

**SELF REGULATED LEARNING STRATEGIES OF HIGHER
EDUCATION STUDENTS IN RELATION TO CAUSAL
ATTRIBUTION AND SELF EMOTIONAL
MANAGEMENT**

**A
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**By
JYOTI BHALLA**

41300072

**Supervised By
DR. VIJAY KUMAR**

**LOVELY FACULTY OF BUSINESS AND ARTS
LOVELY PROFESSIONAL UNIVERSITY**

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DECLARATION

I declare that the thesis entitled “**Self Regulated Learning Strategies of Higher Education Students in Relation to Causal Attribution and Self Emotional Management**” has been prepared by me under the guidance of Dr. Vijay Kumar, Professor, School of Education, Lovely Professional University, Phagwara, Punjab. No part of this thesis has formed the basis for the award of any degree or fellowship previously.

Jyoti Bhalla

Reg. No.: 41300072

School of Education

Lovely Professional University

Phagwara, Punjab, India.

Dated: _____



CERTIFICATE

I certify that Jyoti Bhalla has prepared her thesis entitled “Self Regulated Learning Strategies of Higher Education Students in Relation to Causal Attribution and Self Emotional Management” for the award of Ph.D. degree of the Lovely Professional University under my guidance. She has carried out the work at the School of Education, Lovely Professional University, Phagwara, Punjab.

Dr. Vijay Kumar

(Supervisor)

Professor

School of Education

Lovely Profession University

Phagwara, Punjab, India

Dated : _____

ABSTRACT

Self-regulated learning is a very important factor for success in higher education. Self-regulation is an interplay of personal, behaviour and environmental triadic processes which are proactively adopted by an individual in order to attain the personal goals. Self-regulated learners are metacognitively and motivationally active participants in the process of their learning. Previous researches have highlighted that the ability of the learner to interpret the success or failure is an important factor in the process of self-regulated learning. The attributions for success or failure influence the emotional reactions and success expectations of the learners which will in turn influence the self-regulated learning of the learner. The present scenario of the higher education system is facing some major challenges like poor academic performance, lack of motivation, poor learning and study skills, inability to manage emotions among the students. Therefore, it calls for an urgent need to mend these serious issues which may hinder the learners to achieve their desired goals.

The present study is aimed at investigating the self-regulated learning strategies of higher education students in relation to causal attribution and self-emotional management. The objectives of the study were; a) To identify the causal attributions of higher education students of different program with respect to successfulness, b) To identify the level of self-emotional management of higher education students with respect to program and semester, c) To study the relationship of successful and unsuccessful student's causal attributions to exam score studying in different semesters of different programs, d) To study the significant differences in causal attribution, self-regulated learning strategies & self-emotional management of higher education students with respect to gender and successfulness, e) To study the significant differences in self-regulated learning strategies & self-emotional management of higher education students with respect to program and semester, f) To study the influence of causal attribution on self-regulated learning strategies among higher education students studying in different semesters of different programs, g) To study the influence of self-emotional management on self-regulated learning strategies among higher education students

studying in different semesters of different programs, h) To study the inter-relationship among self-regulated learning strategies, causal attribution and self-emotional management of higher education students studying in different semesters of different programs.

A descriptive study was designed using convenience sampling. The respondents were drawn from government, private and aided colleges & universities located in three regions of Punjab i.e. Majha, Malwa and Doaba. The data was collected mainly from Sciences, Computer Application, Business and Commerce disciplines. Further, the data was comprised of 1424 respondents from the 2nd semester, 4th semester and 6th semester of UG programs viz. B. Com, B.Sc., BBA and BCA and 2nd semester of PG programs viz. M. Com, M.Sc. (Chemistry), MBA and MCA. In order to measure self-regulated learning strategies, 'Motivated Strategies for Learning Questionnaire' (MSLQ) by Pintrich et al. (1991), for causal attribution, 'The Revised Causal Dimension Scale (CDS II)' by McAuley et al. (1992) and for measuring self-emotional management, 'Managing Own Emotions' dimension was extracted from 'The assessing emotions scale' by Schutte et al. (2009) was used. All tools were validated on the Indian population by using confirmatory factor analysis (CFA). For reliability, internal consistency of the scales was analysed by calculating Cronbach's alpha coefficient. Apart from this, composite reliability was calculated for each dimension of the scale. The statistical designs included Pearson Chi-Square design, Correlational design, 2-way factorial MANOVA design and 2-way factorial ANOVA design. The data were analysed by using IBM SPSS AMOS version 21 and IBM SPSS version 22.

The major findings of the study are a) The majority of students from UG and PG level, who perceived themselves as unsuccessful attributed their failure to efforts and the students who perceived themselves as successful attributed their success to study habits; b) The PG level students were found to possess high level of self-emotional management as compared to UG level students; c) The B.Sc. program at UG level and MBA program at PG level was found to have a maximum number of students with high self-emotional management; d) Successful students were found to attribute their success to their internal, stable and controllable cause whereas, the unsuccessful students were found to attribute their failure to internal, unstable and

controllable cause; e) The male students of B.Com 2nd and BCA 2nd semester attributed stable causes for their achieved score more than their female student counterparts. Similarly, the male students of BCA 2nd semester has been found to attribute their achieved score to externally controllable causes more than their female student counterparts; f) The students of all UG programs and semesters who perceived their achieved score as successful attributed stable causes whereas, the students who perceived their score as unsuccessful attributed unstable causes; g) Significant interaction effect has been found in causal attribution due to gender and successfulness in BBA 2nd and B. Com 2nd semester; h) The female students of B. Com 2nd, B. Sc. 4th and B. Sc. 6th, BBA 2nd, BBA 4th and BBA 6th semesters are found to be more self-regulated as compared to male students. In B.Sc. 2nd and B. Com 4th semester, the female students are found to be more inclined to seek help from others as compared to their male counterparts; i) In B. Com 4th, B. Com 6th, B.Sc. 2nd, BBA 4th and BBA 6th semester, the students who perceived themselves as successful were found to be highly motivated to regulate their learning process and make good use of learning strategies as compared to unsuccessful students; j) The significant interaction effect has been found in self-regulated learning strategies due to gender and successfulness in majority of the UG and PG programs; k) M.Com 2nd, MBA 2nd and MCA 2nd semester students who perceived themselves as successful were found to be highly motivated to regulate their learning process and make good use of learning strategies as compared to unsuccessful students; l) The female students of B.Com 2nd, BBA 2nd, BBA 4th and M.Com 2nd semester are found to possess a high level of self-emotional management as compared to their male student counterparts; m) Successful students of B.Sc. 2nd, BBA 4th, BBA 6th, M.Com 2nd, MBA 2nd and MCA 2nd semester were found to possess a high level of self-emotional management as compared to their unsuccessful student counterpart; n) Significant interaction effect has been found in self emotional management due to gender and successfulness in B. Com 2nd, B. Sc. 4th and MBA 2nd semester; o) Both UG and PG students with high self-emotional management were found to be more self-regulated as compared to the students with average or low self-emotional management; p) Positive significant correlation has been found between motivation and self-emotional management, learning strategies and self-emotional management, & self-regulated learning strategies and self-emotional management. From the study,

it has been highlighted that there is a serious need to improve SRLS of the higher education students and also to correct their causal attributions. For this, the government and educational institutions need to plan activities like training programs, awareness camps, counselling sessions etc. The study recommended that training programs should be developed and executed in colleges and universities to make students aware of the importance of self-regulated learning strategies and to choose correct causal attributions for their performance.

KEYWORDS: Self-Regulated Learning Strategies, Causal Attribution, Self-Emotional Management, Higher Education Students

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CHAPTER – 1

THEORETICAL ORIENTATION OF THE PROBLEM

Education is a process of human enlightenment and empowerment through the transmission of knowledge, skills and values. Education is the most significant lever for human, social and economic development. A sound and effectual system of education end up in the enfoldment of learners' potentialities, enhancement of their competencies, the revolution of their interests, attitudes and values. As we tend to step into the globe of the twenty-first century where the complicated and interconnected changes are presenting new challenges for education system worldwide. Hence, the zeal to learn has become important for the students in order to make them active and efficient learners inside and outside of classroom settings. Furthermore, the availability of the most effective academic setting and conditions that support higher learning and development of the student is on the academic reform agenda worldwide. To add to this, the mission, structure, curriculum, and role of higher education have been changed over time, accompanied by evolving the ways to transform the students to self-directed learners. Every learner ought to have the power to initiate and direct their learning outside the formal classroom setting. In formal educational system, the classroom instruction is usually restricted to a couple of hours per week thus, in these settings the attainment of a high level of competency is hardly achievable until or unless the students effectively regulate their learning behaviour and take responsibility for their learning outside the classroom.

1.1 SELF-REGULATED LEARNING

Recent researches on the academic achievement of college or university students highlighted the importance of self-regulation in the process of learning. The learning is the interplay of cognitive, metacognitive, affective and motivational processes (Aleven et al., 2010 and Avezedo et al., 2010) and self-regulation of learning is the process of controlling the cognitive, metacognitive, affective and motivational aspects all together (Pintrich, 1995; Pintrich & Garcia, 1991; Zimmerman, 1990, 1998; Zimmerman and Bandura, 1994; Zimmerman and

Martinez-Pons, 1988). As defined by Bandura (1986), self-regulated learning is associated with three psychological processes towards goal attainment: self-monitoring, self-judgment and self-reaction. Self-controlled learning is a sparkling, constructive process whereby a learner lay down targets for his or her learning and then attempt to monitor, regulate, and manage their cognition, motivation, and behaviour, controlled by their goals and environment (Pintrich, 2000). Self-Regulated learning is comprised of cognitive, metacognitive, behavioural, and motivational processes, where individuals involve for the purpose of learning and achieving their goals (Kirschenbaum, 1984, 1987; Kitsantas and Zimmerman, 1998, 2002; Zimmerman, 1989, 2000, 2004). It was due to the work of Albert Bandura (1986), through his work based on 'social foundations of thought and action' the concept of self-regulation came into being. Self-regulation initially focused on behavioural and emotional regulation (Bandura, 1982). However, Bandura's later works on self-efficacy has led to an addition of the construct of motivation to the self-regulation framework. The motivational dimension of self-regulation according to Bandura includes an evaluative dimension of performance, valuation of activities and attributions. The motivational factors like goal orientation, self-efficacy and task value and various cognitive, metacognitive and regulatory strategies play a significant role in the process of academic self-regulation (Pintrich and De Groot, 1990; Pintrich et al., 1994; Pintrich and Schrauben, 1992). There are different cognitive strategies which strengthen the process of encoding, retention, comprehending the classroom notes and various metacognitive strategies that help the learner to plan, regulate and monitor their learning (Corno, 1989; Sternberg, 1998; Zimmerman, 1989). Schunk and Zimmerman (1994) advocated that self-regulated learning is the self-gearred thoughts, self-motivated feelings and actions, which are helpful in achieving personal goals (Zimmerman, 2000).

Self-regulation is important in order to achieve the prime aim of education i.e. development of life-long learning skills. Researchers have confirmed that self-regulation directly influences the academic success or failure of the learner. Successful academic self-regulation leads to success, enhanced motivation and self-efficacy and self-confidence of the learner. On the contrary, poor academic self-regulation leads to failure and increased stress and anxiety. Adaptive academic self-

regulation includes intrinsic goal orientation, control of learning beliefs, self efficacy, valuing the task, various cognitive and metacognitive strategies, whereas maladaptive academic self-regulation includes task avoidance approach and high level of test anxiety (Pintrich and Garcia, 1991; Pintrich and Zusho, 2002; Barron and Harackiewicz, 2001). The learners who use adaptive self-regulated strategies appraise their strengths, weaknesses, set goals accordingly and self-reflect on their achieved effectiveness. This provides self-satisfaction and motivates them to improve their strategies of learning. Positive motivation and use of adaptive learning strategies help the learners to succeed academically and enable them to view their future optimistically. Cleary and Zimmerman (2001) stated that a self-regulated learner is entirely different from other learners in applying his or her knowledge in crucial situations during the learning process. He is able to improve specific insufficiencies in learning technique, keep himself motivated and focused for accomplishing the targeted goals. Self-regulated learning is the use of processes that an individual is adapted to vis a vis the learning tasks. It does not mean the characterization of certain traits or lacking them. Instead, it includes the careful use of explicit processes that must be personally adapted to each learning task.

Schunk and Zimmerman (1994, 1998) advocated that the skills component of self-regulated learning include: (a) setting of explicit proximal goals, (b) advocating powerful strategies for attaining the set goals, (c) monitoring the performance, (d) reorganizing the physical and social framework to make it compatible with the set goals, (e) managing the time resourcefully, (f) self-evaluation of used strategies, (g) attributing causation to results, and (h) adapting future methods. The level of the student's learning is different based on the presence or absence of these important skills of the self-regulated learning process. Schunk (1990) concluded that competencies to be aware of the learning progress in the academics lead to satisfaction and positive beliefs which in turn increases the self-efficacy to perform at the higher level in different learning tasks. In the last few decades, academicians raised a question: "What is self-regulated learning and what is it for? In raising this thought, academicians inevitably assumed that self-regulated learning (SRL) is a special form of learning which is regulated externally. The most salient feature of SRL is that the learner is controlling his own cognitive and motivational processes

for achieving the set goals. Hence, self-regulated learning is intentional and conscious in its nature. Now, the next obvious question would come in the mind of the researcher that “What key strategies do students need to guide and direct their learning process?”. Self-regulation being a very wide construct and has been researched by different researchers by keeping in light the theoretical understanding available at that time. Some of the models of self-regulation include Kirschenbaum (1984, 1987): A Five-Stage Model of Self-Regulation, Zimmerman's (1989, 2000, 2004) cyclic model and Pintrich et al. Model of Self-Regulated Learning (1991).

1.1.1 Kirschenbaum (1984, 1987): A Five Stage Model of Self-Regulation

Kirschenbaum (1984, 1987) proposed a five-stage model of self-regulation. The first stage is related to the identification of the problem, where the learner is responsible for his learning and enhancement of the learning process. In the second stage, the learner develops a plan of action for solving the problem. In the third stage, the learner implements the proposed plan of action. According to Kirschenbaum, self-monitoring is vital in this stage, in which learner keeps check on his performance or progress and compare it to the set standard. Self-monitoring leads to change in behaviour. The fourth stage is related to environmental aspects like physical and social situations. Environmental aspects influence learner's self-regulated behaviour and either facilitate or weaken the learner's attempts to accomplish the set goals. Kirschenbaum emphasised that it is very much important to manage one's physical and social environment in order to concentrate on personal goals and conquering the extra mile. The fifth state is the generalisation of the behaviour, in this stage, the learner needs to generalise his learned behaviour in other learning settings. Individuals often fail to generalise the learned behaviour across the settings this may be due to the intervention of some intrinsic and extrinsic sources like emotional and physiological states. A successful self-regulated learner needs to generalise his behaviour in spite of interferences. Kirschenbaum (1984, 1987) have designed a cyclic model, explaining the stages for generalising the behaviour. The five stages of the model have been depicted in the following figure 1.1.

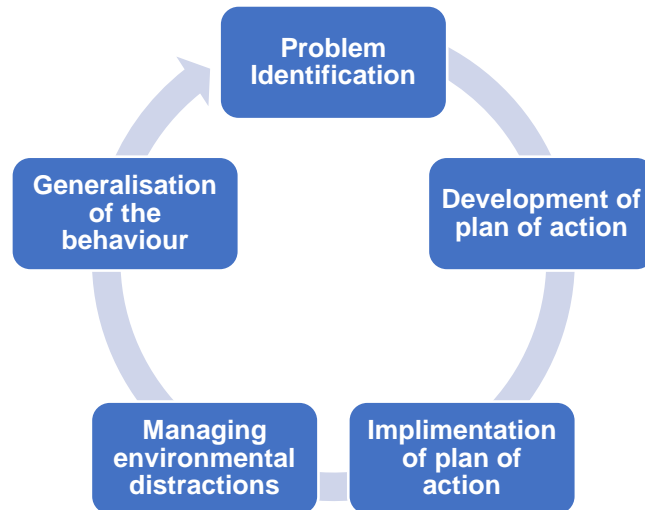


Fig. 1.1: Kirschenbaum (1984, 1987) - A Five-Stage Model of Self-Regulation

1.1.2 Zimmerman (1989, 2000, 2004) Cyclic Model of Self Regulated Learning

In the late 1980s, Zimmerman (1989) and Zimmerman and Martinez-Pons (1986, 1988) conceptualised self-motivation, metacognitive awareness, critical thinking strategies, self-monitoring and deliberate self-assessment of learning progress as self-regulated learning. According to Zimmerman and Martinez-Pons, self-motivation is the heart of self-regulated learning, which is an intense determination of the learner to learn something in order to enhance competence. Based on the findings of his previous studies, Zimmerman (2000, 2004) proposed a cyclic model which is based on Bandura's (1986) 'Social Cognitive Theory'. This model has emerged from academic achievement research conducted by Kitsantas and Zimmerman (1998). Bandura (1986) 'Social Cognitive Theory' postulates that human functioning is the interaction of environmental context, behaviour, and personal factors, these factors reciprocally determine each other. Zimmerman (1989, 2000, 2004) model include self-oriented feedback loop which functions in the triadic interaction between environmental, behavioural and personal factors. At the behavioural level, self-regulation encompasses the use of various learning strategies. The environmental self-regulation demands to monitor and altering environmental conditions which are affecting individual learning. At the personal stage, the individual involves in covert self-regulation of cognitive and affective factors influencing learning. The triadic model has been shown in the following figure 1.2.

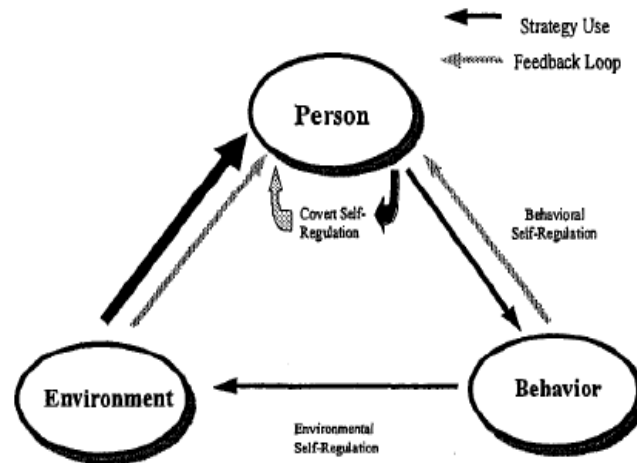


Fig.1.2: Triadic Forms of Self- Regulation (Zimmerman, 2004)

The cyclic model of self- regulation has basically 3 phases viz. Forethought phase, Performance phase and Self-Reflection phase. The cyclic model of self-regulation has been presented in the following figure 1.3.

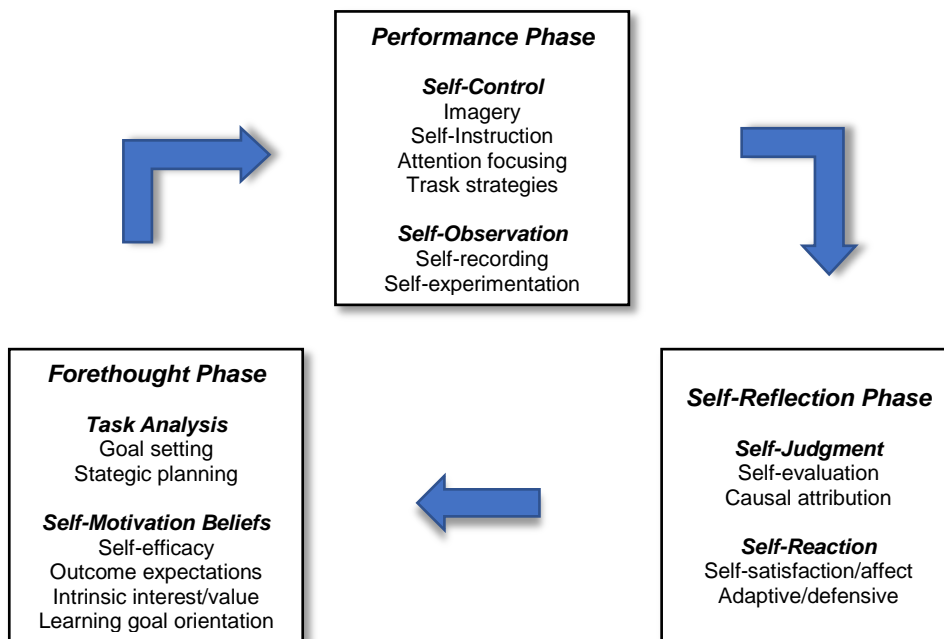


Fig. 1.3: Cyclic Model of Self-regulation (Zimmerman and Campillo, 2003)

1) Forethought Phase

The forethought phase of self-regulation includes goal setting, goal orientation, strategic planning and self-efficacy aspects of the learner.

-Goal Setting and Goal Orientation

It is the very first phase of the cycle of self-regulation, this phase deals goal setting and goal orientation. The 'Orientation' is basically a general reason an individual does a task and within each orientation (intrinsic or extrinsic) the person may have either approach or avoidance focus (Pintrich, 2000). The intrinsic goal orientation mainly deals with mastery-oriented goals. A person with mastery-approach will work for getting mastery over the task, deep learning and understanding and the persons with mastery-avoidance will focus only on removing doubts but not on mastering the task. Extrinsic goal orientation mainly deals with performance-oriented goals. A person with a performance approach focus will just focus on "being superior, surpass or outperform others and possess the desire to have favourable judgements of one's competence. However, a person with the task-avoidance approach will look for excuses and is likely to engage in behaviours showing him as imprudent and suffering from inferiority complex vis a vis other people (Pintrich, 2000). The learners with mastery-oriented goals are most likely to self-regulate (Pintrich, 2000; Zimmerman, 1998) and outperform students with performance-oriented goals (Bartels and Magun-Jackson, 2009; Hoyert and O'Dell, 2009).

-Strategic Planning

Zimmerman's model of self-regulated learning had given emphasis on strategic planning in order to achieve the set goals. This includes picking up tools and learning strategies, which will be used by the learner during the learning session. Where tools ranging from flashcards, charts and textbooks to peers and instructor's help (Zimmerman, 2000). Pintrich (2000) included time and effort planning and self-observation in this forethought phase.

-Self-Efficacy

It is the ability and competence of an individual to learn and perform a task (Pajares and Schunk, 2005). Self-efficacy is determined by a number of factors i.e. verbal persuasion, vicarious experiences, performance outcomes and emotional and physiological states of an individual. High self-efficacy leads to higher performance

by the individual. Zimmerman placed self-efficacy in the forethought phase as self-motivation is influenced by self-efficacy, while, Schunk and Ertmer (2000) viewed that self-efficacy operates in all of the phases of self-regulated learning. Self-efficacy is vital to initiate academic self-regulation. Pajares and Schunk (2005) found people select those tasks or activities in which they feel competent and put more efforts to complete that task. Consequently, learner's thoughts and emotional reactions are influenced by their self-efficacy beliefs.

Hence, the forethought phase has two processes namely analysis of the task and self-motivational beliefs. The analysis of the task involves goal setting and strategic planning for achieving goals. The learners who are active in setting up their proximal goals explicitly and strategically plan activities for accomplishing their goals, achieve desirable academic success. The second component of the forethought phase is self-motivational beliefs, motivation is a spark that would ignite the process of self-regulation. Moreover, in order to remain focused on a particular task, one needs to possess a high level of motivation (Kitsantas and Zimmerman, 1998, 2002). Self-motivation shoots from the self-efficacy beliefs in different learning activities and perceived expectations for positive learning outcome and interest (Bandura and Wessels, 1997).

2) The performance or Volitional Phase

Zimmerman (2000, 2004) performance control phase includes strategies which influence the attention and action. At this phase, the learner removes internal and external obstructions in order to protect his learning activities. He monitors his cognition, motivation, efforts, time, seeking help from others and changing of task and context. Apart from this, the learner focusses on selecting the appropriate learning strategies, increase or decrease the efforts in order to maintain his concentration and learning intentions.

3) The Self-Reflection Phase

This phase has mainly two components mainly, self-judgement and self-reaction. The self-judgement contains self-evaluation where the learner evaluate his performance outcome in contrast to a standard (Kirschenbaum, 1984, 1987) and

causal attribution where the learner assigns the cause for his success or failure. Weiner (1979,1985) suggests that good performance is best attributed to internal, stable and controllable causes. Poor performance, on the other hand, is best ascribed to causes which are external, unstable and uncontrollable factors. Self-reaction which is further composed of self- satisfaction, adaptive and defensive activities. Self-satisfaction is correlated with the emotional aspect of the performance. Self-satisfaction and positive affect about the performance lead to positive motivation and will help the learner to put continuous efforts for achieving set goals. On the other hand, lack of self-satisfaction and positive emotions will affect negatively on motivation and will result in avoidance (Schunk, 2001). Self-reactions are composed of other important activities like adaptive or defensive reactions. Adaptive reactions are the regulations intended to enhance the efficiency of one's technique of learning either by disposal or amending an unproductive learning strategy. On the contrary, defensive reactions refer to use defense mechanisms in order to give cover to the self- image by either withdrawing or avoiding the situations such as dropping the course in order to minimize the dissatisfaction and disappointment. Bandura and Schunk (1981) have shown that the students with explicit proximal goals have a high level of self-satisfaction and use adaptive reactions in order to improve their performance and are successful in achieving their targets as compared to the students who do not set proximal goals explicitly at forethought phase.

1.1.3 Pintrich et al. Model of Self-Regulated Learning (1991)

The work on the development of the conceptual framework or model of self-regulated learning strategies started in the early 1980s but, Pintrich et al. (1991) have given the final shape to the conceptual framework of self-regulated learning and finally proposed an advanced model of self-regulated learning based on the motivational beliefs and learning strategies. The conceptual framework of self-regulation highlighted the importance of different types of motivational orientations which directly or indirectly affect the process of academic self-regulation of the students. The model of self-regulated learning strategies represented here includes two main categories a) motivational beliefs and b) learning strategy.

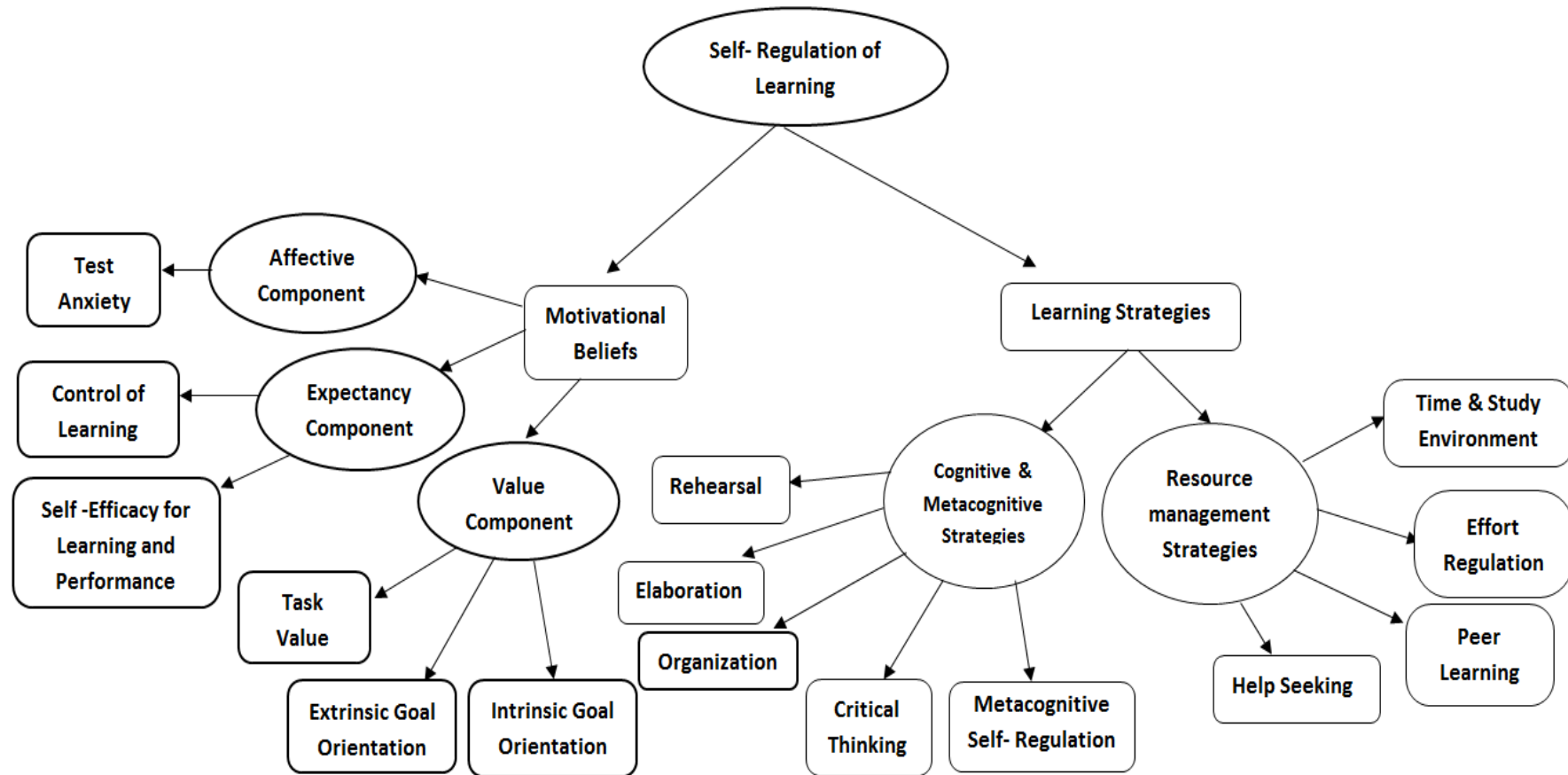


Fig.1.4: Pintrich et al. model of Self- Regulated Learning Strategies (Pintrich et al. 1991)

Motivational beliefs are separated into a) value components with subdimensions viz. i) intrinsic goal orientation ii) extrinsic goal orientation iii) task value, b) expectancy components with constructs as i) control beliefs ii) self-efficacy for learning and performance c) affective components with construct i) test anxiety. Another major dimension of the MSLQ scale was learning strategy scale, which is further bifurcated into a) cognitive learning strategies with constructs as rehearsal, elaboration, organization, critical thinking, metacognitive self-regulation, b) resource management strategies with constructs viz. time and study environment, effort regulation, peer learning, help-seeking. The model has been given in figure 1.4.

A) Motivational Beliefs

Motivation is one of the foremost essential elements of learning in an academic setting. Psychologists and educators have long thought of the role of motivation in student accomplishment and learning.

1) Value Components

- i) **Intrinsic Goal Orientations:** “Goal orientation refers to the student's perception of the reasons why she is engaging in a learning task. In the process of academic self-regulation, goal orientation refers to the student's general goals or orientation to the course as a whole. Intrinsic goal orientation concerns the degree to which the student perceives herself to be participating in a task for reasons such as challenge, curiosity, mastery. Having an intrinsic goal orientation towards an academic task indicates that the student's participation in the task is an end all to itself, rather than participation is a means to an end.”
- ii) **Extrinsic Goal Orientation:** “Extrinsic goal orientation complements intrinsic goal orientation and concerns the degree to which the student perceives herself to be participating in a task for reasons such as grades, rewards, performance, evaluation by others, and competition. When one is high in extrinsic goal orientation, engaging in a learning task is the means to an end. The main concern the student has is related to issues that are not

directly related to participating in the task itself such as grades, rewards, comparing one's performance to that of others.”

- iii) **Task Value:** “Task value refers to the student's evaluation of the how interesting, important, and useful the task is (“What do I think of this task?”). High task value will lead to more involvement in the process of learning.”

2) **Expectancy Components**

- i) **Control of learning beliefs:** “Control of learning refers to students' beliefs that their efforts to learn will result in positive outcomes. It concerns the belief that outcomes are contingent on one's own effort, in contrast to external factors such as the teacher. If students believe that their efforts to study make a difference in their learning, they should be more likely to study more strategically and effectively. That is, if the student feels that she can control her academic performance, she is more likely to put forth what is needed strategically to effect the desired changes.”

- ii) **Self- Efficacy for Learning and Performance:** “Expectancy for success refers to performance expectations and relates specifically to task performance. Self-efficacy is a self-appraisal of one's ability to master a task. Self-efficacy includes judgments about one's ability to accomplish a task as well as one's confidence in one's skills to perform that task.”

3) **Affective Components**

- i) **Task Anxiety:** “Test anxiety refers to the stress, tension, worry, fear of failure and somatic symptoms such as nausea, upset feeling, fastening of heartbeat before or during the exam. Test anxiety has mainly two components: cognitive component (i.e. worry), and an emotionality component. The worry component refers to students' negative thoughts that disrupt performance, while the emotionality component refers to affective and physiological arousal aspects of anxiety. Cognitive concern and preoccupation with performance have been found to be the greatest sources of performance decrement. Training in the use of effective learning strategies and test-taking skills should help reduce the degree of anxiety.”

Learning Strategies

Learning strategies are bifurcated into cognitive and metacognitive strategies, both of these strategies are essential for the self-regulation process.

1) Cognitive Learning Strategies

- a) **Rehearsal:** Rehearsal is the strategy, where the students are focused on learning the content by practising it again and again. They use this strategy in order to memorise the simple tasks and trigger their working memory
- b) **Elaboration:** Elaboration strategy helps the learner to reach the extra mile, whereby the learner integrates details about the concept in order to strengthen the real idea. It helps the learner to store information for a longer period of time. Hence, during the lecture, it is very important that the teacher should engage the students in elaborating the concept that is being taught in the class. This strategy helps the learner in making a bridge between new and previous knowledge.
- c) **Organization:** Organization strategy assists the learner to choose appropriate information and to build links among the information to be learned. The organization is a vigorous and effortful attempt in which learners are closely occupied in the activity that leads towards fruitful performance. Furthermore, organizational strategies consist of tactics like note-taking, concept mapping, clustering, outlining, and selecting the main ideas during lectures.
- d) **Critical Thinking:** Critical thinking is an analytical, logical and evaluative process which always leads to creative solutions of the problems and systematic and generative aspects of being critical.

2) Metacognitive Self-Regulation

Metacognition refers to the consciousness, acquaintance, and control of cognition. Metacognitive self-regulatory activities include planning, monitoring, and regulating techniques used by the active learner during his learning process.

- i) **Planning:** Planning refers to the setting of learning goals, skimming of the content, framing questions and task analysis of the problem. The rationale of the planning strategies is to make the organisation and comprehension of the content much easier.
- ii) **Monitoring:** Monitoring activities include tracking of one's attention during problem-solving and attending a lecture, and self-testing through questioning to check the understanding about the concept: these assist the learner in understanding the material and integrating it with prior knowledge. To become planned learners, students should take ownership of their learning and achievement upshots.
- iii) **Regulation:** Regulation of cognition refers to the control over the learning process i.e. reflection in action, that needs the use of strategies to attain significant learning outcomes. Regulating activities are assumed to improve performance by assisting learners in checking and correcting their behaviour as they proceed on a task. Learner changes their learning strategy according to the nature of the content.

3) **Resource Management Strategies**

Resource management strategies include judicious use of time for study and learning, apart from this, managing time, controlling learning environment, regulating one's efforts according to one's capabilities, seeking help from teachers and peer group for doubt clearing.

- a) **Time and study environment:** Apart from the self-regulation of cognition, students must be competent to direct and control their time and study surroundings. Time management involves scheduling, planning, and managing one's own time to study. This demands not only setting aside chunks of time to study, but the effectual utilization of that study time, and setting of pragmatic goals. The teacher should encourage the students to set the time table for studying and an appropriate place where the learner can concentrate properly.

- b) **Effort Regulation:** Self-regulation also includes student's skill to regulate their effort and attention especially in the phase of interruptions and monotonous assignments. Effort regulation is a mirror of self-management that demands an obligation towards completing one's academic goals, even in the conditions of teething troubles or interruptions. Effort regulation is imperative for academic achievement since it not only a sign of goal commitment but also regulates the unrelenting use of learning strategies.
- c) **Peer Learning:** Peer-mediated learning implies learning in collaboration with peers. Collaborating with one's peer group have positive effects on achievements. Peer- to- peer learning makes each learner act as a tutor and student. As the discussion with peers helps a learner to clarify the encountered difficulties in the course material and to attain insights that one could not attain on one's own. Thus, the teacher should encourage peer learning among learners in the class.
- d) **Help-Seeking:** Another important aspect of the environment is that the learner must be skilled at getting support from peers and tutors. When a self-regulated learner doesn't understand anything, he is able to spot someone who could provide him with assistance in understanding the concept. Many researchers have proved that peer help, peer teaching, and individualised teacher assistance facilitate student's accomplishment in the learning process.

Students are supposed to be self-directed if they are able to choose and utilize a variety of learning strategies and know at what time, why, and how to use these approaches in an apt circumstance (Marcou and Philippou, 2005). Student's self-regulation and goal orientation are strongly intertwined constructs that affect learning and cognition of the students (McWhaw and Abrami, 2001; Pintrich, 1989; Wolters et al., 1996; Zimmerman and Kitsantas, 1997). Studies have explored that the students who regulate their learning are aware and know how to use a series of cognitive strategies viz. repetition, elaboration and organization, they know how to set up a plan, manage and direct their mental processes for achieving their personal goals i.e. metacognition, they show high sense of educational self-effectiveness,

development of positive emotions (joy, enthusiasm, satisfaction) towards task, they sketch and manage their time and efforts and able to produce an appropriate learning setting and take help from their lecturers and peers when they have complexities, they're able to manage varied external and internal distracters so as to take care of their concentration (Corno, 2001; Weinstein, et al., 2000; Zimmerman, 1998, 2000, 2002). The proactive qualities and self-motivating abilities distinguish self-regulated learners with their peers. Previous studies also prove that self-regulated students are more actively engaged in their learning as compared to other students. Self-regulated learners are generally the front benchers (Labuhn et al., 2010), quick in answering questions in the classrooms (Elstad and Turmo, 2010), and ask for extra learning material from teachers to go deeper in content understanding (Clarebout et al., 2010). Further, self-regulated learners are enablers of their learning environment to cater to their learning requirements (Kolovelonis et al., 2011). As discussed earlier, self-efficacy is important in the process of self-regulation. High level of self-efficacy enables the students to set advanced and stimulating goals, use effective learning strategies, monitor their work, remain focused and overcome distractions and evaluate their performance outcome more accurately (Schunk,1990; Schunk and Meece, 2006; Schunk and Zimmerman, 2012).

From the discussion of the above conceptual models of self-regulation, it can be summarized that Kirschenbaum (1984, 1987) documented the five-stage model of self-regulation. The very first stage is related to the identification of the problem, in the second stage, the learner needs to develop a plan of action, the third stage is related to the implementation of the plan of action, the fourth stage deals with removing the interruptions and distractions and in the last stage, the learner has to generalize his learned behaviour. In the late 1980s, Zimmerman and Martinez-Pons conceptualized that self-motivation is the heart of the self-regulation and based on it, they proposed self-motivation, metacognitive awareness, critical thinking strategies, self-monitoring and deliberate self-assessment of learning progress as self-regulated learning strategies. Zimmerman (2004) gave the cyclic model of self-regulation, which is basically having three phases viz. forethought phase, performance phase and self-reflection phase. In 1991, Pintrich conceptualised a comprehensive model, in which a) Motivational Beliefs and b) Learning strategies were the main components of self-regulated learning strategies model.

1.2 CAUSAL ATTRIBUTION

The word ‘Attribution’ typically refers to assigning the cause. In psychology, attribution refers to the presumption made about the sources at the back of an event or behaviour. For instance, two students appeared in an entrance exam and after the declaration of the result one has qualified the test and another has failed the same. The successful student attributed his success to his or her ability, efforts and felt the sense of achievement. On the other hand, an unsuccessful student attributed his failure to circumstances on the far side his or her management viz. feeling sick, poor night's sleep and unimportant task. The concept of causal attribution has been theorized by different psychologists. Fritz Heider was the first social psychologist who proposed a theory of attribution in his book, ‘The Psychology of Interpersonal Relations’ in 1958. The research in the field of Attribution was further expanded by Herold Kelly and Bernard Weiner. Different Attribution theories conceptualized by Heider (1958), Kelly (1967) and Bernard Weiner (1972, 1974, 1979, 1985, 1986, 1995, 2000, 2006) have been explained as follows.

1.2.1 Heider’s Theory of Attribution (1958)

Heider (1958) gave the model of attribution which is characterized by two constructs of object perception and person perception. His thoughts on object perception are rarely cited in the researches conducted in this era but the work had led the foundation for his advanced theory of person perception. In 1920, Heider attempted to find the association between sensory information and real objects. He reported that perceptual apparatus restructures real objects from their distinctive characteristic effects on the “media” (i.e. such as air pressure, light reflections, and sense organs etc.). Heider named it as reconstruction attribution, which is a process that produces interpretations of the relatively invariant qualities of the objects from their distinctive features. The sensory information of the perceivers thus experiences perceptual objects as they attribute the sensory information to their underlying cause in the world. After working on object perception, Heider wanted to study the perceptions of people about each other in social interaction in order to determine how people make sense of other’s behaviour. He further wanted to understand the role of intentions in creating the social perception among the individuals. Heider

argued that the perceivers bring order and meaning according to the intentions and the inferences drawn of the wishes, purposes, sentiments, and other mental states. Two distinct features of person perception highlighted by him are variance and invariance. Variance is described by him as the person's ongoing behaviour and invariance is described as inferred perceptions, intents, motives, traits and sentiments. He considered motives, perceptions, sentiments and intents are the core processes which manifest themselves in overt behaviour and the invariance is described as a disposition by him in the literature.

Another distinctive feature of person perception is that when people perform an attributional analysis of human behaviour. Their judgments of causality follow one of two conceptual models (Heider, 1958). The first model was the model of "impersonal causality", deals with unintentional human behaviours (i.e. worry and sadness) and physical events (i.e. leaf shedding). The second model was "personal causality" which is invoked whenever there are intentional human behaviours (such as cleaning the home or inviting someone to lunch). According to Heider, personal causality is the situation where 'q' causes 'x' intentionally, which is considered as a purposive action. Heider proposed person-situation dichotomy in attribution. He argued that the outcome of the action depends upon personal and situational forces. He illustrated that for an action outcome to occur, there is need of the conjunction of two elements (Try x Can), person's attempt to perform an action (Try) and the supporting factors (Can), which are either person's effort and ability or the environment i.e. luck and favourable situations. He considered 'Trying' as an intention of the person (personal causality) and 'Can' forces can be personal or situational. According to him, these 'Can' forces are essential for an intentional action to be successful. At this, Heider introduced the division between internal and external. He considered effort and ability as internal and opportunity, luck favourable situations as external causes of the action outcome.

1.2.2 Kelley's Theory of Attribution as Causal Judgment (1967)

Kelley (1967) proposed the covariation model of attribution, in which an individual attempt to describe others' or his certain behaviour as a result of covariation of multiple observations. Kelly's attribution theory deals with both

social perceptions and self-perceptions of a person. This theory postulates that an observer makes attributions about an actor's response to a stimulus at a particular time depending on three aspects viz. consensus, distinctiveness, and consistency. Each of these factors can be either low or high in a given situation and certain combinations of these factors at various levels is known as attributional patterns. The unique combinations of these factors give rise situational, dispositional or circumstance attributions.

The consensus is defined as whether other persons also experience the stimulus in the same way as the actor. Now if the other students also performed poor on that test then it indicates high consensus, whereas if the other students performed well then this indicates low consensus. Consistency is defined as whether the response of the actor to the stimulus is consistent over time. As an illustration, consider a student who performed poorly on the exam. Now, if the student always performs poorly on the exam then this will be high consistency, whereas high consistency indicates that the student generally performs well on exams. Finally, Distinctiveness is the uniqueness of the behaviour in a particular situation. It indicates whether the behaviour of the person occurs along with the stimulus or not without it. If the student performed poor in one subject only but performed good in others then this indicates high distinctiveness. Likewise, if the student has performed poor in one and other subjects also, then this indicates low distinctiveness. Now, high consensus, high consistency and high distinctiveness indicate that an actor is attributing the situational or environmental causes for his or her achievement. Further, the pattern, low consensus, high consistency and low distinctiveness indicates that an actor is attributing dispositional causes. To add to this, the pattern, low consensus, low consistency and high distinctiveness indicates that an actor is attributing some specific circumstances under which the event has occurred.

1.2.3 Bernard Weiner Attributional Theory (1972, 1974, 1979, 1985, 1986, 1995, 2000, 2006)

The attribution theory of Bernard Weiner (1972, 1974, 1979, 1985, 1986, 1995, 2000, 2006) is directed towards the achievement and emotional contexts. Attribution is a phenomenological model which focusses on how the individuals themselves perceive a situation. Every person tries to explore the cause of why the

event happened. This process is called the perceptions or judgements of the persons regarding the cause of the event in their environment, these events include personal behaviour and the behaviour of others as well. Weiner has developed four-factor theory mainly focussed on ability, effort, luck and task difficulty. The synthesis of the results of previous researches directed Weiner to document the first dimension of his attribution theory i.e. internal vs external locus of causality. He found that internally attributed causes affect the emotions of individuals and resulted in hope or hopelessness. If a person attributed to lack of ability as a cause of failure, it has a negative impact on his self-esteem and future expectations and resulted in hopelessness. On the contrary, if a person attributed to lack of effort as a cause of his failure then it has resulted in hope that if he will do hard work then he can able to get success. Further, Weiner opined that the cause may change in the future. Weiner et al. (1971) identified a second causal dimension referred to like stability and categorized ability, effort, task difficulty and luck in a 2 x 2 matrix as shown in table 1.1.

Table 1.1: Weiner’s 2×2 Matrix of Four Dominant Achievement-Related Situations, Weiner et al. (1971)

	Internal	External
Stable	Ability	Task Difficulty
Unstable	Effort	Luck

The causative attributions are the individual’s internal and external perceptions about the causes of the occurrence of an event. The locus of causality dimension affects the emotional reactions of the persons and the stability dimension influences the cognitive reactions of persons. For an illustration, if a person perceives success or failure is due to stable factors like high ability or task difficulty, he or she would expect a similar outcome in future performance too. However, if one feels that success or failure is due to some unstable factors like luck or effort then he or she could expect different results at other times in the future.

Weiner (1985) identified the third causal dimension i.e. ‘Controllability’. Which explain mixed reasons, such as fatigue, mood, and other temporary effects which may be responsible for a particular outcome. These attributions facilitate the

people to prepare their worlds and contemplations in an effort to create a sense of truth, to attain harmony and balance around them. The individuals justify their work either by attributing it to external governable factors or to inner uncontrollable ones. Based on these attributions, Weiner (1985) developed and a structured theory of causative attributions and proposed 2x2x2 taxonomy which includes locus of causality (internal-external), stability (stable-unstable), and controllability (controllable-uncontrollable) has been presented in table 1.2 and 1.3.

**Table 1.2: Weiner’s 2×2×2 Taxonomy for Poor Academic Performance,
Weiner (1985)**

	Internal		External	
	Stable	Unstable	Stable	Unstable
Controllable	Never Studies	Insufficient Effort	Instructor is Biased	No Help
Uncontrollable	Low Ability	Sick on the day of the test	Test Difficulty	Fate

**Table 1.3: Perceived Cause on the basis of Locus × Stability × Controllability
By Weiner (1985)**

Dimension	Cause
Internal- Stable-Uncontrollable	Ability
Internal-Stable-Controllable	Study Habits
Internal-Unstable-Uncontrollable	Health
Internal-Unstable-Controllable	Efforts
External-Stable-Uncontrollable	School requirements
External-Stable-Controllable	Instructor's Bias
External-Unstable-Uncontrollable	Luck
External-Unstable-Controllable	Tutors/Friends

These perceived causative determinants of outcomes fall under three dimensions—locus, stability, and control (Weiner, 1985). As an instance, luck is external (locus), unstable, and uncontrollable. These types of attributions have an

effect on how people cognitively, affectively, and behaviorally respond to potential things (Weiner, 1994). Locus of control is generally of two types viz. internal and external. The stability dimension confines whether causes transform over the period or not. For example, ability and attempts to assess both inner factors, whereas ability or aptitude, may be classified as a stable construct, efforts, on the contrary, is unstable. Controllability is compared as causes one can control and one cannot control. Causes one can control includes skill /efficacy or effort and causes one cannot control includes aptitude, mood, other's actions, and luck. Weiner (1985) has proposed a 3-dimensional classification of causality to explain the attributional theory.

Locus of control (internal-external): the first dimension of attribution theory is the internal-external locus of control. It measures the reason for attribution as internal or external for an individual. For example, mood and ability are internal causes, whereas fortune and teacher bias are external causes.

Stability (stable-unstable): Stability means the cause is fixed. For instance, if one is good at playing the guitar and he attributes it with his rigorous practice over one year. In this case, the ability to play the guitar is a stable cause for this person. In another case, if one got an A grade in mathematics, and he attributed it that the test was very easy, everyone got 'A' grade. Here, in this case, performing good is just by chance and the easy test is an inconsistent or unstable cause.

Controllability (controllable-uncontrollable): Controllability refers to the factors that one can control to influence results. Factors like skill and competence are classified as controllable, whereas luck and mood are classified as uncontrollable.

Weiner highlighted that the students who attribute failure to a lack of efforts will do hard work and increase their efforts in future in order to get success in order to achieve their goals. These students perceive that they have control over their performance. To handle challenging situations, learners may use a range of cognitive and behavioural approaches in order to come successful. Learners execute an array of plans to stay away from the breakdown or to amend its inherent meaning. In the academic environment, there are mainly two strategies viz. self-handicapping

and defensive-pessimism which are being used by the students in order to defend their self-esteem (Jones and Berglas 1978; Cantor 1990). The students who are considered as self-handicappers often scared of breakdown and generally try to find a pretext for failure and engage themselves in tasks-irrelevant behaviours. This provides an attributional cover to them and concurrently, dwindle the probability of achievement. The outcome as a result of self-handicapping will come as an individual with pessimism or motivation which will, in turn, defines the results. The perspective of self-handicapping is that it points to the sense of worth and is handy. The researches in higher education as exhibited that self-handicapping results in poor study success and wellbeing (Jones and Berglas 1978; Eronen et al. 1998).

From the above discussion, it can be summarized that Heider (1958) attempted to give attribution theory in his work for the very first time and described that a person either attribute the cause of his success or failure to the person or to the environment. Kelley (1967) proposed the covariation model of attribution, in which an individual attempt to describe others' or his certain behaviour as a result of covariation of multiple observations. Kelly's attribution theory deals with both social perceptions and self-perceptions of a person. Weiner (1972, 1974, 1979, 1985, 1986, 1995, 2000, 2006) projected a 3-dimensional classification of causality in order to explain the attributional theory. Which is mainly based on Locus of control- (internal-external), Stability- (stable-unstable) and Controllability- (controllable-uncontrollable).

1.3 SELF REGULATED LEARNING AND CAUSAL ATTRIBUTION

The review of self-regulated learning strategies has demonstrated that students employ different cognitive and behavioural strategies in highly challenging academic situations to avoid possible failure. The 'Self-Handicapping' and 'Defensive-Pessimism' are two specific strategies, which are used by the students in order to protect their self-worth (Jones and Berglas, 1978; Cantor, 1990). The students who are afraid of failure make excuses for potential failure. These manoeuvres provide an attributional shield for the students but at the same time, reduce the likelihood of the success. It has been advocated by previous studies that in university students self-handicapping is found to be highly correlated with failure,

poor study habits and low well-being (Jones and Berglas, 1978; Eronen et al., 1998). As Zimmerman (1998) proposed three phases of self-regulation very first phase is forethought phase, which is mainly related with the motivation, the second phase is performance or volitional control phase, which directs the learning process and the third phase is self-reflection phase, which is associated with the self-judgement and self-reaction. Self-judgement leads the learner to attribute the causes for their success or failure. The attribution interpretations can lead to positive or negative self-reactions. The learner may interpret his failure to unsuccessful strategy due to 'lack of ability' (internal, stable and uncontrollable attribution) for his failure. This attribution interpretation will lead to negative self-reaction and lower down the perceived self-efficacy of the learner which will lead the learner to experience low motivation, high anxiety and negative emotional experiences. On the contrary, if the learner blames lack of efforts' which is an internal, unstable and controllable attribution and this attribution interpretation will provide positive self-reaction, which will be helpful to the learner to correct his learning strategy and put more efforts for the hard work in order to get success. Researchers argued in their studies that it could be possible to retrain the students to attribute internal, unstable and controllable attribution (i.e. inadequate efforts) for their failure instead to making internal stable and uncontrollable attribution (i.e. lack of ability). However, this could also be possible that a hardworking but unsuccessful learner who attributes insufficient efforts for his failure may feel hopeless and frustrated. Previous studies have proved that, if the student gets a failure on the same task continuously for a period of time, this could lead the learner to distrust his capability and questioning why he is still doing hard work to get success (Schunk and Cox, 1986). In such a situation, the learner should be directed to assess his learning strategies used while studying instead of attributing the lack of efforts. Hence, it can be said that the causal attribution divulges the plausible reasons for the learning failures or mistakes and helpful for the learner to discover the best suitable learning strategies according to their learning styles.

1.4 SELF EMOTIONAL MANAGEMENT

During the past decade, emotions have become a highly important area in the field of educational psychology. The researches on the emotions in education have

been ignited by the claim that emotions play an imperative role in the academic self-regulation of the students and their achievement (Pekrun and Schutz, 2007). A growing number of empirical researches have confirmed the importance of emotions in an educational setting (Boekaerts, 2007; Linnenbrink, 2007; Pekrun et al. 2002). Academic emotions have a direct connection with the learning, instruction and academic achievement of the students (Pekrun et al., 2002). Pekrun (2006) categorised the academic emotions into four categories: positive activating emotions, which include enjoyment and pride, positive deactivating emotions, which include relief negative activating emotions which include anger and anxiety, and negative deactivating emotions, which includes boredom and hopelessness. Mauss et al. (2007) define emotions as comprehensive, whole-body responses that engage harmonized changes in the domains of subjective experience, behaviour, and tangential composition. They proposed that emotions take place when an individual encounters a circumstance and appraises it as pertinent to his or her purpose. Similarly, Phye et al. (2011) pointed out two key aspects of the definition of emotions. Firstly, emotions involve judgment or assessment of what is occurring during a particular person-environment operation. Individuals assess where they are in relation to where they want to be with regard to their aims, values and convictions as well as their social set of connections. Recent researches in the field of psychology and neuroscience have confirmed that emotions are extensively associated to cognition and influencing various cognitive & behavioural processes, such as memory, attention, self-regulation, self-efficacy and so on (Ahn and Picard, 2005).

Emotions are social constructs and take place from the meticulous social-historical framework. Thus, specific emotional experiences encompass person-environment operation and are controlled by certain social-historical contexts in which this transaction came about. Emotions are valanced responses i.e. positive or negative to different situations in accordance with the apprehensions of individuals. Pekrun et al. (2004) found that positive test emotions of joy, hope and pride are positively associated with measures of general self-esteem, self-efficacy, perceived academic control and interests. On the other hand, negative test emotions of anger, anxiety, shame and helplessness were negatively associated with these beliefs.

Moreover, it is not always true that achievement emotions produce desired results i.e. positive emotions yield positive results and negative emotions yield negative results. Turner and Schallert (2001) reported that the students who have confidence in their capabilities, and the perception of the humiliation of exam failure can influence inspiration to devote more efforts. Thus, pessimistic activating sensations affects are generally negative except in certain cases where it led to a performance. Coover and Murphy (2000) revealed that the higher the self-concept and self-schema, the more positive self-description and emotions and therefore better the achievement. In our everyday life, every individual may experience a wide variety of emotional experiences with family, friends, teachers, co-worker and a stranger too. Our society holds an understanding of what type of emotion is expected and accepted and every individual knows how to manage their emotions according to the situation. Our society, culture and interpersonal interactions influence the personal experiences of emotions. The social interaction mainly focusses on how an individual receives an emotional reaction from others and how the interacting individuals interpret the meaning of emotional reaction. Individuals may accept or reject the emotional responses of others or the person articulating their emotions may alter the self-presentation accordingly (Goffman, 1959).

Individuals often use feeling rules in order to interpret others and their emotions, then they engage in emotional management which is a process of making self indications of what they should be feeling and work to display or experience those emotions (Hochschild, 1979, 1983, 1988, 1990). Every person tries to manage their emotions and understands the emotions of other persons according to the social norms. As the child grows and becomes more sophisticated, he learns that he can experience different types of emotions in different situations and certain emotions/feelings need to be controlled. Moreover, every culture and society ensure that the child should be able to distinguish between appropriate and inappropriate emotions (Pollak and Thoits 1989). The use of emotions in interpersonal and intrapersonal situations is called emotional intelligence. Mayer and Salovey (1995) defined emotional intelligence as the cognitive ability of an individual which includes perception of emotions, facilitation of emotions, understanding of emotions and managing of emotions. Goleman (1995) opined that the people who skillfully

manage their emotions, work more efficiently in their day to day like, they have full control over their mind and they know how to fight with their inner clashes. Self-emotional management can be defined as the skill to manage one's own sensations and emotional responses. Researchers have concluded that high EQ rather than IQ determine the achievement and contentment in different spheres of life. Emotion management involves commencing, impeding or controlling inner sentiments, contemplations, physiological and behavioural reactions as well. Self-regulation of behaviour usually refers to conscious monitoring of one's cognitive actions and steps that are necessary to achieve one's objectives or to attain desired consequences from the surroundings (Blair, 2002). Researches have explored that the adults who show pessimistic emotional experiences result in deprived concentration, poor commitment and harmful effects on wellbeing, whereas positive emotional experiences enhance concentration, commitment and perseverance (Carver and Scheier,1990). If a person wants to regulate his emotions, he/she should have an objective self-awareness (Silvia, 2002). The emotion management is the process in which an individual knows which emotions he has when he has them and how they should express them. He emphasized that managing emotions support people in realizing their goals by controlling negative emotional reactions (Gross, 2002). According to Gross and Thompson (2007), emotion management may weaken, strengthen or remain constant depending upon the target or goals of an individual. On the other side, Phye et al. (2011) viewed that emotion management has different phases like observing, appraising and altering the emotional experiences according to the situation. Gross (2002) postulated that emotions can be managed consciously or unconsciously.

Gross (2001) proposed a five stages model of emotion regulation, which is depicting five different stages of regulation or managing emotions. The five stages are the selection of the condition, alteration of the condition, positioning of attention, modification of cognition and intonation of responses (i.e. physiological, psychological and experiential). The first four stages are antecedent focussed, where an individual does the things before the emotional response is completely stimulated and the fifth stage is response focussed, where an individual does the things when the emotion is on-going. There are mainly two types of emotion regulation strategies

namely cognitive reappraisal and expressive suppression (Balzarotti, John, & Gross, 2010). Both empirical and experimental pieces of research have confirmed that reappraisal is related with the lessening of negative emotional experiences and strengthening of positive emotional experiences, on the other side, suppression is associated with lessening of positive emotional experiences and strengthening of negative emotional experiences (Gross, 2001; Gross and John, 2003; Mauss et al., 2007). Usually, there are accumulating confirmations that students' positive emotional experiences have a positive impact on learning and academic achievement, while negative emotional experiences have a negative impact (Buric et al., 2011; Buric and Soric, 2012; Goetz et al., 2007; Pekrun et al., 2002, 2006, 2011; Petrešević and Soric, 2011; Schutz and Davis, 2000).

1.5 SELF REGULATED LEARNING AND SELF EMOTIONAL MANAGEMENT

Self-regulated learning and emotional management hold a strong bond with each other, a student can only be able to control over his learning process if and only if he is able to manage his emotions, especially negative emotional reactions. As self-regulation of learning is the process of controlling the cognitive, metacognitive, affective and motivational aspects altogether. Boekeart (2007) emphasized a special place of cognitive appraisals in the process of academic self-regulation. Cognitive appraisals mainly work on denoting the task as congruent or incongruent with the goals and aspirations. An individual will feel positive emotions and cognition if there exists a match between personal goals and learning tasks. Positive emotions enable the individual to make adaptive use of cognitive and motivational strategies. On the contrary, if there exist mismatch between personal goals and learning tasks then the individual will experience negative emotions. Negative emotions force the learner to avoid the learning task in order to protect the self-worth. Op't Eynde and Turner (2006) opined that managing emotions may be influenced by the efforts to control the overt and covert behaviour of the learner. As an instance, emotional management often influenced by the efforts to manage the completion of a task which takes extended periods of time and in the process, the negative emotions often arise due to internal and external deadlines for completing a task. Likewise, Gross (1998) viewed that emotion regulation may be influenced by the efforts of the

learner to regulate their study environment as situation. The wise selection and modification of the required strategies to regulate the learning process may prevent and control unpleasant emotional reactions. In addition to this, learner's efforts to manage their social environment as seeking help from others also helps in reducing the impact of negative emotional reactions (Pintrich, 2004). Researches have revealed that emotion management in group learning has a positive effect on the help-seeking ability of the learner. Tyson et al. (2009) pointed out that numerous researches have been done in the area of self-regulated learning but very few studies have been conducted on emotional management and achievement. Due to the stressful nature of our education system, where the learner always faces the challenges of completing assignments, class tests and projects before the deadline that prompt student's different and intense emotional reactions. Moreover, the ability of the learner to intervene and alter the emotional reactions when they perceive the inconsistency between their emotional experience and the current situation is very important for regulating the learning process and academic achievement. The learner can be able to regulate his learning process if and only if he is able to make the balance between his emotional state and situation. If he is able to handle his negative or stressful emotions which are creating hindrances in his learning then the learner will successfully be able to regulate his learning. Many researchers have proved that self emotional management plays an important role in regulating learning environment and academic success. Pekrun et al. (2007) opined that there is a need to pay intense attention to exploring different emotional management skills and develop an effective learning environment for the acquisition of these skills. Isen (2001) proved that positive emotional states always facilitate flexible and creative ways to solve the problem, while, the negative emotional states make it rigid and cumbersome. The positive emotional states help the learner to use elaboration, organization and metacognitive learning strategies, whereas negative emotional states force the learner to use superficial learning strategies like rote learning. For instance, if the learner is joyful and enjoys learning mathematics, then it will be easier for the learner to make good use of self-regulated learning strategies. On the contrary, if the learner has boredom, frustration and math anxiety then it will lead her to adopt rote memorization instead of logical comprehension. Pekrun et al. (2002) highlighted that elaboration and organization learning strategies are found to

be positively correlated with student's enjoyment, excitement and hope. Additionally, the teacher's emotions while teaching also influences the emotional reactions of the students within the classroom learning. The teacher's enjoyment, excitement and enthusiasm during teaching can induce excitement and enjoyment in classroom learning (Hatfield et al. 1993; Frenzel et al. 2009).

From the above discussion it clear that emotions are important in academic self-regulation and academic achievement of the learner. There is a need to develop the learner in such a way so that he can be able to create a balance between his emotional experience (positive or negative) and the situation. Apart from this, the teacher's emotional state is also influencing the emotional reactions of the students and vice versa. The teachers and students reciprocally influence their emotions within the classroom setting (Meyer and Turner, 2007). This emotional contagion can be advantageous or detrimental in nature. Hence, it is required that both teachers and students should learn to manage their emotions in different situations by acquiring different emotional management strategies. According to Astleitner (2000), this can only be done by sharpening the student's learning environment and teacher's occupational environment in an emotionally sound way.

CHAPTER – 2

REVIEW OF RELATED LITERATURE

The purpose of reviewing the related literature is to convey what knowledge and ideas already have been already established by accredited academicians and researchers on the topic. It provides guiding hypotheses, suggestive methods of investigation and information for interpreting the results. In the present study, the investigator has used different articles, thesis, newspaper, books and websites for the purpose of reviewing the related literature. Detailed information about the related literature pertaining to the different variables has been present hereunder.

2.1 STUDIES PERTAINING TO SELF REGULATED LEARNING STRATEGIES

The studies related to self-regulated learning strategies came into focus in the western world after the work of the Pintrich. Three are other models of self-regulation proposed by Kirschenbaum (1984, 1987): A Five-Stage Model of Self-Regulation, Zimmerman's (1989, 2000, 2004) cyclic model and Pintrich et al. model of self-regulated learning (1991). These models were also used to assess the self-regulation of learners at different levels of education. But, the Pintrich et al. (1991) model was widely and most successfully used in different cultural contexts. Different researches conducted focusing on self-regulated learning strategies are reviewed and are presented below.

Pintrich and De Groot (1990) studied the correlation between motivational orientation, self-regulated learning, and academic performance on the sample of 173 seventh grade students from English and Science classes. The correlational analysis revealed that self-efficacy and intrinsic value were positively correlated to cognitive engagement and academic performance of the students. Similarly, the regression analyses pointed out that self-regulation, self-efficacy and test anxiety are not good predictors of academic performance. Also, intrinsic values did not make any direct influence on academic performance but were highly related to self-regulation and cognitive strategy use, regardless of prior achievement level.

Pintrich and Schrauben (1992) found that the students who are adept in the use of learning strategies viz. planning, summarizing, elaboration and monitoring are generally having a high level of intrinsic goal orientation and are willing to spend time and energy. On the contrary, students possessing an extrinsic goal orientation tend to focus on grades and were less willing to invest time in learning and therefore, rely deeply on surface level strategies like memorization and notetaking.

Wolters et al. (1996) studied the relationship between goal orientations, motivational beliefs and self-regulated learning of 434 secondary school students. The result of regression analysis revealed that learning goal orientation and a relative ability goal orientation are good predictors of motivational beliefs (i.e. task value, self-efficacy, and test anxiety), cognitive strategy use self-regulation and academic performance. Also, it is revealed that adopting an extrinsic goal orientation led to more maladaptive motivational and cognitive outcomes.

VanZile-Tamsen and Livingston (1999) found motivation orientation and self-regulated strategy use as highly correlated among low-achievers and high-achievers. However, the association among low achievers is more as compared to high achievers.

Patrick et al. (1999) investigated the gender differences in extrinsic goal orientations, self-efficacy, cognitive, and regulatory strategies. The survey was conducted on 445 secondary school students. It was found that males scored higher on extrinsically oriented than females, whereas females scored more on the use of cognitive strategies than males. Further, regression analysis showed that extrinsic goal orientation of the males was related to low self-efficacy, least use of regulatory and cognitive strategies at the start and low performance at the end of the academic year. On the other side, the mastery orientation of female students showed high self-efficacy, greater use of regulatory and cognitive strategies at the start and good performance at the end of the academic year.

Zimmerman (2000) indicated that self-efficacy has come out as a strong predictor of students' motivation and learning. Self-efficacy beliefs of the students have found to be influenced by the changes in academic performance, self-regulated learning processes, and mediate the academic achievement.

Wolters and Rosenthal (2000) conducted a study to find the relationship between motivational beliefs and self-regulated learning strategies. The sample of the study were 114 eighth grade students. The results revealed that three or more of the regulatory strategies are explained by task value, learning goal orientation, and performance goal orientation.

Garavalia and Gredler (2002) conducted an experiment on 69 college students and divided them into two groups in order to see the influence of goal instruction on the perceptions of the students regarding the use of self-regulated learning strategies. The results showed that the students in the experimental group with goal setting instruction conditions achieved higher grades and goal-setting instruction was the strong predictor of the students' achievement.

Soleymannezhad and Shahrarai (2002) conducted a survey in order to find the relationships between locus of control, self-regulated learning strategies and academic achievement of the high school students. The sample of the study was 150 boys from high school. The results showed that there was a positive and significant correlation among internal locus of control, self-regulated learning strategies and academic achievement of the students.

Zusho et al. (2003) investigated 458 chemistry students of the Midwestern University of USA with the aim to find if motivation and use of self-regulated learning strategies change with the passage of time and if these components predict the student's achievement. The results indicated that over time self-confidence to perform well in the class reduced, they did not value the chemistry subject. Also, the results showed that the use of rehearsal and elaboration strategies decreased and use of organisation and regulatory strategies increase over time.

Naumann et al. (2003) explored that expectancy belief was one of the most important factors in predicting GPA among first-year students at Midwestern University, USA.

Hofer and Yu (2003) conducted an experiment in order to check the efficiency of the “Learning to Learn” course which has been introduced to make the students as self-regulated learners. The results of pre and posttest with the Motivated

Strategies for Learning Questionnaire (MSLQ) revealed that there was an increase in mastery orientation to learning and self-efficacy for learning, along with it, students increased in their valuing of the course and in cognitive strategy use, and reduced test anxiety over the term. The findings suggested that interventions could play a significant role in making college students, self-regulated learners.

Kitsantas et al. (2004) concluded that students in the process goal condition showed a higher degree of self-efficacy, performance satisfaction and positive strategic attributions than the students in the outcome goal condition. Moreover, in process goal condition, among students who were not engaged to self-evaluate their work reported a higher level of self-efficacy, self-satisfaction and appraised the instruction more positively than did their counterparts in the outcome goal group. Also, self-evaluation showed a positive effect on the acquisition of skills, particularly for students in the outcome goal condition.

Whipp and Chiarelli (2004) conducted a case study on six successful students of web-based courses. Primary sources of data collection were three interviews with each student, one transcribed interview with the course teacher, and reflective journals made by the students. The results of the content analysis revealed that these students made good use of planning, organization, help-seeking, environment restructuring, record keeping, monitoring and various self-reflective strategies for leaning that course. The results showed that motivation was significantly influencing the use of self-regulated learning strategies. Additionally, self-efficacy, goal orientation, interest and causal attributions are affected by the ability of the students to manage their technical and social environment successfully. Apart from this, the instructor's support, peer support, and course design were significantly influencing the use of self-regulated learning strategies.

Young and Ley (2005) examined 34 low achieving or developmental learners (i.e. at risk) and reported that these students most frequently used memorization, rehearsal, seeking information, goal setting and reviewing class notes.

Bidjerano (2005) documented that female students outperformed male students on some self-regulated strategies like the rehearsal, elaboration

organization, metacognition, time management and effort regulation and reported no gender differences on the scores of peer learning, help-seeking and critical thinking skills.

Proctor et al. (2006) reported that high achievers scored higher on the scores of concentration, motivation, information processing, selection of main ideas, attitude, managing time, test strategies and scored less on the score of test anxiety than the low achievers.

Hong et al. (2006) explored that successful students used more effective and adaptive learning strategies than unsuccessful students. However, unsuccessful students used rehearsal strategies more frequently than elaboration and organizational strategies.

Mills et al. (2007) found that self-efficacy for self-regulation was the good predictor of achievement in French language learning among higher education students. The results revealed significant gender differences and female students reported stronger self-efficacy for self-regulation as compared to the male students.

Chyung (2007) studied self-efficacy and academic performance in online learning course “Introduction to Instructional and Performance Technology” offered by Midsized University of USA. The results indicated that female students scored higher on the score of self-efficacy than male students. Apart from this, female students scored significantly higher than male students in the final examination.

Yip (2007) investigated the differences between high and low achievers on the use of learning and study strategies on the sample of 148 university students. The results found low and high achievers significantly differ in the use of learning and study strategies. Also, attitude and motivation were the two main factors that differentiated high and low achievers.

Fathi-Ashtiani et al. (2007) investigated learning strategies of successful and unsuccessful students studying mathematics, experimental sciences and humanities as major subjects and documented significant differences between successful and unsuccessful students with respect to Elaboration and Monitoring Comprehension but no significant difference reported on Rehearsal and organisation strategies of

successful and unsuccessful students. Further, in mathematics and humanities group, successful students scored more on elaboration and comprehension monitoring strategies, in experimental sciences successful students outperformed in using organisation and comprehension monitoring strategies.

Taplin et al. (2007) investigated help-seeking strategies of high achievers and low achievers enrolled in distance mode education in the open university of Hong Kong. The results indicated no significant difference between low and high achievers on the score of help-seeking. Both types of students freely ask for help in case of any doubt.

Shannon (2008) advocated that metacognitive strategies were the most important strategies for making the students as self-directed learners by determining their specific learning styles. Apart from this, results indicated that teaching student's metacognitive strategies are a valuable skill that assists students in becoming self-directed learners.

Jacobson et al. (2008) studied the influence of the type of campus on the self-regulation of students and found a significant difference between traditional and nontraditional college students, the nontraditional campus students outperformed traditional campus students on the use of self-monitoring, elaboration, organization and structuring the study environment except help-seeking. This may be due to reason that nontraditional campus provides diversity in learning opportunities such as distance learning and online education, these critical elements appear to be enhancing the self-regulated learning approach.

Yip (2009) investigated different learning and study strategies of low and high achievers enrolled in distance mode learning at Hong Kong University. The results reported that there was a significant difference between low achievers and high achievers on the use of learning strategies. Also, it was confirmed that 'Will and self-regulation' were more important factors for differentiating high and low achievers.

Bartels et al. (2009) found that individuals who are approach-motivated, use self-efficacy enhancement and stress-reducing actions more frequently than

avoidance motivated individuals. Furthermore, the results indicated that rehearsal and elaboration strategies are best predicted by approach-avoidance motivation.

Soric and Palekcic (2009) studied the relationship among student's interests, learning strategies and causal attribution. The results indicated that the interest was significantly interrelated with the use of learning strategies. Further, the results of multiple regression analysis revealed that organisation strategy, time planning were the best predictors of academic grades while rote learning came out as a negative predictor. The time planning strategy (one of the resource management strategy) was significantly predicting academic achievement. Furthermore, results indicated that the causal dimension of controllability showed a partial mediating role between students' academic achievement and their interests.

Bembenutty (2009) analysed gender differences in academic achievement and self-regulated learning strategies and found that female students outperformed male students in using more adaptive self-regulated learning strategies.

Yukselturk and Bulut (2009) investigated gender differences in motivational beliefs, self-regulated learning and academic achievement in the online learning environment. The results showed no significant gender differences in motivational beliefs, self-regulated learning and academic achievement. However, in female students test anxiety was the significant predictor of achievement and self-efficacy for learning and performance. Also, task value was the significant factor for academic achievement mainly in male students.

Seo and Taherbhai (2009) studied the correlation among motivational beliefs, cognitive processes and academic achievement on the sample of 459 mathematics students of elementary schools of Korea. The results have indicated that the cognitive processes are closely associated with achievement goals, task values and competence beliefs and mathematics achievement is associated with competence beliefs, performance-avoidance goals and persistence learning strategies.

Ayotola and Adedeji (2009) studied the correlation between self-efficacy and academic achievement on the sample of 352 senior secondary mathematics students

of Oyo state. The results revealed that there was no significant gender difference in academic achievement and self-efficacy of mathematics students.

Xu et al. (2010) examined the correlation among parental involvement, self-regulated learning strategies and reading achievement of 5th-grade students. The results indicated that six dimensions of parental involvement viz. involvement of parents in school, setting TV watching rules, help in homework, parental education expectations, frequency of homework and participation in extracurricular activities likely to foster self-regulated learning. Further, parental education expectations, school involvement, and help in homework significantly influence the use of self-regulated learning strategies. The results also suggested that self-regulated learning strategies mediate the correlation between parental involvement and reading achievement.

Virtanen and Nevgi (2010) conducted a survey on 1248 undergraduate students at several Finnish universities and found that female students scored higher on help-seeking strategies as compared to their male counterpart. Apart from this, male and female students of behavioural science and female students of Sciences reported consistently, while, male students of Information Technology reported remarkable low on using self-regulation in learning.

Heikkila et al. (2011) found a positive correlation between self-regulation success expectations and negative correlation was found between task-irrelevant behaviour and lack of regulation. To add to this, lack of regulation was negatively correlated with the success expectations and positively correlated with the task-irrelevant behaviour. Moreover, a negative correlation has been found between task-irrelevant behaviour and success expectations. Further, self-directed students possessed a high level of 'self-regulation, success expectations, deep understanding, critical evaluation', and low level of 'lack of regulation, test anxiety, stress and task-irrelevant behaviour'.

Ghazvini and Khajehpour (2011) explored that female student of high school surpassed male students on attitude, motivation, time management, test anxiety and self-testing strategies whereas male students outperformed female students in concentration, information processing skills and selecting main ideas than female

students. Apart from this, no significant gender difference reported in using study aids and test strategies.

Schwinger and Stiensmeier-Pelster (2012) proposed a conceptual model of motivational regulation in self-regulated learning. He surveyed 301 twelfth students in order to see the sights regarding their use of motivational regulation approaches during preparation for an examination. The results of path analysis showed the indirect effect of motivational regulation on achievement. Further, the motivational regulatory strategies were correlated with learning efforts and academic achievement.

Kadhiravan (2012) investigated self-controlled learning of adolescents in relation to their achievement motivation and found that female students outperformed male students on the use of self-regulated learning strategies. Further, the government schools students have shown a higher usage of self-regulated learning strategies than the students of private schools. Further, the results indicated that students of literate parents have shown a better usage of self-regulated learning strategies than their counterpart and self-regulated learning strategies has a significant positive association with the constructs of achievement motivation.

Liao et al. (2012) surveyed international community and domestic college students with the aim to examine the influence of intrinsic motivation, extrinsic motivation and self-regulated learning efficacy on academic achievement. The results indicated that 'international community college' students performed better academically than 'domestic college' students. Further, the intrinsic and extrinsic motivation influence academic achievement with the mediating effect of self-regulated learning efficacy.

Heikkila et al. (2012) surveyed 213 first year teacher students of Finnish university with the aim to explore the intercorrelation among learning, self-regulated learning, cognitive and attributional strategies. The results explored that self-regulated learners showed a high level of deep understanding, critical evaluation, and optimism, and the lowest level of surface approach, lack of regulation and are least stressed and exhausted. Further, there was a positive correlation of critical

evaluation and deep understanding with optimism and negative correlation with lack of self-regulation.

Javid et al. (2012) investigated motivational orientation for English language learning among Saudi Arabian Undergraduates have high extrinsic goal orientation and intrinsic goal orientation. Apart from this, female students studying medicines and Information Technology as major subjects scored more on both extrinsic and intrinsic goal orientations as compared to male students.

Son and Simon (2012) reported that high achievers scored higher on self-regulated learning strategies such as effective goal setting, monitoring of goals and different approaches to as compared to low achievers.

Marrs and Sigler (2012) explored that female students at community college and university surpassed male students on deep approach, achieving approach, motivation, self-testing techniques, use of study aids and time management skills.

Kormos et al. (2014) found that the use of learning resources and information technology independently for improving language learning competence is positively influenced by self-regulated learning strategies. Further, self-regulated learning strategies mediate the motivation and autonomous learning behaviour.

Banarjee and Kumar (2014) found no significant difference in self-motivation of undergraduate science students. Further, female students scored higher on the use of self-regulated learning strategies as compared to their male counterparts.

Al-Harthy and Aldhafri (2014) studied the association among task value, self-efficacy and academic achievement of university students found that female students scored more on task-value and scored less on self-efficacy as compared to male students.

Balam (2015) investigated the motivation and learning strategies of 139 postgraduate students of South-Eastern University. The results of 2x6 mixed ANOVA and 2x9 mixed ANOVA in order to see the significant gender difference. The results reported no significant gender differences in the total scores of

motivation and learning strategies. However, significant gender differences have been found in certain dimensions i.e. extrinsic goal orientation, test anxiety, effort regulation and peer learning.

Hood et al. (2015) examined the influence of the context and role of the learner on self-regulated learning in MOOCs. The results found that students from higher education and working professionals showed higher levels of self-regulated learning as compared to others.

Littlejohn et al. (2016) examined a quantitative investigation on the learning behaviour of 788 students enrolled in MOOCs followed by the interview of 32 students. The results revealed a significant difference between the learners with different levels of self-regulated learning in their motivation and goal for the course. The motivation and goal were found to shape the learner's approach towards the MOOCs and use of self-regulated learning strategies.

Kelley and Salisbury-Glennon (2016) conducted a study on doctoral students with the aim to find the role of self-regulation in completion of the dissertation and the results indicated that intrinsic task value was significantly predicting self-regulated learning. Self-regulated learning was found to be a strong predictor of the duration of time taken to complete the dissertation. The students who possessed a high level of self-regulated learning strategies completed their dissertation on time.

Thibodeaux et al. (2016) investigated the association between time usage, academic self-regulation and the GPA of first-year students (N=589). The results indicated that first-year students planned and spent less time in academics as compared to the students of the second semester. Time usage is positively related to academic self-regulation and GPA of both first and second year students. Apart from this, the results suggested that the self-regulated learning strategies were low in first year students.

Kizilcec et al. (2017) conducted a survey on 4831 of online learners enrolled in different MOOC courses from different disciplines viz. Engineering, Computer Science, Management, Transportation and Education. The courses were offered by Pontificia Universidad Catolica de Chile through Coursera and found that the goal

setting and strategic planning are more helpful in achievement in MOOCs and the students with strong self-regulated learning strategies persistently test their knowledge in order to promote their learning. Apart from this, help-seeking was negatively affecting the goal attainment of the students. Results also revealed gender differences in the use of self-regulated learning strategies, women showed more inclination on seeking help from others as compared to men.

Sebesta and Speth (2017) surveyed introductory Biology course students with the aim to analyse the SRL strategies of high and low achieving students. The results reported that high achievers specifically used cognitive and metacognitive learning strategies as compared to low achievers. Apart from this, low achievers reported that they did not implemented their planned learning strategies. The results suggested that SRL development should be the integral pedagogical tool that aim at nurturing student's lifelong skills.

Ganda and Boruchovitch (2018) analysed the effectiveness of an innovative course especially designed to promote self-regulated learning among preservice student teachers of Brazil. The sample consisted of 109 freshmen from 4 Brazilian public universities. The research was conducted by using quasi- experimental design having three stages: pre-test, intervention and post-test. The results confirmed the effectiveness of the intervention program on the self-regulation of the students. Also, students of experimental group scored higher on self-efficacy for self-regulation and using various learning strategies as compared to the students of control group.

Laelasari (2018) suggested that self-regulated learning of prospective mathematics teachers can be enhanced by using project-based learning. He found that after implementing problem-based learning in development courses, students started solving the task with novel ideas and creativity and showed overall increase in using self-regulated learning strategies.

Abadikhah et al. (2018) explored the attitude of the EFL (English as a Foreign Language) students towards the use of self-regulated learning strategies in writing academic papers. Investigators surveyed 98 college students from 3rd and 4th year, having English Language as their major subject. The results showed that

most of the participants were found to be in moderate to high in the use of self-regulated learning strategies, further, 4th year students scored more on using self-regulated learning strategies as compared to 3rd year students.

Ahmed (2018) investigated the correlation between motivation and self-regulated learning on the sample of 5548, fifteen years old mathematics students in USA. A multivariate multilevel analysis was conducted in order to examine the role of intrinsic value, instrumental value and self-efficacy (motivational variables) in predicting elaboration, memorization and control (SRL strategies). The results revealed that intrinsic and instrumental value of mathematics were the stronger predictors of memorization, elaboration and control strategies as compared to self-efficacy. The results suggested that in order to develop self-regulated learning strategies in mathematics, help the students to develop positive value for the success in mathematics.

2.2 SUMMARY OF REVIEWS ON SELF REGULATED LEARNING STRATEGIES

From the review of literature related to the self-regulated learning it can be summarized that Pintrich et al. (1990), Zimmerman (2000), Zusho et al. (2003) showed that self-efficacy and self-regulation were the stronger predictors of the academic performance. Similarly, Mills et al. (2007) found that self-efficacy for self-regulation was the strongest predictor of the French language learning achievement. Ahmed (2017) reported that intrinsic and instrumental value of mathematics were the stronger predictors of memorisation, elaboration and control strategies as compared to self-efficacy. Bidjerano (2005), Bembenutty (2009), Yukselturk and Bulut (2009), Virtanen and Nevgi (2010), Ghazvini and Khajehpour (2011), Kadiravan (2012), Marrs and Sigler (2012), Al-Harthy and Aldhafri (2014) reported that female students showed high level of motivation, use of adaptive learning strategies and on overall score of self regulated learning strategies as compared to their male students counterpart. However, Banarjee and Kumar (2014) found no significant gender differences in self-motivation but female reported high on the score of self-regulated learning strategies. Kizilcec et al (2017) found that female students scored higher on help-seeking dimension as compared to male

students. Proctor et al. (2006), Hong et al. (2006), Yip (2007, 2009), Ashtiani et al. (2007), Taherbhai (2009), Ayotola, and Adedeji (2009), Son and Simon (2012) and Sebesta and Speth (2017) found that high achieving students scored more on both Self Regulated Learning Strategies as compared to low achieving students. Abadikhah et al. (2018) showed that 4th year students scored more on SRL strategies as compared to 3rd year students. Ganda and Boruchovitch (2018) found that SRL strategies among the prospective teachers can be enhanced by introducing an innovative course mainly dealing with the development of SRL strategies. In the same way, Laelasari (2018) suggested that self-regulated learning of prospective mathematics teachers can be enhanced by introducing project-based learning. Hood, Littlejohn & Milligan (2015), Littlejohn et al. (2016) and Kizilcec et al. (2017) found that the students who possess high level of motivation, commitment to learn, relevant prior knowledge scored more on Self- Regulated leaning.

Thus, from the literature review, a number of researches were conducted in different countries and highlighted the importance of motivational beliefs and learning strategies. The studies were conducted on gender differences and predicting academic achievement. There is another variable i.e. Causal Attribution, which is predicting the academic performance of higher education students. Hence, causal attribution of different students is reviewed and provided below.

2.3 STUDIES PERTAINING TO CAUSAL ATTRIBUTION

Different researches conducted focussing on causal attribution has been reviewed and are presented below.

Wolleat et al. (1980) surveyed 647 female and 577 male high school students enrolled in college preparatory algebra and geometry classes in order to explore the trend of their perceptions about their performance in an achievement test by using ‘The Mathematics Attribution Scale (MAS)’. The results showed statistically significant gender difference with respect to the perception of success and failure. Further, the male students attributed their success to their ability while female students attributed their success to efforts. Apart from this, female students attributed failure to the lack of ability in mathematics and task difficulty.

Ames et al. (1988) explored that the students who have mastery goals in the classroom make effective use of learning strategies, showed strong desire to perform demanding tasks, had positive attitude toward the class, and had stronger belief that achievements will go behind from individual's endeavours. On the other side, the students who have performance goals assessed their ability negatively and attributed their failure to lack of ability. Further, it can be concluded that type of classroom goal orientation influence the learning strategies and causal attribution of the students.

Beyer (1998) investigated the gender differences in causal attributions and emotions for the archived success or failure. The results reported that male students gave more importance to ability attributions, whereas female students attributed study habits and paying more attention for their success. In case of failure situation, males attributed lack of study and females attributed lack of ability. Apart from this, female students felt happy on getting success and felt disappointed on getting failure than dis male students

Vlachou and Buchel (2000) found that there exists no significant relation between success and failure outcomes for effort, ability, task and luck. Results also indicated that the group who received attribution retraining made better distinction between the attribution element and success or failure outcome than the two other groups.

Zimmerman (2000) found that causal attribution judgments are critical to self-reflection and the results showed that attributing the failure to lack of ability, which is a stable attribution, prompt the learners to respond negatively and discourage the efforts to improve the performance. He advocated that self-regulated learners often attribute their poor performance to inadequate efforts or the use of ineffective learning strategies.

Anthony (2000) found university students and professors tended to view factors outside their control as more influential than those within their control. The students were much more likely to suggest that lecture conditions and course materials influenced success more than professors, while professors were much more likely to attribute failure to the student than any other factors.

Perry et al. (2001) revealed that, students with low self-control, obtained worse grades and had lesser inspiration and applied less efforts, felt more annoyed and anxious, used less self-directed strategies, and had less control over course assignments and life in common.

Gibb et al. (2002) reported that the students who make internal and stable attributions for negative and unsuccessful outcomes have poor academic achievement. On the other side, the students with high academic achievement make external and unstable attributions for negative and unsuccessful outcomes.

Gobel and Mori (2007) surveyed 233 Japanese first-year university students in order to explore their attributions for success or failure in language learning in both oral communication and reading classes. The results revealed a statistically significant correlation between attributions of ability, task difficulty and luck and exam scores. Further, it has been explored that the learners attributed their success to internal and failure to external causes.

Cortes-Suarez and Sandiford (2008) investigated the differences between the attributions of passing and failing students in algebra course. He surveyed 410 students by using Revised Causal Dimensions Scale (CDSII) and asked to rate their success and failure on Locus of Causality, Stability, Personal Controllability, and External Controllability dimensions. The results found statistically significant differences between the passing and failing groups. The students in the passing group attributed success to internal, stable, personal controllable, and external controllable. On the contrary, the students in the failing group attributed failures to external, unstable other than personal controllable and external controllable dimension.

Perry et al. (2008) explored the attributional thinking for the failure in new academic setting (i.e. transition from high school to university). The results reported that the students attributed a fixed order of causes viz. efforts, difficulty of the task, strategy, teaching quality, ability and luck respectively for their poor performance.

Haynes et. al. (2008) involved 336 first year students in the study in order to check the efficacy of the attributional training for improving the motivation and

academic success of the students. The results reported that attributional retraining may enhance the mastery motivation but did not show any influence on performance motivation. Apart from this, it has been revealed that mastery motivation mediated the relationship between attributional retraining and GPA, suggesting that mastery motivation is a key instrument of attributional retraining.

Hsieh and Schallert (2008) investigated 500 undergraduate students in Spanish, German and French courses and measured attribution through questionnaire and then interviewed students for asking the actual cause for the outcome. The results of regression analysis revealed that the self efficacy was the strong predictor of the success of the students. Also, the students who attributed effort attributions for the failure have higher self efficacy as compared to the students who did not attributed effort attributions.

Soric (2009) found that internally motivated successful students feel autonomous and self-determined rather than controlled by others. They attributed their achievements to more internal and controllable causes. But relations between other regulatory styles and causal dimensions still remain blurred, particularly in the case of failure circumstances.

Lei (2009) revealed that the higher education students showed different causal attributions toward success and failure. Further, the results showed that the students attributed the successful scores to external factors, while they attributed internal factors for their failure. It has also been found that gender has less impact on causal attributions toward success or failure. On talking about expectations, students show more willpower to perform more hard work on getting high grades. The successful students primarily carried emotions of gratification and pride. On the contrary, facing with failure, college students showed more expectations to improve in future and carried emotions of guiltiness and complaining and they have stronger emotional responses after getting success.

Hassaskhah and Vahabi (2010) investigated attributions among children, teenagers, and adults toward their success and failure in learning English language. The results of the study indicated that nearly all three age-groups believed that effort was the most significant cause of their failure. After effort, difficulty of the task,

ability and luck were the causes attributed for the failure or success. All three groups reported luck was considered as least important factor. Moreover, mean score of children were high on controllability and changeability dimension as compared to other two groups.

Basturk and Yavuz (2010) surveyed 96 students from Turkish high schools with an average age of 18 with the aim to investigate the causal attributions for success and failure. The results explored that the students attribute their failure in mathematics to the difficulty of mathematical concepts, teachers lack subject mastery, poor teaching methods, injustice by the teacher.

Shaukat et al. (2010) examined internal and external attributions for success and failure of 300 post graduate students selected randomly from six disciplines viz. Physics, Chemistry, Mathematics, English, Education and Urdu. The results indicated that high achievers attributed their success to internal factors like interest, hard work and ability on the other side the low achievers attributed their failure to external factors ineffective teaching method, favouritism and irregularity of the teachers and internal factors like insufficient preparation and mental depression. Statistically significant difference found in attributing their success and failure between male and female students. Mean scores of girls were higher on both internal and external causes for their success and failure as compared to male students.

Cochran et al. (2010) studied causal attributions for success, attitude and aptitude in learning a foreign language on the sample of 648 university students. The results showed significant gender differences in effort attributions. The female students scored more on effort attributions for success as compared to their male counterpart.

Stewart et al. (2011) examined the efficacy of attributional retraining to reduce the occurrence of course failure in freshmen enrolled in an introductory psychology course. The main aim of the intervention was to replace lack of ability and bad luck attributions to more adaptive lack of efforts and poor study habits attributions which are controllable. The results revealed that the group who got attributional retraining were less likely to fail and achieved good scores. The investigators suggested that attributional retraining was effective, inexpensive and relatively easy to administer.

Gordeeva and Osin (2011) explored that optimistic attributional style for good events was associated with higher academic achievement in high school students and mediated the effect of academic performance upon self-esteem ($N = 224$). Optimistic attributional style for negative events predicted success in passing three difficult written entrance examinations in university entrants and optimistic attributional style for good events predicted success with success expectations as a mediator. The results indicate that attributional styles for positive and negative events are both related to well-being but are not uniform in their relationship to achievement in different academic settings.

Pishghadam and Motakef (2011) surveyed Iranian students from Humanities Sciences and Mathematics disciplines. The sample of the study was 708 high school students. The results showed that mathematics and science students showed high mean scores in attributing their success in language learning to positive emotions and self-image as compared to Humanities students.

Gargari et al. (2011) examined the relationship between academic procrastination and causal attribution on 203 undergraduate students from English, French and Literature students of Tabriz University of Iran and found that the students who attribute their success as internal and controllable factors showed low degree of academic procrastination and the students who attributed their failure to internal and stable factors showed high degree of academic procrastination. The results showed negative significant correlation between procrastination and causal description for the success, and a positive correlation between procrastination and causal explanation for the failure reasons.

Kizgin and Dalgin (2012) showed that the persons who make internal attributions for the event that occurred and give importance to the efforts make more reliable assessment of their success and failure

Mahasneh et al. (2013) studied the correlation between attribution styles, personality traits, gender and academic specialization among the students of Hashemite university. The results revealed that there is positive correlation between positive attribution style and extroversion. And there is no significant correlation between negative attribution style and personality trait and no significant gender differences have been found with respect to attribution style.

Dasinger (2013) surveyed 331 college students from 24 sections studying intermediate Algebra with the aim to determine if relationship existed between exam scores and student's attributions of their achieved scores in developmental mathematics and to see if significant difference between male and females and high & low achievers. The results indicated that low graded students gave external, stable and uncontrollable attributions for their failure but high achievers attributed internal, stable and controllable factors for their success. Apart from this, there was no significant differences between low and high achieving students with respect to locus of causality and stability dimensions but significant differences appeared in personal controllability dimension. Further, female attributed internal factors for their achieved score more as compared to male students.

Dong et al. (2013) surveyed 156 students of Midwestern University, USA on open ended questionnaire, where students free to give multiple causal attributions for their success and failure. The results revealed that the effort was the first rated attribution for the success followed by teacher, practice and text book. On the other side, students attributed lack of efforts, interest, practice, time management, teacher, bad luck for explaining their failure.

Gobel et al. (2013) explored statistically significant difference in the attribution rating for success and failure between rural and urban area students in learning English as a second language. Urban area students attribute their success to the internal causes like, ability, sustained efforts and study skills as compared to rural area students. Urban area students showed strong beliefs in their ability to get success in language learning class.

Erten and Burden (2014) studied the relationship between academic self-concept, classroom test performance and causal attribution on 267 Turkish students. The results of multiple regression analysis showed that the academic self-concept, ability, interest and teacher related attributions were the good predictors of the performance in the class test. Moreover, the most frequent cited attributions for the test performance were uncontrollable and stable. The ability attribution, academic self-concept, interest attribution, and teacher attribution were the best predictors of test performance.

Solar (2015) showed that the effort and luck were attributed for the academic performance by 3rd year Biology major students. Apart from this, effort was given highest percentage, while luck had least percentage in overall rank. Furthermore, statistically significant differences have been found between the groups of 3rd and 4th year students in attributing their performances in the class tests, projects, workbooks, class participation, laboratory experiments and attendance categories.

Leana-Tascilar (2016) advocated that the girls outperformed the boys on the use of self-regulated learning skills i.e. planning, strategy using and assessment and total self-regulated learning skills. No significant difference found between male and female students with respect to causal attribution for success and failure. Further, significant positive intercorrelation was found between the locus of causality and motivation and action to learn; planning, strategy using and assessment and total scores of self-regulated learning skills. Apart from this, significant and positive intercorrelation was found between personal control and motivation and between strategy using and assessment and total scores of self-regulated learning skills. Further, results of regression analysis showed that stability predicts 6% of motivation and action to learn and planning and predicts 4% of the lack of self-directedness, locus of causality predicts 9% of strategy using and assessment, and 8% of total self-regulated learning skills.

Genc (2016) analysed Turkish tertiary level EFL learner's attributions to success and failure and the effects of gender and age. The results indicated that EFL (English as a Foreign Language) learners attributed interest, ability, effort, luck along with it the influence of teacher and school for their success whereas lack of efforts, ability and interest, the effect of teacher and school, task difficulty, and luck attributed causes for their failure. In addition to this, female students attributed external factors more than their male counterparts. Lastly, the study exposed that age was not a significant factor in EFL learner's attribution to success and failure.

Mohammadi and Sharififar (2016) revealed that learners attributed their success and failure to both internal and external factors. Further, positive and significant intercorrelation has been found between gender, proficiency level and attributions.

Johnson (2016) surveyed 139 (88 traditional, 51 non-traditional) students on motivational measures viz. self-determination, attribution, and expectancy-value. The results revealed that non-traditional students showed significantly higher degree of interest and teacher's influence, apart from this, results of two stepwise regression analyses indicated that ability-attribution and cost-value variables predict traditional student's academic achievement, and self-efficacy and peer-personal support variables predict non-traditional student's academic achievement.

Gosiewska-Turek (2017) examined causal attribution for success and failure in learning English as a second language of Polish secondary school students. The results indicated that successful students attribute internal factors like efforts and ability for their success and unsuccessful students attribute external factors like luck and difficulty of the task for their failure.

Lohbeck et al. (2017) investigated academic self-concept and causal attributions for success and failure among elementary school students and found that boys attributed high ability for their success, while girls attributed low ability and difficult task for their failure.

Niels and Janneck (2017) conducted a study on the sample of 109 participants with the aim to explore the influence of computer related causal attributions on the problem-solving motivation of the online users and explored that users with favourable attribution styles possess high level of problem solving motivation as compared to the users with unfavourable attribution styles.

Hamm et al. (2017) gave attributional retraining and stress reduction treatments to first year students who had different levels of cognitive elaboration in online learning environment. The results revealed that students with low cognitive elaboration, who received attributional retraining scored more in class test than their peers who got stress reduction treatment. Path analysis indicated that attributional retraining performance was mediated by causal attributions, perceived control and positive and negative achievement emotions.

Saez et al. (2018) surveyed 694 students from 14 programs and 5 universities of the province of Chile with the aim to analyse the relationship between willingness

to study strategies, causal attributions and self-efficacy of the students. The results showed that there was positive and strong correlation between willingness to study strategies and effort attributions for success and weak positive association with ability attribution for success. There was negative and weak relationship between willingness to study strategies and causal attributions for failure. Self-efficacy showed a strong and positive association with willingness to study strategies, but weak association with ability and effort attributions for success but negative correlation with causal attributions for failure.

Maymon et al. (2018) investigated the correlation between causal attributions and emotions in academic computation technological challenges at post-secondary level. The results revealed that causal attributions of the students had significant impact on the emotions related to computational technological challenges. Further, the results confirmed that stability dimension predicted more negative emotions specifically, in unexpected computer problems and internal and personally controllable attributions for computational challenges showed mixed effects on emotions. Also, personally controllable attributions are important for learning, perseverance, and academic achievement.

2.4 SUMMARY OF REVIEWS ON CAUSAL ATTRIBUTION

From the review of related literature regarding causal attribution, it can be summarised that Wolleat et al. (1980), Beyer (1998) and Lohbeck et al. (2017) advocated that the male students attributed their success to their ability while female students attributed their success to efforts. Apart from this, female students attributed their failure to the lack of ability in mathematics and task difficulty. Cochran et al. (2010) reported that female students scored more on effort attributions for success as compared to their male counterpart. Gobel et al. (2013) revealed that the urban area students attribute their success to the internal causes like, ability, sustained efforts and study skills as compared to rural area students. Pishghadam and Motakef (2011) mathematics and science students showed high mean scores in attributing their success in language learning to positive emotions and self-image as compared to Humanities students. Cortes-Suarez and Sandiford (2008), Perry et al. (2008), Soric (2009), Hassaskhah and Vahabi (2010), Basturk and Yavuz (2010), Shaukat et al. (2010), Dasinger (2013), Genc (2016),

Mohammadi and Sharififar (2016) & Gosiewska-Turek (2017) reported that the successful students attributed their success to internal, stable, personally controllable factors and unsuccessful attributed their failures to external, unstable other than personal controllable and external controllable dimension. On the contrary, Lei (2009) reported that college students attributed their successful results to external factors, while in failure to internal factors. Saez et al. (2018) positive and strong correlation between willingness to study strategies and effort attributions for success and weak positive association with ability attribution for success. Gargari et al. (2011) showed negative significant correlation between procrastination and causal description for the success, and a positive correlation between procrastination and causal explanation for the failure reasons.

Vlachou and Buchel (2000) found no significant correlation between success and failure outcomes for effort, ability, task and luck. However, Gobel and Mori (2007) found statistically significant correlation between attributions of ability, task difficulty and luck and exam scores. Dong et al. (2013) advocated that effort was the first rated attribution for the success followed by teacher, practice and text book. On the other side, students attributed lack of efforts, interest, practice, time management, teacher, bad luck for explaining their failure. Zimmerman (2000) explored that self-regulated learners are more likely to comprehend poor performance as being due to inadequate attempts or the execution of futile learning strategies. Leana-Tascilar (2016) indicated that the girls scored higher on self-regulated learning skills such as planning, strategy using and assessment and total self-regulated learning skills and no significant gender difference has been found with respect to causal attribution for success and failure.

Gibb et al. (2002) reported that the students who made internal and stable attributions for negative outcomes, have low level of academic ability and receive low GPA. While, Perry et al. (2001) revealed that students with low self-control, obtained worse grades and have lesser inspiration and apply less efforts. Haynes et al. (2008) reported that attributional retraining may enhance the mastery motivation but did not show any influence on performance motivation. Stewart et al. (2011) revealed that the group of students who got attributional retraining were less likely to fail and achieved good scores. Hamm et al. (2017) showed that students with low

cognitive elaboration, who received attributional retraining scored more in class test than their peers who got stress reduction treatment and the results of path analysis indicated that attributional retraining performance was mediated by causal attributions, perceived control and positive and negative achievement emotions. Gordeeva and Osin (2011) showed that attributional styles for positive and negative events are both related to well-being but are not uniform in their relationship to achievement in different academic settings. Mahasneh et al. (2013) found that there is positive correlation between positive attribution style and extroversion. And there is no significant correlation between negative attribution style and personality trait and male and female students do not differ significantly on their attribution style. Anthony (2000) found university students and professors tended to view factors outside their control as more influential than those within their control. Hsieh and Schallert (2008) advocated that self efficacy was the strong predictor of the success of the students and the students who attributed effort attributions for the failure have higher self efficacy. Erten and Burden (2014) found that the academic self-concept, ability, interest and teacher related attributions found good predictors of the performance in the class test. Maymon et al. (2018) confirmed that stability dimension predicted more negative emotions specifically, in unexpected computer problems and internal and personally controllable attributions for computational challenges showed mixed effects on emotions.

Thus, from the literature review, a number of researches were conducted in different countries and explored the importance of internal, stable and controllable attributions in the academic achievement. There is another variable i.e. self emotional management, which is influencing the academic self-regulation and performance of higher education students. Hence, self emotional management of different students reviewed and provided below.

2.5 STUDIES PERTAINING TO SELF EMOTIONAL MANAGEMENT

Different researches conducted focussing on self emotional management has been reviewed and are presented below.

Gross (1998) reported that emotion regulation is influenced by a student's efforts to regulate their study environment. McCraty et al. (1999) suggested that

learning emotional competence skills right in the childhood stage lead to healthier physiological response pattern, consequently, self-emotional management skills should be integrated into school curricula in order to teach emotional management skills.

Pekrun et al. (2004) reported that positive emotions like joy, hope and pride are positively correlated with measures of general self-esteem, self-efficacy, perceived academic control and interests. On the other hand, negative test emotions of anger, anxiety, shame and helplessness were negatively associated with these beliefs.

Wosnitza and Volet (2005) examined the impact of emotions on social online learning and documented that emotions played an important role in collaborative learning and help-seeking approach helps the learners in managing their emotions.

Liljedahl (2005) found that positive emotions like enjoyment, hope, pride, joy motivate students to work on mathematical problem-solving. On the other hand, Turner and Waugh (2007) reported that negative emotion like embarrassment hampers the motivation of the student in solving mathematical problems.

Pekrun (2006) reported that value-related beliefs that students carry to the learning condition and certain other individual characteristics like age and gender affect their achievement emotions. The achievement emotions influence the motivational, cognitive and regulatory processes mediating learning, academic achievement and psychological well being.

Yip and Martin (2006) examined the relationship between sense of humour, emotional intelligence and social competence in 111 undergraduate students. The results indicated that emotional management was positively correlated with self-enhancing humour and social competence and negatively correlated to aggressive and self-defeating humour.

Goetz (2006) conducted a survey on 200 students from grade 7 to 10 and advocated that there is a direct association between student's cognition, academic emotions and the social environment. Further, he reported that student's cognitions were mediated the relationship between social environment and student's emotional experiences.

Wei (2007) surveyed 926 college students with the aim of exploring the relationship between emotion management ability and mental health. The results of multiple regression analysis showed a significant correlation between emotion management and mental health.

Zembylas (2008) analysed the emotional talks of adult learners enrolled in the distance education master level program. The results explored that new adult learners reported that instructor and peer help was helpful in managing their emotions, also found variance in emotional responses of men and women with respect to social and gender roles. Females showed negative emotions resulting from not being able to balance their professional, family, and social life in online environments.

McClain (2009) investigated the relationship of emotional intelligence to academic performance and perceived stress on the sample of 92 first-year medical students of University of Kansas School of Medicine and found that the students who are better in managing their emotions showed less stress and high GPA score as compared to other students.

Eisenberg et al. (2010) found that the development of emotional self-management is rapid in the childhood stage and steadily improves in the period of adulthood. The individual differences in children's self-regulation are stable and negatively correlated with some types of externalizing problems. The findings for internalizing problems are less consistent and robust. The self emotional management abilities are associated with both heredity and environmental factors and their interaction.

Pintrich (2004) and Xu (2011) stated that emotion management is positively related to time management. However, Xu et al. (2013) found the role of managing time in emotion management is mediated by help-seeking, but Xu et al. (2014) reported no relationship between time management and emotion management on Chinese student's sample.

Corno (2004) and Xu et al. (2013) found that self emotion management is positively correlated with monitoring motivation in the online learning environment.

Goetz et al. (2006) found that students' emotions of joy and pride were positively correlated with their general self-esteem, academic self-concept and valuation of learning as well as with knowledge and achievement.

Xu (2011) and Raffaelli et al. (2005), McRae et al. (2008) reported that female students exhibit more effort to regulate their emotion. Similarly, Woehle (2015) found a significant gender difference in regulating emotions. However, Xu et al. (2014) reported no significant gender difference with respect to emotion management in the online learning group.

Aggarwal and Saxena (2012) compared the undergraduate students of Arts, Science and Commerce programs with respect to their emotional intelligence and reported that science students scored higher than arts and commerce students, whereas commerce students outperformed arts students on all the dimensions of emotional intelligence.

Xu et al. (2013, 2014) conducted a study in order to analyse emotion management in online group work in 298 undergraduate Chinese students from 80 online study groups, the same study was conducted in 2014 by taking 307 students enrolled in online learning and the results of both of the studies reported that self-emotional management in group work was positively correlated with help seeking, monitoring motivation, feedback and peer learning.

Poorani and Arulsamy, S. (2015) surveyed 220 females studying in MBA and MCA programs and found that females of the MBA program surpassed females of MCA program on emotional self-regulation and empathy dimensions of emotional intelligence. However, female MCA students showed a higher level of motivation than female MBA students.

Jasso (2016) surveyed 493 first-year college students in order to study the role of authentic leadership and emotional intelligence in academic success. The results revealed that students who scored more on managing own emotions dimensions have a high level of self-awareness, moral and ethical behaviour. The students who scored higher on authentic leadership are able to manage their emotions more as compared to others.

Olagundoye (2016) studied the correlation between leadership styles and emotional intelligence on the sample of 185 IT professional from the US and the results confirmed that transformational style of leadership was the good predictor of self-emotional management but, transactional style of leadership did not predict self-emotional management among IT professionals.

Dubey and Bakhshi (2018) studied the emotional intelligence of management students on the sample of 120 management students from different colleges and found that male students surpassed female students on the score of managing own emotions. Apart from this, management students showed weak self-emotional management skills.

Ramana and Devi (2018) studied the relationship between emotional intelligence and academic achievement of intermediate students and found that the students of non medical stream scored higher on all the dimensions of emotional intelligence viz. Intrapersonal Awareness, Interpersonal Awareness, Intrapersonal Management and Interpersonal Management than students of the medical stream.

2.6 SUMMARY OF REVIEWS ON SELF EMOTIONAL MANAGEMENT

From the backdrop of the above review of related literature, it can be summarised that Gross (1998) reported that emotion regulation is influenced by student's efforts to regulate their study environment. McCraty et al. (1999) self-emotional management skills should be integrated with school curricula in order to teach emotional management skills. Pekrun et al. (2004) revealed that positive emotions of joy, hope and pride are positively associated general self-esteem, self-efficacy, perceived academic control and interests and motivation, on the other hand, negative test emotions of anger, anxiety, shame and helplessness were negatively associated with these beliefs. Liljedahl (2005) found that positive emotions like enjoyment, hope, pride, joy motivate students to work on mathematical problem-solving. On the other hand, Turner and Waugh (2007) reported that negative emotion like embarrassment hampers the motivation of the student in solving mathematical problems. Wosnitza and Volet (2005) examined the impact of emotions on social online learning and documented that emotions played an important role in collaborative learning and help-seeking approach helps the learners

in managing their emotions. Pekrun (2006) documented that the achievement emotions influence the motivational, cognitive and regulatory processes mediating learning, academic achievement and psychological wellbeing. Goetz et al. (2006) found that students' emotions like joy and pride were positively correlated with their general self-esteem, academic self-concept and valuation of learning as well as with knowledge and achievement. Goetz (2006) advocated that there is a direct correlation between cognition, academic emotions and the social environment. Yip and Martin (2006) indicated that emotional management was positively correlated with self-enhancing humour and social competence and negatively correlated to aggressive and self-defeating humour. Wei (2007) found a significant correlation between emotion management and mental health of college students. Zembylas (2008) advocated that instructor and peer help was helpful in managing their emotions and females showed negative emotions resulting from not being able to balance their professional, family, and social life in online environments. McClain (2009) showed that the students who are better in managing their emotions showed less stress and high GPA score as compared to other students. Eisenberg et al. (2010) opined that the development of emotional self-regulation is rapid in childhood and steadily improves the phase of adulthood. Pintrich (2004) and Xu (2011) stated that emotion management is positively related to time management. However, Xu et al. (2013) found the role of managing time on emotion management is mediated by help-seeking, but Xu et al. (2014) reported no relationship between time management and emotion management in Chinese student's sample. Corno (2004) and Xu et al. (2013) found that emotion management is positively correlated with monitoring motivation in the online learning environment. Xu (2011) and Raffaelli et al. (2005), McRae et al. (2008) reported that female students exhibit more effort to regulate their emotion. Similarly, Woehle (2015) found a significant gender difference in regulating emotions. However, Xu et al. (2014) reported no significant gender difference with respect to emotion management in the online learning group. Xu et al. (2013, 2014) found that emotion management in group work was positively related to helping to seek, monitoring motivation, feedback and peer learning. Jasso (2016) reported that the students who scored higher on authentic leadership are able to manage their emotions more as compared to others. Olagundoye (2016) advocated that the transformational style of leadership was the

good predictor of self-emotional management. Dubey and Bakhshi (2018) found that male students surpassed female students on the score of managing own emotions and also revealed that management students showed weak self-emotional management skills than their counterparts.

2.7 SIGNIFICANCE OF THE STUDY

Self-regulated learning is very important for the success in higher education, as it enables the students to manage their learning environment on their own. The process of self-regulation highly depends upon the active participation of the learners. The research on self-regulated learning strategies has become an area of recent researches among the researchers. There has been quite an interest to understand this process so that the learners can be facilitated in their learning. This is a process where the students learn through experiences and self-reflection. Models of self-regulated learning fall out against the conception of intelligence as a characteristic that varies among students and is unchangeable after a certain point in life. Though there are different learners with different levels of intellect all can be good at self-regulation of their learning.

To be good or bad at self-regulation over time or across different classes is a question of serious debate for researchers. All students can learn how to regulate their learning regardless of age, gender, competence and knowledge level. Self-regulated learning is not an innate ability but an acquired quality through which the students are able to improve their functioning in terms of their behaviour, knowledge and motivation. This helps them to improve their academic achievement and performance. Self-regulated learning framework suggested by the previous researchers includes the functioning of cognitive, metacognitive, motivational and behavioural components. Thus, to be good at self-regulation needs to be good at all cognitive, metacognitive, motivational and behavioural factors. There are some studies conducted on self-regulated learning strategies of children and adolescents (Pintrich et al.,1990; Wolters et al., 1996; Patrick et al., 1999 and Schwinger and Stiensmeier-Pelster, 2012; Xu et al., 2010) and most of the studies in the context of higher education have been conducted in western countries (Naumann et al., 2003; Zusho et al., 2003; Naumann et al., 2003; Chyung, 2007 and Ahmed, 2018). The

present research is a new effort to bring into focus the importance of self-regulated learning in the Indian context. It will help to answer some of the questions that arise in the mind of the researcher that, why do some students excel academically while other students struggle to pass? What drives some students to actually learn and appreciate the course material? Why do some students study and others do not? Why do some students procrastinate? Why do some students regulate their emotions but some do not? The students who regulate their learning and emotions are having high academic performance, self-efficacy, self-confidence, less procrastinators and stress free (Pintrich, et al., 1990; Schunk et al., 2000; Zimmerman, 2000 and Nikos and George, 2005) and attribute their success to their ability, efforts and hard work and feel confident (Weiner, 1980; Ames et al., 1988). Thus, the second important aspect of the learner is his causative attributions for his success or failure in certain tasks. As is evident, the unsuccessful student will blame his failure to circumstances beyond his or her control viz. feeling sick, poor night's sleep, difficult test (Zimmerman, 2000; Perry et al., 2001; Gibb et al., 2002). However, successful people believe that their success is due to their ability or effort. If people believe that they have no ability to perform a task and will remain unsuccessful then they will be less likely to try and put efforts but if they do, it is doubtful that they give 100% efforts and get desirable results. This may be due to lack of motivation, lack of self-regulation and may have negative effects on their future. Thirdly, the role of emotions in pursuing any task cannot be ruled out. If an individual performs a task with positive emotions like joy and happiness then the person is likely to enjoy and complete the task effortlessly.

However, if an individual performs the task with negative emotions like anger, anxiety, boredom then the individual is most likely to avoid the tasks. As these negative emotions make the task uninteresting and hinder the individual put in wholehearted efforts to complete the task in the required time. Thus, Emotional management plays a very important role in academic self-regulation process of an individual. Therefore, it is very important to know what kind of attribution do the higher education students have and how it is influencing their emotions and academic self-regulation. Apart from this, it has been seen that despite enormous research and significant investment in educational programs and services,

researchers, teachers and higher education administrators continue to grapple with the problem of why many students who enroll in college fail to complete a degree. Also, in the stressful academic settings, where, a learner has to face high-stakes testing, challenging assignment and projects. This stressful academic situation always leads to elicit negative emotional reactions like anxiety, boredom and frustration. This inability of managing the negative emotional reactions sometimes force the learner to leave the course or change the course. The question of student retention is the main concern of colleges and universities. Moreover, not much of work has been done in studying the relationship of self-regulated learning strategies and emotional management among students at higher education level in India. Finally, what type of causal attributions are made by the student of higher education with respect to success and failure. How these attributions are related to self-emotional management is also an important process to understand. Lastly, how causal attributions influence the self-regulated learning of higher education students needs to be understood. Hence, this research will create knowledge of higher education students of different programs and semesters and develop our understanding of the construct under consideration. This study will be helpful for the administrators, policy makers, curriculum planners and teachers to identifying different problems of the students in the process of self-regulation and will help the undergraduate and postgraduate students in using appropriate self-regulated learning strategies, developing positive attributional beliefs and helping them in managing their emotions in every kind of situation for achieving success in their life.

2.8 STATEMENT OF THE PROBLEM

Owing to the above significance of the problem, the present study is entitled as, **“Self Regulated Learning Strategies of Higher Education Students in Relation to Causal Attribution and Self Emotional Management”**. The investigator has explored the self-regulated learning strategies, causal attribution and self-emotional management of higher education students of different programs at UG viz. BCA, BBA, B.Sc. and B. Com and PG viz. MCA, MBA, M.Sc. and M.Com. Further, the influence of causal attribution and self-emotional management on self-regulated learning strategies has been studied.

2.9 OPERATIONAL DEFINITION OF THE TERMS USED

The variables used in the study has been operationally defined as given below.

2.9.1 Self Regulated Learning Strategies

Self-regulated learning is a process, where the learner engages motivationally, cognitively, metacognitively & behaviourally and use their repertoire of learning strategies in order to improve his or her own learning. In the present study, self-regulated learning strategies has been operationally defined as the motivational orientations of the students and their use of different learning strategies for a course under study. Motivational beliefs are studied in terms of “Intrinsic Goal Orientation, Extrinsic Goal Orientation, Task Value, Control of learning, Self-Efficacy for Learning and Performance and Test Anxiety”. Similarly, learning strategies are studied in terms of “Rehearsal, Elaboration, Organization, Critical Thinking, Metacognitive Self-Regulation, Time and study environment, Effort regulation, Peer learning, Help-Seeking” (Pintrich, et al, 1991).

2.9.2 Causal Attribution

Causal attribution has been operationally defined as the process by which individuals attribute the causes of their success and failure. Most of the causes to which students attribute their successes or failures are characterized in terms of four dimensions: locus of causality (location of the cause internal or external to the person), stability (whether the cause stays the same or can change), Personal controllability and external controllability.

Locus of Causality is meant by the internal attributions which are lying within oneself (e.g. ability, study habits, efforts and health) and external attributions which are lying outside oneself (e.g. luck, task difficulty, help and instructor’s bias). The stability attributions are measured as stable (e.g. ability, study habits, instructor’s bias and task difficulty) and unstable (e.g. luck, mood, health, efforts and help). Likewise, the personally controllable attributions are the attributions

which can be controlled by the person (e.g. efforts and study habits) and externally controllable attributions are the attributions which can be controlled by the other person (e.g. instructor's bias)

2.9.3 Self Emotional Management

Self-emotional management is operationally defined as the ability to manage own emotions so that they facilitate rather than interfere with the task at hand and help in achieving intended tasks.

2.9.4 Successful Students

In the present study, successful students were the students who perceived that they were successful to achieve the desired score (Dasinger, 2011).

2.9.5 Unsuccessful Students

In the present study, unsuccessful students were the students who perceived that they failed to achieve the desired score (Dasinger, 2011).

2.10 DELIMITATIONS OF THE STUDY

The present study has been delimited to the following areas:

- 1) It was delimited to higher education students studying at UG and PG level in government and private universities in Punjab.
- 2) It was delimited to B. Com, B.Sc., BBA and BCA programs at UG level and M. Com, M.Sc., MBA and MCA programs at PG level.

2.11 OBJECTIVES

The present study has been designed to achieve the following objectives:

- 1) To identify the causal attribution of higher education students of the different program with respect to successfulness.
- 2) To identify the level of self-emotional management of higher education students with respect to program and semester.

- 3) To study the relationship of successful and unsuccessful student's causal attributions to exam score studying in different semesters of different programs.
- 4) To study the significant differences in causal attribution, self-regulated learning strategies & self-emotional management of higher education students with respect to Gender and Successfulness.
- 5) To study the significant differences in self-regulated learning strategies & self-emotional management of higher education students with respect to Program and Semester.
- 6) To study the influence of causal attribution on self-regulated learning strategies among higher education students.
- 7) To study the influence of self-emotional management on self-regulated learning strategies among higher education students.
- 8) To study the inter-relationship among self-regulated learning strategies, causal attribution and self-emotional management of higher education students studying in different semesters of different programs.

2.12 HYPOTHESES

- 1) There is no significant relationship between successful and unsuccessful student's causal attributions to exam score of higher education students.
- 2) There is no significant difference in causal attribution of higher education students with respect to gender.
- 3) There is no significant difference in causal attribution of higher education students with respect to successfulness.
- 4) There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher students.
- 5) There is no significant difference in self-regulated learning strategies of higher education students with respect to gender.
- 6) There is no significant difference in self-regulated learning strategies of higher education students with respect to successfulness.
- 7) There is no significant interaction effect of gender and successfulness on the self-regulated learning strategies of higher education students.

- 8) There is no significant difference in self emotional management of higher education students with respect to gender.
- 9) There is no significant difference in self emotional management of higher education students with respect to successfulness.
- 10) There is no significant interaction effect of gender and successfulness on the self emotional management of higher education students.
- 11) There is no significant difference in self-regulated learning strategies of higher education students with respect to program of study.
- 12) There is no significant difference in self-regulated learning strategies of higher education students with respect to the semester of study.
- 13) There is no significant interaction effect of program and semester of study on the self-regulated learning strategies of higher education students.
- 14) There is no significant difference in self emotional management of higher education students with respect to program of study.
- 15) There is no significant difference in self emotional management of higher education students with respect to the semester of study.
- 16) There is no significant interaction effect of program and semester of study on the self emotional management of higher education students.
- 17) There is no significant influence of causal attribution on self-regulated learning strategies among higher education students.
- 18) There is no significant influence of self-emotional management on self-regulated learning strategies among higher education students.
- 19) There is no significant inter-relationship among self-regulated learning strategies and self-emotional management of higher education students.
- 20)
 - a) There is no significant inter-relationship among self-regulated learning strategies and locus of causality dimension of causal attribution of unsuccessful higher education students.
 - b) There is no significant inter-relationship among self-regulated learning strategies and locus of causality dimension of causal attribution of successful higher education students.
- 21)
 - a) There is no significant inter-relationship among self-regulated learning strategies and stability dimension of causal attribution of unsuccessful higher education students.

- b) There is no significant inter-relationship among self-regulated learning strategies and stability dimension of causal attribution of successful higher education students.
- 22)
- a) There is no significant inter-relationship among self-regulated learning strategies and external controllability dimension of causal attribution of unsuccessful higher education students.
 - b) There is no significant inter-relationship among self-regulated learning strategies and external controllability dimension of causal attribution of successful higher education students.
- 23)
- a) There is no significant inter-relationship among self-regulated learning strategies and personal controllability dimension of causal attribution of unsuccessful higher education students.
 - b) There is no significant inter-relationship among self-regulated learning strategies and personal controllability dimension of causal attribution of successful higher education students.

CHAPTER – 3

RESEARCH METHODOLOGY

In the preceding chapters, the problem of the study, objectives, hypotheses, review of related literature was discussed. The present chapter deals with the method of study which covers sample, design of the study, procedure, tool selection, tool validation and statistical techniques used for the analysis of data.

3.1 RESEARCH METHOD AND SAMPLING

The research was conducted with the help of the descriptive survey method of research. The descriptive survey is a quantitative method, with the help of which investigator can collect quantified information of the population by using the sample of that population

3.1.1 Population

The population for the present study was the undergraduate and postgraduate students of Punjab, enrolled in Sciences, Computer Application, Business or Commerce programs in the academic year of 2017-2018. The total number of students enrolled in UG programs in various universities and colleges were 688777, in which males were 345399 (50.1%) and females were 343378 (49.8%). In PG programs, a total number of students were 117509, in which males were 39504 (33.6%) and females were 78006 (66.3%). The distribution of the districts, number of universities and colleges of Punjab have been presented in table 3.1, table 3.2 and table 3.3.

Table 3.1: Distribution of the Districts of Punjab

S. No.	Majha	Doaba	Malwa
1	Pathankot	Hoshiarpur	Firozpur
2	Gurdaspur	Kapurthala	Bathinda
3	Amritsar	Jalandhar	Ludhiana
4	Tarn Taran Sahib	Nawashahar	Moga
5		Roopnagar	Barnala

Contd. ...

S. No.	Majha	Doaba	Malwa
6			Mansa
7			Faridkot
8			Fatehgarh Sahib
9			Sangrur
10			Muktsar
11			Mohali
12			Fazilka
13			Patiala

Table 3.2: Distribution of the Colleges in Punjab

Total number of Colleges	Number	Total number of government and private colleges	Number
General Colleges	485	Private Un-Aided	643
Commerce	4	Private Aided	180
Computer Application	19	Government	197
Management	39		
Science	2		

Table 3.3: Distribution of the Universities in Punjab

Total Universities in Punjab	Number
Central University	1
State Public Universities	9
State Private Universities	15
Deemed University- Government	1
Deemed University- Private	1

3.1.2 Sample Size

In order to select the statistically significant sample size for the present study, online sample calculator was used which considers the following values viz.

population, confidence level and margin of error. This online calculator was based on the following formula developed by Krejcie and Morgan (1970).

$$S = \frac{\chi^2 NP(1-P)}{d^2 (N-1) + \chi^2 P(1-P)}$$

S is the required sample size.

χ^2 is the table value of chi-square for 1 degree of freedom at the desired confidence level (0.05 = 3.841).

N is the population size.

P is the population proportion (assumed to be 0.50 since this would provide the maximum sample size).

d is the degree of accuracy expressed as a proportion (error margin) (0.05).

Population of undergraduate students = 688777, Confidence level = 95%, Error margin = 4 and calculated sample size = 600. Further, population of postgraduate students = 117509, Confidence level = 95%, Error margin = 4 and calculated sample size = 598. However, actual collected data from UG students was 885 and from PG students was 595. Keeping in view the scope of the study, the convenience sampling technique was used to collect the data from three regions of Punjab i.e. Majha, Malwa and Doaba. The data was collected from government and private universities and colleges from all three regions of Punjab. The selection of districts has been done keeping in view the convenience to reach the respondents. From the Majha region, three districts viz. Amritsar, Gurdaspur and Pathankot, from Malwa region, six districts viz. Ludhiana, Mohali, Ropar, Moga, Patiala and Barnala and from Doaba region, two districts viz. Jalandhar and Kapurthala were selected for data collection. Data was collected mainly from 3 departments viz. Sciences, Computer Application and Business & Commerce. Further, data comprised of the students from a 2nd semester, 4th semester, 6th semester of UG programs viz. B.Sc., BCA, BBA and B. Com and 2nd semester of PG programs viz. M.Sc. (Chemistry),

MCA, MBA and M.Com. Further, data was collected online by using the URL links i.e. tinyurl.com/jyotisurvey1 for UG students and tinyurl.com/jyotisurvey12 for PG students and offline by visiting the colleges. Due permission has been taken from the respective authorities. Investigator personally visited various places for getting questionnaires filled. Thus, in total 1480 respondents (900 from UG and 580 from PG) filled the tools booklets on Self-Regulated Learning Strategies, Causal Attribution and Self Emotional Management. After data screening, the incomplete forms were removed from the dataset and finally data of 1424 respondents were considered for data analysis. The region wise, UG and PG level wise, gender-wise and program wise distribution of the sample is presented in table 3.4 and table 3.5.

Table 3.4: Distribution of the Sample with respect to Region, Level and Gender

Region	N	Total
Majha	495	1424
Malwa	432	
Doaba	497	
Level	N	Total
UG	864	1424
PG	560	
Gender	N	Total
Male	605	1424
Female	819	

Table 3.4 shows that 495 respondents were taken from the Majha region, 432 from the Malwa region and 497 from Doaba region. Further, in the total sample, 864 respondents were from UG level and 560 from PG level and 605 were male students and 819 were female students.

Table 3.5: Distribution of the Sample with respect to Different Programs

Program	N
B.Com 2 nd semester	66
B.Com 4 th semester	80
B.Com 6 th semester	83
Total	229
B.Sc. 2 nd semester	90
B.Sc. 4 th semester	65
B.Sc. 6 th semester	99
Total	254
BBA 2 nd semester	63
BBA 4 th semester	51
BBA 6 th semester	53
Total	167
BCA 2 nd semester	66
BCA 4 th semester	76
BCA 6 th semester	72
Total	214
M.Com 2 nd semester	79
M.Sc. 2 nd semester	152
MBA 2 nd semester	179
MCA 2 nd semester	150
Total	1424

Table 3.5 shows that 66 respondents were from B. Com 2nd semester, 80 from B. Com 4th semester and 83 from B. Com 6th semester, hence, B. Com comprised of 229 respondents. Further, 90 students from B.Sc. 2nd semester, 65 from B.Sc. 4th semester and 99 from B.Sc. 6th semester, thus, B.Sc. comprised of 254 respondents. Further, 63 from BBA 2nd semester, 51 from BBA 4th semester and 53 from BBA 6th semester, hence, BBA comprised of 167 respondents. Further, 66 from BCA 2nd semester, 76 from BCA 4th semester and 72 from BCA 6th semester, hence, BCA comprised of 214 respondents. From PG level, 79 respondents were selected from the M.Com 2nd semester, 152 from M.Sc. 2nd semester, 179 from MBA 2nd semester and 150 from MCA 2nd semester.

3.1.3 Distribution of the Sample on the basis of Perceived Successfulness among Higher Education Students

The data thus collected, quantified, processed and presented in the form of frequency and percentage pertaining to the perceived successfulness by the higher education students. The distribution of the sample has been reported in the following table 3.6.

Table 3.6: Frequency Distribution of the Sample based on Successfulness and Semester of Different UG & PG Programs

Program	Semester	Unsuccessful	Successful	Total
B. Com	2nd Sem	8	58	66
	4th Sem	21	59	80
	6th Sem	22	61	83
B. Sc	2nd Sem	42	48	90
	4th Sem	24	41	65
	6th Sem	29	70	99
BBA	2nd Sem	26	37	63
	4th Sem	19	32	51
	6th Sem	27	26	53
BCA	2nd Sem	21	45	66
	4th Sem	20	56	76
	6th Sem	11	61	72
M. Com	2nd Sem	9	70	79
M. Sc	2nd Sem	44	108	152
MBA	2nd Sem	35	144	179
MCA	2nd Sem	27	123	150
Total	All	385	1039	1424

It is clear from table 3.6 that in B. Com 2nd semester there were only 8 students who had reported their achieved score as unsuccessful score and 58 students reported their achieved score as a successful score. In B. Com 4th semester there were 21 students who had reported their achieved score as unsuccessful score and 59 students reported their achieved score as a successful score. In B. Com 6th

semester there were 22 students who had reported their achieved score as unsuccessful score and 61 students reported their achieved score as a successful score. In B.Sc. 2nd semester there were 42 students who had reported their achieved score as unsuccessful score and 48 students reported their achieved score as a successful score. In B.Sc. 4th semester there were 24 students who had reported their achieved score as unsuccessful score and 41 students reported their achieved score as successful score. In B.Sc. 6th semester there were 29 students who had reported their achieved score as unsuccessful score and 70 students reported their achieved score as successful score. In BBA 2nd semester there were 26 students who had reported their achieved score as unsuccessful score and 37 students reported their achieved score as successful score. In BBA 4th semester there were 19 students who had reported their achieved score as unsuccessful score and 32 students reported their achieved score as successful score. In BBA 6th semester there were 27 students who had reported their achieved score as unsuccessful score and 26 students reported their achieved score as successful score. In BCA 2nd semester there were 21 students who had reported their achieved score as unsuccessful score and 45 students reported their achieved score as successful score. In BCA 4th semester there were 20 students who had reported their achieved score as unsuccessful score and 56 students reported their achieved score as successful score. In BCA 6th semester there were 11 students who had reported their achieved score as unsuccessful score and 61 students reported their achieved score as successful score.

In M. Com 2nd Semester there were only 9 students who had reported their achieved score as unsuccessful score and 70 students reported their achieved score as successful score. In M.Sc. 2nd Semester there were 44 students who had reported their achieved score as unsuccessful score and 108 students reported their achieved score as successful score. In MBA 2nd Semester there were 35 students who had reported their achieved score as unsuccessful score and 144 students reported their achieved score as successful score. In MCA 2nd Semester there were 27 students who had reported their achieved score as unsuccessful score and 123 students reported their achieved score as successful score. In total, there were 385 students who reported that they considered themselves as unsuccessful in the achieved score and 1039 reported that they considered themselves as successful in the achieved score.

The detailed list of colleges selected for collection of data in different regions of the Punjab state is presented below in table 3.7.

Table 3.7: List of Colleges / Universities from three Regions of Punjab

Region	District	Name of College/University	Region	District	Name of College/University	Region	District	Name of College/University
Majha	Amritsar	<ul style="list-style-type: none"> • Khalsa College, Amritsar • Khalsa College for Women, Amritsar • BBK DAV College for Women, Amritsar • DAV College, Amritsar • Guru Nanak Dev University, Amritsar • GNDU Regional Campus, Sathiala 	Malwa	Ludhiana	<ul style="list-style-type: none"> • Gujranwala Guru Nanak Khalsa College, Ludhiana • Guru Nanak Institute of Management & Technology, Ludhiana • Kamla Lohtia Sanatan Dharam College, Ludhiana • Arya College, Ludhiana • Government College for Girls, Ludhiana • DD Jain Collage, Ludhiana 	Doaba	Jalandhar	<ul style="list-style-type: none"> • DAV College Jalandhar • St. Soldier College, Jalandhar • Doaba College, Jalandhar • Lyallpur Khalsa College, Jalandhar • Khalsa College Lyallpur Institute of Management & Technology, Jalandhar • GNDU Regional Campus, Jalandhar • DAV university, Jalandhar
	Tarn Taran Sahib	Majha College for Women, Tarn Taran						
	Gurdaspur	<ul style="list-style-type: none"> • RR Bawa DAV College, Batala • Baring Union Charistan College, Batala • SL Bawa DAV College, Batala • Shanti Devi Arya Mahila College, Dinanagar 						

Region	District	Name of College/University	Region	District	Name of College/University	Region	District	Name of College/University
Majha	Pathankot	Adarsh Bhartiya College, Pathankot	Malwa	Ropar	Rayat Institute of Management, Ropar		Kapurthala	Kanya Maha Vidyalaya, Jalandhar
				Mohali	Rayat and Bahra University, Mohali			
				Patiala	Government Mohindra College, Patiala			Lovely Professional University, Phagwara
				Barnala	SD College, Barnala			

The number of respondents from each college, from various streams and from different regions i.e. Majha, Malwa and Doaba are presented in table 3.8, 3.9 and 3.10.

Table 3.8: Distribution of the Sample from Different Colleges of Majha Region of Punjab

College	Program																
	B. Com 2nd	B. Com 4th	B. Com 6th	B.Sc. 2nd	B.Sc. 4th	B.Sc. 6th	BBA 2nd	BBA 4th	BBA 6th	BCA 2nd	BCA 4th	BCA 6th	M.Com 2nd	M.Sc. (Chemistry) 2nd	MBA 2nd	MCA 2nd	Total
Khalsa College, Amritsar	4	10	2	20	10	10	-	-	-	-	-	1	10	26	-	17	110
RR Bawa DAV College, Batala	1	-	-	6	3	3	-	2	5	-	-	-	-	-	-	-	20
Baring Union Charistan College, Batala	1	-	5	5	3	5	-	2	6	-	-	5	-	-	-	-	32
SL Bawa DAV College, Batala	12	7	7	3	2	5	-	1	1	-	-	-	-	-	-	-	38
BBK DAV College for Women, Amritsar	-	1	-		5	5	-	2		6	4	5	2	-	-	-	30
Khalsa College for Women, Amritsar	-	8	11	-	-	-	10	10	2				10	-	-	-	51
GNDU Regional Campus, Gurdaspur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	16	20
GNDU Regional Campus, Sathiala	-	-	1		2	-	-	-	-	3	11	21		-	12	4	54
Majha college for women, Tarantaran	-	-	-		4	-	-	-	-	-	-	-	-	-	-	-	4
DAV College Amritsar	-	-	-	5		10	10	-	5	-	-	-	6	25	-	-	61
Adarsh Bhartiya College, Pathankot	-	1	-	-	-	-	-	-	-	5	1	1	-	-	-	-	8
Shanti Devi Arya Mehla College, Dinanagar	-	-	-	-	-	-	-	-	-	4	1	1	-	-	-	-	6
Guru Nanak Dev University, Amritsar	-	-	-	-	-	-	-	-	-				-	-	47	14	61
Total	18	27	26	39	29	38	20	17	19	18	17	34	28	51	63	51	495

Table 3.9: Distribution of Sample with respect to Different Colleges from Malwa Region

College	Programs																
	B. Com 2nd	B. Com 4 th	B. Com 6th	B.Sc. 2nd	B.Sc. 4th	B.Sc. 6th	BBA 2nd	BBA 4th	BBA 6th	BCA 2nd	BCA 4th	BCA 6th	M.Com 2nd	M.Sc. (Chemistry) 2nd	MBA 2nd	MCA 2nd	Total
Gujranwala Guru Nanak Khalsa College, Ludhiana	4	7	8	8	2	6	-	-	1	7	9	7	10	-	-	-	69
SD College, Barnala	4	5	5	5	-	5	-	-	-	3	1	-	-	-	-	-	28
Rayat and Bahra University, Mohali	2	-	6	10	4	2	1	2	-	3	-	-	6	29	16	6	87
Rayat Institute of Management, Ropar	9	10	5	-	-	-	-	7	6	-	-	6	-	-	9	1	53
Kamla Lohtia Sanatan Dharam College, Ludhiana	-	1	3	-	-	-	8	4	3	4	7	2	3	-	-	-	35
Arya College, Ludhiana			2		6	5	3				1	2	3	-	-	-	22
Government College for Girls, Ludhiana	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	2
Guru Nanak Institute of Management & Technology, Ludhiana	-	-	-	-	-	-	5	-	7	1	-	-	2	-	21	19	55

College	Programs																
	B. Com 2nd	B. Com 4 th	B. Com 6th	B.Sc. 2nd	B.Sc. 4th	B.Sc. 6th	BBA 2nd	BBA 4th	BBA 6th	BCA 2nd	BCA 4th	BCA 6th	M.Com 2nd	M.Sc. (Chemistry) 2nd	MBA 2nd	MCA 2nd	Total
DD Jain Collage Ludhiana	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Government Mohindra College, Patiala	-	-	-	-	-	-	-	4	-	1	-	-	-	-	-	-	5
Guru Nanak Girls College, Ludhiana	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	18	28
Khalsa Institute of Management & Technology for Women, Ludhiana	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	5	15
G.H.G Khalsa College Gurus Sadhar, Ludhiana	-	-	-	3	-	4	-	-	-	-	-	-	-	25	-	-	32
Total	19	23	29	26	12	22	18	18	17	19	18	17	25	54	66	49	432

Table 3.10: Distribution of Sample with respect to Different Colleges from Doaba Region

College	Program																
	B. Com 2 nd	B. Com 4 th	B. Com 6 th	B.Sc. 2nd	B.Sc. 4th	B.Sc. 6th	BBA 2nd	BBA 4th	BBA 6th	BCA 2nd	BCA 4th	BCA 6th	M.Com 2nd	M.Sc. (Chemistry) 2nd	MBA 2nd	MCA 2nd	Total
DAV College Jalandhar	5	5	5	5	2	1	5	-	1	-	6	4	5	17	-	-	61
St. Soldier College, Jalandhar	5	5	3	8	3	6	-	1	-	5	8	-	-	-	10	10	64
Lovely Professional University, Phagwara	2	-	2	-	4	-	2	3	-	2	-	2	4	10	10	19	60
Kanya Maha Vidyalaya, Jalandhar	5	5	4	5	7	10	5	-	-	9	10	7	5	10	-	-	82
Doaba College, Jalandhar	3	7	4	-	-	10	5	-	4	3	5	6	5	-	-	-	52
Lyallpur Khalsa College, Jalandhar	9	8	10	7	2	12	8	1	-	7	7	2	7	10	-	-	90
DAV university, Jalandhar	-	-	-	-	6	-	-	-	-	-	-	-	-	-	15	21	42
Khalsa College Lyallpur Institute of Management & Technology, Jalandhar	-	-	-	-	-	-	-	11	12	3	5	-	-	-	15	-	46
Total	29	30	28	25	24	39	25	16	17	29	41	21	26	47	50	50	497

In order to get the causal attributions of the students on their achieved score in a previous semester course, following courses of different programs in different semesters were selected.

Table 3.11: List of Subjects Chosen from Different Programs for Causal Attribution

Program	Course
B.com 2 nd Semester	Financial Accounting
B.com 4 th Semester	Corporate Accounting
B.com 6 th Semester	Management Accounting
B.Sc. 2 nd Semester	Inorganic Chemistry
B.Sc. 4 th Semester	Physical Chemistry
B.Sc. 6 th Semester	Inorganic Chemistry
BBA 2 nd Semester	Micro Economics
BBA 4 th Semester	Marketing Management
BBA 6 th Semester	Business Environment
BCA 2 nd Semester	Computer Programming in C
BCA 4 th Semester	Object-Oriented Programming through C++
BCA 6 th Semester	Java Programming
M.Com 2 nd Semester	Organizational Behavior
M. Sc 2 nd Semester	Physical Chemistry
MBA 2 nd Semester	Managerial Economics
MCA 2 nd Semester	Programming in C

Following acronyms have been used throughout the chapter:

ACRONYM	DESCRIPTION	ACRONYM	DESCRIPTION
ANOVA	Analysis of Variance	λ	The symbol for Wilk Lambda
MANOVA	Multivariate Analysis of Variance	V	Symbol for Pillai trace
Df	Degree of Freedom	IGO	Intrinsic Goal Orientation
M	Mean	EGO	Extrinsic Goal Orientation
MSS	Mean Sum of Square	TV	Task Value
N	Number of people	CLB	Control of Learning Beliefs
R	Standard Error of Deviation	SELP	Self-Efficacy for Learning and Performance
Σ	The symbol for Standard Deviation	TA	Test Anxiety
UG	Under Graduate	REH	Rehearsal
PG	Post Graduate	ELAB	Elaboration
χ^2	The Symbol for Chi-Square	ORG	Organisation
US	Unsuccessful	CT	Critical thinking
S	Successful	MSR	Metacognitive Self-Regulation
I-S-UnC	Internal- Stable- Uncontrollable	TSE	Time and study environment
I-UnS-C	Internal-Unstable- Controllable	ER	Effort regulation
I-S-C	Internal- Stable- Controllable	PL	Peer learning
I-UnS-UnC	Internal-Unstable- Uncontrollable	HS	Help-Seeking
E-UnS-UnC	External-Unstable- Uncontrollable	BCA	Bachelor of Computer Application
E-S-UnC	External-Stable- Uncontrollable	BBA	Bachelor of Business Administration
E-UnS-C	External-Unstable- Controllable	B. Com	Bachelor of Commerce
E-S-C	External-Stable- Controllable	B.Sc.	Bachelor of Science
LoC	Locus of Control	MCA	Master of Computer Application
ST	Stability	MBA	Master of Business Administration
EC	External Controllability	M.Com	Master of Commerce
PC	Personal Controllability	M.Sc.	Master of Science
W.R.T	With Respect To	SEM	Self Emotional Management

3.2 RESEARCH DESIGN OF THE STUDY

Following research designs i.e. Chi-Square design, Correlational design, 2-way factorial MANOVA design, 2-way factorial ANOVA designs have been employed to conduct the analysis. The designs are further divided into the following parts:

3.2.1 Chi-Square Design

Chi-Square design was employed on the scores of Causal Attribution in order to check the relationship between successful and unsuccessful student's causal attributions for the achieved scores.

3.2.2 Correlational Research Design

- a) A correlational design was employed to find the relationship between the Self-Regulated Learning Strategies and Self-Emotional Management scores of higher education students.
- b) A correlational design was employed to find the relationship between the Self-Regulated Learning Strategies and Causal Attribution scores of higher education students.

3.2.3 Two-Way Factorial Design

- a) Two-way MANOVA factorial design was employed on Causal Attribution scores, wherein, successfulness and gender were studied as independent variables and four causal dimensions viz. Locus of Causality, Stability, External Controllability and Personal Controllability were studied as the dependent variable. The systematic layout of the design has been presented in the following figure 3.1.

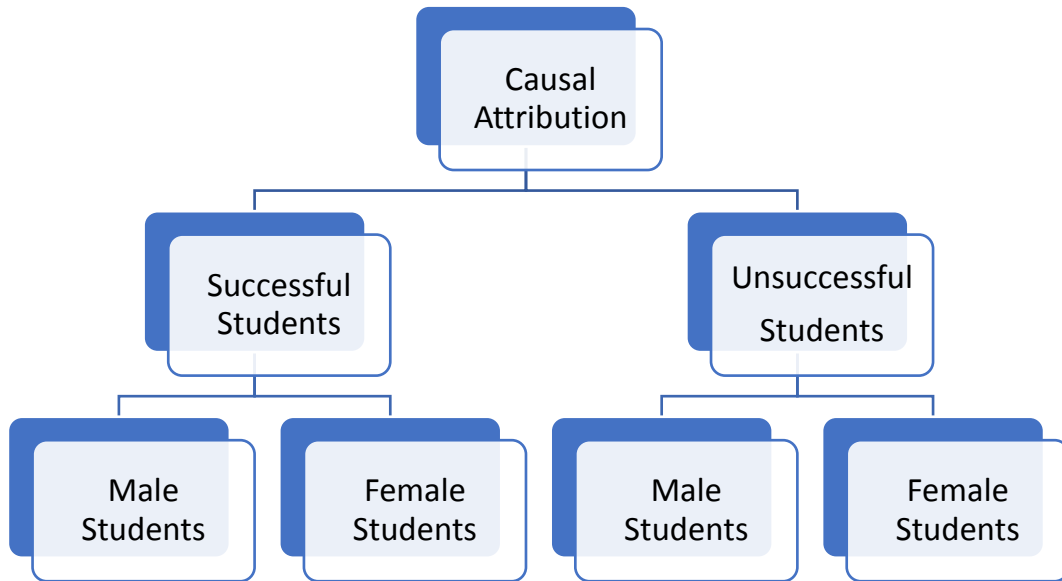


Fig. 3.1: Systematic Representation of 2x2 Factorial Design for MANOVA on the Scores of Causal Attribution

- b) Two-way ANOVA factorial design was employed on Self-Regulated Learning Strategies scores wherein, successfulness and gender were studied as independent variables and Self-Regulated Learning Strategies were studied as the dependent variable. The systematic layout of the design has been presented in the following figure 3.2.

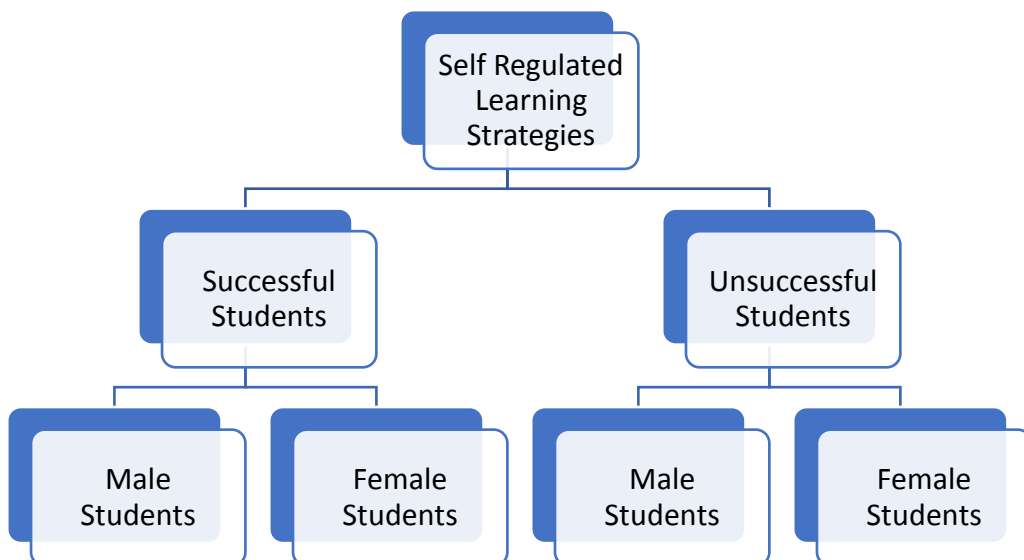


Fig. 3.2: Systematic Representation of 2x2 Factorial Design for ANOVA on the Scores of Self-Regulated Learning Strategies

- c) Two-way ANOVA factorial design was employed on Self- Emotional Management scores, wherein, successfulness and gender were studied as independent variables and Self- Emotional Management were studied as the dependent variable. The systematic layout of the design has been presented in the following figure 3.3.

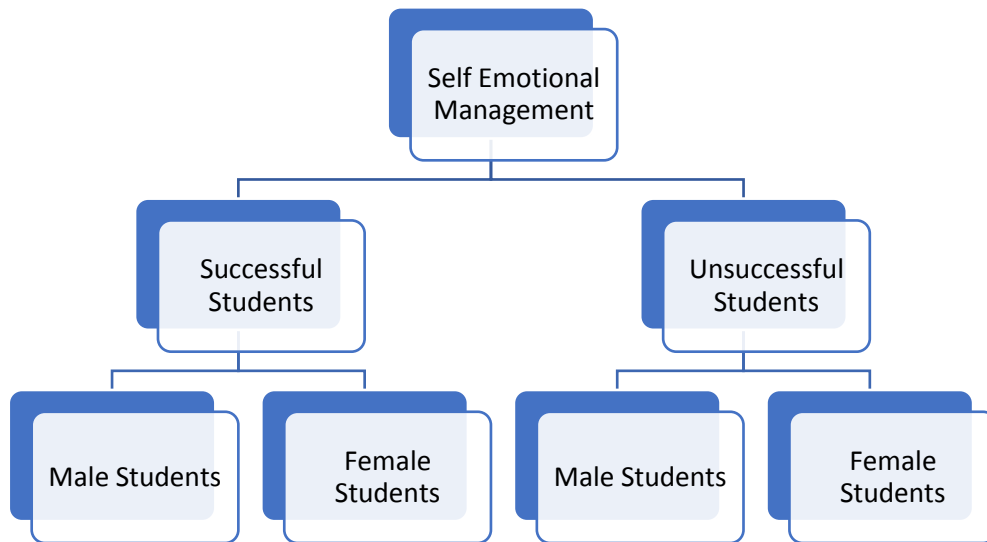


Fig. 3.3: Systematic Representation of 2×2 Factorial Design for ANOVA on the Scores of Self-Emotional Management

3.2.4 One -Way ANOVA Design

In order to find significant differences as a result of:

a. Causal Attribution b. Self-Regulated Learning Strategies c. Self-Emotional Management, one-way ANOVA design was employed.

3.3 VALIDATION AND DESCRIPTION OF THE TOOLS

The following tools have been validated and administered to conduct the present study:

3.3.1 ‘Motivated Strategies for Learning Questionnaire (MSLQ)’ developed by Pintrich et al. (1991).

3.3.2 ‘The Revised Causal Dimension Scale (CDS II)’ developed by McAuley et al. (1992)

3.3.3 ‘Managing Own Emotions’, the dimension extracted from ‘The Assessing Emotions Scale’ developed by Schutte et al. (2009).

3.3.1 Motivated Strategies for Learning Questionnaire (MSLQ) Developed by Pintrich et al. (1991)

The Motivated Strategies for Learning Questionnaire (MSLQ) was a self-report instrument designed to assess college students' motivational orientations and their use of different learning strategies for a college course. It is an 81-item scale involving 2 sections i.e. Motivation and Learning Strategies. Motivation section has 31 items related to individual's view on the motivational beliefs on goal orientation, value beliefs for a particular course of study and their perception about the skill to succeed in the course and also their anxiety for tests in the course. Similarly, learning strategy section is of 50 items which further has 2 subsections. The learning strategy section includes 31 items related to the use of cognitive and metacognitive strategies and 19 items are related to Resource management. Summarily, the MSLQ is having 15 sub-scales, six within the motivation section and nine within the learning strategies section.

3.3.1.1 Dimensions of Motivated Strategies for Learning Questionnaire (MSLQ)

1) Motivational Beliefs

a) Value Components

- i) Intrinsic Goal Orientation
- ii) Extrinsic Goal Orientation
- iii) Task Value

b) Expectancy Components

- i) Control of learning Beliefs
- ii) Self-Efficacy for Learning and Performance

c) Affective Components

- i) Test Anxiety

2) **Learning strategies**

a) **Cognitive and Metacognitive Strategies**

- i) Rehearsal
- ii) Elaboration
- iii) Organization
- iv) Critical Thinking
- v) Metacognitive Self-Regulation

b) **Resource Management Strategies**

- i) Time and Study Environment
- ii) Effort Regulation
- iii) Peer Learning
- iv) Help Seeking

Table 3.12: Distribution of Items of Motivated Strategies for Learning Questionnaire (MSLQ)

S. No	Areas	Sub Dimensions	Sub Dimensions	Item No.	Total No. of Items
1.	Motivation	Value components	Intrinsic goal orientation	1,16,22,24	4
			Extrinsic goal orientation	7,11,13,30	4
			Task value	4,10,17,23,26,27	6
		Expectancy components	Control of Learning Beliefs	2,9,18,25	4
			Self-efficacy for learning and performance	5,6,12,15,20,21,29,31	8
		Affective components	Test anxiety	3,8,14,19,28	5

Contd. ...

S. No	Areas	Sub Dimensions	Sub Dimensions	Item No.	Total No. of Items
2.	Learning Strategies	Cognitive and Metacognitive Strategies	Rehearsal	39,46,59, 72	4
			Elaboration	53,62,64, 67,69,81	6
			Organization	32,42,49, 63	3
			Critical Thinking	38,47,51, 66,71	5
			Metacognitive self - regulation	33,36,41, 44,54,55, 56,57,61, 76,78,79	12
		Resource Management Strategies	Time and study environment	35,43,52, 65,70,73,77,80	8
			Effort regulation	37,48,60, 74	4
			Peer learning	34,45,50	3
			Help seeking	40,58,68, 75	4

3.3.1.2 Administration and Scoring of the MSLQ

The fifteen different scales on the MSLQ can be administered in individual as well as group situation. All scales are modular in nature and can fit into the needs of the researcher or instructor. Generally, in order to complete the instrument, the subject can take approximately 20-30 minutes. It is a seven-point Likert scale from "not at all true of me" to "very true of me". Scales are constructed by taking the mean of the items that make up that scale. For example, intrinsic goal orientation has four items. An individual's score for intrinsic goal orientation would be computed by summing the four items and taking the average. Items marked as reversed are reverse coded items and must be reflected before scale construction. These negatively worded items and the ratings have to be reversed before an individual's score can be computed. If an item has to be reversed, a person who has circled 1 for that item now receives a score of 7 and so on. Accordingly, 1 becomes 7, 2 become 6, 3 becomes 5, 4 becomes 4, 5 becomes 3, 6 becomes 2, and 7 becomes 1. The simplest way to reflect the reverse coded items is to subtract the original scores from 8.

3.3.1.3 Validation of Motivated Strategies for Learning Questionnaire (MSLQ) developed by Pintrich, et al. (1991)

(a) **Motivation Scale**

(b) **Learning Strategies Scale**

Motivated Strategies for Learning Questionnaire (MSLQ) has essentially two subscales motivation scale and learning strategies scale, was constructed and standardized by Pintrich et al. on the population of western culture, hence it was very much required to validate the current scale on the population of higher education students of Indian culture. Apart from this, the review of related literature revealed that very fewer researches have been conducted in India by taking Motivated Strategies for Learning as a variable. Hence, no such scale has been constructed and validated which measure self-regulated learning strategies of respondents in Indian culture. This encourages the investigator to test the appropriateness of the scale in the Indian context. Validation of all three scales was confirmed by confirmatory factor analysis, for checking the internal consistency of the scales, Coefficient Alpha (Cronbach, 1951) and Fornell's Composite Reliability of each sub-dimension of each scale was computed manually. The acceptable value of composite reliability coefficient (CR) is 0.70 (Fornell and Larcker, 1981).

Composite Reliability (CR) was calculated by using the following Formula (Fornell and Larcker, 1981)

$$CR = \frac{(\text{Sum Total of Standardised Regression Weights})^2}{(\text{Sum Total of Standardised Regression Weights})^2 + (\text{Sum of Error Variance of terms})^2}$$

3.3.1.4 Sample

For validation, the data was collected from three departments viz. Science, Computer applications, Business & Commerce from different colleges of three regions of Punjab namely Majha, Malwa and Doaba and from four districts viz. Amritsar, Jalandhar, Ludhiana and Kapurthala. Hence, 368 students comprised of 165 females (44.8%), 203 males (55.1%) from the undergraduate and post-graduate level have been selected by stratified and purposive sampling technique. Furthermore, data was collected from the students of 2nd and 4th and 6th semesters of

undergraduate level viz. BCA, BBA, B. Com, B. Sc and second semester of postgraduate level viz. MCA, MBA, M.Com, M.Sc. (Chemistry). The distribution of the sample is presented below.

Table 3.13: Distribution of the Sample at UG and PG Level

Region	District	Name of College/ University	UG	PG	Total
Majha	Amritsar	BBKDAV college	25	15	118
		DAV college	20	8	
		Khalsa College	25	25	
Malwa	Ludhiana	Gujranwala Guru Nanak Institute of Management and Technology	20	10	80
		Kamla Lothia Sanatan Dharam College	30	20	
Doaba	Jalandhar	Lyallpur Khalsa college	10	10	170
		DAV College	5	15	
		KMV College	20	10	
	Kapurthala	Lovely Professional University	60	40	
Total			215	153	368

3.3.1.5 Results of CFA Analysis of Motivation Scale of MSLQ

Validation of the motivation scale of MSLQ was conducted using confirmatory factor analysis with the aim to assess how well does a hypothesized factor structure “fits” the observed data? Confirmatory factor analysis was conducted using IBM SPSS AMOS-21 version of the computer program to analyze the validity and IBM SPSS-22 version was used to calculate Cronbach’s alpha for confirming the reliability of the instrument. Initially, in order to check the adequacy of the data before proceeding to perform factor analysis, Kaiser Mayer Olkin (KMO) and Bartlett Test of Sphericity have been calculated. The KMO value is found to be 0.90. The statistic of Bartlett test of sphericity with $\chi^2(465, N= 368) = 4525.62, p= 0.000$, which is found to be significant. Hence, the acceptable value of KMO (0.90) and significant Bartlett test of Sphericity have confirmed the adequacy of the data to run factor analysis.

After checking the adequacy of data, confirmatory factor analysis (CFA) was conducted. Maximum likelihood estimation procedures were employed to evaluate the fit of the proposed model of motivation scale. Furthermore, Hu and Bentler (1999) recommended a “two criteria” strategy in evaluating model fit. Firstly, they advised using the standardized root mean square residual (SRMSR) in estimating the model fit, with a value of .08 or less indicating a good fit to the data. Secondly, they recommended the usage of one of several fit statistics, viz. Tucker-Lewis Index (TLI) (Tucker and Lewis, 1973), Bollen’s (1989) Index (IFI), the Comparative Fit Index (CFI) (Bentler, 1990), the Relative Noncentrality Index (RNI) (McDonald and Marsh, 1990), Gamma Hat (Steiger, 1989), McDonald’s (1989) Centrality Index (MFI), or the Root Mean Square Error of Approximation (RMSEA) developed by Steiger et al. (1980). Moreover, Hu and Bentler (1999) also indicated that the measures used in evaluating model fit for many of these statistics should be increased. For illustration, for the TLI, IFI, CFI, and RNI the widely-used criterion of 0.90 or greater should be increased to 0.95 or greater. For MFI, the criterion should be 0.90 or greater, and for RMSEA, the criterion should be 0.06 or lower. RMSEA values less than 0.05 suggest good fit, whereas the model with $RMSEA \geq 0.1$ should be discarded. $RMSEA \leq 0.08$ suggest adequate model fit (Browne and Cudeck, 1993). Goodness-of-fit index, GFI can range from 0 to 1, values of 0.90 or greater indicate the model that explained data well (Tanaka, 1987). Moreover, the value of χ^2/df ratio should be less than 5 is indicative of a good fit between the observed and reproduced correlation matrix (Hayduk, 1987). Apart from this, Hoelter’s Critical N is one of the goodness of fit measures developed to test the adequacy of the sample size. It tells, from the data obtained, whether the sample size of the specified model is sufficient or not (Garson, 2009). Generally, the accepted threshold for Hoelter’s N is equal and greater than 200 but, a value of Hoelter’s N less than 75 indicates that the sample size of the proposed model is not adequate to evaluate the model fit (Wan, 2002; Garson, 2009). Hoelter’s Critical N, $75 \leq \text{value} < 200$ is acceptable and if it is greater than or equal to 200 is good (Garson, 2009).

Table 3.14: Measures of Fit for the Motivation Scale of MSLQ

Measure Fit	Calculated Values	Original Scale Values
χ^2/df	3	3.49
Root Mean Square Error of Approximation (RMSEA)	0.07	-
Goodness of Fit Index (GFI)	0.8	0.77
Root Mean Square Residual (RMR)	0.16	0.07
Bollen 89 Index, Incremental Fit Index (IFI)	0.79	-
Comparative Fit Index (CFI)	0.97	-
Normed Fit Index (NFI)	0.72	-
Relative Fit Index (RFI)	0.69	-
Tucker- Lewis Index (TLI)	0.77	-
Hoelter's Critical Number (CN)	140	122
Standardised Factor Loadings of The Items of Motivation Scale of MSLQ		
Dimension	Items No.	Standardized factor loading
IGO	24	0.50
	22	0.70
	16	0.65
	1	0.55
EGO	30	0.57
	13	0.70
	11	0.66
	7	0.47

Contd. ...

Dimension	Items No.	Standardized factor loading
TV	27	0.65
	26	0.61
	23	0.70
	17	0.68
	10	0.67
	4	0.62
CLB	25	0.40
	18	0.70
	9	0.44
	2	0.57
SELP	31	0.66
	29	0.60
	21	0.65
	20	0.68
	15	0.58
	12	0.66
	6	0.51
	5	0.56
TA	28	0.55
	19	0.70
	14	0.55
	8	0.40
	3	0.58

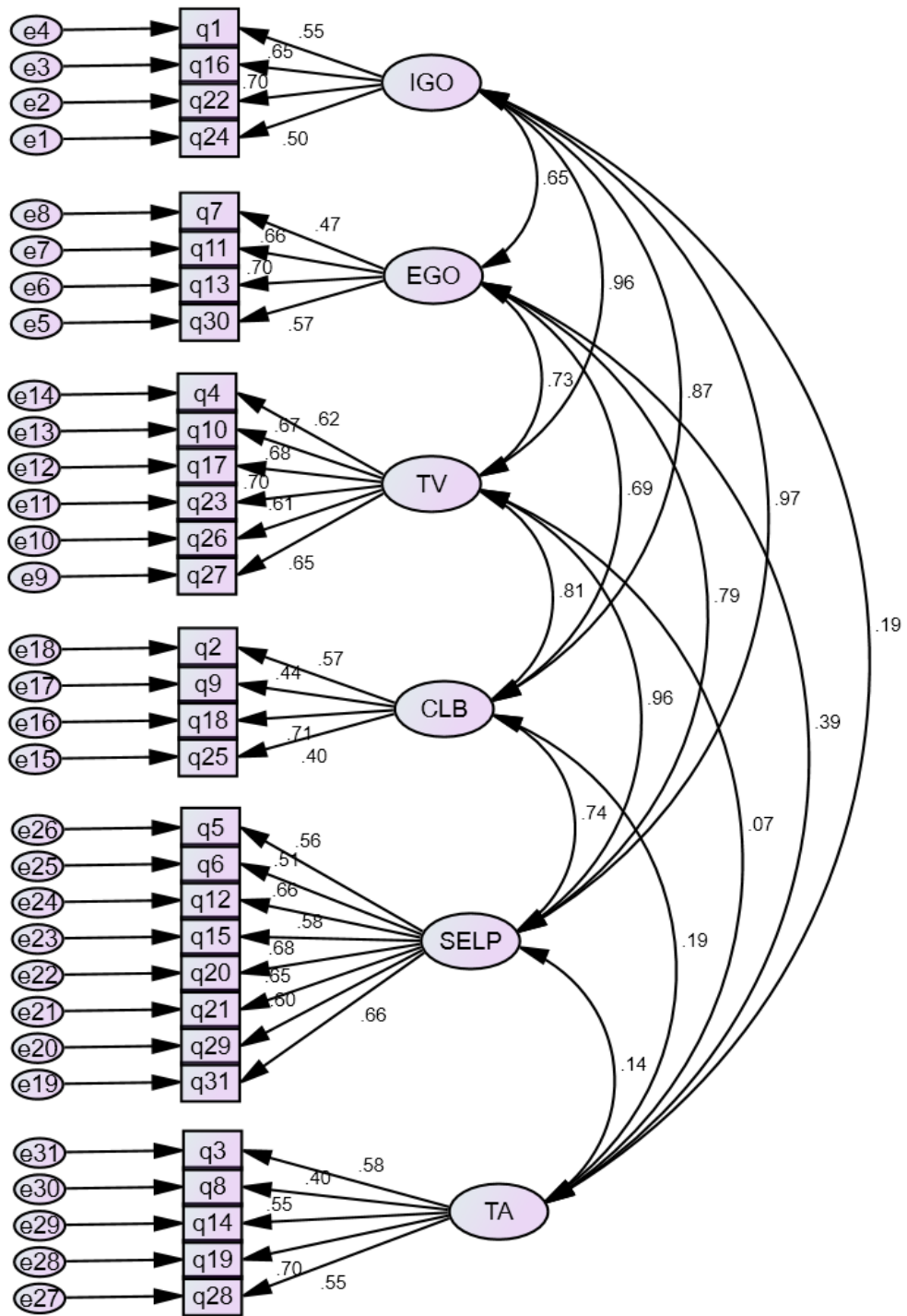


Fig 3.4: Path Diagram of Motivation Scale of MSLQ

Note: IGO- Intrinsic Goal Orientation, EGO-Extrinsic Goal Orientation, TV-Task Value, CLB-Control of Learning Beliefs, SELP-Self -Efficacy for Learning and Performance, TA-Test Anxiety

The results of confirmatory factor analysis inserted in table 3.14 reveals that the hypothesized model of motivation scale is found to provide an excellent fit to the data with $\chi^2(419, N= 368) = 1282.88, p= 0.000$, significant, $p<.001$, $\chi^2/ df = 3$ and Goodness- of fit-index, GFI = 0.80, which is showing good fit to the data. Along with it, statistics of Root Mean Square Error of Approximation (RMSEA) = 0.07 which is also acceptable and advocate good model fit (Browne and Cudeck,1993). Further, statistics viz. Root Mean Square Residual (RMR)= 0.16, Bollen 89 Index, Incremental Fit Index (IFI)= 0.79, Comparative Fit Index (CFI)=0.97, Normed Fit Index (NFI)=0.72, Relative Fit Index (RFI)= 0.69, Tucker-Lewis Index (TLI) =0.77. Hence, all values are satisfying the threshold criteria and contributing in confirming the model fit. Additionally, it is clear from table 3.14, that standardized regression weights or standardized factor loading of all items range from 0.40 to 0.70. According to Stevens (2002), the significant value of factor loading depends upon the size of the sample. For the sample greater than 600, the factor loading greater than 0.21 can be considered significant. Hence, CFA established the construct Motivation Scale of Motivated Strategies for Learning Questionnaire (MSLQ) in Indian situations.

3.3.1.6 Reliability

Coefficient Alpha (Cronbach, 1951) for the whole scale and for each subdimension and Composite Reliability (Fornell and Larcker, 1981) for each subdimension was computed in order to assess the internal consistency of the scale and its various dimensions. The calculated values and the original scale values of Cronbach's alpha have been reported in table 3.15.

Table 3.15: Reliability of Motivation Scale of MSLQ

Dimensions	Item No.	Calculated values of Cronbach's Alpha	Original scale values of Cronbach's Alpha	Composite Reliability Coefficient (CR)
Value Component	14 items	0.87	-	-
a. Intrinsic Goal Orientation	1, 16, 22, 24	0.68	0.74	0.96
b. Extrinsic Goal Orientation	7, 11, 13, 30	0.67	0.62	0.97
c. Task Value	4, 10, 17, 23, 26, 27	0.82	0.90	0.96
Expectancy Component	12 items	0.83	-	-
a. Control of Learning Beliefs	2, 9, 8, 25	0.61	0.68	0.92
b. Self- Efficacy for learning and performance	5, 6, 12, 15, 20, 21, 29, 31	0.82	0.93	0.98
Affective Component	5 items	0.69	-	-
a. Test Anxiety	3, 8, 14, 19, 28	0.69	0.80	0.96
Full Scale	31 items	0.90	-	-

In Original scale, Pintrich and De Groot (1991) showed the reliability of each subdimension. The coefficient alpha for Motivational belief components namely intrinsic goal orientation was (0.74), extrinsic goal orientation (0.62), Task value (0.90), Control of learning belief (0.68), self-efficacy for learning and performance (0.93) and for Test anxiety (0.80).

In the present study, the calculated coefficient alpha (Cronbach, 1951) for the whole scale was (0.90). Furthermore, coefficient alpha for each subscale were as follows: Value Component (0.87), Intrinsic Goal Orientation (0.68), Extrinsic Goal Orientation (0.67), Task Value (0.82). Further, for Expectancy Component (0.83),

Control of Learning Beliefs (0.61), Self-Efficacy for learning and performance (0.82), Affective Component with single sub-dimension i.e. Test Anxiety (0.69).

3.3.1.7 Validity of Original Scale

The items of MSLQ subscales are taken and adapted from different instruments used by different researchers (Eccles, 1983; Harter, 1981; Weinstein, Schulte & Palmer, 1987, quoted in Pintrich & DeGroot, 1990) to measure student motivation, cognitive strategy use and meta-cognition. All the instruments are having appropriate face validity of this scale. The construct validity of the tool has also been found to be correlated with other measures on motivational achievement (Pintrich, 1999).

3.3.1.8 Results of CFA Analysis of Learning Strategies Scale (MSLQ)

Initially, in order to check the adequacy of the data before proceeding to perform factor analysis, Kaiser Mayer Olkin (KMO) and Bartlett Test of Sphericity have been calculated. The KMO value is found to be 0.94. The statistic of Bartlett Test of Sphericity, χ^2 (1225, N= 368) = 8661.72, p= 0.000, which is found to be significant. Hence, the acceptable value of KMO and significant Bartlett Test of Sphericity have confirmed the adequacy of the data to run factor analysis. The measures of fit have been reported in table 3.16.

Table 3.16: Measures of Fit for the Learning Strategies Scale of MSLQ

Measures of Fit	Calculated Values	Original Scale Values
χ^2 / df	2.70	2.26
Root Mean Square Error of Approximation (RMSEA)	0.06	-
Goodness of Fit Index (GFI)	0.71	0.78
Root Mean Square Residual (RMR)	0.17	0.08
Bollen 89 Index, Incremental Fit Index (IFI)	0.74	-
Comparative Fit Index (CFI)	0.74	-
Normed Fit Index (NFI)	0.72	-
Relative Fit Index (RFI)	0.69	-
Tucker- Lewis Index (TLI)	0.72	-
Hoelter's Critical Number (CN)	146	180

Contd. ...

Standardised Factor Loadings of The Items of Learning Strategies Scale of MSLQ		
Dimension	Item No.	Standardized factor loading
REH	72	0.67
	59	0.58
	46	0.65
	39	0.54
ELAB	81	0.67
	69	0.71
	67	0.64
	64	0.65
	62	0.69
	53	0.68
ORG	63	0.71
	49	0.46
	42	0.68
	32	0.61
CT	71	0.62
	66	0.67
	51	0.69
	47	0.66
	38	0.66
MSR	79	0.47
	78	0.58
	76	0.55
	61	0.56
	57	0.31
	56	0.55
	55	0.67
	54	0.59
	44	0.67
	41	0.71
	36	0.67
33	0.23	

Contd. ...

Dimension	Item No.	Standardized factor loading
TSE	35	0.50
	43	0.68
	52	0.30
	65	0.57
	70	0.70
	73	0.44
	77	0.37
	80	0.33
ER	37	0.32
	48	0.56
	60	0.31
	74	0.48
PL	34	0.57
	45	0.48
	50	0.61
HS	40	0.43
	58	0.55
	68	0.59
	75	0.53

The results of confirmatory factor analysis (CFA) inserted in table 3.16 reveals that the hypothesized model of learning strategies scale of MSLQ is found to provide an excellent fit to the data with χ^2 (1139, N= 368) = 3154.74, $p= 0.000$ (significant, $p<.001$), $\chi^2/ df = 2.7$ and Goodness- of fit-index, GFI = 0.71, which is showing good fit to the data. Along with it, statistics of Root Mean Square Error of Approximation (RMSEA) = 0.06 which is also acceptable and advocate good model fit (Browne and Cudeck,1993). However, statistics viz. Root Mean Square Residual (RMR) =0.17, Bollen 89 Index, Incremental Fit Index (IFI)= 0.74, Comparative Fit Index (CFI)=0.74, Normed Fit Index (NFI)=0.72, Relative Fit Index (RFI)= 0.69, Tucker-Lewis Index (TLI) = 0.72. Further, it is clear from table 3.16, that standardized regression weights or standardized factor loading of all items range from 0.23 to 0.71, which are statistically significant as per the guidelines of Stevens (2002). Hence, all values are satisfying the threshold criteria and contributing in confirming the model fit. Hence, CFA validated the Learning Strategies Scale of MSLQ.

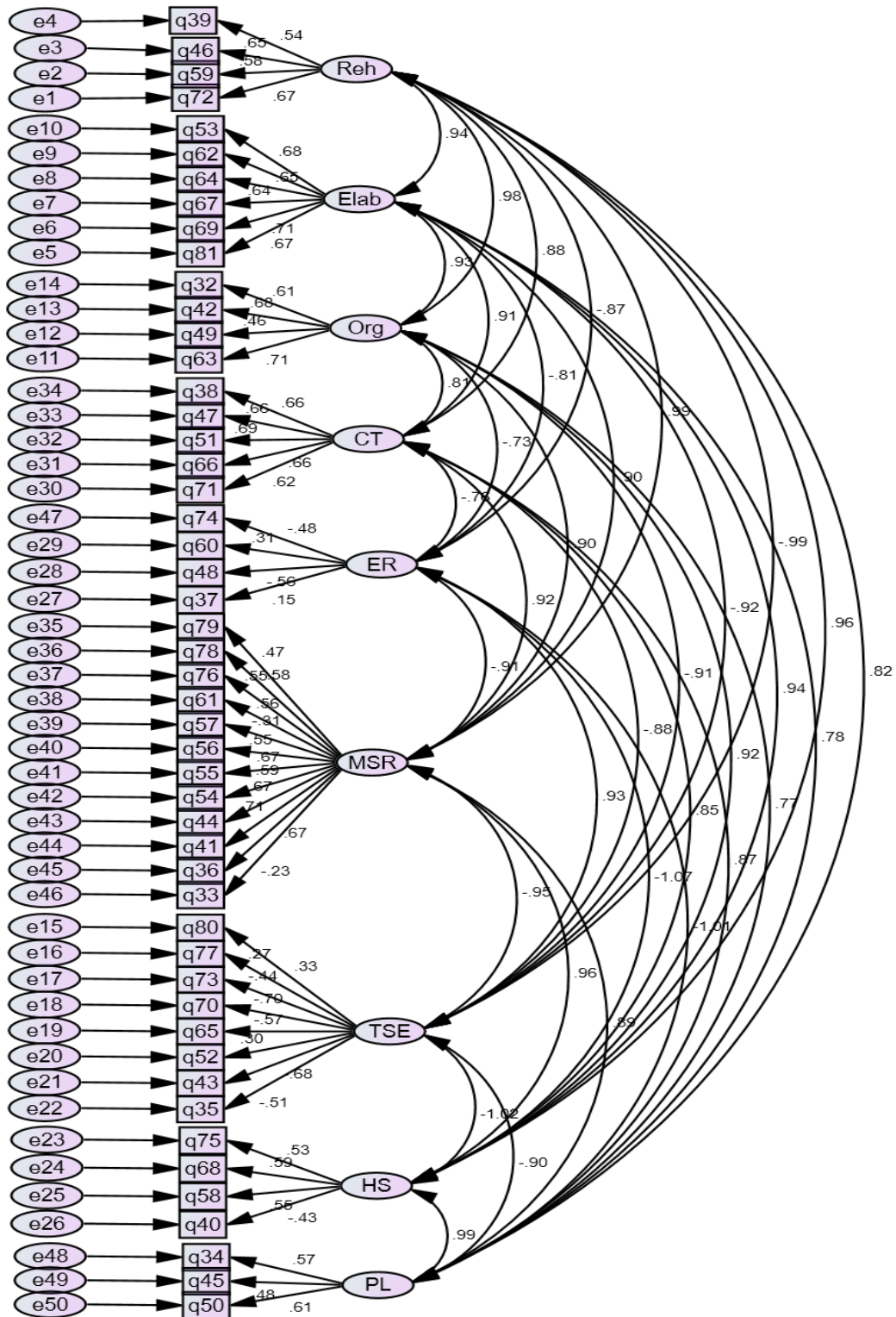


Fig. 3.5: Path Diagram of Learning Strategies Scale of MSLQ

Note: Reh – Rehearsal, Elab- Elaboration, Org- Organization, CT- Critical Thinking, ER- Effort Regulation, MSR- Metacognitive Self-Regulation, TSE- Time and Study Environment, HS- Help Seeking, PL- Peer Learning.

3.3.1.9 Reliability

Coefficient Alpha (Cronbach, 1951) for the whole scale and for each subdimension and Composite Reliability (Fornell and Larcker, 1981) for each subdimension was computed in order to assess the internal consistency of the scale and its various dimensions. The calculated values and the original scale values of Cronbach's alpha have been reported in table 3.17.

Table 3.17: Reliability of Learning Strategies Scale of MSLQ

Dimensions	Items	Calculated Value of Cronbach's Alpha	Original Scale Value of Cronbach's Alpha	Composite Reliability Coefficient (CR)
Cognitive and Metacognitive Strategies	31 items	0.92	-	-
a. Rehearsal	39, 46, 59, 72	0.72	0.69	0.99
b. Elaboration	53, 62, 64, 67, 69, 81	0.83	0.76	0.99
c. Organization	32, 42, 49, 63	0.69	0.64	0.98
d. Critical Thinking	38, 47, 51, 66, 71	0.79	0.80	0.98
e. Metacognitive Self-Regulation	33, 36, 41, 44, 54, 55, 56, 57, 61, 76, 78, 79	0.73	0.79	0.91
Resource Management Strategies	19 items	0.64	-	-
a. Time and Study Environment	35, 43, 52, 65, 70, 73, 77, 80	0.60	0.76	0.79
b. Effort Regulation	37, 48, 60, 74	0.58	0.69	0.70
c. Peer Learning	34, 45, 50	0.57	0.76	0.97
d. Help Seeking	40, 58, 68, 75	0.50	0.52	0.84
Full Scale	50 items	0.92	-	-

In the original scale, Pintrich & De Groot (1991) the coefficient alpha for Rehearsal (0.69), Elaboration (0.76), Organization (0.64), Critical thinking (0.80), for Self-regulation 0.79, Time and study environment (0.76), Effort Regulation (0.69), Peer Learning (0.76), Help-seeking (0.52). In the present study, the coefficient alpha of the whole scale was 0.92. Further, the calculated coefficient alpha for each subscale were as follows: for Cognitive and Metacognitive Strategies 0.92, Rehearsal (0.72), Elaboration (0.83), Organization (0.69), Critical Thinking, (0.79), Metacognitive Self-Regulation (0.73), Resource Management Strategies (0.64), Time and Study Environment (0.60), Effort Regulation (0.58), Peer Learning (0.57), Help Seeking, (0.50). Apart from this, the composite reliability for Rehearsal (0.99), Elaboration (0.99), Organization (0.98), Critical Thinking (0.98), Metacognitive Self-Regulation (0.91), Time and Study Environment (0.79), Effort Regulation (0.70), Peer Learning (0.97) and Help-Seeking (0.84).

3.3.2 The Revised Causal Dimension Scale (CDS II) Developed by McAuley et al. (1992)

The Revised Causal Dimension Scale (CDSII) was a self-report instrument designed to assess the causal perceptions of an individual in terms of locus of causality, stability and controllability dimensions as described by Weiner. The Revised Causal Dimension Scale (CDSII) contains 12 items, each with a semantic differential scale of 9 to 1. Each of the three items from the CDSII related to Locus of Causality, Stability, Personal Controllability and External Controllability.

Table 3.18: Distribution of Items in the Revised Causal Dimension Scale (CDS II)

Dimensions	Item No.	Total No. of Items
Locus of Causality	1,6,9	3
External Controllability	5,8,12	3
Stability	3,7,11	3
Personal Controllability	2,4,10	3

3.3.2.1 Administration of The Scale

The revised causal dimension scale (CDS II) is a self-administering scale. The researcher has given directions for the administration of the scale and ensured the confidentiality of the results. The researcher has asked the students to tick the possible causes (from the list of eight probable causes) behind their success or failure on the basis of the achieved score in the selected course and then mention the one main cause. In the light of that cause, rate the cause on the given scale and do not leave any question unanswered.

3.4.2.2 Scoring

The revised causal dimension scale (CDS II) is comprised of 12 items distributed in 4 dimensions. Each item is answered on a 9-point semantic differential scale. The total score for each dimension is obtained by summing the items. High scores on these subscales indicate that the cause is perceived as internal, stable and controllable and low scores on these subscales indicate that the cause is perceived as external, unstable and uncontrollable. As Controllable dimension was divided into two parts viz. personal control and external control. Consequently, a high score on two dimensions (personal and external control) would reflect controllable cause and a low score on two dimensions would reflect uncontrollable cause.

3.4.2.3 Validation of The Revised Causal Dimension Scale (CDS II)

The Revised Causal Dimension Scale (CDS II) was constructed and standardized by McAuley et al. (1992) on the population of western culture, hence it was very much required to validate the current scale on the population of higher education students of Indian culture. Apart from this, the review of related literature revealed that very fewer researches have been conducted in India by taking Causal Attribution as a variable. Hence, no scale has been constructed and validated which measure causal attribution of respondents in Indian culture. This encourages the investigator to test the appropriateness of the scale in the Indian context.

3.4.2.4 Results of CFA Analysis of The Revised Causal Dimension Scale (CDS II)

Initially, in order to check the adequacy of the data before proceeding to perform factor analysis, Kaiser Mayer Olkin (KMO) and Bartlett Test of Sphericity have been calculated. The KMO value is found to be 0.84. The statistic of Bartlett

test of Sphericity, χ^2 (66, N= 368) = 1169.56, p= 0.000, which is found to be significant. Hence, the acceptable value of KMO and significant Bartlett test of Sphericity have confirmed the adequacy of data to run factor analysis. The results of the measures of fit for the four-factor model has been reported in table 3.19.

Table 3.19: Measures of Fit for the Four-Factor Model of the Causal Dimension Scale (CDS II)

Measure Fit	Calculated Values	Original Scale values
χ^2 / df	3.10	2.00
Root Mean Square Error of Approximation (RMSEA)	0.07	-
Goodness of Fit Index (GFI)	0.93	0.95
Root Mean Square Residual (RMR)	0.25	-
Standardized Root Mean Square Residual (SRMSR)	0.05	-
Bollen 89 Index, Incremental Fit Index (IFI)	0.95	-
Comparative Fit Index (CFI)	0.95	-
Normed Fit Index (NFI)	0.93	-
Non-Normed Fit Index (NNFI)	0.93	-
Relative Fit Index (RFI)	0.90	-
Hoelter's Critical N (CN)	180	-
Standardised Factor Loadings of The Items of Causal Dimension Scale (CDS II)		
Dimensions	Item No.	Standardized Factor Loading
Locus of Causality	1	0.60
	6	0.66
	9	0.62
External Controllability	5	0.52
	8	0.55
	12	0.66
Stability	3	0.69
	7	0.77
	11	0.48
Personal Controllability	2	0.71
	4	0.61
	10	0.62

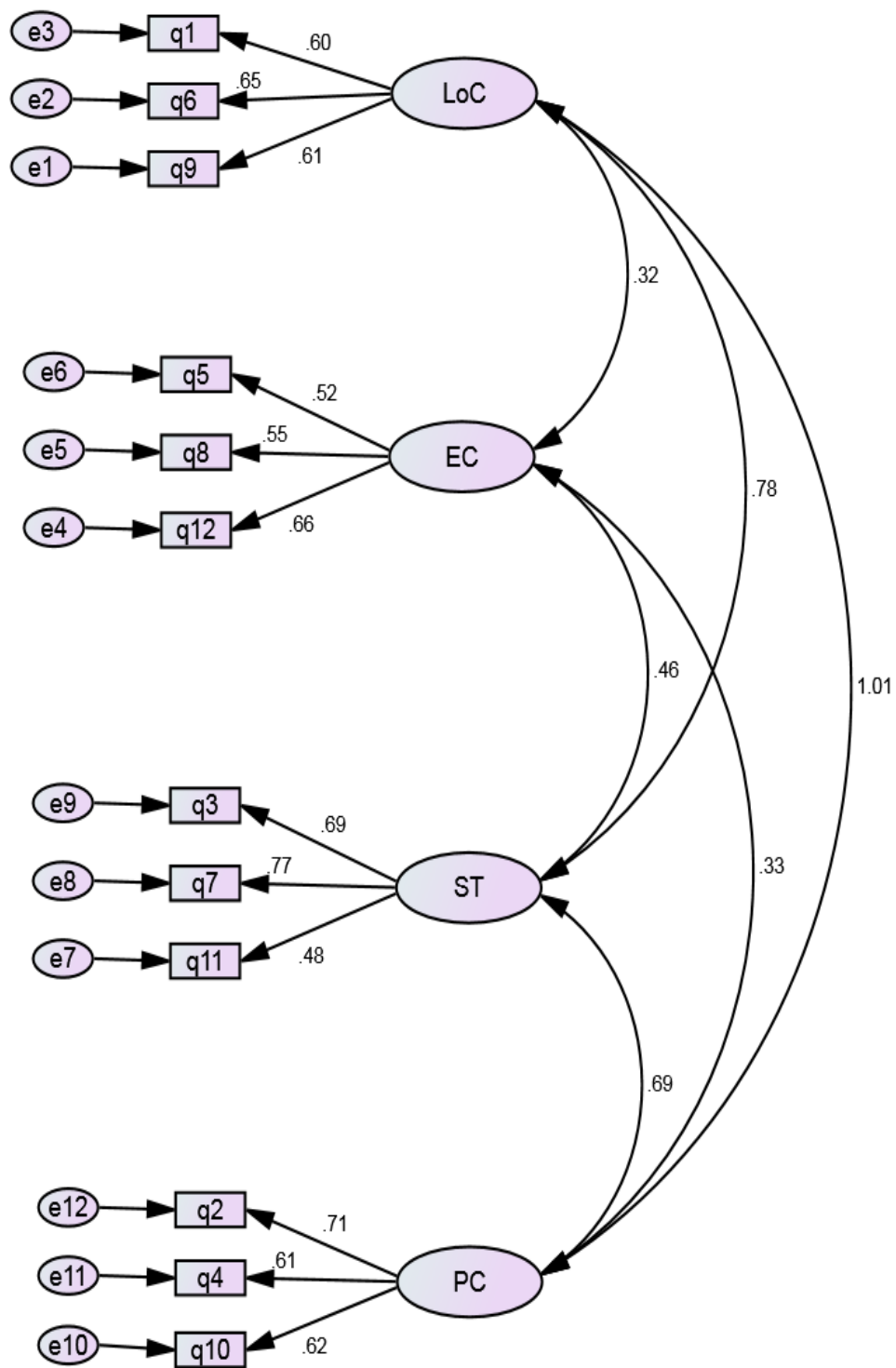


Fig. 3.6: Path Diagram of Causal Dimension Scale (CDS II)

Note: LoC- Locus of Causality, EC- External Controllability, ST- Stability, PC Personal Controllability

Confirmatory factor analysis was conducted by using IBM SPSS AMOS-21 for analyzing the construct validity and Cronbach's alpha was calculated by using the IBM SPSS-22 version of computer software for confirming the internal consistency of the instrument.

The results of confirmatory factor analysis inserted in table 3.19 reveals that the hypothesized four-factor model of Revised Causal Dimension Scale (CDS II) is found to provide an excellent fit to the data, $\chi^2(48, N= 368) = 150.89$, $p= 0.000$, $\chi^2/df = 3.1$ and Goodness-of-fit-index, $GFI = 0.93$, which is showing good fit to the data. Along with it, statistics of Root Mean Square Error of Approximation (RMSEA) = 0.07 which is also acceptable and advocate good model fit (Browne and Cudeck,1993). Whereas, Hoelter's Critical N (CN) = 180 which also came in acceptable range (Garson, 2009). However, statistics viz. Bollen 89 Index, Incremental Fit Index (IFI)= 0.95, Comparative Fit Index (CFI)=0.95, Normed Fit Index (NFI)=0.93, Non-Normed Fit Index (NNFI)= 0.93, Relative Fit Index (RFI)= 0.90 are also satisfying the criteria of value 0.95 or greater as suggested by Hu and Bentler (1998). Furthermore, Standardized Root Mean Square Residual (SRMSR)= 0.05, (for good model value of 0.08 or less, Hu and Bentler, 1999) proved a good fit of the model. Also, the factor loading of all the items ranges from 0.48 to 0.71. Hence, CFA validated the four-factor model of Revised Causal Dimension Scale (CDS II) by McAuley et al. (1992).

3.4.2.5 Reliability

Coefficient Alpha (Cronbach, 1951) for the whole scale and for each subdimension and Composite Reliability (Fornell and Larcker, 1981) for each subdimension was computed in order to assess the internal consistency of the scale and different dimensions. The calculated values and the original scale values of Cronbach's alpha have been reported in table 3.20.

In the original Causal Dimension Scale (CDSII), the average internal consistencies across four studies were as follows: locus of causality, 0.67, stability, 0.67, personal controllability, 0.79, external controllability, 0.82 and for the full scale it was 0.90. In the present study, the coefficient alpha of the whole scale was 0.81, for the locus of causality was 0.65, external controllability, 0.60, stability, 0.61

and personal controllability, 0.68. Hence, the acceptable range of calculated coefficient alpha values confirmed the internal consistency of the whole scale and each subscale. Along with it, the composite reliability was also calculated for each dimension. The CR for the locus of causality, 0.98, external controllability, 0.95, personal controllability, 0.96 and stability, 0.94.

Table 3.20: Reliability of Revised Causal Dimension Scale (CDS II)

Dimensions	Item No.	Calculated values of Cronbach's Alpha	Original Scale Values of Cronbach's Alpha	Composite Reliability Coefficient (CR)
Locus of causality	1, 6, 9	0.65	0.67	0.98
External controllability	5, 8, 12	0.6	0.82	0.95
Personal Controllability	2, 4, 10	0.68	0.67	0.96
Stability	3, 7, 11	0.61	0.79	0.94
Full Scale	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	0.81	0.9	-

3.3.3 Managing Own Emotions, A Dimension Extracted from the Assessing Emotions Scale by Schutte et al. (2009)

The Assessing Emotions Scale is a 33-item self-report inventory focusing on typical emotional intelligence based on Salovey and Mayer's (1990) original model of emotional intelligence. Respondents rate themselves on the items using a five-point scale. Respondents require on average five minutes to complete the scale. The scale has mainly four dimensions, the four factors were described as follows: perception of emotions, managing emotions in the self, social skills or managing others emotions, and utilizing emotions. The items comprising the subscales based on these factors (Ciarrochi et al., 2001) are as follows: Perception of Emotion (items 5, 9, 15, 18, 19, 22, 25, 29, 32, 33), Managing Own Emotions (items 2, 3, 10, 12, 14, 21, 23, 28, 31), Managing Others Emotions (items 1, 4, 11, 13, 16, 24, 26, 30), and Utilization of Emotion (items 6, 7, 8, 17, 20, 27). The researcher has used one of the dimensions of the scale named as Managing Own Emotions for assessing self-emotional management of the respondents.

3.3.3.1 Administration

The Scale is a self-report inventory focusing on assessing self- emotional management of the respondents. Respondents rate themselves on the items using a five-point scale. Respondents require on an average five minutes to complete the scale.

3.3.3.2 Scoring

The dimension ‘Managing Own Emotions’ has a total of 9 items. Each item is answered on a five-point scale viz. strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, strongly agree. Each positive item or statement should be scored as 1 for strongly disagree, 2 for somewhat disagree, 3 for neither agree nor disagree, 4 for somewhat agree, 5 for strongly agree. On the contrary, negative item or statement should be scored as 5 for strongly disagree, 4 for somewhat disagree, 3 for neither agree nor disagree, 2 for somewhat agree, 1 for strongly agree. The total scores of the subjects ranged from 9 to 45 on the scale.

3.3.3.3 Validation of Managing Own Emotions, the Dimension Extracted from ‘The Assessing Emotions Scale’ Developed by Schutte et al. (2009)

The subscale ‘Managing Own Emotions’ was extracted from ‘The Assessing Emotions Scale’ developed by Schutte et al. (2009) as this scale was constructed and standardized in the western culture so it was mandatory to validate the used subscale in the Indian context. Apart from this, the review of related literature revealed that very few researches have been conducted in India by taking self- emotional management as a variable. Hence, no scale has been constructed and validated which measure self-emotional management of the respondents in Indian culture. This encourages the investigator to test the appropriateness of the extracted subscale in the Indian context.

3.3.3.4 Results of CFA Analysis of Managing Own Emotions Scale

Initially, in order to check the adequacy of the data before proceeding to perform factor analysis, Kaiser Mayer Olkin (KMO) and Bartlett Test of Sphericity

was calculated. The KMO value is found to be 0.87. The statistic of Bartlett test of Sphericity, χ^2 (36, N= 368) = 988.79, p= 0.000, which is found to be significant. Hence, the acceptable value of KMO and significant Bartlett test of Sphericity have confirmed the adequacy of data to run factor analysis. The measures of fit have been reported in table 3.21.

Table 3.21: Measures of Fit for Managing Own Emotions Scale

Measures of Fit		Value
χ^2/df		3.70
Root Mean Square Error of Approximation (RMSEA)		0.08
The Goodness of Fit Index (GFI)		0.96
Root Mean Square Residual (RMR)		0.04
Standardized Root Mean Square Residual (SRMSR)		0.04
Bollen 89 Index, Incremental Fit Index (IFI)		0.97
Comparative Fit Index (CFI)		0.97
Normed Fit Index (NFI)		0.96
Non-Normed Fit Index (NNFI)		0.96
Relative Fit Index (RFI)		0.94
Standardised Factor Loadings of The Items of Causal Dimension Scale (CDS II)		
Dimension	Item No.	Standardized Factor Loading
Self-Emotional Management	1	0.59
	2	0.71
	3	0.64
	4	0.61
	5	0.68
	6	0.54
	7	0.74
	8	0.16
	9	0.62

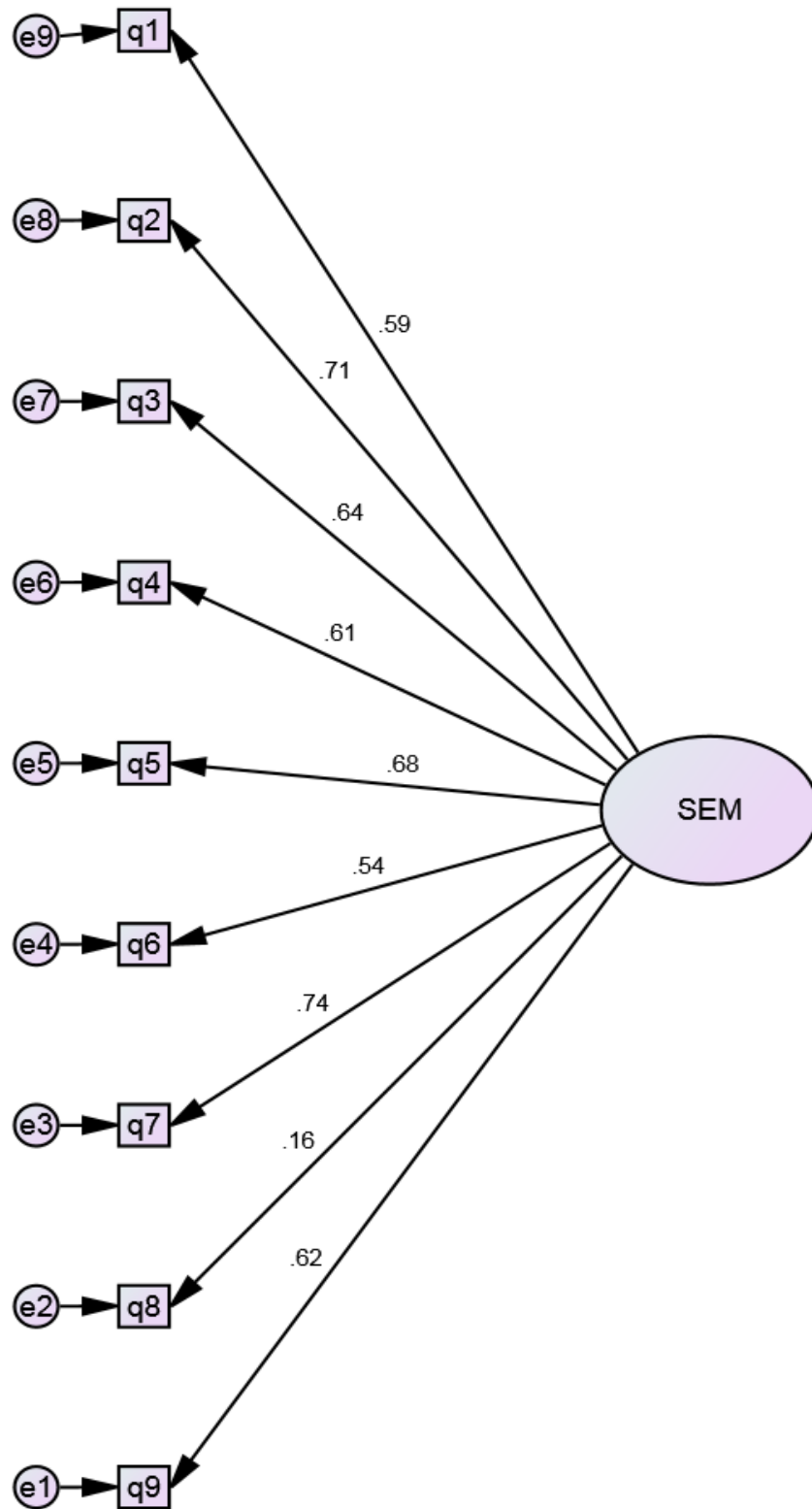


Fig. 3.7: Path Diagram of Self Emotional Management Scale

Note : SEM – Self Emotional Mangement

Confirmatory factor analysis was conducted by using IBM SPSS AMOS-21 for analyzing the construct validity and Cronbach's alpha was calculated by using the IBM SPSS-22 version of computer software for confirming the internal consistency of the instrument. Maximum likelihood estimation procedures were employed to evaluate the fit of the hypothesized model. The results of the current analysis revealed that the hypothesized model was found to provide an excellent fit to the data, $\chi^2(14, N= 368) = 52.58, p= 0.00, \chi^2/ df = 3.7$ and Goodness- of fit-index, GFI = 0.96, which is showing a good fit to the data. Along with it, statistics of Root Mean Square Error of Approximation (RMSEA) = 0.08 which is also acceptable and advocate good model fit (Browne and Cudeck,1993). Whereas, Hoelter's Critical N (CN) = 204.42 which is considered a good fit (Garson,2009). However, statistics viz. Bollen 89 Index, Incremental Fit Index (IFI)= 0.97, Comparative Fit Index (CFI)=0.97, Normed Fit Index (NFI)=0.96, Non-Normed Fit Index (NNFI)= 0.96, Relative Fit Index (RFI)= 0.94 are also satisfying the criteria of value 0.95 or greater as suggested by Hu and Bentler (1998). Furthermore, Standardized Root Mean Square Residual (SRMSR)= 0.04, (for good model value of 0.08 or less, Hu and Bentler, 1999) proved a good fit of the model. The values of factor loading for each item ranges from 0.54 to 0.74, which are statistically acceptable as per the guidelines of Stevens (2002). Hence, CFA validated the subscale named as Managing Own Emotions extracted from 'The Assessing Emotions Scale' developed by Schutte et al. (2009).

3.3.3.5 Reliability

Coefficient Alpha (Cronbach, 1951) and Composite Reliability (Fornell and Larcker, 1981) were computed. The results have been reported in table 3.22.

Table 3.22: Reliability of 'Managing Own Emotions' Dimension of 'The Assessing Emotions Scale'

Dimension	Item No.	Cronbach Alpha	Composite Reliability Coefficient
Managing Own Emotions	1,2,3,4,5,6,7,8,9	0.82	0.93

In the original scale, the Cronbach's alpha for the whole 'The Assessing Emotions Scale' was 0.90 as reported by Schutte et al. (2009). For the same scale, Ciarrochi et al. (2001, 2002) reported Cronbach's alpha for each subscale viz. Perception of Emotion (0.76, 0.80), Managing Own Emotions (0.63, 0.78), Managing Others' Emotions (0.66, 0.66) and Utilisation of Emotion (0.55, alpha for this dimension was not reported by Ciarrochi et al. in 2001). Schutte et al. (1998) reported a two-week test-retest reliability of 0.78 for total scale scores. In the present study, the coefficient alpha for managing own dimension came out 0.82 and composite reliability coefficient came out 0.93. Hence, the acceptable values of Cronbach alpha and composite reliability coefficient confirmed the internal consistency of the scale.

3.4 STATISTICAL TECHNIQUES

The following statistical techniques were employed in order to analyse the data

- a) Means and standard deviation were employed to understand the nature of data on the scores of Causal Attribution, Self-Regulated Learning Strategies and Self Emotional Management.
- b) Chi-Square test was employed in order to check the relationship between successful and unsuccessful student's attributions for their obtained score.
- c) Two-Way MANOVA was employed in order to find a significant difference between subgroups due to independent variables i.e. successfulness and gender and correlated dependent variables i.e. Locus of Causality, Stability, External Controllability and Personal Controllability.
- d) Two-Way ANOVA was employed in order to find a significant difference between subgroups due to independent variables i.e. successfulness, gender, different programs at UG and PG level and different semesters at UG level on the scores of Self-Regulated Learning Strategies and Self Emotional Management.
- e) One-Way ANOVA was employed in order to find out the influence of Causal Attribution on a) Self-Regulated Learning Strategies b) Self Emotional Management.

- f) Pearson Product Moment correlation for large sample and Spearman Rank Order correlation for the small sample was employed in order to study the relationship between different variables i.e. Causal Attribution, Self-Regulated Learning Strategies and Self Emotional Management.

CHAPTER – 4

RESULTS AND INTERPRETATION

In the preceding chapters, theoretical orientation of the problem, review of related literature, the significance of the study, objectives, hypotheses, tools, sample, research design, procedure and statistical techniques were discussed. The present chapter deals with the analysis and interpretation of results. The study investigates the self-regulated learning strategies, causal attribution and self-emotional management of higher education students in Punjab. In order to accomplish the goal, standardized tools were adapted in Indian situations and administered to collect the data.

4.1 DATA SCREENING

In quantitative research, in order to make generalizations, a careful procedure in sample selection, tools, techniques and data collection are required. In order to avoid measurement errors, data screening was performed to ensure the accuracy of data and to identify any missing data. In total, 1480 forms were received by the investigator. Incomplete forms were excluded from the dataset while entering the data. After removal of incomplete forms, the actual number of forms considered for analysis of data was 1424.

4.2 DESCRIPTIVE ANALYSIS OF VARIABLES (SELF REGULATED LEARNING STRATEGIES, CAUSAL ATTRIBUTION AND SELF EMOTIONAL MANAGEMENT AMONG HIGHER EDUCATION STUDENTS

4.2.1 Descriptive Analysis of Self Regulated Learning Strategies among Higher Education Students

With the view to interpret the self- regulated learning strategies of higher education students, the collected data was quantified and processed for calculating descriptive statistics and the results have been reported in the following table 4.1.

Table 4.1: Summary of Descriptive Analysis of Self Regulated Learning Strategies Scale

	Dimensions	N	M	M_d	σ	Sk	SE_(Sk)	z(Sk)	Kurt	SE_(kurt)	z(kurt)
	Motivation Scale										
Value component	Intrinsic Goal Orientation	1424	5.17	5	1.2	-0.37	0.065	-5.69	-0.22	0.13	-1.69
	Extrinsic Goal Orientation	1424	5.22	5.3	1.22	-0.48	0.065	-7.38	-0.42	0.13	-3.23
	Task Value	1424	5.11	5.2	1.14	-0.45	0.065	-6.92	-0.28	0.13	-2.15
Expectancy component	Control of Learning Beliefs	1424	5.11	5.3	1.15	-0.33	0.065	-5.08	-0.44	0.13	-3.38
	Self -efficacy for learning and performance	1424	5.05	5.1	1.04	-0.41	0.065	-6.31	-0.12	0.13	-0.92
Affective component	Test Anxiety	1424	4.39	4.4	1.21	-0.3	0.065	-4.62	-0.15	0.13	-1.15
	Motivation	1424	29.86	30.43	5.19	-0.37	0.065	-5.69	-0.13	0.13	-1.00

Contd. ...

	Dimensions	N	M	M_d	σ	Sk	SE_(Sk)	z(Sk)	Kurt	SE_(kurt)	z(kurt)
	Learning Strategies Scale										
Cognitive and metacognitive strategies	Rehearsal	1424	4.92	5	1.15	-0.28	0.065	-4.31	-0.31	0.13	-2.38
	Elaboration	1424	4.97	5	1.09	-0.26	0.065	-4.00	-0.33	0.13	-2.54
	Organization	1424	5.06	5	1.17	-0.33	0.065	-5.08	-0.46	0.13	-3.54
	Critical Thinking	1424	4.84	4.8	1.09	-0.31	0.065	-4.77	-0.06	0.13	-0.46
	Metacognitive Self-Regulation	1424	4.68	4.7	0.81	-0.12	0.065	-1.85	0.00	0.13	0.00
Resource management strategies	Time and Study Environment	1424	4.37	4.4	0.74	0.03	0.065	0.46	1.06	0.13	8.15
	Effort Regulation	1424	4.23	4.3	0.93	0.09	0.065	1.29	0.86	0.13	6.62
	Peer Learning	1424	4.84	5	1.27	-0.34	0.065	-4.86	-0.34	0.13	-2.62
	Help Seeking	1424	4.67	5	0.98	-0.25	0.065	-3.57	0.53	0.13	4.08
Learning Strategies		1424	42.35	42.46	6.9	-0.22	0.065	-3.38	-0.18	0.13	-1.38
Self-Regulated Learning Strategies		1424	72.21	73	11.27	-0.31	0.065	-4.77	-0.22	0.13	-1.69

It is clear from the table 4.1 that in ‘Intrinsic Goal Orientation’ dimension, the mean (M), median (M_d), standard deviation (σ), skewness (Sk), standard error of skewness ($SE_{(Sk)}$), z(skewness), kurtosis (kurt), standard error of kurtosis ($SE_{(kurt)}$) and z(kurtosis) were found to be 5.17, 5, 1.2, -0.37, 0.065, -5.69, -0.22, 0.13 and -1.69 respectively. In ‘Extrinsic Goal Orientation’ dimension, it was 5.22, 5.3, 1.22, -0.48, 0.065, -7.38, -0.42, 0.13 and -3.23 respectively. In ‘Task Value’ dimension, it was 5.11, 5.2, 1.14, -0.45, 0.065, -6.92, -0.28, 0.13 and -2.15 respectively. In ‘Control of Learning Beliefs’ dimension, it was 5.11, 5.3, 1.15, -0.33, 0.065, -5.08, -0.44, 0.13 and -3.38 respectively. In ‘Self- Efficacy for Learning and Performance’ dimension, it was 5.05, 5.1, 1.04, -0.41, 0.065, -6.31 -0.15, 0.13 and -0.92 respectively. In ‘Test Anxiety’ dimension, it was 4.39, 4.4, 1.21, -0.3, 0.065, -4.62, -0.15, 0.13 and -1.15 respectively. In ‘Motivation’, it was 29.86, 30.43, 5.19, -0.37, 0.065, -5.69, -0.13, 0.13 and -1.00 respectively.

In ‘Rehearsal’ dimension, the mean (M), median (M_d), standard deviation (σ), skewness (Sk), standard error of skewness ($SE_{(Sk)}$), z(skewness), kurtosis (kurt), standard error of kurtosis ($SE_{(kurt)}$) and z(kurtosis) were found to be 4.92, 5, 1.15, -0.28, 0.065, -4.31, -0.31, 0.13 and -2.38 respectively, in ‘Elaboration’ dimension, it was 4.97, 5, 1.09, -0.26, 0.065, -4.00, -0.33, 0.13 and -2.54 respectively. In ‘Organization’ dimension, it was 5.06, 5, 1.17, -0.33, 0.065, -5.08, -0.46, 0.13 and -3.54 respectively. In ‘Critical Thinking’ dimension, it was 4.84, 4.80, 1.09, -0.31, 0.065, -4.77, -0.06, 0.13 and -0.46 respectively. In ‘Metacognitive Self- Regulation’ dimension, it was 4.68, 4.70, 0.81, -0.12, 0.065, -1.85, 0.00, 0.13 and 0.00 respectively. In ‘Time and Study Environment’, it was, 4.37, 4.40, 0.74, 0.03, 0.065, 0.46, 1.06, 0.13 and 8.15 respectively. In ‘Effort Regulation’ dimension, it was 4.23, 4.30, 0.93, 0.09, 0.065, 1.29, -0.34, 0.13 and 6.62 respectively. In ‘Peer Learning’ dimension, it was 4.84, 5, 1.27, -0.34, 0.065, -4.86, -0.34, 0.13 and -2.62 respectively. In ‘Help-Seeking’ dimension, it was 4.67, 5, 0.98, -0.25, 0.065, -3.57. 0.53, 0.13 and 4.08 respectively. In ‘Learning Strategies’, it was 42.35, 42.46, 6.90, -0.22, 0.065, -3.38, -0.18, 0.13 and -1.38 respectively. In ‘Self-Regulated Learning Strategies’, it was, 72.21, 73, 11.27, -0.31, 0.065, -4.77, -0.22, 0.13 and -1.69 respectively.

Although in most of the cases, the z (skewness) and z (kurtosis) are less than 3.29 ($p > 0.001$) with some exceptions, the data is normal in nature for most of the dimensions and total score. Further, since the sample (1424) was very large and due to which the standard error values are coming very low. In such a situation, the visual representation of the data is good enough to see the normality of the data (Field, 2009).

4.2.2 Descriptive Analysis of Causal Attribution among Higher Education Students

With the view to interpret the causal attribution of higher education students, the collected data was quantified and processed for calculating descriptive statistics and the results have been reported in the following table 4.2.

Table 4.2: Summary of Descriptive Analysis of Causal Dimension Scale (CDS II)

Dimensions	N	M	M _d	σ	Sk	SE _(sk)	Z (skew)	Kurt	SE _(kurt)	Z (Kurt)
Locus of Causality	1424	6.07	6.17	1.66	-0.46	0.065	-7.08	-0.13	0.13	-1.00
Stability	1424	5.42	5.67	1.79	-0.28	0.065	-4.31	-0.43	0.13	-3.31
External Controllability	1424	4.92	5.00	1.75	-0.18	0.065	-2.77	-0.29	0.13	-2.23
Personal Controllability	1424	6.03	6.33	1.75	-0.57	0.065	-8.77	-0.19	0.13	-1.46

The table 4.2 reveals that in 'Locus of Causality' dimension, the mean (M), median (M_d), standard deviation (σ), skewness (Sk), standard error of skewness (SE_(sk)), z (skewness), kurtosis (kurt), standard error of kurtosis (SE_(kurt)) and z (kurtosis) were found to be 6.07, 6.17, 1.66, -0.46, 0.065, -7.08, -0.13, 0.13 and -1.00 respectively. In 'Stability' dimension, it was 5.42, 5.67, 1.79, -0.28, 0.065, -4.31, -0.43, 0.13 and -3.31 respectively. In 'External Controllability' dimension, it was 4.92, 5.00, 1.75, -0.18, 0.065, -2.77, -0.29, 0.13 and -2.23 respectively. In

‘Personal Controllability’ dimension, it was 6.03, 6.33, 1.75, -0.57, 0.065, -8.77, -0.19, 0.13 and -1.46 respectively.

Though in most of the cases, the z (skewness) and z (kurtosis) are less than 3.29 ($p > 0.001$) with some exceptions, the data is normal in nature for most of the dimensions and total score. Further, since the sample (1424) was very large and due to which the standard error values are coming very low (Field, 2009).

4.2.3 Descriptive Analysis of Self-Emotional Management among Higher Education Students

With the view to interpret the self-emotional management of higher education students, the collected data was quantified and processed for calculating descriptive statistics and the obtained results are reported in the following table 4.3.

Table 4.3: Summary of Descriptive Analysis of Self- Emotional Management

N	1424
M	33.90
M _d	35.00
σ	7.25
Sk	-0.87
SE _(Sk)	0.065
Z(skewness)	-13.38
Kurt	0.30
SE _(kurt)	0.13
Z(kurtosis)	2.30

It is clear from the table 4.3 that in ‘Self- Emotional Management’ the mean (M), median (M_d), standard deviation (σ), skewness (Sk), standard error of skewness (SE_(Sk)), z(skewness), kurtosis (kurt), standard error of kurtosis (SE_(kurt)) and z(kurtosis) were 33.90, 35, 7.25, -0.87, 0.065, -13.38, 0.30, 0.13 and 2.30 respectively.

Though, the z (skewness) and z (kurtosis) are less than 3.29. Since the sample (1424) is very large and due to which standard error values are coming very low (Field, 2009).

4.3 CAUSAL ATTRIBUTION AMONG HIGHER EDUCATION STUDENTS

The first objective of the study was to identify the causal attribution of higher education students of different programs with respect to successfulness. The data thus collected, quantified, processed and presented in the form of frequency and percentage pertaining to different categories given by Weiner (1985) in table 4.4. The data has been analysed for the students who perceived their score as successful, unsuccessful and also in totality.

In achievement related context, the causes perceived as most responsible for their failure or success are ability, study habits, efforts, mood, luck, task difficulty, instructor's bias or favouritism and teacher's help. In order to explain the success or failure, the individual assesses his or her level of ability to perform a task ("I failed because I am poor at mathematics"), here ability is an internal, stable and uncontrollable cause (I-S-UnC). Another attribution for success or failure can be study habits of the student, study habits are the sustained/ stable efforts of an individual throughout the year, hence study habits are considered as the internal, stable and controllable cause (I-S-C). Likewise, individuals may attribute the amount of effort exerted in preparing for the examination for success or failure. The effort is an internal, unstable and controllable cause (I-UnS-C). Apart from this, students may attribute mood which is an internal-unstable and controllable cause (I-UnS-UnC), anticipated luck which is external, unstable and uncontrollable (E-UnS-UnC) cause, perceived difficulty level of the task which is external, stable and uncontrollable (E-S-UnC) cause, Instructor's bias/favouritism which is external, stable and controllable (E-S-C) cause, help from the teacher which is external, unstable and controllable (E-UnS-C) cause.

Table 4.4: Causal Attributions among Higher Education Students with respect to Successfulness

Number (Percent)									
Causal Attributions	Total	Total Unsuccessful	Total Successful	UG	PG	UG Unsuccessful	UG Successful	PG Unsuccessful	PG Successful
I-S-UnC (Ability)	185 (12.99)	77 (20)	108 (10.39)	119 (13.7)	66 (11.7)	51 (18.88)	68 (11.44)	26 (22.61)	40 (8.99)
I-UnS-C (Efforts)	276 (19.38)	129 (33.51)	147 (14.14)	171 (19.7)	105 (18.7)	82 (30.37)	89 (14.98)	47 (40.87)	58 (13.03)
I-S-C (Study Habits)	479 (33.64)	15 (3.9)	464 (44.6)	257 (29.7)	222 (25.6)	10 (3.7)	247 (41.58)	5 (4.35)	217 (48.76)
I-UnS-UnC (Mood)	54 (3.79)	30 (7.79)	24 (2.30)	33 (3.8)	21 (3.75)	20 (7.40)	13 (2.18)	10 (8.7)	11 (2.47)
E-UnS-UnC (Luck)	151 (10.6)	62 (16.1)	89 (8.57)	103 (11.9)	48 (8.57)	55 (20.37)	48 (8.08)	7 (6.09)	41 (9.21)
E-S-UnC (Task Difficulty)	105 (7.37)	51 (13.25)	54 (5.19)	62 (7.17)	43 (7.6)	37 (13.7)	25 (4.21)	14 (12.17)	29 (6.51)
E-S-C (Instructor's Bias/ Favoritism)	15 (1.05)	9 (2.34)	6 (0.57)	9 (1.04)	6 (1.07)	5 (1.85)	4 (0.67)	4 (3.48)	2 (0.44)
E-UnS-C (Teacher's Help)	159 (11.16)	12 (3.11)	147 (14.14)	110 (12.7)	49 (8.75)	10 (3.70)	100 (16.83)	2 (1.74)	47 (10.56)
Total	1424 (100)	385 (100)	1039(100)	864 (100)	560(100)	270 (100)	594 (100)	115 (100)	445 (100)

I – Internal, S – Stable, C – Controllable, E – External, UnS – Unstable, UnC – Uncontrollable

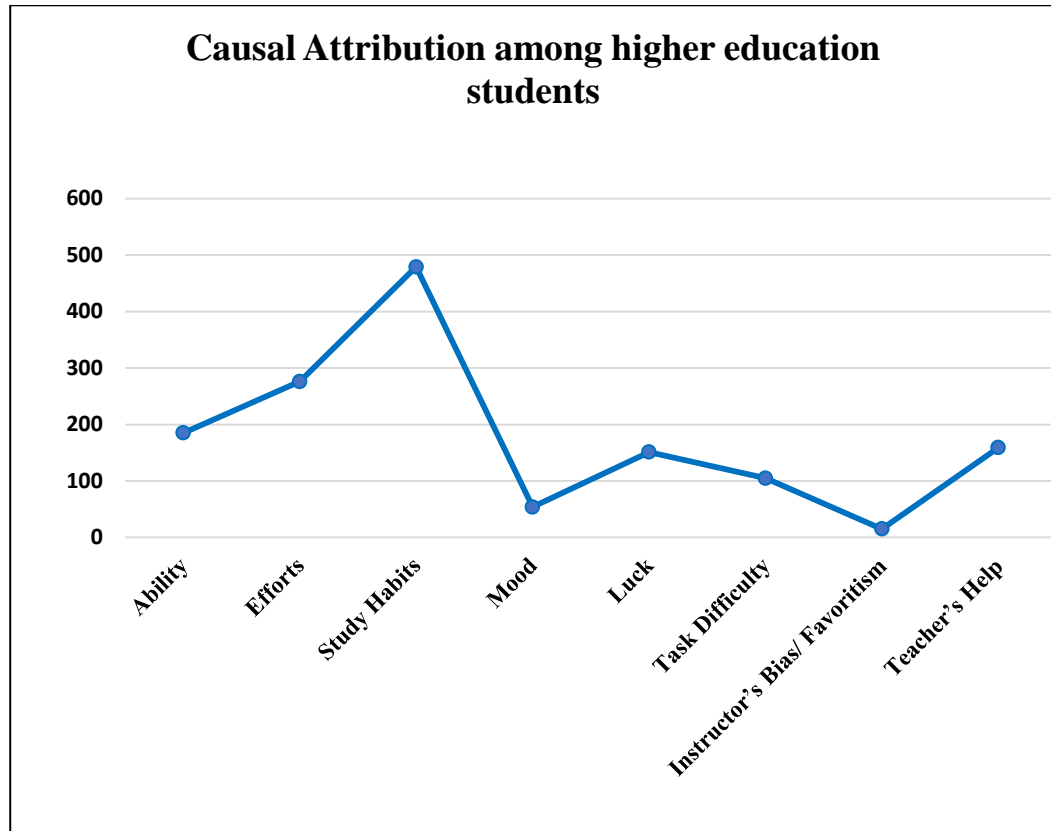


Fig. 4.1: Causal attributions among higher education students

It is clear from table 4.4 and figure 4.1 that among total students taken in the study, 185 (12.99%) students attributed ‘Ability’ (Internal-Stable-Uncontrollable) for their perceived success or failure, 276 (19.38%) attributed ‘Efforts’ (Internal-Unstable-Controllable) for their perceived success or failure, 479 (33.64%) students attributed ‘Study Habits’ (Internal-Stable-Controllable) for their perceived success or failure, 54 (3.79%) students attributed ‘Mood’ (Internal-Unstable-Uncontrollable) for their perceived success or failure, 151 (10.60%) students attributed their ‘Luck’ (External-Unstable-Uncontrollable) for their perceived success or failure, 105 (7.37%) students attributed ‘Task Difficulty’ (External-Stable-Uncontrollable) for their perceived success or failure, only 15 (1.05%) students attributed their success or failure to ‘Instructor’s Bias/Favoritism’ (External-Stable-Controllable) for their perceived success or failure. There were 159 (11.16%) students attributed ‘Teacher’s Help’ (External-Unstable-Controllable) for their perceived success or failure.

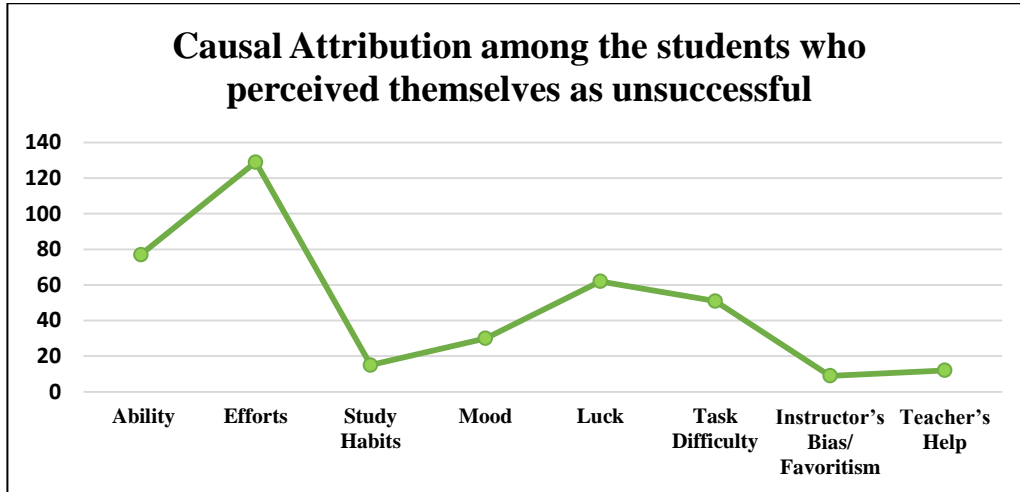


Fig. 4.2: Causal Attributions among the students who perceived themselves as unsuccessful

Among the subgroup of the students who perceived their achieved score as unsuccessful, the majority of students 129 (33.51%) attributed 'Efforts' (Internal-Unstable-Controllable) for their unsuccessful score. However, a smaller number of students, 9 (2.34%) attributed their failure to external factor i.e. 'Instructor's Bias/Favoritism' (External-Stable-Controllable). The overall ranking of the cause among unsuccessful subgroup is as, Efforts (33.51%), Ability (19.74%), Luck (16.10%), Task Difficulty (13.25%), Mood (7.79%), Overall Study Habits (3.9%), Teacher's Help (3.11%) and Favoritism by the Teacher (2.34%) were the attributions given by the students who perceived themselves as unsuccessful.

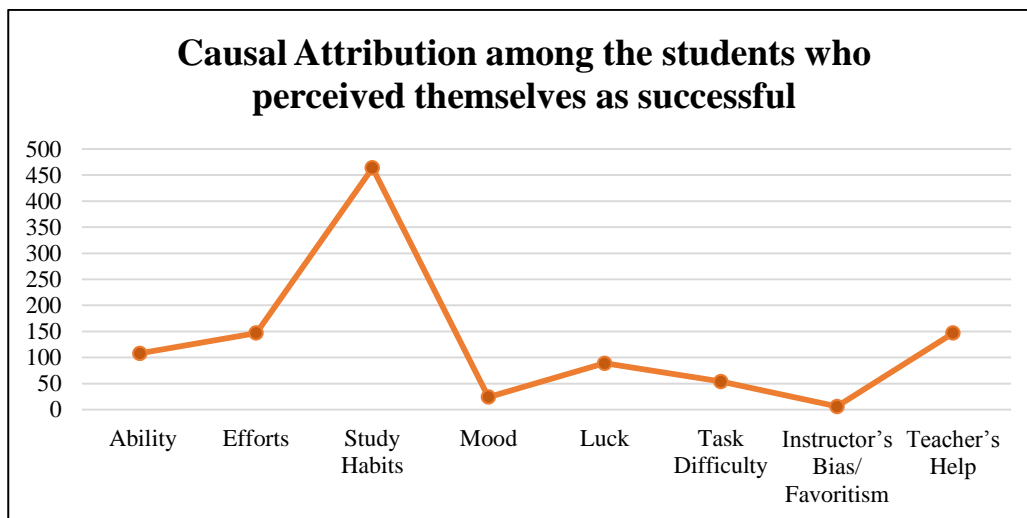


Fig. 4.3: Causal Attributions among the students who perceived themselves as successful

Among the subgroup of students who perceived their achieved score as successful, majority of the students, 464 (44.66%) attributed their success to ‘Study Habits’. There were only 8 (0.57 %) successful students attributed their success to ‘Instructor’s Bias/Favoritism’. Ranking wise, the cause for the successful score attributed to Study Habits (44.66%), Efforts (14.14%), Teacher’s Help (14.14%), Ability (10.39%), Luck (8.57%), Task Difficulty (5.19%), Mood (2.30%) and ‘Instructor’s Bias/Favoritism’ (0.57%) were the attributions given by the students who perceived themselves as successful.

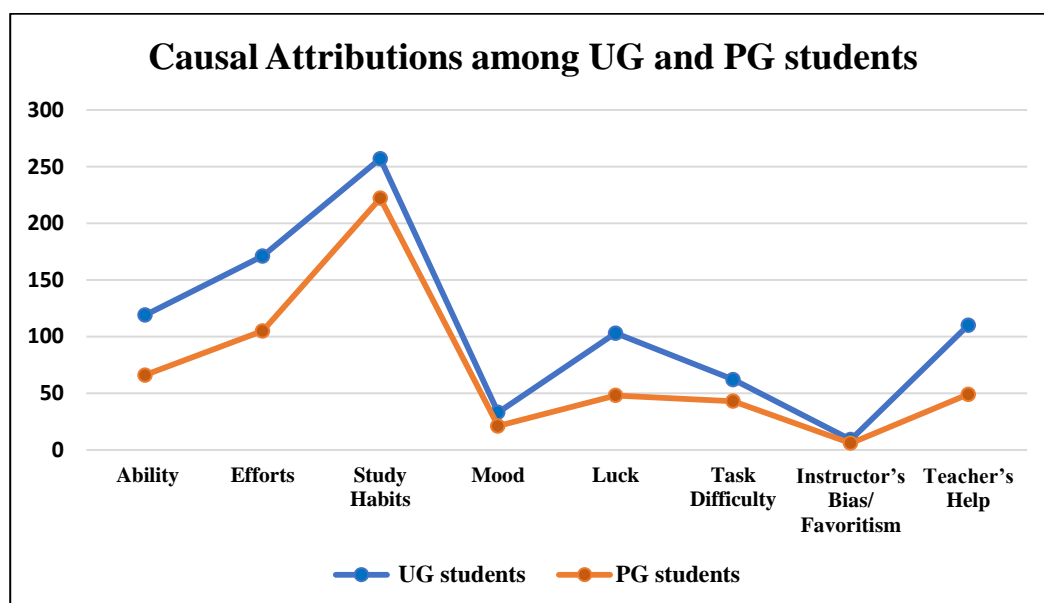


Fig 4.4: Causal Attributions among UG and PG students

Among the subgroup of UG and PG students, 257 (29.7%) UG and 222 (25.6%) PG students attributed ‘Study Habits’ (Internal- Stable-Controllable) for their achieved score. Further, a small number of UG students 9 (1.04%) and PG students 6 (1.07%) attributed ‘Instructor’s Bias/Favoritism’ (External-Stable-Controllable) for their achieved score. The overall trend of ranking of the cause for achieved score among UG students is as Study Habits (29.7%), Efforts (19.7%), Ability (13.7%), Teacher’s Help (12.7%), Luck (11.9%), Task Difficulty (7.17%), Mood (3.8%), ‘Instructor’s Bias/Favoritism’ (1.04%). Among PG students, rank wise order to causal attribution is, Study Habits (25.6%), Test Preparation (18.7 %), Ability (11.7%), Teacher’s Help (8.75%), Luck (8.57%), Task Difficulty (7.67%), Mood (3.75%) and ‘Instructor’s Bias/Favoritism’ (1.07%).

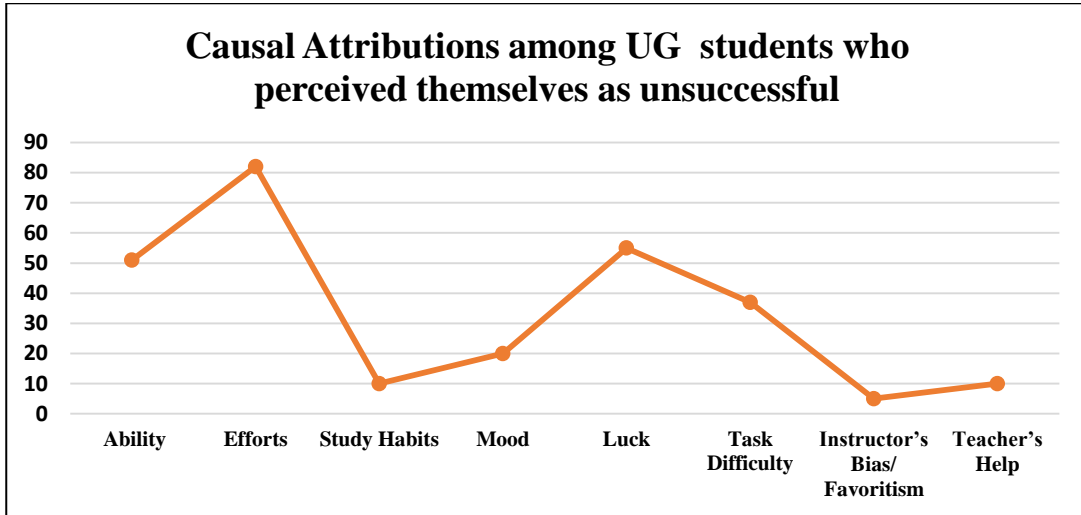


Fig. 4.5: Causal Attributions among UG students who perceived themselves as unsuccessful

Among the subgroup of UG students who perceived their achieved score as unsuccessful, 82 (30.37%) attributed 'Efforts' (Internal-Unstable-Controllable) their failure. However, a small number of students, 5 (1.85%) attributed 'Instructor's Bias/Favoritism' (External-Stable-Controllable) their failure to. Rank wise order to causal attribution is Efforts (30.37%), Luck (20.37%), Ability (18.88%), Task Difficulty (13.7%), Mood (7.40%), Study Habits (3.70%), Teacher's Help (3.70%) and Instructor's Bias/Favoritism (1.85%).

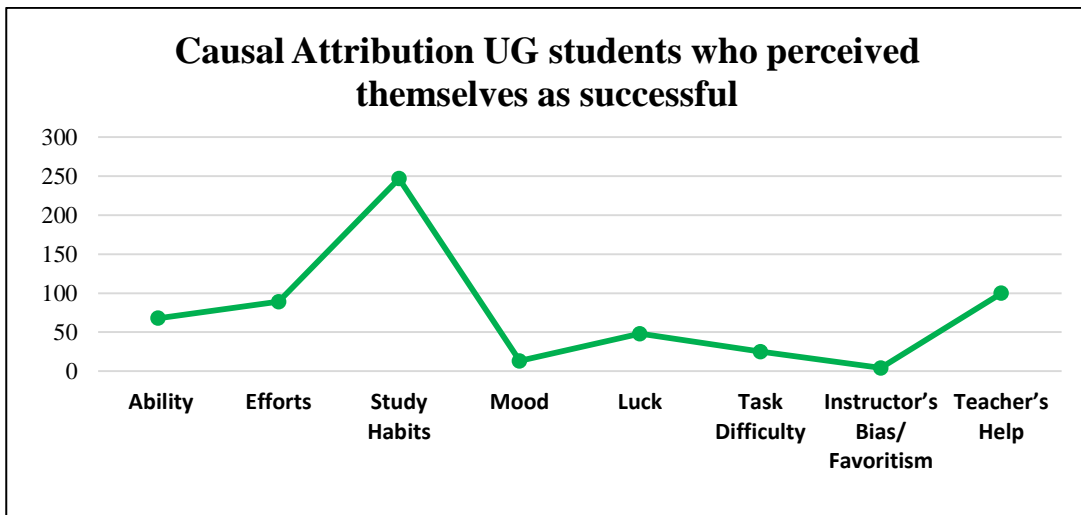


Fig. 4.6: Causal Attributions among UG students who perceived themselves as successful

Among the subgroup of UG students who perceived their achieved score as successful, maximum number of students, 247 (41.58%) attributed ‘Study Habits’ (Internal- Stable-Controllable) for their achieved score and only 4 (0.67 %) attributed ‘Instructor’s Bias/Favoritism’ (External-Stable-Controllable) for their achieved score. Ranking wise, the cause for the successful score attributed to Study Habits (41.58%), Teacher Help (16.83%), Efforts (14.98%), Ability (11.44%), Luck (8.08%), Task Difficulty (4.21%), Mood (2.18%) and Instructor’s Bias/Favoritism (0.67%).

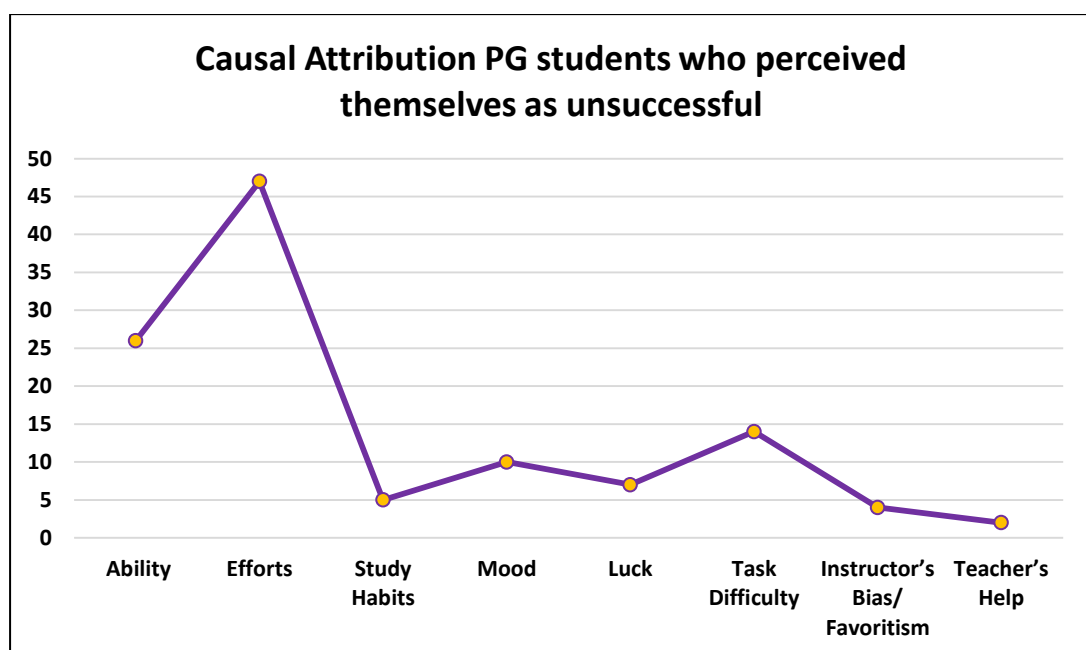


Fig. 4.7: Causal Attributions among PG students who perceived themselves as unsuccessful

Among the subgroup of PG students who perceived their achieved score as unsuccessful, a maximum number of students, 47 (40.87%) attributed ‘Efforts’ (Internal-Unstable-Controllable) their achieved score. However, a small number of students, 4 (3.48%) attributed ‘Instructor’s Bias/Favoritism’ (External-Stable-Controllable) for their achieved score. Rank wise order to causal attribution is Efforts (40.87%), Ability (22.61%), Task Difficulty (12.17%), Mood (8.70%), Luck (6.09%), Study Habits (4.35%), Instructor’s Bias/Favoritism (3.48%) and Teacher’s Help (1.74%).

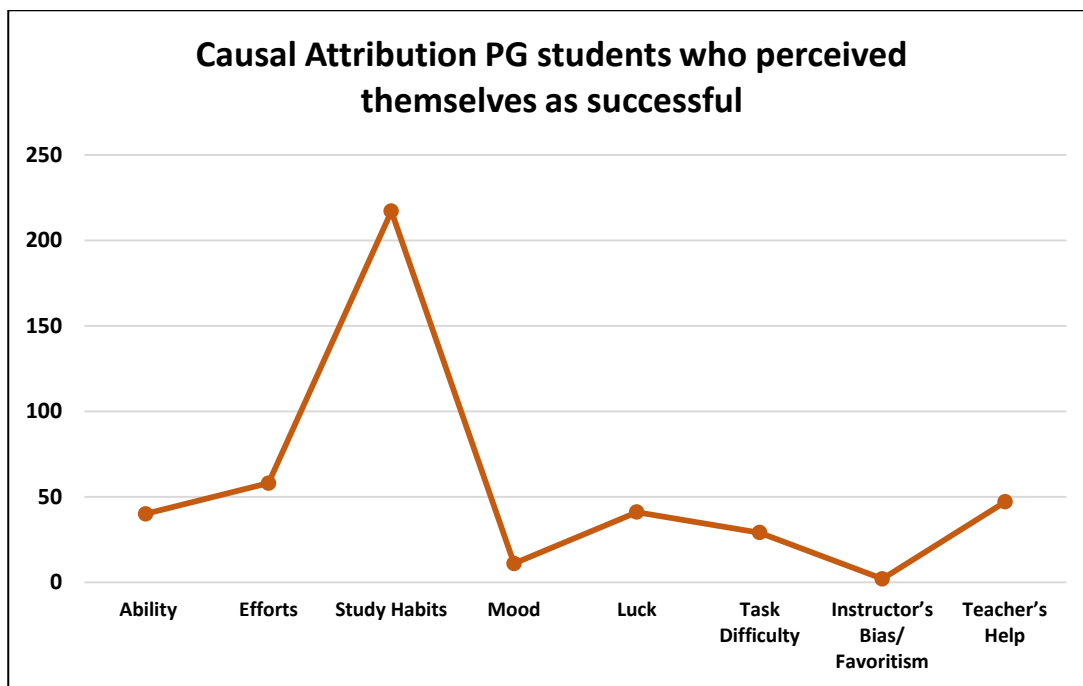


Fig. 4.8: Causal Attributions among PG students who perceived themselves as successful

Among the subgroup of PG students who perceived their achieved score as successful, majority of the students 217 (48.76%) attributed 'Study Habits' (Internal- Stable-Controllable) for their achieved score. There are only 3 (0.67%) students who attributed 'Instructor's Bias/Favoritism' (External-Stable-Controllable) for their achieved score. Rank wise order to causal attribution is Study Habits (48.76%), Efforts (13.03%), Teacher's Help (10.56%), Luck (9.21%), Ability (8.99%), Task Difficulty (6.51%), Mood (2.47%) and Instructor's Bias/Favoritism' (0.44%).

SUMMARY

It has been found that majority of the UG level students who perceived themselves as unsuccessful attributed their failure to efforts followed by luck, ability, task difficulty, mood, study habits, help from teacher and instructor bias and successful students attributed their success to study habits followed by help from teacher, efforts, ability, luck, task difficulty, mood and instructor bias. In case of PG level, majority of the students who perceived themselves as unsuccessful attributed

their failure to efforts followed by ability, the difficulty of the task, mood, luck, study habits, instructor bias and help from the teacher. While the majority of students who perceived themselves as successful attributed their success to their study habits followed by efforts, help from teachers, luck, ability, the difficulty of the task, mood and instructor bias.

4.4 LEVEL OF SELF-EMOTIONAL MANAGEMENT AMONG HIGHER EDUCATION STUDENTS

To identify the level of self-emotional management of higher education students with respect to program and semester. The data thus collected, quantified, processed and presented in the form of frequency and percentage pertaining to different levels of Self Emotional Management in table 4.5.

Table 4.5: Level of Self- Emotional Management among Higher Education Students

Level	High SEM	Low SEM	Avg. SEM	Total
UG	316 (36.5%)	266 (30.7%)	282 (32.6%)	864 (100%)
PG	214 (38.2%)	178 (31.7%)	168 (30%)	560 (100%)
Total	530 (37.2%)	444 (31.1%)	450 (31.6%)	1424 (100%)

It is clear from the table 4.5 that at UG level 316 (36.5%) students have high self-emotional management, 266 (30.7%) students have low self-emotional management and 282 (32.6%) students have average self-emotional management. On looking at the results at PG level students, 214 (38.2%) students have high self-emotional management, 178 (31.7%) students have low self-emotional management and 450 (31.6%) students have average self-emotional management. Similarly, the level of self-emotional management has been analysed for different programs and semesters at UG and PG level. The results have been reported in table 4.6.

Table 4.6: Level of Self- Emotional Management among Higher Education Students of Different Programs and Semesters

Number (Percentage)					
Program	Semester	High SEM	Low SEM	Avg SEM	Total
B.Com	2nd Semester	21 (27.3)	34 (44.1)	22 (28.5)	77 (100)
	4th Semester	27 (33.8)	22 (27.5)	31 (38.8)	80 (100)
	6th Semester	35 (42.2)	29 (34.9)	19 (22.9)	83 (100)
	Total	83 (36.2)	85 (37.1)	72 (31.4)	240 (100)
B.Sc.	2nd Semester	40 (44.4)	20 (22.2)	30 (33.3)	90 (100)
	4th Semester	34 (52.3)	8 (12.3)	23 (35.4)	65 (100)
	6th Semester	40 (40.4)	23 (23.2)	36 (36.4)	99 (100)
	Total	114 (44.8)	51(20)	89 (35)	254 (100)
BBA	2nd Semester	18 (28.6)	20 (31.7)	25 (39.7)	63 (100)
	4th Semester	18 (35.3)	19 (37.3)	14 (27.5)	51 (100)
	6th Semester	9 (17)	27 (50.9)	17 (32.1)	53 (100)
	Total	45 (26.9)	66 (39.5)	56 (33.5)	167 (100)
BCA	2nd Semester	14 (21.2)	29 (43.9)	23 (34.8)	66 (100)
	4th Semester	33 (43.4)	24 (31.6)	19 (25)	76 (100)
	6th Semester	27 (37.5)	22 (30.6)	23 (31.9)	72 (100)
	Total	74 (34.5)	75 (35)	65 (30.3)	214 (100)
M.Com	2nd Semester	27 (34.2)	24 (30.4)	28 (35.4)	79 (100)
M.Sc.	2nd Semester	59 (38.8)	38 (25)	55 (36.2)	152 (100)
MBA	2nd Semester	78 (43.6)	50 (27.9)	51 (28.5)	179 (100)
MCA	2nd Semester	50 (33.3)	66 (44)	34 (22.7)	150 (100)

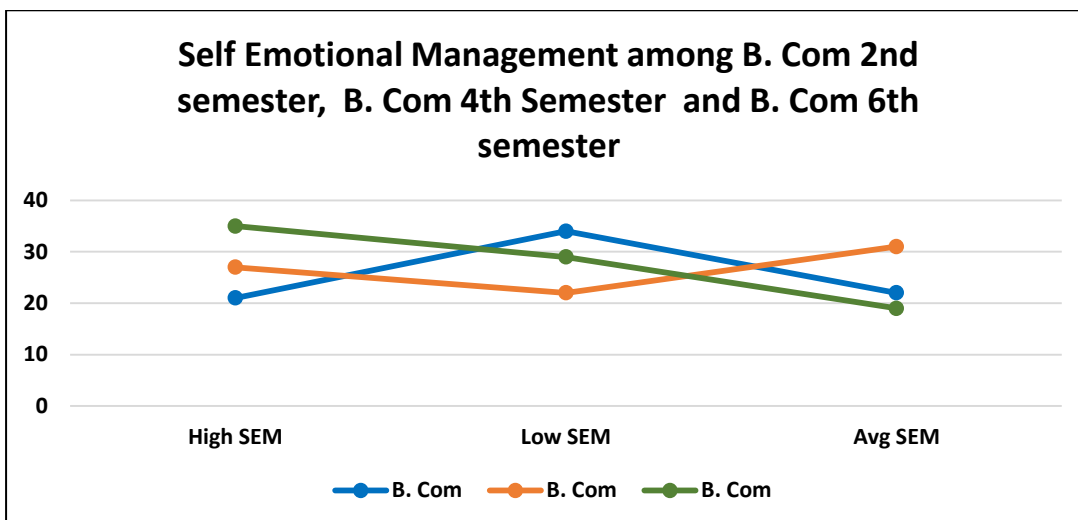


Fig. 4.9: Self Emotional Management among B. Com 2nd Semester, B. Com 4th Semester and B. Com 6th Semester

It is clear from the table 4.6 in B. Com 2nd Semester 21 (27.3%) students were in high SEM category, 34 (44.1%) students were in low SEM category and 22 (28.5%) students were in Average SEM category. In 4th semester 27 (33.8%) students were in high SEM category, 22 (27.5%) students were in low SEM category and 31 (38.8%) students were in Average SEM category. In 6th semester 35 (42.2%) students were in high SEM category, 29 (34.9%) students were in low SEM category and 19 (22.9%) students were in Average SEM category.

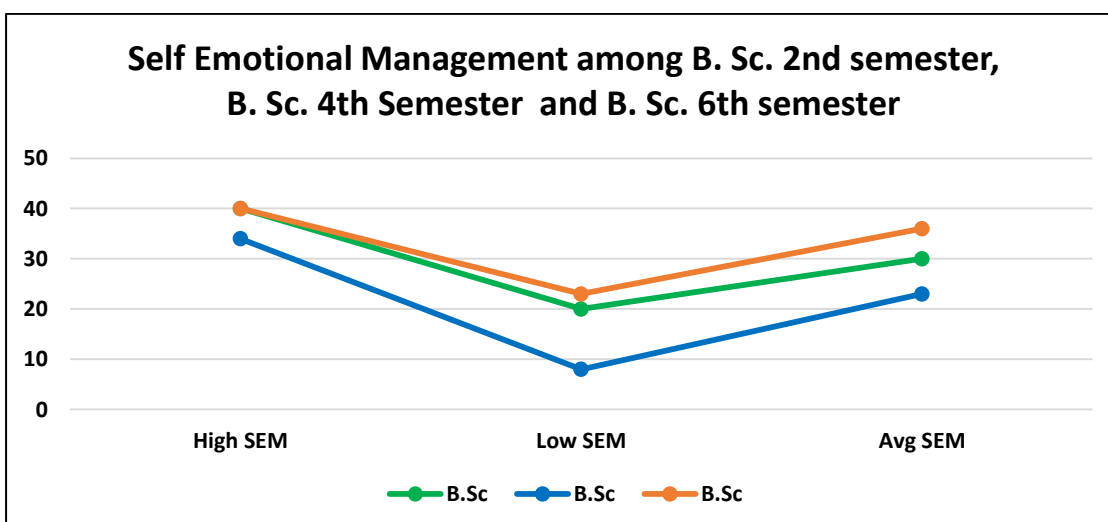


Fig. 4.10: Self Emotional Management among B.Sc. 2nd semester, B.Sc. 4th Semester and B.Sc. 6th semester

In B.Sc. 2nd Semester 40 (44.4%) students were in high SEM category, 20 (22.2%) students were in low SEM category and 30 (33.3%) students were in Average SEM category. In 4th semester 34 (52.3%) students were in high SEM category, 8 (12.3%) students were in low SEM category and 40 (40.4%) students were in Average SEM category. In 6th semester 40 (40.4%) students were in high SEM category, 23 (23.2%) students were in low SEM category and 36 (36.4%) students were in Average SEM category.

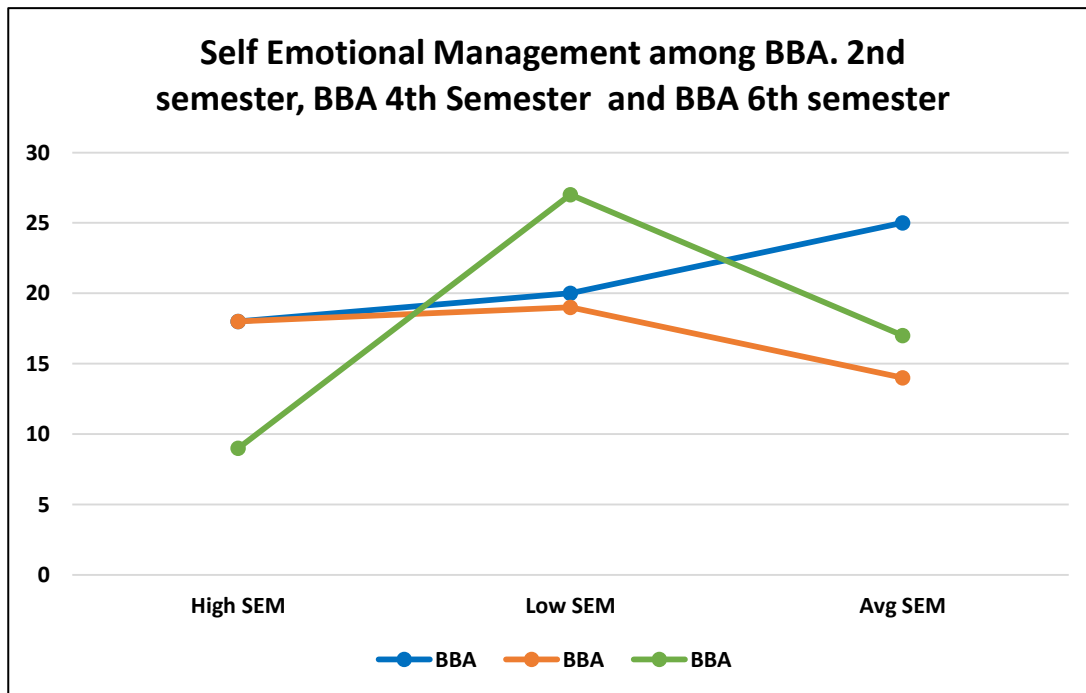


Fig. 4.11: Self Emotional Management among BBA 2nd Semester, BBA 4th Semester and BBA 6th semester

In BBA 2nd Semester 18 (28.6%) students were in high SEM category, 20 (31.7%) students were in low SEM category and 25 (39.7%) students were in Average SEM category. In 4th semester 18 (35.3%) students were in high SEM category, 19 (37.3%) students were in low SEM category and 14 (27.5%) students were in Average SEM category. In 6th semester 9(17%) students were in high SEM category, 27 (50.9%) students were in low SEM category and 17 (32.1%) students were in Average SEM category.

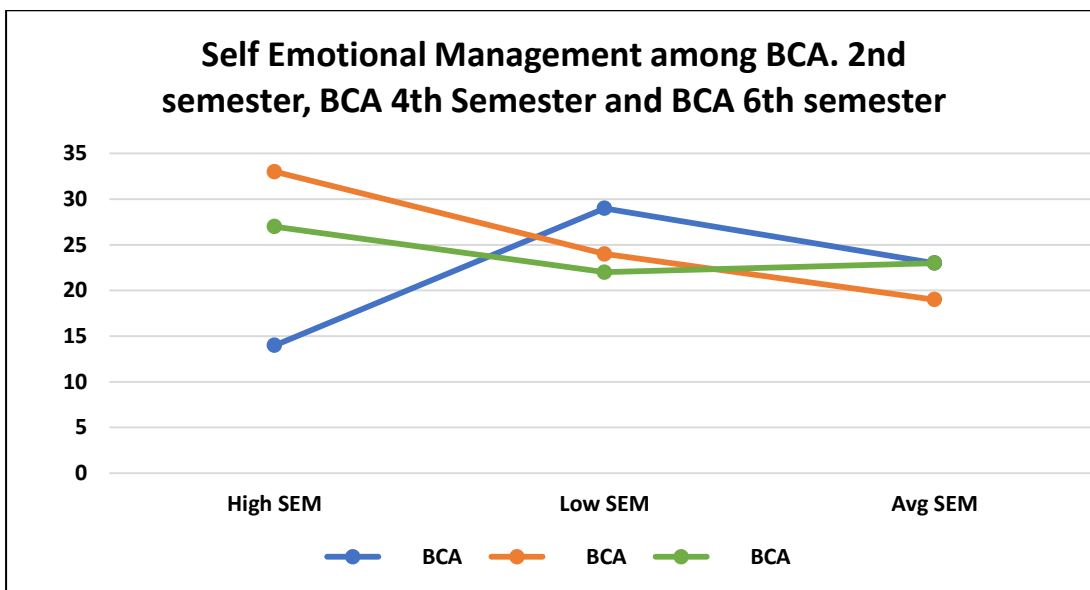


Fig. 4.12: Self Emotional Management among BCA 2nd Semester, BCA 4th Semester and BCA 6th Semester

In BCA 2nd Semester 14 (21.2%) students were in high SEM category, 29 (43.9%) students were in low SEM category and 23 (34.8%) students were in Average SEM category. In 4th semester 33 (43.4%) students were in high SEM category, 24 (31.6%) students were in low SEM category and 19 (25%) students were in Average SEM category. In 6th semester 27 (37.5%) students were in high SEM category, 22 (30.6%) students were in low SEM category and 23 (31.9%) students were in Average SEM category.

In M. Com 2nd Semester 27 (34.2%) students were in high SEM category, 24 (30.4%) students were in low SEM category and 28 (35.4%) students were in Average SEM category. In M. Sc (Chemistry) 2nd Semester 59 (38.8%) students were in high SEM category, 38 (25%) students were in low SEM category and 55 (36.2%) students were in Average SEM category. In MBA 2nd semester 78 (43.6%) students were in high SEM category, 50 (27.9%) students were in low SEM category and 51 (28.5%) students were in Average SEM category. In MCA 2nd semester 50 (33.3%) students were in high SEM category, 66 (44%) students were in low SEM category and 34 (22.7%) students were in Average SEM category.

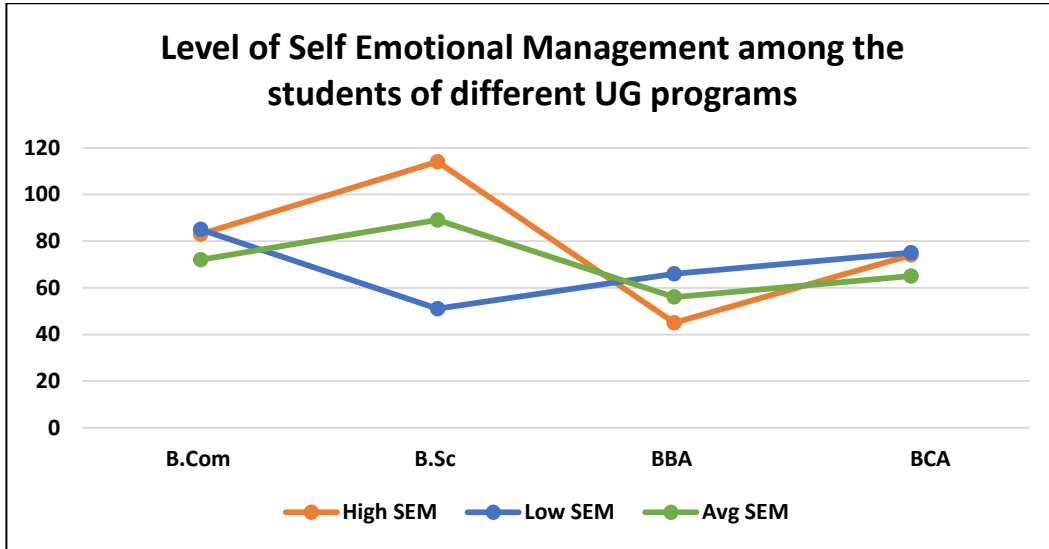


Fig. 4.13: The Level of Self Emotional Management among the Students of Different UG Programs

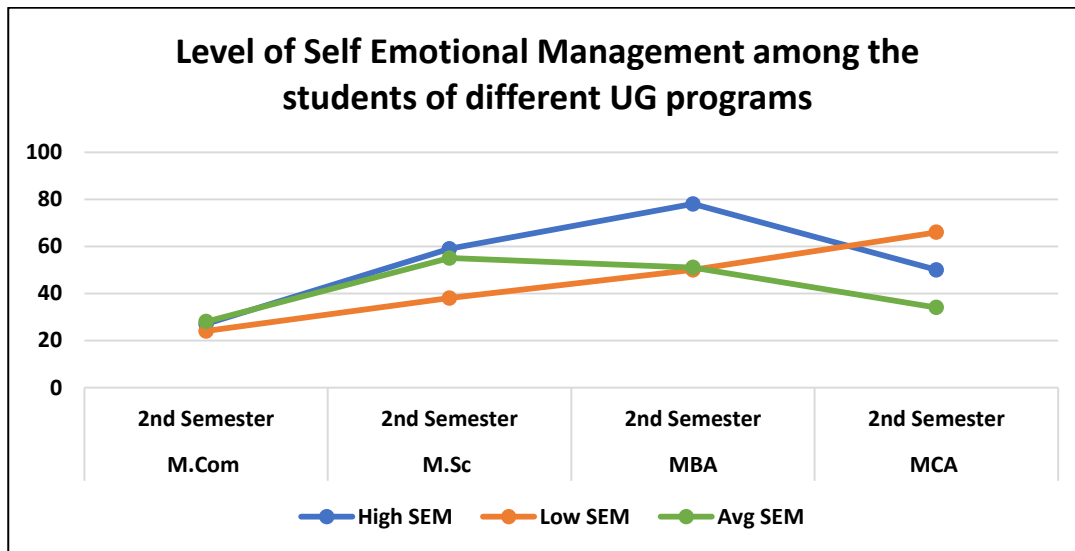


Fig. 4.14: The Level of Self Emotional Management among the Students of Different UG Programs

It is clear from table 4.6 that among UG programs, majority of the students of B.Sc. 114 (44.8%) possess high level of self emotional management followed by B.Com 83 (36.2%), BCA 74 (34.5%) and BBA 45 (26.9 %) programs. Further, among PG programs, majority of the MBA 78 (43.6%) possess a high level of self emotional management followed by M.Sc. 59 (38.8%), MCA 50 (33.3%) and M. Com 27 (34.2) programs.

SUMMARY

It has been found that the percentage of students with high self-emotional management was higher at PG level than at the UG level. This may be due to the reason that as the person grows and matures with age, he starts managing his or her emotions (Eisenberg et al. 2010). Further, in B. Com program, the percentage of the students with high self-emotional management is found to be more in 6th semester as compared to 2nd and 4th semesters. In B. Sc, BBA and BCA Programs, 4th semester students are found to have a high level of self-emotional management as compared to 2nd and 6th semester. Further, In the case of UG programs, B.Sc. program found to have a maximum number of students with high self-emotional management followed by B.Com, BCA and BBA programs. In the case of PG programs, MBA program found to have a maximum number of students with high self-emotional management followed by M.Sc. MCA and M.Com programs.

4.5 SUMMARY OF RELATIONSHIP BETWEEN SUCCESSFUL AND UNSUCCESSFUL STUDENT'S CAUSAL ATTRIBUTIONS TO EXAM SCORE STUDYING IN DIFFERENT SEMESTERS OF DIFFERENT PROGRAMS

To study the relationship between successful and unsuccessful student's causal attributions to exam score studying in different semesters of different programs. The obtained scores were subjected to Pearson Chi-Square test and the results are reported in the following headings pertaining to different programs at UG and PG level.

4.5.1 Relationship between Successful and Unsuccessful Student's Causal Attributions to Exam Score studying in different Semesters of UG Programs

The Pearson Chi-Square test was used to examine the relationship between successful and unsuccessful student's causal attributions to exam score studying in different semesters of different UG programs. The results came therein are presented in table 4.7 and table 4.8.

It is clear from the table 4.8 that for B. Com 2nd semester students, the relationship between unsuccessful and successful student's causal attributions to achieved score is found to be significant with $\chi^2(6,66) = 27.58, p < 0.01$. Similarly, for B. Com 4th semester students, the relationship between unsuccessful and successful student's causal attributions to achieved score is found to be significant with $\chi^2(6,80) = 25.33, p < 0.01$ and for B. Com 6th semester students, the relationship between unsuccessful and successful student's causal attributions to achieved score is also found to be significant with $\chi^2(7,83) = 32.7, p < 0.01$. Thus, the hypothesis (1), "There is no significant relationship between successful and unsuccessful student's causal attributions to exam score of higher education students" is rejected for B. Com 2nd, B. Com 4th and B. Com 6th semesters. Meaning thereby that there exists a statistically significant relationship between unsuccessful and successful student's attributions and the achieved score.

The data of table 4.7 shows that in B. Com 2nd semester, the students who perceived that they were unsuccessful in achieving the desired score attributed their failure to efforts followed by ability, study habits, mood and task difficulty. In B. Com 4th semester, the most rated cause for the perceived failure was task difficulty followed by efforts, luck, mood, study habits and ability. In B. Com 6th semester, the most rated cause for the perceived failure was luck followed by mood, task difficulty, efforts, ability and teacher's help. On the other side, majority of the successful students of B. Com 2nd semester attributed their success to study habits followed by teacher's help, ability, luck, efforts and task difficulty. In B. Com 4th semester, most of the students attributed their success to study habits followed by teacher's help, efforts, luck, task difficulty, ability and mood. Similarly, in B. Com 6th semester, majority of the students rated study habits as the main cause behind their successful score followed by efforts, ability, task difficulty, teacher's help, and luck. It is clear that the most rated cause for success in B. Com 2nd, B. Com 4th and B. Com 6th semester students was study habits which is an internal, stable and controllable cause.

Table 4.7: Frequency Distribution of Causal Attribution to Exam Score based on Semester of Study and Successfulness of Different UG Programs

Classification	B. Com						B.Sc.					
	2nd Semester		4th Semester		6th Semester		2nd Semester		4th Semester		6th Semester	
	Unsuccessful	Successful	Unsuccessful	Successful	Unsuccessful	Successful	Unsuccessful	Successful	Unsuccessful	Successful	Unsuccessful	Successful
I-S-UnC (Ability)	1	11	1	2	2	8	12	6	2	4	6	10
I-UnS-C (Efforts)	4	3	5	11	3	9	12	8	10	5	5	14
I-S-C (Study Habits)	1	25	1	22	0	26	1	23	3	20	0	34
I-UnS-UnC (Mood)	1	0	3	2	5	0	5	1	0	0	0	0
E-UnS-UnC (Luck)	0	6	4	5	7	4	7	4	4	2	11	8
E-S-UnC (Task Difficulty)	1	1	7	3	4	7	3	2	4	2	5	2
E-S-C (Instructor's Bias/ Favoritism)	0	12	0	14	1	7	0	4	0	9	2	2
E-US-C (Teacher's Help)	0	0	0	0	0	0	2	0	0	0	0	0
Total	8	58	21	59	22	61	42	48	24	41	29	70

Contd. ...

Classification	BBA program						BCA Program					
	2nd Semester		4th Semester		6th Semester		2nd Semester		4th Semester		6th Semester	
	Unsuccessful	Successful	Unsuccessful	Successful	Unsuccessful	Successful	Unsuccessful	Successful	Unsuccessful	Successful	Unsuccessful	Successful
I-S-UnC (Ability)	7	6	1	3	3	1	8	7	2	7	5	4
I-UnS-C (Efforts)	7	6	7	5	12	8	6	8	9	7	2	5
I-S-C (Study Habits)	0	14	0	8	2	8	1	17	1	20	0	30
I-UnS-UnC (Mood)	4	3	2	2	0	0	0	0	0	0	0	5
E-UnS-UnC (Luck)	5	3	5	1	4	3	4	3	1	5	3	4
E-S-UnC (Task Difficulty)	3	2	4	1	3	0	0	1	2	2	1	2
E-S-C (Instructor's Bias/ Favoritism)	0	3	0	12	3	3	0	0	3	1	0	0
E-UnS-C (Teacher's Help)	0	0	0	0	0	3	2	9	2	14	0	11
Total	26	37	19	32	27	26	21	45	20	56	11	61

Table 4.8: Summary of Pearson Chi-Square for Relationship between Unsuccessful and Successful Student's Attributions to Exam Score Studying in Different Semesters of Different UG Programs

	B. Com				B. Sc			
Semester	df	N	χ^2	p-value	df	N	χ^2	p-value
2nd Semester	6	66	27.58**	0.00	6	66	27.58**	0.00
4th Semester	6	80	25.33**	0.00	6	80	25.33**	0.00
6th Semester	7	83	32.7**	0.00	7	83	32.7**	0.00
	BBA				BCA			
Semester	df	N	χ^2	p-value	df	N	χ^2	p-value
2nd Semester	7	63	16.58*	0.02	5	66	13.19*	0.02
4th Semester	6	51	24.05**	0.00	7	76	20.7**	0.00
6th Semester	7	53	11.53	0.12	6	72	25.4**	0.00

*significant at the 0.05 level of confidence

**significant at 0.01 level of confidence

It is clear from the table 4.8 that for B.Sc. 2nd semester, the relationship between unsuccessful and successful student's causal attribution to achieved score is found to be significant with $\chi^2 (7, 90) = 32.39, p < 0.01$. In the case of B. Sc 4th semester, the relationship between unsuccessful and successful student's causal attribution to achieved score is found to be significant with $\chi^2 (6,65) = 22.88, p < 0.01$ and for B. Sc 6th semester, the relationship between unsuccessful and successful student's causal attribution to achieved score is also found to be significant with $\chi^2 (6,99) = 30.62, p < 0.01$. Thus, the hypothesis (1), "There is no significant relationship between successful and unsuccessful student's causal attribution to exam score of higher education students" is rejected for B.Sc. 2nd, B.Sc. 4th and B.Sc. 6th semesters. Meaning thereby that there exists a statistically significant relationship between unsuccessful and successful student's attributions and the achieved score.

Table 4.7 clearly reveals that the majority of unsuccessful students of B.Sc. 2nd semester attributed their failure to efforts and ability followed by luck, mood, task difficulty, instructor bias and study habits. In the case of B. Sc. 4th semester, the effort was the most rated cause for the failure followed by luck, task difficulty, study habits and ability. In the case of B. Sc. 6th semester, luck was the most rated cause for the failure followed by ability, efforts, task difficulty and teacher's help. On the other side, majority of the successful students of B. Sc. 2nd semester mentioned study habits as a major cause for their successful score followed by efforts, ability, luck, teacher's help, task difficulty and luck. Similarly, in the case of B. Sc. 4th semester again 'study habits' was the most rated cause for the success followed by teacher's help, efforts, ability, luck and task difficulty. In the case of B. Sc. 6th semester, most of the students rated study habits as the main cause for their success followed by efforts, ability, luck, task difficulty and teacher's help. It is clear from the trend that the majority of the successful students of B.Sc. 2nd, B.Sc. 4th and B.Sc. 6th semester mentioned internal, stable and controllable cause i.e. 'study habits' for their successful score.

It is clear from the table 4.8 that for BBA 2nd semester students, the relationship between unsuccessful and successful student's causal attributions to

achieved score is found to be significant with $\chi^2(7, 63) = 16.58, p < 0.05$. Further, for BBA 4th semester students the relationship between unsuccessful and successful student's causal attributions to achieved score is found to be significant with $\chi^2(6,51) = 24.05, p < 0.01$. However, for BBA 6th semester students, the relationship between unsuccessful and successful student's causal attributions to achieved score is not found to be significant with $\chi^2(7,53) = 11.53, p > 0.05$. Thus, the hypothesis (1) "There is no significant relationship between successful and unsuccessful student's causal attributions to exam score of higher education students" is rejected except in case of BBA 6th semester. Table 4.7 shows that the unsuccessful students of BBA 2nd semester attributed their possible failure to ability and effort attributions followed by luck, mood and task difficulty. In the case of BBA 4th semester, the effort is the most rated cause for the failure followed by luck, task difficulty, mood and ability. On the other side, the successful students of BBA 2nd semester attributed their success to study habits followed by efforts, ability, mood luck, teacher help and task difficulty. In BBA 4th semester, the successful students rated teacher's help as the main cause for their success followed by study habits, efforts, ability, mood, luck and task difficulty.

Table 4.8 shows that for BCA 2nd semester students, the relationship between unsuccessful and successful student's causal attributions to achieved score is found to be significant with $\chi^2(5, 66) = 13.19, p < 0.05$. Likewise, for BCA 4th semester students, the relationship between unsuccessful and successful student's causal attributions to achieved score is found to be significant with $\chi^2(7,76) = 20.7, p < 0.01$. Similarly, for BCA 6th semester students, the relationship between unsuccessful and successful student's causal attributions on the achieved score is also found to be significant with $\chi^2(6,72) = 25.4, p < 0.01$. Thus, the hypothesis (1), "There is no significant relationship between successful and unsuccessful student's causal attributions to exam score of higher education students" is rejected for BCA 2nd, 4th and 6th semesters. Meaning thereby that there exists a statistically significant relationship between unsuccessful and successful student's attributions and the achieved score for the students studying in BCA 2nd, 4th, 6th semesters. Table 4.7 shows that the unsuccessful students of BCA 2nd semester attributed their failure to

ability followed by efforts, luck, instructor's bias and study habits. In the case of BCA 4th semester, the effort is the most rated cause for the possible failure followed by teacher's help, ability, task difficulty, instructor bias, mood and luck. In the case of BCA 6th semester, the ability was the most cited cause for the probable failure followed by luck, efforts and task difficulty. On the other hand, majority of the successful students of BCA 2nd semester attributed study habits as a major cause for their success followed by favouritism, efforts, ability, luck and task difficulty. In case of BCA 4th semester, again majority of the successful students attributed study habits as the main cause for their success followed by favouritism, ability, efforts, luck, task difficulty and teacher's help. In the case of BCA 6th semester, majority of the successful students cited study habits as the main cause for their success followed by favouritism, efforts, mood, ability, luck and task difficulty. It is clear from the trend that the majority of the successful students of BCA 2nd, BCA 4th and BCA 6th semester mentioned internal, stable and controllable cause i.e. 'study habits' for their successful score.

It is clear from the above finding that there is a significant relationship between successful and unsuccessful student's causal attributions and achieved score. The finding of the present study is consistent with the findings of Frieze and Weiner (1971), Weiner (1972, 1986), Wolleat et al. (1980), Edwin and Talif (1990), Gobel and Mori (2007) and Peacock (2009), Dasinger (2011) who found the significant relationship between causal attributions and academic performance of the students. It has been found that the majority of students who perceived their score as successful have endorsed internal attributions i.e. study habits to explain their success. This shows that successful students always study hard throughout the year according to their scheduled study plan and have firm faith in their ability and efforts and in turn achieved a successful result. On the other side, the majority of unsuccessful students endorsed a lack of effort. They also cited ability, task difficulty, luck, instructor's bias and mood to explain their failure. Cortes-Suarez (2008) explored that the college students who were successful in mathematics attributed their success to internal causes (i.e. efforts and ability) and unsuccessful students attributed their failure to external causes (i.e. difficult task and luck). Perry

et al. (2008) found that unsuccessful college students were most likely to endorse poor efforts followed by a difficult test, poor learning strategy, lack of help from the teacher, low ability and bad luck at the time of the exam. Hsieh and Schallert (2008) reported that successful undergraduate students enrolled in different language programs endorsed ability attributions for their success while unsuccessful students endorsed effort attributions for their failure. Bornholt and Moller (2003) documented that effort was the most common cause reported by both successful and unsuccessful students for their achieved score. It has also been revealed from the result of the present study that successful students also attributed to some external causes like luck and teachers for their success but to a lesser extent. The finding is in tune with the results of Gobel and Mori (2007), Gobel et al. (2011), Thang et al. (2011) who found that first-year Japanese undergraduates attending English speaking and reading classes attributed their success to teachers and the classroom environment.

4.5.2 Relationship of Successful and Unsuccessful Student's Causal Attributions to Exam Score Studying in 2nd Semester of PG Programs

A Pearson Chi-Square test was used to find the relationship between successful and unsuccessful student's causal attributions to exam score studying in the 2nd semester of different PG programs. The results came therein are presented in table 4.9 and table 4.10.

It is clear from the table 4.10 that for M. Com 2nd semester the relationship between unsuccessful and successful student's causal attributions to achieved score is found to be significant with $\chi^2(6,79) = 25.29, p < 0.01$. Similarly, for M. Sc (Chemistry) 2nd semester, the relationship between unsuccessful and successful student's causal attribution to achieved score is found to be significant with $\chi^2(7,152) = 49.97, p < 0.01$. Likewise, MBA 2nd semester, the relationship between unsuccessful and successful student's causal attributions to achieved score is found to be significant with $\chi^2(7,179) = 39.09, p < 0.01$. Similarly, for MCA 2nd semester, the relationship between unsuccessful and successful student's causal attributions to achieved score is found to be significant with $\chi^2(7,179) = 31.93, p < 0.01$.

Table 4.9: Frequency Distribution of Causal Attributions to Exam Score based on Semester of Study and Successfulness of Different PG Programs

Program	M.Com		M. Sc (Chemistry)		MBA		MCA	
Semester	2nd Semester		2nd Semester		2nd Semester		2nd Semester	
Classification	Unsuccessful	Successful	Unsuccessful	Successful	Unsuccessful	Successful	Unsuccessful	Successful
I-S-UnC (Ability)	0	4	15	9	8	19	3	8
I-UnS-C (Efforts)	6	7	16	17	14	17	11	17
I-S-C (Study Habits)	0	34	1	53	2	76	2	54
I-UnS-UnC (Mood)	1	1	4	2	2	6	3	2
E-UnS-UnC (Luck)	1	5	2	6	2	8	2	22
E-S-UnC (Task Difficulty)	1	6	2	9	5	4	6	10
E-S-C (Instructor's bias/ Favouritism)	0	13	1	11	1	13	0	10
E-UnS-C (Teacher's Help)	0	0	3	1	1	1	0	0
Total	9	70	44	108	35	144	27	123

Table 4.10: Summary of Pearson Chi-Square for Relationship between Unsuccessful and Successful Students' Attributions to Exam Score Studying in 2nd Semester of Different PG Programs

	M.Com 2nd Semester	M.Sc. (Chemistry) 2nd Semester	MBA 2nd Semester	MCA 2nd Semester
df	6	7	7	7
N	79	152	179	179
χ^2	25.29**	49.97**	39.09**	31.93**
p-value	0.00	0.00	0.00	0.00

**significant at 0.01 level of confidence

Thus, the hypothesis (1), “There is no significant relationship between successful and unsuccessful student’s causal attributions to exam score of higher education students” for M. Com 2nd, M.Sc. (Chemistry) 2nd, MBA 2nd, MCA 2nd semester is rejected. Meaning thereby that there exists a statistically significant relationship between unsuccessful and successful students’ attributions and the achieved scores in all PG programs. It is clear from table 4.9, unsuccessful students of M. Com 2nd semester attributed their failure to efforts followed by mood, luck and task difficulty. While majority of the successful students attributed study habits as the main cause for their success followed by teacher’s help, efforts, task difficulty, luck, ability and mood. In the case of M. Sc. 2nd semester, the majority of unsuccessful students attributed their failure to efforts followed by ability, mood, favouritism, luck, task difficulty, study habits and teacher’s help.

On the other side, the majority of successful students attributed their success to study habits followed by efforts, teacher’s help, ability, task difficulty, luck mood and instructor’s bias. In case of MBA 2nd semester, majority of the unsuccessful students attributed their failure to efforts followed by ability, task difficulty, study habits, mood, luck, teacher’s help and instructor’s bias. On the other side, majority of the successful students attributed their success to study habits followed by ability, efforts, teacher’s help, luck, mood, task difficulty and favouritism by the teacher. In the case of MCA 2nd semester, majority of the unsuccessful students attributed their failure to efforts followed by task difficulty, ability, mood, study habits and luck. On

the other side, majority of the successful students attributed study habits as the main cause for their success followed by luck, efforts, task difficulty, teacher's help, ability and mood. The overall trend showed that the successful students of all of the PG programs attributed their success to internal, stable and controllable cause (i.e. study habits). The finding of the present study enjoys support from the findings of previous researches, who reported that there is a significant relationship between low and high achieving students' attributions to their achieved scores (Weiner et al., 1971; Weiner, 1972, 1986; Wolleat et al., 1980). Solar (2015) reported that success is attributed to internal, stable and controllable factors (i.e. study habits). Cortes-Suarez (2008) explored that the college students who were successful in mathematics attributed their success to internal causes (i.e. efforts and ability) and unsuccessful students attributed their failure to external causes (i.e. difficult task and luck). found that the undergraduate students. Perry et al. (2008) found that unsuccessful college students were most likely to endorse poor efforts followed by a difficult test, poor learning strategy, lack of help from the teacher, low ability and bad luck at the time of the exam. Hsieh and Schallert (2008) reported that successful undergraduate students enrolled in different language programs endorsed ability attributions while unsuccessful students endorsed effort attributions. Bornholt and Moller (2003) documented that effort was the most common cause reported by both successful and unsuccessful students. While some studies reported that unsuccessful students always attribute to external causes for their poor performance (Bond et al., 1982; Chiu, 1988; Yan and Gaier, 1994; Heine et al., 2001; Brown and Kobayashi, 2002; Kurman, 2003; Sedikides et al. 2003). But in the present study majority of unsuccessful students attributed to effort attribution which is considered as a facilitating cause that aid performance. The students who tend to attribute to insufficient effort for their poor performance are practical thinkers and able to identify causes that will help them to improve their performance in future.

DISCUSSION ON RESULTS

From the results, it has been found that there exists a significant relationship between successful and unsuccessful students' causal attributions to exam score. In all of the UG programs viz. B. Com, B.Sc., BBA and BCA of 2nd, 4th and 6th semesters, the majority of successful students attributed study habits (internal-stable-

controllable) cause for their success, with an exception of BBA 4th semester students who reported favouritism by the teacher (external-stable-controllable) as a cause for their success. In case of unsuccessful students, it has been found that majority of the unsuccessful students of B. Com 2nd, B.Sc. 2nd, B.Sc.4th, BBA 2nd, BBA 4th, BBA 6th and BCA 4th semesters reported 'Effort' attribution (internal-unstable-controllable) for their failure. While in case of B.Sc. 2nd, BBA 2nd, BCA 2nd and BCA 6th semester unsuccessful students reported 'Ability' attribution (internal-stable-uncontrollable) and in the case of B.Com 6th and B.Sc. 6th semester, unsuccessful students reported 'Luck' attribution (external-unstable-uncontrollable) for their failure.

On analyzing the responses of different PG programs viz. M. Com, M.Sc. (Chemistry), MBA and MCA, it has been found that the successful students attributed 'Study Habits' (internal-stable-controllable) cause for their success. However, unsuccessful students attributed 'Efforts' (internal- unstable-controllable) cause for their failure. Perry et al. (2008) also found that low efforts were the most common cause mentioned by the unsuccessful students followed by test difficulty, poor strategy, professor quality, natural ability, and bad luck. According to Weiner (1985, 2000), college students who consider lack or insufficient efforts for their failure would blame themselves, feel guilt yet hopeful and be inspired and motivated to put more efforts in order to improve their scores and performance in the exam and give protection to their self- efficacy (Covington, 2007). The present study found that 'lack of effort' was the most rated cause for the failure. Weiner's (1985) emphasized that 'effort' attribution plays a very constructive role in the academic achievement of the students. As 'effort' is an internal, personally controllable and unstable attribution, which always gives hope for success. Hence, the result of the present research has supported Weiner's claim. To add to this, the students who attributed internal, stable and uncontrollable (i.e. lack of ability) factor for their failure would feel little accountability, shame, helplessness and will never expect to improve their performance in the exam. This means unstable attributions motivate the learners to improve their performance but stable attributions make learners helpless, as it is set in their mind that they cannot able to get success because of low ability or aptitude in the subject. Sometimes helplessness in one subject forces the student to drop the program.

4.6 SUMMARY OF 2×2 MULTIVARIATE ANALYSIS OF VARIANCE ON THE SCORES OF CAUSAL DIMENSIONS WITH RESPECT TO GENDER AND SUCCESSFULNESS AT UG LEVEL

To study the significant differences in causal attribution of higher education students studying in different semesters of different programs of UG level with respect to Gender and Successfulness. Data was analyzed for different subjects studied at different semesters in different programs. The students studied the courses viz. Financial Accounting, Corporate Accounting and Management Accounting in B. Com (2nd semester), B. Com (4th semester) and B. Com (6th semester) respectively. Similarly, the courses viz. Inorganic Chemistry, Physical Chemistry and Inorganic Chemistry have been taken from B.Sc. (2nd semester), B.Sc. (4th semester) and B.Sc. (6th semester) respectively. The courses viz. Micro Economics, Marketing Management and Business Environment have been taken from BBA (2nd semester), BBA (4th semester) and BBA (6th semester) respectively. The courses viz. Computer Programming in C, Object Oriented Programming through C++, Java Programming have been taken from BCA (2nd semester), BCA (4th semester) and BCA (6th semester) respectively. Causal Attribution is studied in terms of four dimensions viz. ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’.

To find out the significant difference on ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of causal attribution (continuous dependent variables) due to Gender and Successfulness, two-way MANOVA was applied. Box’s test was used to check the homogeneity of variance-covariance because of the homogeneity of variance-covariance is the test assumption for MANOVA. Hence, Box’s test was first evaluated. Wherever Box’s test was not found to be significant ($p > 0.001$), the homogeneity of variance-covariance among matrices was assumed and ‘Wilk Lambda’ (λ) test statistic was used to interpret the MANOVA results. Wherever Box’s test was found to be significant ($p < 0.001$) (which may occur due to the extreme unequal group sample size), the homogeneity of variance-covariance among matrices was not assumed. In this case, ‘Pillai Trace’ (V) test statistic was used to interpret MANOVA results

(Meyers et al., 2016; Mertler et al. 2016). After computing two-way MANOVA, wherever multivariate significance was found, the univariate 2x2 ANOVA was performed in order to indicate the degree to which groups differ for each dependent variable. Further, on getting univariate significance for the particular dependent variable, t-test was employed in order to find the significant group differences. All the four subscales of the causal dimension scale were analyzed program wise and semester wise to make interpretations. The results are reported below in the following headings.

4.6.1 Summary of 2x2 Multivariate Analysis of Variance on the Scores of Causal Dimensions with respect to Gender and Successfulness at B.Com 2nd Semester

To study the significant difference in causal attribution of B. Com 2nd semester students in the course 'Financial Accounting' with respect to Gender and Successfulness; two-way MANOVA was applied and Box's test was computed to check the homogeneity of variance and covariance. The obtained results have been reported in table 4.11 and 4.12.

Table 4.11: Summary of Box's Test of Equality of Covariance Matrices with respect to Various Dimensions of Causal Attribution of B.Com 2nd Semester

Box's M	55.93
F	2.21
df1	20
df2	737
Sig.	0.002

It is clear from table 4.11 that Box's test was not found to be significant, Box's M= 55.93, F (20, 737) =2.21, $p > 0.001$. This indicates that the equality of variance and covariance can be assumed. Therefore, the assumption was not violated, therefore, Wilks' Lambda was used to interpret two-way MANOVA results and reported in the table 4.12.

Table 4.12: Summary of MANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of B.Com 2nd Semester

Effect	Multivariate Test	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	Wilks' Lambda	0.75	4.92**	4	59	0.00	0.25
Successfulness	Wilks' Lambda	0.71	5.9**	4	59	0.00	0.29
Gender * Successfulness	Wilks' Lambda	0.72	5.9**	4	59	0.00	0.29

** significant at 0.01 level of confidence

Table 4.12 shows that, the main effects of ‘Gender’ with Wilk’s $\lambda = 0.75$, $F(4, 59) = 4.92$, $p < 0.001$, multivariate $\eta^2 = 0.25$ and ‘Successfulness’ with Wilk’s $\lambda = 0.71$, $F(4, 59) = 5.9$, $p < 0.01$, multivariate $\eta^2 = 0.29$ and interaction effect (Gender*Successfulness) with Wilk $\lambda = 0.72$, $F(4,59) = 5.9$, $p < 0.01$, multivariate $\eta^2 = 0.29$ are found to be significant at the 0.01 level of confidence. The above result indicates that there exist significant group differences with respect to the locus of causality, stability, external controllability and personal controllability dimensions of causal attribution. To further determine significant group difference for each dependent variable, two-way ANOVA was employed as a follow-up test to two-way MANOVA and obtained results are reported in table 4.14.

MAIN EFFECTS

GENDER

It is clear from the table 4.14 that the F- values for ‘Locus of Causality’, ‘External Controllability’ and ‘Personal Controllability’ between male and female are found to be 0.43, 3.46 and 2.03 respectively, which are not found to be significant even at the 0.05 level of confidence. This indicates that male and female students do not differ significantly on their scores on ‘Locus of Causality’, ‘External Controllability’ and ‘Personal Controllability’.

Table 4.13: Means and SDs of Sub-Groups of ANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of B.Com 2nd Semester

	LoC									ST								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	6.17	5.75	5.77	4.89	6.21	5.96	5.21	5.95	5.86	1.67	5.84	5.6	5.22	5.73	5.63	4.33	5.79	5.62
σ	2.6	1.54	1.56	1.42	1.23	1.36	1.66	1.42	1.46	0	1.24	1.55	1.91	1.24	1.37	2.31	1.23	1.46
N	2	33	35	6	25	31	8	58	66	2	33	35	6	25	31	8	58	66
	EC									PC								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	2.84	5.02	4.9	4.67	5.24	5.13	4.21	5.11	5	6.84	5.82	5.88	4.78	6.15	5.88	5.29	5.96	5.88
σ	2.6	1.28	1.42	1.33	1.2	1.22	1.72	1.24	1.32	0.23	1.51	1.49	0.91	1.39	1.41	1.23	1.46	1.44
N	2	33	35	6	25	31	8	58	66	2	33	35	6	25	31	8	58	66

Table 4.14 : Summary of 2×2 ANOVA Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of B.Com 2nd Semester

Source	Gender				Successfulness				Gender * Successfulness				Error			
Dependent Variable	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC
SS	0.89	16.12	5.72	4.06	1.12	29.73	10.31	0.17	4.12	18.15	3.54	7.73	129.02	104.2	102.57	123.78
Df	1	1	1	1	1	1	1	1	1	1	1	1	62	62	62	62
MSS	0.89	16.12	5.72	4.06	1.12	29.73	10.31	0.17	4.12	18.15	3.54	7.73	2.08	1.68	1.65	2
F	0.43	9.59**	3.46	2.03	0.54	17.69**	6.23*	0.09	1.98	10.8**	2.14	3.87*				
Sig.	0.52	0.00	0.07	0.16	0.47	0.00	0.02	0.77	0.16	0.00	0.15	0.05				

*Significant at 0.05 level of confidence, **Significant at 0.01 level of confidence

However, F- ratio for the dimension 'Stability' came out 9.59, which is significant at the 0.01 level of confidence, which indicates that both male and female students differ significantly on their scores on 'Stability' dimension. Thus, the hypothesis (2), "There is no significant difference in causal attribution of higher education students with respect to Gender" for B. Com 2nd semester is rejected for 'Stability' dimension of causal attribution. Further, on overseeing the mean scores table 4.13, it has been observed that in 'Stability' dimension the mean score of male students (5.63) is slightly higher than that of the female students (5.60). This shows that male students attributed stable factors for their achieved scores more than female students. The present finding is consistent with the finding of Wolleat et al. (1980), Beyer (1998), Cochran et al. (2010) and Lohbeck et al. (2017) who found significant gender difference with respect to causal attribution and reported that males attributed success to stable factors like high ability while females attributed success to unstable factors like efforts in studying and giving more attention. Beyer (1998) advocated that in case of failure situation, males attributed low interest and lack of efforts, while females attributed to lack of ability. On the contrary, Lehmann (1987) reported no significant difference in attributions based on gender.

SUCCESSFULNESS

The results reported in table 4.14 showed that the F- values for 'Locus of Causality', and 'Personal Controllability' are found to be 0.54 and 0.09, which are not found to be significant even at the 0.05 level of confidence. It means successful and unsuccessful students do not differ significantly on the scores of 'Locus of Causality' and 'Personal Controllability' dimensions. However, F- values for the dimensions 'Stability' and 'External Controllability' came out 17.69 and 6.23 respectively, which are found to be significant either at the 0.01 or 0.05 level of confidence. Results showed that successful and unsuccessful students differ significantly on the score of 'Stability' and 'External Control'. Thus, the hypothesis (3), "There is no significant difference in causal attribution of higher education students with respect to Successfulness" for B. Com 2nd semester is rejected for 'Stability' and 'External Controllability' dimensions of Causal Attribution. On comparing the mean scores of successful and unsuccessful students from the table 4.13, it has been found that in 'Stability' dimension, the mean scores of successful

students (5.79) came out higher than unsuccessful students (4.33). In ‘External Controllability’ dimension again successful students (5.11) scored more than unsuccessful students (4.21). This shows that successful students more likely attributed stable factors while unsuccessful students attributed unstable factors for their achieved score. Apart from this, successful students have been found to attribute externally controllable factors more than the unsuccessful students. The above finding is in consonance with the finding of Hassaskhah and Vahabi (2010) who reported that unsuccessful students attributed their failure in language learning to lack of efforts. Likewise, Adiba (2004) and Solar (2015) reported that successful students reported stable factors like the high ability for their success and unsuccessful students reported unstable factors luck and task difficulty for their failure. Similarly, Mori et al. (2011) found that high proficiency Malaysian undergraduates attributed success to their efforts and ability and failure to class and interest-related factors such as class atmosphere and interest in the task. Gobel and Mori (2007), Gobel et al. (2011) and Thang et al. (2011) found that undergraduate students attributed their success to externally controllable factors like the teacher and the congenial environment of the classroom

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

Table 4.14 clearly reveals that the F-values for the interaction between gender and successfulness on the scores of ‘Locus of Causality’ and ‘External Controllability’ are found to be 1.98 and 2.14 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-value for the dimensions of ‘Stability’ and ‘Personal Controllability’ found to be 10.8 and 3.84 respectively, which are found to be significant either at 0.01 or 0.05 level of confidence. Thus, the Hypothesis (4), “There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher education students” for B. Com 2nd semester is rejected for ‘Stability’ and ‘Personal Controllability’ dimensions of Causal Attribution. Further, in order to analyse the significant difference between subgroups, t-test was computed on the score of ‘Stability’ and ‘Personal Controllability’ dimensions. The subgroups with significant t- values are presented in table 4.15.

Table 4.15: Summary of 't' Values for Subgroups on Interaction of Gender & Successfulness on Stability and Personal Control Dimensions of Causal Attribution of B.Com 2nd Semester

Group 1	Group 2	ST	PC
Unsuccessful Females	Successful Females	19.32**	3.30**
Unsuccessful Females	Unsuccessful Males	4.55**	5.08**
Unsuccessful Female	Successful Males	16.37**	2.14*
Successful Females	Unsuccessful Males	0.77	2.29*

*significant at 0.05 level of confidence, **significant at 0.01 level of confidence

Table 4.15 clearly shows that in 'Stability' dimension, the t-value of the pairs 'Unsuccessful Females & Successful Females', 'Unsuccessful Females & Unsuccessful Males' and 'Unsuccessful Females & Successful Males' are found to be 19.32, 4.55 and 16.37 respectively, which are found to be significant at the 0.01 level of confidence. On overseeing the mean scores table 4.13, it has been found that successful female students (5.84) have scored higher than unsuccessful female students (1.67) and unsuccessful male students (5.22). Similarly, successful male students (5.73) and unsuccessful male students (5.22) have scored higher than unsuccessful female students (1.67). The results revealed that successful female, successful male and unsuccessful male students attributed stable causes for their achieved score whereas, the unsuccessful female students attributed unstable causes for their achieved score.

It is clear from table 4.15, that in 'Personal Controllability' dimension, the t-value of the pairs viz. 'Unsuccessful Females & Successful Females', 'Unsuccessful Females & Unsuccessful Males', 'Unsuccessful Females & Successful Males' and 'Successful Females & Unsuccessful Males' came out to be 3.30, 5.08, 2.14 and 2.29, which are found to be significant at 0.01 level of confidence. On overseeing the mean scores table 4.13, it has been found that unsuccessful female students (6.84) have scored higher than successful female

students (5.82), unsuccessful male students (4.78) and successful male students (6.15). This shows that unsuccessful female students attributed their failure to personally controllable factor more than other subgroups. Further, successful female students (5.82) have scored higher than unsuccessful male students (4.78). This shows that successful female students were more inclined towards attributing personally controllable factors than unsuccessful male students for their achieved score.

4.6.2 Summary of 2×2 Multivariate Analysis of Variance on the Scores of Causal Dimensions with respect to Gender and Successfulness at B.Com 4th Semester

To study the significant differences in causal attribution of the students studying in B. Com 4th semester, in the course, ‘Corporate Accounting’ with respect to Gender and Successfulness; two-way MANOVA was applied and Box’s test was computed to check the homogeneity of variance and covariance. The obtained results have been reported in table 4.16 and table 4.17.

Table 4.16: Summary of Box's Test of Equality of Covariance Matrices with respect to Various Dimensions of Causal Attribution of B.Com. 4th Semester

Box's M	35.64
F	1.02
df1	30
df2	3530
Sig.	0.439

Table 4.16 shows that the Box’s test was not significant, Box’s M= 35.64, F (30, 3530) =1.02, $p > 0.001$, This indicates that the equality of variance and covariance can be assumed. Therefore, the assumption is not violated and Wilks’ Lambda was used to interpret two-way MANOVA results and reported in the table 4.17.

Table 4.17: Summary of MANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of B.Com. 4th Semester

Effect	Multivariate Test	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	Wilks' Lambda	0.98	0.35	4.00	73.00	0.84	0.012
Successfulness	Wilks' Lambda	0.74	6.46**	4.00	73.00	0.00	0.26
Gender * Successfulness	Wilks' Lambda	0.95	1.00	4.00	73.00	0.41	0.05

** significant at 0.01 level of confidence

It is clear from the table 4.17 that the F value of ‘Gender’ with Wilk $\lambda = 0.98$, $F(4, 73) = 0.35$, $p > 0.05$, multivariate $\eta^2 = 0.01$ is not found to be significant even at the 0.05 level of confidence, but for ‘Successfulness’, Wilk $\lambda = 0.74$, $F(4, 73) = 6.46$, $p < 0.01$, multivariate $\eta^2 = 0.26$ came out significant at the 0.01 level of confidence. However, the F value for the interaction effect (Gender*Successfulness) with Wilk $\lambda = 0.95$, $F(4, 73) = 1$, $p > 0.05$, multivariate $\eta^2 = 0.05$ is not found to be significant even at the 0.05 level of confidence. Hence, the significant result of ‘Successfulness’ demanded univariate ANOVA determine significant group difference. Further, two-way ANOVA was computed on the obtained score and the results are reported in the table 4.19.

MAIN EFFECTS

GENDER

It is clear from the table 4.19 that the F- values for ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ between male and female is found to be 0.11, 0.38, 0.08 and 0.00 respectively, which are not found to be significant even at the 0.05 level of confidence. This indicates that male and female students do not differ significantly on their scores on ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’.

Table 4.18: Means and SDs of Sub-Groups of ANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of B.Com. 4th Semester

	LoC									ST								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	5.07	5.89	5.74	5	6.23	5.77	5.03	6.01	5.75	3.74	5.83	5.44	3.81	5.28	4.73	3.78	5.64	5.15
σ	1.81	1.6	1.65	1.88	1.12	1.55	1.8	1.45	1.6	1.84	1.37	1.67	1.83	1.36	1.69	1.79	1.38	1.7
N	9	39	48	12	20	32	21	59	80	9	39	48	12	20	32	21	59	80
	EC									PC								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	4.22	5.37	5.15	4.67	4.7	4.69	4.48	5.14	4.97	4.3	6.06	5.73	4.33	5.97	5.35	4.32	6.03	5.58
σ	1.17	1.54	1.53	1.12	1.77	1.54	1.13	1.64	1.54	1.89	1.79	1.92	2.04	1.66	1.95	1.93	1.74	1.93
N	9	39	48	12	20	32	21	59	80	9	39	48	12	20	32	21	59	80

Table 4.19: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of B.Com. 4th Semester

Source	Gender				Successfulness				Gender * Successfulness				Error			
	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC
SS	0.26	0.85	0.18	0.01	15.55	47.05	5.17	42.74	0.65	1.39	4.57	0.06	185.69	170.93	174.03	248.89
Df	1	1	1	1	1	1	1	1	1	1	1	1	76	76	76	76
MSS	0.26	0.85	0.18	0.01	15.55	47.05	5.17	42.74	0.65	1.39	4.57	0.06	2.44	2.25	2.29	3.28
F	0.11	0.38	0.08	0.00	6.36**	20.92**	2.26	13.05**	0.27	0.62	2	0.02				
Sig.	0.74	0.54	0.78	0.95	0.01	0.00	0.14	0.00	0.61	0.44	0.16	0.89				

**Significant at 0.01 level of confidence

Thus, the hypothesis (2), “There is no significant difference in causal attribution of higher education students with respect to Gender” for B. Com 4th semester is not rejected. The results go in consonance with the previous researches of Travis et al. (1991), Hyde (2005), Wu (2011) & Pishghadam and Motakef (2011) who showed that male and female students were not significantly different in terms of causal attribution.

SUCCESSFULNESS

The data reported in table 4.19 shows that the F- values for ‘External Controllability’ came out 2.26, which is insignificant even at the 0.05 level of confidence. However, F- values for ‘Locus of Causality’, ‘Stability’, and ‘Personal Controllability’ are found to be 6.36, 20.92 and 13.05 respectively, which are found to be significant at 0.01 level of confidence. It indicates that male and female students differ significantly on the scores of ‘Locus of Causality’, ‘Stability’, and ‘Personal Controllability’. Thus, the hypothesis (3), “There is no significant difference in causal attribution of higher education students with respect to Successfulness” for B. Com 4th semester is rejected for ‘Locus of Causality’, ‘Stability’, and ‘Personal Controllability’ dimensions of Causal Attribution. On overseeing the mean scores table 4.18 it is clear that, in ‘Locus of Causality’ dimension, successful students (6.01) have scored higher than unsuccessful students (5.03). Similarly, in the ‘Stability’ dimension, successful students (5.64) have scored higher than unsuccessful students (3.78).

In ‘Personal Controllability’ dimension, successful students (6.03) have scored higher than unsuccessful students (4.32). It means that successful students are more likely to attribute internal and stable factors and unsuccessful students attributed external and unstable factors for their achieved score. Further, successful students have been found to attribute personally controllable factors for their achieved score more than unsuccessful students. The finding of the present research is consistent with the findings of Mynatt and Doherty (2002), Ushioda (2001) and Boruchovitch (2004), Hsieh (2004) successful students were more inclined to attribute internal, stable and personally controllable factors for their success.

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

It is clear from the table 4.19 that the F- values for the interaction between gender and successfulness on the scores of 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' are found- to be 0.27, 0.62, 2.00 and 0.02 respectively, which are not found to be significant even at the 0.05 level of confidence. This indicates that there exists no interaction effect between gender and successfulness on 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' dimensions. Thus, the hypothesis (4), "There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher education students" for B. Com 4th semester is not rejected.

4.6.3 Summary of 2×2 Multivariate Analysis of Variance on the Scores of Causal Dimensions with respect to Gender and Successfulness at B.Com 6th Semester

To study the significant differences in causal attribution the students studying in B. Com 6th semester, in the course, 'Management Accounting' with respect to Gender and Successfulness; two-way MANOVA was applied and Box's test was computed to check the homogeneity of variance and covariance. The obtained results have been reported in table 4.20 and table 4.21.

Table 4.20: Summary of Box's Test of Equality of Covariance Matrices with respect to various Dimensions of Causal Attribution of B.Com 6th Semester

Box's M	47.478
F	1.37
df1	30
df2	4219
Sig.	0.085

Data in table 4.20 shows that Box's $M= 47.48$, $F(30, 4219) = 1.37$, $p > 0.001$, This indicates that the equality of variance and covariance can be assumed. Therefore, the assumption is not violated and Wilks' Lambda was used to interpret two-way MANOVA results and reported in the table 4.21.

Table 4.21: Summary of MANOVA for 2×2 Design with respect to various Dimensions of Causal Attribution in Relation to Gender and Successfulness of B.Com. 6th Semester

Effect	Gender	Successfulness	Gender * Successfulness
Multivariate Test	Wilks' Lambda		
Value	0.95	0.77	0.98
F	0.95	5.7**	0.46
Hypothesis df	4	4	4
Error df	76	76	76
Sig.	0.44	0.00	0.76
Partial Eta Squared	0.05	0.23	0.02

** Significant at 0.01 level of confidence

Data in table 4.21 shows that the main effect of ‘Gender’ with Wilk $\lambda= 0.95$, $F(4, 76) = 0.95$, $p>0.05$, multivariate $\eta^2 = 0.05$ is not found to be significant at the 0.05 level of confidence. However, the main effect of ‘Successfulness’ with Wilk $\lambda= 0.77$, $F(4, 76) = 5.7$, $p<0.01$, multivariate $\eta^2 = 0.23$ came out significant at 0.01 level of confidence. Further, interaction effect (Gender*Successfulness) with Wilk $\lambda = 0.98$, $F(4,76) = 0.46$, $p>0.05$, multivariate $\eta^2 = 0.02$ is not found to be significant even at the 0.05 level of confidence. Hence, the significant result in ‘Successfulness’ demanded two-way ANOVA as a follow-up test to two-way MANOVA in order to determine significant group difference for each dependent variable. Thus, two-way ANOVA was computed on the obtained scores and the results are reported in table 4.23.

MAIN EFFECTS

GENDER

The data reported in the table 4.23 shows that the F- values for ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ between male and female found to be 2.51, 0.79, 0.01 and 0.37 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that male and female students do not differ significantly on their scores on ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’.

Table 4.22: Means and SDs of Sub-Groups of ANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of B.Com. 6th Semester

	LoC									ST								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	5.97	6.84	6.63	4.8	6.46	5.94	5.44	6.7	6.37	4.72	5.85	5.59	4.3	5.49	5.11	4.53	5.72	5.41
σ	2.16	2.04	2.08	1.58	1.79	1.87	1.97	1.94	2.02	1.51	2.03	1.96	1.61	1.43	1.57	1.54	1.83	1.83
N	12	39	51	10	22	32	22	61	83	12	39	51	10	22	32	22	61	83
	EC									PC								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	4.39	5.32	5.1	4.97	4.62	4.73	4.65	5.07	4.96	4.78	6.62	6.18	4.3	6.54	5.84	4.56	6.59	6.05
σ	1.25	2.28	2.11	1.78	2.2	2.06	1.5	2.26	2.08	1.97	1.83	2.01	2.06	1.51	1.97	1.98	1.71	1.99
N	12	39	51	10	22	32	22	61	83	12	39	51	10	22	32	22	61	83

**Table 4.23: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Causal Attribution in relation to Gender and
Successfulness of B.Com 6th Semester**

Source	Gender				Successfulness				Gender * Successfulness				Error			
Dependent Variable	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC
SS	9.49	2.47	0.06	1.19	25.01	21.1	1.33	65.41	2.46	0.01	6.36	0.65	298.67	247.35	344.83	256.14
Df	1	1	1	1	1	1	1	1	1	1	1	1	79	79	79	79
MSS	9.49	2.47	0.06	1.19	25.01	21.1	1.33	65.41	2.46	0.01	6.36	0.65	3.78	3.13	4.37	3.24
F	2.51	0.79	0.01	0.37	6.62*	6.74*	0.3	20.18*	0.65	0	1.46	0.2				
Sig.	0.12	0.38	0.91	0.55	0.01	0.01	0.58	0.00	0.42	0.95	0.23	0.66				

*Significant at 0.05 level, **Significant at 0.01 level

Thus, the hypothesis (2), “There is no significant difference in causal attribution of higher education students with respect to Gender” for B. Com 6th semester is not rejected. The finding of the present research is consistent with the findings of Travis et al. (1991), Hyde (2005), Wu (2011) & Pishghadam and Motakef (2011) also reported that there exist no significant differences between male and female students in their attribution for their achievement.

SUCCESSFULNESS

The data reported in table 4.23 clearly shows that the F- values for ‘External Controllability’ came out 0.30, which is insignificant even at the 0.05 level of confidence. It shows that successful and unsuccessful students do not differ significantly on the scores of ‘External Control’. Further, F- values for ‘Locus of Causality’, ‘Stability’, and ‘Personal Controllability’ are found to be 6.62, 6.74 and 20.18 respectively. This indicates that successful and unsuccessful students differ significantly on the scores of ‘Locus of Causality’, ‘Stability’, and ‘Personal Controllability’. Thus, the hypothesis (3), “There is no significant difference in causal attribution of higher education students with respect to Successfulness” is rejected for B. Com 6th semester in ‘Locus of Causality’, ‘Stability’, and ‘Personal Controllability’ dimensions of Causal Attribution. On comparing the mean table 4.22, it is clear that the mean scores of successful students ‘Locus of Causality’, ‘Stability’, and ‘Personal Controllability’ is found to be 6.70, 5.72, 6.59 respectively, which are greater than unsuccessful students 5.44, 4.53, 4.56.

This shows that successful students attribute internal, stable and personally controllable causes more than unsuccessful students. It means that successful students attributed high ability, study habits and good preparation for test for their success. On the contrary, unsuccessful students attribute lack of efforts, poor study habits and the low ability for their failure. The present result is in tune with the results of Hassaskhah and Vahabi (2010) who reported that unsuccessful students attributed their failure in language learning to lack of efforts. Adiba (2004) reported that successful students reported sustained efforts throughout the year and ability attributions for their success and unsuccessful students reported luck and task

difficulty attributions for their failure. Previous researches supported that success is most likely attributed to internal, stable and controllable factors (Williams et al., 2001; Graham, 2002; Hsieh, 2004, Dong et al., 2013; Solar, 2015).

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

The data reported in the table 4.23 shows that the F- values for the interaction between gender and successfulness on the scores of ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ are found to be 0.65, 0.00, 1.46 and 0.20 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that there exists no interaction effect of gender and successfulness on the scores of the dimensions viz. ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’. Thus, the hypothesis (4), “There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher education students” for B. Com 6th semester is not rejected.

4.6.4 Summary of 2×2 Multivariate Analysis of Variance on the Scores of Causal Dimensions with respect to Gender and Successfulness at B.Sc 2nd Semester

To study the significant differences in causal attribution of the students studying in B. Sc 2nd semester, in the course, ‘Inorganic Chemistry’ with respect to Gender and Successfulness; two-way MANOVA was applied and Box’s test was computed to check the homogeneity of variance and covariance. All the four subscales of the causal dimension scale were analysed program wise and semester wise to make interpretations and results are reported below.

Table 4.24: Summary of Box's Test of Equality of Covariance Matrices with respect to Various Dimensions of Causal Attribution of B.Sc 2nd Semester

Box's M	33.38
F	0.98
df1	30
df2	3906
Sig.	0.501

Table 4.24 clearly shows that Box's $M = 33.38$, $F(30, 3906) = 0.98$, $p > 0.00$, which is not found to be significant. This indicates that the equality of variance and covariance can be assumed. Therefore, the assumption is not violated and Wilks' Lambda was used to interpret two-way MANOVA results and reported in the table 4.25.

Table 4.25: Summary of MANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in Relation to Gender and Successfulness of B.Sc 2nd Semester

Effect	Gender	Successfulness	Gender * Successfulness
Multivariate Test	Wilks' Lambda		
Value	0.96	0.81	0.95
F	0.87	4.78**	1.03
Hypothesis df	4	4	4
Error df	83	83	83
Sig.	0.49	0.00	0.4
Partial Eta Squared	0.04	0.19	0.05

**Significant at 0.01 level of confidence

The data presented in table 4.25 shows that the main effect of 'Gender' with Wilk $\lambda = 0.96$, $F(4, 83) = 0.87$, $p > 0.05$, multivariate $\eta^2 = 0.04$ is not found to be significant even at 0.05 level of confidence. However, the main effect of 'Successfulness', Wilk $\lambda = 0.81$, $F(4, 83) = 4.78$, $p < 0.01$, multivariate $\eta^2 = 0.19$ came out significant at the 0.01 level of confidence. Further, the interaction effect (Gender*Successfulness) with Wilk $\lambda = 0.95$, $F(4, 83) = 1.03$, $p > 0.05$, multivariate $\eta^2 = 0.05$ is not found to be significant even at the 0.05 level of confidence. Hence the significant result of 'Successfulness' demanded two-way ANOVA as a follow-up test of two-way MANOVA in order to determine significant group difference for each dependent variable. Therefore, two-way ANOVA was computed on the obtained scores and the results are reported in table 4.27.

Table 4.26: Means and SDs of Sub-Groups of ANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of B.Sc 2nd Semester

	LoC									ST								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	5.34	6.9	6.08	5.89	6.3	6.16	5.46	6.67	6.11	4.38	6.17	5.23	4.55	5.56	5.22	4.42	5.94	5.23
σ	1.89	1.54	1.89	2	1.95	1.94	1.91	1.71	1.89	2.01	1.47	1.97	2.33	1.93	2.08	2.05	1.66	1.99
N	33	30	63	9	18	27	42	48	90	33	30	63	9	18	27	42	48	90
	EC									PC								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	4.08	4.47	4.26	3.48	4.91	4.43	3.95	4.63	4.31	5.57	6.99	6.25	4.85	6.3	5.81	5.42	6.73	6.12
σ	1.59	1.48	1.54	1.48	1.93	1.89	1.57	1.66	1.64	2.01	1.65	1.97	2.5	1.81	2.13	2.11	1.72	2.02
N	33	30	63	9	18	27	42	48	90	33	30	63	9	18	27	42	48	90

Table 4.27: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of B.Sc. 2nd Semester

Source	Gender				Successfulness				Gender * Successfulness				Error			
	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC
SS	0.02	0.84	0.11	8.72	16.75	33.66	14.27	35.53	5.73	2.66	4.7	0	280.09	297.9	224.85	313.82
Df	1	1	1	1	1	1	1	1	1	1	1	1	86	86	86	86
MSS	0.02	0.84	0.11	8.72	16.75	33.66	14.27	35.53	5.73	2.66	4.7	0	3.26	3.46	2.61	3.65
F	0.01	0.24	0.04	2.39	5.14*	9.72**	5.46*	9.74**	1.76	0.77	1.8	0				
Sig.	0.95	0.62	0.84	0.13	0.03	0.00	0.02	0.00	0.19	0.38	0.18	0.97				

*Significant at 0.05 level, **Significant at 0.01 level

MAIN EFFECTS

GENDER

The data reported in table 4.27 shows that the F- values for 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' between male and female found to be 0.01, 0.24, 0.04 and 2.39 respectively, which are not found to be significant even at 0.05 level of confidence. This indicates that male and female students do not differ significantly on their scores on 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability'. Thus, the hypothesis (2), "There is no significant difference in causal attribution of higher education students with respect to Gender" for B.Sc. 2nd semester is not rejected. The finding of the present research is in tune with the findings of Travis et al. (1991), Hyde (2005), Wu (2011) & Pishghadam and Motakef (2011) who showed that male and female students were not significantly different in terms of causal attribution.

SUCCESSFULNESS

The data reported in table 4.27 reveals that the F- values for 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' are found to be 5.14, 9.72, 5.46 and 9.74 respectively, which are found to be significant either at 0.05 or 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability'. Thus, the Hypothesis (3), "There is no significant difference in causal attribution of higher education students with respect to Successfulness" for B.Sc. 2nd semester is rejected. On overseeing the mean scores table 4.26, it has been found that the mean score of successful students in 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' came out 6.67, 5.94, 4.63 and 6.73 respectively, which are higher than mean scores of unsuccessful students 5.46, 4.42, 3.95 and 5.42 respectively. This shows that successful students attributed internal and stable factors for their success, while, unsuccessful students perceived internal and unstable factors for their failure. Further, successful students attributed personally

controllable factors for their achieved score more than unsuccessful students. Also, both successful and unsuccessful students showed less inclination towards externally controllable factors (e.g. help from the teacher). The present finding is in tune with the finding of Hassaskhah and Vahabi (2010) who reported that most of the students rated effort attribution for the failure in language. Likewise, Adiba (2004) reported that successful students reported effort and ability attributions for their success and unsuccessful students reported luck and task difficulty attributions for their failure. Previous researches supported that success is most likely attributed to internal, stable and controllable factors (Williams et al., 2001; Graham, 2002; Hsieh, 2004, Dong et al., 2013; Solar, 2015).

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

It is clear from the table 4.27 that the F- values for the interaction between gender and successfulness for ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ are found to be 1.76, 0.77, 1.80 and 0.00 respectively which are not found to be significant even at the 0.05 level of confidence. This shows that there exists no interaction effect of gender and successfulness on the scores of the dimensions viz. ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’. Thus, the Hypothesis (4), “There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher education students” for B.Sc. 2nd semester is not rejected.

4.6.5 Summary of 2×2 Multivariate Analysis of Variance on the Scores of Causal Dimensions of B.Sc 4th Semester in relation to Gender and Successfulness

To study the significant differences in causal attribution of the students studying in B. Sc 4th semester, in the course, ‘Physical Chemistry’ with respect to Gender and Successfulness; two-way MANOVA was applied and Box’s test was computed to check the homogeneity of variance and covariance. All the four subscales of the causal dimension scale were analysed program wise and semester wise to make interpretations and results are reported below.

Table 4.28: Summary of Box's Test of Equality of Covariance Matrices with respect to Various Dimensions of Causal Attribution of B.Sc 4th Semester

Box's M	57.18
F	1.64
df1	30
df2	5395
Sig.	0.016

Table 4.28 clearly shows that Box's $M=57.18$, $F(30, 5395)=1.64$, $p>0.001$, which is not found to be significant. This indicates that the equality of variance and covariance can be assumed. Therefore, the assumption is not violated and Wilks' Lambda was used to interpret two-way MANOVA results and reported in the following table 4.29.

Table 4.29: Summary of MANOVA for 2×2 Design with respect to various Dimensions of Causal Attribution in relation to Gender and Successfulness of B.Sc 4th Semester

Effect	Gender	Successfulness	Gender * Successfulness
Multivariate Test	Wilks' Lambda		
Value	0.98	0.85	0.98
F	0.35	2.62*	0.37
Hypothesis df	4	4	4
Error df	58	58	58
Sig.	0.84	0.04	0.83
Partial Eta Squared	0.02	0.15	0.03

*Significant at 0.05 level of confidence

Table 4.29 shows that, the main effect of 'Gender' with Wilk $\lambda=0.98$, $F(4, 58)=0.35$, $p>0.05$, multivariate $\eta^2=0.02$ is not found to be significant even at 0.05 level of confidence. However, the main effect of 'Successfulness', Wilk $\lambda=0.85$, $F(4, 58)=2.62$, $p<0.05$, multivariate $\eta^2=0.15$ found to be significant at 0.05 level of confidence.

Table 4.30: Means and SDs of Sub-Groups of ANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of B.Sc 4th Semester

	LoC									ST								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	5.36	6.35	6.05	5.78	6.51	6.16	5.57	6.4	6.09	4.61	6.33	5.82	5.11	5.85	5.49	4.86	6.18	5.69
σ	1.54	1.35	1.46	1.31	1.13	1.25	1.42	1.27	1.38	1.91	1.6	1.86	1.65	0.94	1.35	1.76	1.43	1.68
N	12	28	40	12	13	25	24	41	65	12	28	40	12	13	25	24	41	65
	EC									PC								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	4.95	5.2	5.13	4.69	4.87	4.79	4.82	5.1	5	5.92	6.68	6.45	6.19	6.54	6.37	6.06	6.63	6.42
σ	1.17	1.28	1.24	1.56	1.66	1.58	1.35	1.4	1.38	1.73	1.49	1.58	1.46	1.4	1.41	1.57	1.45	1.51
N	12	28	40	12	13	25	24	41	65	12	28	40	12	13	25	24	41	65

Table 4.31: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of B.Sc 4th Semester

Source	Gender				Successfulness				Gender * Successfulness				Error			
	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC
SS	1.22	0	1.2	0.07	10.55	21.6	0.68	4.37	0.23	3.49	0.02	0.62	109.69	149.95	119.1	139.67
Df	1	1	1	1	1	1	1	1	1	1	1	1	61	61	61	61
MSS	1.22	0	1.2	0.07	10.55	21.6	0.68	4.37	0.23	3.49	0.02	0.62	1.8	2.46	1.95	2.29
F	0.68	0.00	0.62	0.03	5.87*	8.79**	0.35	1.91	0.13	1.42	0.01	0.27				
Sig.	0.41	0.99	0.44	0.87	0.02	0.00	0.56	0.17	0.73	0.24	0.92	0.6				

*Significant at 0.05 level, **Significant at 0.01 level

Further, the interaction effect (Gender*Successfulness) with Wilk $\lambda = 0.98$, $F(4, 58) = 0.37$, $p > 0.05$, multivariate $\eta^2 = 0.03$ is not found to be significant even at the 0.05 level of confidence. The significant result of 'Successfulness' demanded two-way ANOVA as a follow-up test to two-way MANOVA in order to determine significant group difference for each dependent variable. Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.31.

MAIN EFFECT

GENDER

The data inserted in table 4.31 shows that the F- values for 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' between male and female found to be 0.68, 0.00, 0.62 and 0.03 respectively, which are not found to be significant even at the 0.05 level of confidence. This indicates that male and female students do not differ significantly on their scores on 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' dimensions of Causal Attribution. Thus, the hypothesis (2), "There is no significant difference in causal attribution of higher education students with respect to Gender" for B. Sc 4th semester is not rejected. The above finding is in tune with the finding of Travis et al. (1991), Hyde (2005), Wu (2011) & Pishghadam and Motakef (2011) who showed that male and female students were not significantly different in terms of causal attribution.

SUCCESSFULNESS

The data reported in table 4.31 shows that the F- values for 'External Controllability' and 'Personal Controllability' dimensions are found to be 0.35 and 1.91 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Locus of Causality' and 'Stability' dimensions came out 5.87 and 8.79, which are found to be significant either at 0.05 and 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of 'Locus of Causality' and 'Stability' dimensions. Thus, the hypothesis (3), "There is no significant difference in causal attribution of higher

education students with respect to Successfulness” for B.Sc. 4th semester is rejected for ‘Locus of Causality’ and ‘Stability’ dimensions of Causal Attribution. On overseeing the mean scores table 4.30, it has been found that successful students (6.40) have scored higher on ‘Locus of Causality’ dimension as compared to unsuccessful students (5.57). Likewise, in ‘Stability’ dimension, the successful students (6.18) outperformed unsuccessful students (4.86). This indicates that the successful students attributed internal factors for their achieved score more than unsuccessful students. On the other side, it has been found that successful students attributed stable factors and unsuccessful students attributed unstable factors for their achieved score. The present finding is in tune with the finding of Hassaskhah and Vahabi (2010) who reported that most of the students rated unstable (i.e. efforts) causes for their failure. Likewise, Adiba (2004) reported that successful students reported stable (e.g. ability) attributions for their success and unsuccessful students reported unstable (e.g. luck and task difficulty) attributions for their failure. Previous researches supported that success is most likely to be attributed to internal factors (Williams et al., 2001; Graham, 2002; Dong et al., 2013; Solar, 2015).

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

It is clear from the table 4.31, that the F- values for the interaction between gender and successfulness for ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ are found to be 0.13, 1.42, 0.01 and 0.27 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that there exists no interaction effect of gender and successfulness on the scores of the dimensions viz. ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’. Thus, the Hypothesis (4), “There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher education students” for B.Sc. 4th semester is not rejected.

4.6.6 Summary of 2×2 Multivariate Analysis of Variance on the Scores of Causal Dimensions of B.Sc 6th Semester in relation to Gender and Successfulness

To study the significant differences in causal attribution of the students studying in B. Sc 6th semester, in the course, ‘Inorganic Chemistry’ with respect to

Gender and Successfulness; two-way MANOVA was applied and Box's test was computed to check the homogeneity of variance and covariance. All the four subscales of the causal dimension scale were analysed program wise and semester wise to make interpretations and results are reported below.

Table 4.32: Summary of Box's Test of Equality of Covariance Matrices with respect to various Dimensions of Causal Attribution of B.Sc 6th Semester

Box's M	62.31
F	1.85
df1	30
df2	4922
Sig.	0.003

Table 4.32 clearly shows that Box's $M=62.31$, $F(30, 4922) = 1.85$, $p > 0.001$, which is not found to be significant. This indicates that the equality of variance and covariance can be assumed. Therefore, the assumption is not violated and Wilks' Lambda was used to interpret two-way MANOVA results and reported in the following table 4.33.

Table 4.33: Summary of MANOVA for 2×2 Design with respect to various Dimensions of Causal Attribution in relation to Gender and Successfulness of B.Sc 6th Semester

Effect	Gender	Successfulness	Gender * Successfulness
Multivariate Test	Wilks' Lambda		
Value	0.97	0.78	0.98
F	0.84	6.55**	0.48
Hypothesis df	4	4	4
Error df	92	92	92
Sig.	0.51	0.00	0.75
Partial Eta Squared	0.04	0.22	0.02

**Significant at 0.01 level of confidence

The data inserted in table 4.33 shows that the main effect of ‘Gender’ with Wilk $\lambda = 0.97$, $F(4, 92) = 0.84$, $p > 0.05$, multivariate $\eta^2 = 0.04$ is not found to be significant even at the 0.05 level of confidence. The main effect of ‘Successfulness’, Wilk $\lambda = 0.78$, $F(4, 92) = 6.55$, $p < 0.01$, multivariate $\eta^2 = 0.22$ found to be significant at 0.01 level of confidence. Further, the interaction effect (Gender*Successfulness) with Wilk $\lambda = 0.98$, $F(4, 92) = 0.48$, $p = 0.75$, multivariate $\eta^2 = 0.02$ is not found to be significant even at the 0.05 level of confidence. Hence, the significant result of ‘Successfulness’ demanded two-way ANOVA as a follow-up test in order to determine significant group difference for each dependent variable. Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.35.

MAIN EFFECTS

GENDER

The data presented in table 4.35 shows that the F- values for ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ between male and female found to be 1.10, 0.50, 0.13 and 0.00 respectively, which are not found to be significant even at the 0.05 level of confidence. This indicates that male and female students do not differ significantly on their scores on ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of causal attribution. Thus, the hypothesis (2), “There is no significant difference in causal attribution of higher education students with respect to Gender” for B.Sc. 6th semester is not rejected. The above finding is in tune with the finding of Travis et al. (1991), Hyde (2005), Wu (2011) & Pishghadam and Motakef (2011) who showed that male and female students were not significantly different in terms of causal attribution.

Table 4.34: Means and SDS of Sub-Groups of ANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of B.Sc 6th Semester

	LoC									ST								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	5.26	6.23	5.88	6.03	6.31	6.25	5.53	6.27	6.05	4.32	5.96	5.36	4.67	6.19	5.86	4.44	6.08	5.6
σ	1.58	1.6	1.64	2.37	1.79	1.9	1.88	1.69	1.77	1.44	1.86	1.88	1.92	1.83	1.93	1.59	1.84	1.91
N	19	33	52	10	37	47	29	70	99	19	33	52	10	37	47	29	70	99
	EC									PC								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	4.11	5	4.67	4.07	5.33	5.06	4.09	5.18	4.86	5.77	6.29	6.1	5.83	6.25	6.16	5.79	6.27	6.13
σ	1.83	1.9	1.91	1.32	1.73	1.72	1.65	1.81	1.82	1.64	1.81	1.75	1.85	1.7	1.72	1.68	1.74	1.73
N	19	33	52	10	37	47	29	70	99	19	33	52	10	37	47	29	70	99

Table 4.35: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of B.Sc 6th Semester

Source	Gender				Successfulness				Gender * Successfulness				Error			
Dependent Variable	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC
SS	3.37	1.59	0.41	0	7.33	47.81	22.27	4.23	2.3	0.07	0.66	0.05	291.65	301.98	299.29	287.48
Df	1	1	1	1	1	1	1	1	1	1	1	1	95	95	95	95
MSS	3.37	1.59	0.41	0	7.33	47.81	22.27	4.23	2.3	0.07	0.66	0.05	3.07	3.18	3.15	3.03
F	1.1	0.5	0.13	0	2.39	15.04**	7.07**	1.4	0.75	0.02	0.21	0.02				
Sig.	0.3	0.48	0.72	0.98	0.13	0.00	0.01	0.24	0.39	0.88	0.65	0.90				

**Significant at 0.01 level

SUCCESSFULNESS

The data reported in table 4.35 shows that the F- values for ‘Locus of Causality’ and ‘Personal Controllability’ dimensions came out 2.39 and 1.40 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for ‘Stability’ and ‘External Controllability’ dimensions came out 15.04 and 7.07 respectively, which are found to be significant at 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the score of ‘Stability’ and ‘External Controllability’ dimensions of causal attribution. Thus, the hypothesis (3), “There is no significant difference in causal attribution of higher education students with respect to Successfulness” for B.Sc. 6th semester is rejected for ‘Stability’ and ‘External Controllability’ dimensions of Causal Attribution. It is clear from the mean score table 4.34, that in ‘Stability’ dimension, successful students (6.04) have scored higher than unsuccessful students (4.44). Likewise, in ‘External Controllability’ dimension, successful students (5.18) have scored higher than unsuccessful students (4.09). This shows that successful students attributed stable factors (i.e. study habits and ability) and externally controllable factors (i.e. favouritism), while unsuccessful students attributed unstable factors (e.g. luck and the biased teacher) for their achieved score. The present finding is in tune with the finding of Hassaskhah and Vahabi (2010) who reported unsuccessful students attributed their failure to lack of efforts. Likewise, Adiba (2004) and Solar (2015) reported that successful students reported ability attributions for their success and unsuccessful students reported luck and task difficulty attributions for their failure.

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

It is clear from the table 4.35 that the F- values for the interaction between gender and successfulness for ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’ are found to be 0.75, 0.02, 0.21 and 0.02 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that there exists no

interaction effect of gender and successfulness on the scores of the dimensions viz. ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’. Thus, the Hypothesis (4), “There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher education students” for B.Sc. 6th semester is not rejected.

4.6.7 Summary of 2×2 Multivariate Analysis of Variance on the Scores of Causal dimensions of BBA 2nd Semester in relation to Gender and Successfulness

To study the significant differences in causal attribution of the students studying in of BBA 2nd semester, in the course, Micro Economics with respect to Gender and Successfulness; two-way MANOVA was applied and Box’s test was computed to check the homogeneity of variance and covariance. All the four subscales of the causal dimension scale were analysed program wise and semester wise to make interpretations and results are reported below.

Table 4.36: Summary of Box's Test of Equality of Covariance Matrices with respect to Various Dimensions of Causal Attribution of BBA 2nd Semester

Box's M	45.59
F	1.3
df1	30
df2	4189
Sig.	0.129

Table 4.36 clearly shows that Box’s $M=45.59$, $F(30, 4189) = 1.3$, $p > 0.001$, which is not found to be significant. This indicates that the equality of variance and covariance can be assumed. Therefore, the assumption is not violated and Wilks’ Lambda was used to interpret two-way MANOVA results and reported in the following table 4.37.

Table 4.37: Summary of MANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of BBA 2nd Semester

Effect	Gender	Successfulness	Gender * Successfulness
Multivariate Test	Wilks' Lambda		
Value	0.93	0.68	0.73
F	0.99	6.67**	5.3**
Hypothesis df	4	4	4
Error df	56	56	56
Sig.	0.42	0.00	0.00
Partial Eta Squared	0.07	0.32	0.27

**Significant at 0.01 level of confidence

It is clear from the data inserted in table 4.37 that the main effect of ‘Gender’ with Wilk $\lambda=0.93$, $F(4, 56) = 0.99$, $p>0.05$, multivariate $\eta^2=0.07$ is not found to be significant even at the 0.05 level of confidence and for ‘Successfulness’, Wilk $\lambda=0.68$, $F(4, 56) = 6.67$, $p<0.01$, multivariate $\eta^2=0.32$ is found to be significant at 0.01 level of confidence. Further, the interaction effect (Gender \times Successfulness) with Wilk $\lambda = 0.73$, $F(4, 56) = 5.3$, $p<0.01$, multivariate $\eta^2 = 0.27$ came out to be significant at 0.01 level of confidence. The shows that there exists significant group difference with respect to the locus of causality, stability, external controllability and personal controllability. Thus, the significant results demanded two-way ANOVA as a follow-up test to two-way MANOVA in order to determine significant group difference for each dependent variable. Therefore, two-way ANOVA was computed on the obtained scores and the results are reported in table 4.39.

MAIN EFFECTS

GENDER

The data presented in table 4.39 shows that the F- values for ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ between male and female found to be 0.07, 2.12, 1.79 and 0.04 respectively, which are not found to be significant even at the 0.05 level of confidence.

Table 4.38: Means and SDs of Sub-Groups of ANOVA for 2×2 design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of BBA 2nd Semester

	LoC									ST								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	3.52	7.26	5.8	5.25	5.77	5.55	4.65	6.33	5.64	3.07	6.74	5.3	5.51	5.58	5.55	4.67	6.02	5.46
σ	1.89	1.36	2.42	2.1	1.46	1.75	2.16	1.59	2.01	1.9	1.47	2.43	1.9	1.43	1.62	2.2	1.53	1.94
N	9	14	23	17	23	40	26	37	63	9	14	23	17	23	40	26	37	63
	EC									PC								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	2.93	6.21	4.93	5.1	5.42	5.28	4.35	5.72	5.15	4.08	7.14	5.94	5.18	5.84	5.56	4.8	6.33	5.7
σ	2.28	1.92	2.6	2.32	1.42	1.83	2.49	1.65	2.13	2.84	1.16	2.47	2.18	1.39	1.77	2.43	1.44	2.04
N	9	14	23	17	23	40	26	37	63	9	14	23	17	23	40	26	37	63

Table 4.39: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of BBA 2nd Semester

Source	Gender				Successfulness				Gender * Successfulness				Error			
Dependent Variable	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC
SS	0.2	5.71	6.67	0.14	63.57	48.92	45.68	48.88	36.62	45.35	30.9	20.3	169.81	159.14	220.07	200.6
Df	1	1	1	1	1	1	1	1	1	1	1	1	59	59	59	59
MSS	0.2	5.71	6.67	0.14	63.57	48.92	45.68	48.88	36.62	45.35	30.9	20.3	2.88	2.7	3.73	3.4
F	0.07	2.12	1.79	0.04	22.09**	18.14**	12.25**	14.38**	12.72**	16.81**	8.28**	5.97*				
Sig.	0.79	0.15	0.19	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02				

*Significant at 0.05 level of confidence **Significant at 0.01 level of confidence

This indicates that male and female students do not differ significantly on their scores on 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' dimensions of 'Causal Attribution'. Thus, the hypothesis (2), "There is no significant difference in causal attribution of higher education students with respect to Gender" for BBA 2nd semester is not rejected. The finding of the present research is in consonance with the findings of Travis et al. (1991), Hyde (2005), Wu (2011) & Pishghadam and Motakef (2011) who showed that male and female students were not significantly different in terms of causal attribution.

SUCCESSFULNESS

The data reported in table 4.39 reveals that the F- values for 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' are found to be 22.09, 18.14, 12.25 and 14.38 respectively, which are found to be significant at 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' dimensions of 'Causal Attribution'. Thus, the hypothesis (3), "There is no significant difference in causal attribution of higher education students with respect to Successfulness" for BBA 2nd semester is rejected. It has been found from table 4.38 that in 'Locus of Causality' dimension, successful students (6.33) have scored higher than unsuccessful students (4.65). Similarly, in the 'Stability' dimension, successful students (6.02) have scored higher than unsuccessful students (4.67).

In 'External Controllability' dimension, successful students (5.72) have scored higher than unsuccessful students (4.35). In the same way, in the 'Personal Controllability' dimension, successful students (6.33) have scored higher than unsuccessful students (4.8). This indicates that successful students attributed internal, stable, externally controllable and personally controllable factors for their achieved scores, this is indicative of the fact that successful students endorsed their good study habits followed by high ability, efforts, mood, luck, help from the teacher for their success. On the other hand, unsuccessful students endorsed low ability, poor efforts followed by bad luck, a bad mood and a difficult task for their failure in the exam. The present finding in tune with the finding of Hassaskhah and

Vahabi (2010) who revealed that effort was the most quoted cause for failure in language. Likewise, Adiba (2004) reported that successful students reported effort and ability attributions for their success and unsuccessful students reported luck and task difficulty attributions for their failure. Previous researches supported that success is most likely attributed to internal, stable and controllable factors (Williams et al., 2001; Graham, 2002; Dong et al., 2013; Solar, 2015).

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

The data presented in table 4.39 shows that the F- values for the interaction between gender and successfulness on the scores of ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions came out 12.72, 16.81, 8.28 and 5.97 respectively, which are found to be significant either at 0.01 or 0.05 level of confidence. Thus, the Hypothesis (4), “There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher education students” for BBA 2nd semester is rejected. Further, for analyzing the significant differences between various subgroups due to the interaction between Gender and Successfulness on ‘Locus of Causality’ ‘Stability’ and ‘Personal Controllability’ and ‘External Controllability’ dimensions of ‘Causal Attribution’, t-values for the various subgroups were computed. The subgroups with statistically significant t value are reported in table 4.40.

Table 4.40: Summary of 't' Values for Subgroups on Interaction of Gender & Successfulness on Locus of Causality, Stability, External Controllability and Personal Controllability Dimensions of Causal Attribution of BBA 2nd Semester

Dimension		LoC	ST	EC	PC
Group 1	Group 2	t value			
Unsuccessful Females	Successful Females	5.14**	4.92**	3.58**	3.07**
Unsuccessful Females	Unsuccessful Males	2.14*	3.12**	2.29*	1.01
Unsuccessful Females	Successful Males	3.22**	3.59**	3.05**	1.78
Successful Females	Unsuccessful Males	3.21**	2.03	1.46	3.20**
Successful Females	Successful Males	3.14**	2.35*	1.33	3.06**

*significant at 0.05 level of confidence

** significant at 0.01 level of confidence

It is clear from the table 4.40, that in 'Locus of Causality' dimension, the t-value of the pairs i.e. 'Unsuccessful Females & Successful Females', 'Unsuccessful Females & Unsuccessful Males', 'Unsuccessful Females & Successful Males', 'Successful Females & Unsuccessful Males' and 'Successful Females & Successful Males' came out to be 5.14, 2.14, 3.22, 3.21, 3.14 respectively, which are found to be significant either at 0.01 or 0.05 level of confidence. On overseeing the mean scores table 4.38, it has been found that successful female students (7.26) have scored higher than unsuccessful female students (3.52), unsuccessful male students (5.25) and successful male students (6.33) in the locus of causality dimension. This shows that successful female students endorsed internal causes for their success more than unsuccessful and successful male students. Whereas, the unsuccessful female students perceived external factors for their achieved scores. Further, unsuccessful male students (5.25) have scored higher than unsuccessful female students (3.52) and successful male students (6.33) have scored higher than unsuccessful female students (3.52). This shows that male students whether successful or unsuccessful consider internal causes their achieved scores, while unsuccessful female students perceive external causes for their failure.

It is clear from table 4.40, that in 'Stability' dimension, the t-value of the pairs viz. 'Unsuccessful Females & Successful Females', 'Unsuccessful Females & Unsuccessful Males', 'Unsuccessful Females & Successful Males', 'Successful Females & Successful Males' came out to be 4.92, 3.12, 3.59, 2.35 respectively, which are found to be significant either at the 0.05 or 0.01 level of confidence. On overseeing the mean scores table 4.38, it has been found that successful female students (6.74) have scored higher than unsuccessful female (3.07), successful male (5.58) and unsuccessful male (5.51) students in the stability dimension. This shows that successful females attributed stable causes more than successful or unsuccessful students whereas, the unsuccessful female students attributed unstable causes for their achieved score. The unsuccessful male students (5.51) have scored higher than unsuccessful female students (3.07) and successful male students (5.58) have scored higher than unsuccessful female students (3.07) in the stability dimension. This shows that both successful and unsuccessful male students attributed stable causes whereas, the unsuccessful female students attributed unstable causes for their achieved scores.

It is clear from the table 4.40, that in ‘External Controllability’ dimension, the t- value of the pairs of ‘Unsuccessful Female & Successful Female’, ‘Unsuccessful Female & Unsuccessful Male’, ‘Unsuccessful Female & Successful Male’ came out to be 3.58, 2.29 and 3.05, which are found to be significant at 0.01 level of confidence. On overseeing the mean scores table 4.38, it has been found that successful female students (6.21), unsuccessful male students (5.10) and successful male students (5.72) have scored higher than unsuccessful female students (2.93) in external controllability dimension. This shows that successful female, successful and unsuccessful male students attributed externally controllable causes while unsuccessful female students attributed externally uncontrollable causes for their achieved score.

It is clear from table 4.40, that in ‘Personal Controllability’ dimension, the t-value of the pairs viz. ‘Unsuccessful Female & Successful Female’, ‘Successful Female & Unsuccessful Male’, ‘Successful Female & Successful Male’ came out to be 3.07, 3.20 and 3.06, which are found to be significant at 0.01 level of confidence. On overseeing the mean scores table 4.38, it has been found that successful female students (7.14) have scored higher than unsuccessful female students (4.08), unsuccessful male students (5.18) and successful male students (5.84) in personal controllability dimension. This shows that successful female students attributed personally controllable factors more than unsuccessful and successful male students while unsuccessful female students attributed personally uncontrollable causes for their achieved score.

4.6.8 Summary of 2×2 Multivariate Analysis of Variance on the Scores of Causal Dimensions of BBA 4th Semester in relation to Gender and Successfulness

To study the significant differences in causal attribution of the students studying in BBA 4th semester, in the course, ‘Marketing Management’ with respect to Gender and Successfulness; two-way MANOVA was applied and Box’s test was computed to check the homogeneity of variance and covariance. All the four subscales of the causal dimension scale were analysed program wise and semester wise to make interpretations and results are reported below.

Table 4.41: Summary of Box's Test of Equality of Covariance Matrices with respect to Various Dimensions of Causal Attribution of BBA 4th Semester

Box's M	48.91
F	1.32
df1	30
df2	2393
Sig.	0.115

Table 4.41 clearly shows that Box's $M=48.91$, $F(30, 2393) = 1.32$, $p > 0.001$, which is not found to be significant. This indicates that the equality of variance and covariance can be assumed. Therefore, the assumption is not violated and Wilks' Lambda was used to interpret two-way MANOVA results and reported in the following table 4.42.

Table 4.42: Summary of MANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of BBA 4th Semester

Effect	Gender	Successfulness	Gender * Successfulness
Multivariate Test	Wilks' Lambda		
Value	0.95	0.75	0.92
F	0.55	3.67**	1.01
Hypothesis df	4	4	4
Error df	44	44	44
Sig.	0.70	0.01	0.42
Partial Eta Squared	0.05	0.25	0.08

** Significant at 0.01 level

Table 4.42 shows that, the main effect of 'Gender' with Wilk $\lambda = 0.95$, $F(4, 44) = 0.55$, $p > 0.05$ multivariate $\eta^2 = 0.05$ is not found to be significant even at the 0.05 level of confidence and for 'Successfulness' Wilk $\lambda = 0.75$, $F(4, 44) = 3.67$, $p = 0.01$, multivariate $\eta^2 = 0.25$ came out significant at 0.01 level of confidence. Further, the interaction effect (Gender*Successfulness) with Wilk $\lambda = 0.92$, $F(4, 44) = 1.01$, $p > 0.05$, multivariate $\eta^2 = 0.08$ is not found to be significant even at the 0.05 level of confidence.

Table 4.43: Means and SDs of Sub-Groups of ANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of BBA 4th Semester

	LoC									ST								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	3.44	5.89	4.91	4.33	5.26	4.95	3.77	5.62	4.93	3.95	4.7	4.4	3.95	5.02	4.67	3.95	4.84	4.51
σ	1.7	1.68	2.06	1.46	1.86	1.76	1.63	1.76	1.92	1.43	1.39	1.43	1.5	2.25	2.06	1.42	1.79	1.7
N	12	18	30	7	14	21	19	32	51	12	18	30	7	14	21	19	32	51
	EC									PC								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	4.53	5.02	4.82	3.9	4.98	4.62	4.3	5	4.74	3.58	5.89	4.97	3.67	5.24	4.71	3.61	5.6	4.86
σ	1.9	1.79	1.82	1.01	2.38	2.07	1.63	2.04	1.91	1.81	1.39	1.92	1.87	1.78	1.92	1.78	1.58	1.9
N	12	18	30	7	14	21	19	32	51	12	18	30	7	14	21	19	32	51

Table 4. 44: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of BBA 4th Semester

Source	Gender				Successfulness				Gender * Successfulness				Error			
	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC
SS	0.19	0.3	1.26	0.91	32.21	9.49	6.93	42.53	6.53	0.28	0.95	1.53	137.39	134.37	174.34	130.82
Df	1	1	1	1	1	1	1	1	1	1	1	1	47	47	47	47
MSS	0.19	0.3	1.26	0.91	32.21	9.49	6.93	42.53	6.53	0.28	0.95	1.53	2.92	2.86	3.71	2.783
F	0.07	0.11	0.34	0.33	11.02**	3.32	1.87	15.28**	2.23	0.1	0.26	0.55				
Sig.	0.8	0.75	0.56	0.57	0.00	0.08	0.18	0.00	0.14	0.76	0.62	0.46				

**Significant at 0.01 level of confidence

Hence, the significant result of ‘Successfulness’ demanded two-way ANOVA as a follow-up test to two-way MANOVA in order to determine significant group difference for each dependent variable. Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.44.

MAIN EFFECTS

GENDER

The data reported in table 4.44 shows that the F- values for ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ between male and female found to be 0.07, 0.11, 0.34 and 0.33 respectively, which are not found to be significant even at the 0.05 level of confidence. This indicates that male and female students do not differ significantly on their scores on ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’. Thus, the hypothesis (2), “There is no significant difference in causal attribution of higher education students with respect to Gender” for BBA 4th semester is not rejected. The above finding is in tune with the finding of Travis et al. (1991), Hyde (2005), Wu (2011) & Pishghadam and Motakef (2011) who showed that male and female students were not significantly different in terms of causal attribution.

SUCCESSFULNESS

The data presented in table 4.44 shows that the F- values for ‘Stability’, ‘External Controllability’ and are found to be 3.32 and 1.87 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for ‘Locus of Causality’ and ‘Personal Controllability’ came out 11.02 and 15.28 respectively, which are found to be significant at 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of ‘Locus of Causality’ and ‘Personal Controllability’ dimensions. Thus, the hypothesis (3), “There is no significant difference in causal attribution of higher education students with respect to Successfulness” for BBA 4th semester is rejected for ‘Locus of Causality’ and ‘Personal Controllability’ dimensions of causal attribution. On

overseeing the mean scores table 4.43 it has been found that in ‘Locus of Causality’ dimension successful students (5.62) have scored higher than unsuccessful students (3.77). Likewise, in ‘Personal Controllability’ dimension successful students (5.60) have scored higher than unsuccessful students (3.61). This indicates that successful students attributed internal and personally controllable factors like high ability, aptitude, efforts and hard work for their success. On the contrary, unsuccessful students attributed external and personally uncontrollable factors like lack of efforts, bad luck, difficult task and bad mood for their failure. The present finding is in tune with the finding of Adiba (2004) who reported that successful students reported internal factors like effort and ability for their success and unsuccessful students reported luck and task difficulty attributions for their failure. Previous researches supported that success is most likely attributed to internal and controllable factors (Williams et al., 2001; Graham, 2002; Dong et al., 2013; Solar, 2015).

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

It is clear from the table 4.44 that the F- values for the interaction between gender and successfulness for ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ are found to be 2.23, 0.10, 0.26 and 0.55 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that there exists no interaction effect of gender and successfulness on the scores of the dimensions viz. ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’. Thus, the Hypothesis (4), “There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher education students” for BBA 4th semester is not rejected.

4.6.9 Summary of 2×2 Multivariate Analysis of Variance on the Scores of Causal Dimensions of BBA 6th Semester in relation to Gender and Successfulness

To study the significant differences in causal attribution of the students studying in of BBA 6th semester, in the course, ‘Business Environment’ with respect to Gender and Successfulness; two-way MANOVA was applied and Box’s test was computed to check the homogeneity of variance and covariance. All the four

subscales of the causal dimension scale were analysed program wise and semester wise to make interpretations and the results are reported below.

Table 4.45: Summary of Box's Test of Equality of Covariance Matrices with respect to Various Dimensions of Causal Attribution of BBA 6th Semester

Box's M	59.18
F	1.67
df1	30
df2	5676
Sig.	0.013

Table 4.45 clearly shows that Box's $M=59.18$, $F(30,5676)=1.67$, $p>0.001$, which is not found to be significant. This indicates that the equality of variance and covariance can be assumed. Therefore, the assumption is not violated and Wilks' Lambda was used to interpret two-way MANOVA results and reported in the following table 4.46.

Table 4.46: Summary of MANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of BBA 6th Semester

Effect	Gender	Successfulness	Gender * Successfulness
Multivariate Test	Wilks' Lambda		
Value	0.96	0.76	0.97
F	0.44	3.63**	0.38
Hypothesis df	4	4	4
Error df	46	46	46
Sig.	0.78	0.01	0.82
Partial Eta Squared	0.04	0.24	0.03

**Significant at 0.01 level of confidence

Table 4.46 shows that, the main effect of 'Gender' with Wilk $\lambda = 0.96$, $F(4, 46) = 0.44$, $p > 0.05$, multivariate $\eta^2 = 0.04$ is not found to be significant at 0.05 level of confidence and for 'Successfulness', Wilk $\lambda = 0.76$, $F(4, 46) = 3.63$, $p = 0.01$, multivariate $\eta^2 = 0.24$ came out significant at 0.01 level of confidence. Further, the interaction effect (Gender*Successfulness) with Wilk $\lambda = 0.97$, $F(4, 44) = 0.38$, $p > 0.05$, multivariate $\eta^2 = 0.03$ is not found to be significant even at the 0.05 level. Hence, the significant result of 'Successfulness' demanded two-way ANOVA as a follow-up test to two-way MANOVA in order to determine significant group difference for each dependent variable. Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.48.

MAIN EFFECTS

GENDER

The data inserted in table 4.48 shows that the F- values for 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' between male and female found to be 0.02, 0.11, 1.20 and 0.00 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that male and female students do not differ significantly on the scores of 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' dimensions of 'Causal Attribution'. Thus, the hypothesis (2), "There is no significant difference in causal attribution of higher education students with respect to Gender" for BBA 6th semester is not rejected. The finding of the present research is in tune with the findings of Travis et al. (1991), Hyde (2005), Wu (2011) & Pishghadam and Motakef (2011) who showed that male and female students were not significantly different in terms of causal attribution.

Table 4.47: Means and SDs of Sub-Groups of ANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of BBA 6th Semester

	LoC									ST								
Gender	Female			Male			Total			Female			male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	5.17	6.27	5.78	5.38	6.21	5.73	5.28	6.24	5.75	3.81	4.93	4.43	3.89	5.18	4.44	3.85	5.04	4.43
σ	2.17	1.55	1.9	1.75	1.88	1.82	1.91	1.66	1.84	1.79	2.07	1.99	1.73	1.38	1.69	1.72	1.78	1.83
N	12	15	27	15	11	26	27	26	53	12	15	27	15	11	26	27	26	53
	EC									PC								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	4.42	5.27	4.89	4.18	4.24	4.21	4.28	4.83	4.55	4.5	5.78	5.21	4.4	5.82	5	4.44	5.79	5.11
σ	2.37	2.38	2.37	1.58	1.91	1.69	1.93	2.21	2.07	1.61	1.71	1.76	1.9	2.02	2.04	1.74	1.81	1.89
N	12	15	27	15	11	26	27	26	53	12	15	27	15	11	26	27	26	53

Table 4.48: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of BBA 6th Semester

Source	Gender				Successfulness				Gender * Successfulness				Error			
Dependent Variable	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC
SS	0.08	0.36	5.19	0.01	12.15	19.04	2.72	23.61	0.23	0.09	2.01	0.06	163.76	155.64	212.53	160.66
Df	1	1	1	1	1	1	1	1	1	1	1	1	49	49	49	49
MSS	0.08	0.36	5.19	0.01	12.15	19.04	2.72	23.61	0.23	0.09	2.01	0.06	3.34	3.18	4.34	3.28
F	0.02	0.11	1.2	0	3.64	5.99*	0.63	7.2**	0.07	0.03	0.46	0.02				
Sig.	0.88	0.74	0.28	0.95	0.06	0.02	0.43	0.01	0.79	0.87	0.5	0.89				

*Significant at 0.05 level of confidence, **Significant at 0.01 level of confidence

SUCCESSFULNESS

The data reported in table 4.48 reveals that the F- values for ‘Locus of Causality’ and ‘External Controllability’ dimensions came out 3.64 and 0.63 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for ‘Stability’ and ‘Personal Controllability’ dimensions came out 5.99 and 7.20 respectively, which are found to be significant either at 0.05 or 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the score of ‘Stability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’. Thus, the hypothesis (3), “There is no significant difference in causal attribution of higher education students with respect to Successfulness” for BBA 6th semester is rejected for ‘Stability’ and ‘Personal Controllability’ dimensions of Causal Attribution. On overseeing mean score table 4.47, it has been found that in ‘Stability’ dimension successful students (5.04) have scored higher than unsuccessful students (3.85). In the same way, in ‘Personal Controllability’ dimension successful students (5.79) outperformed unsuccessful students (4.44). This indicates that successful students attributed stable and personally controllable factors like the ability, study habits and efforts for their success. On the contrary, unsuccessful students attributed unstable like lack of efforts, low ability in the subject, luck, difficult task or biased teacher for their failure. The present finding is in tune with the finding of Adiba (2004) who reported that successful students reported internal factors like effort and ability for their success and unsuccessful students reported luck and task difficulty attributions for their failure. Previous researches supported that success is most likely attributed to internal and controllable factors (Williams et al., 2001; Graham, 2002; Dong et al., 2013; Solar, 2015).

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

It is clear from the table 4.48 that the F- values for the interaction between gender and 99 successfulness for ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions came out 0.07, 0.87, 0.50 and 0.89 respectively, which are not found to be significant even at the 0.05 level of

confidence. This shows that there exists no interaction effect of gender and successfulness on the scores of the dimensions viz. ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’. Thus, the Hypothesis (4), “There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher education students” for BBA 6th semester is not rejected.

4.6.10 Summary of 2×2 Multivariate Analysis of Variance on the Scores of Causal Dimensions of BCA 2nd Semester in relation to Gender and Successfulness

To study the significant differences in causal attribution of the students studying in BCA 2nd semester, in the course, ‘Computer Programming in C’ with respect to Gender and Successfulness; two-way MANOVA was applied and Box’s test was computed to check the homogeneity of variance and covariance. All the four subscales of the causal dimension scale were analysed program wise and semester wise to make interpretations and results are reported below.

Table 4.49: Summary of Box's Test of Equality of Covariance Matrices with respect to Various Dimensions of Causal Attribution of BCA 2nd Semester

Box's M	122.23
F	3.16
df1	30
df2	903
Sig.	0.000*

*Significant at 0.001 level of confidence

The data of table 4.49 reveals that Box’s M=122.23, F (30,903) =3.16, p<0.001, which is found to be significant. This indicates that the equality of variance and covariance cannot be assumed. Therefore, the assumption is violated and Pillai’s Trace was used to interpret two-way MANOVA results and reported in the following table 4.50.

Table 4.50: Summary of MANOVA for 2×2 Design with respect to various Dimensions of Causal Attribution in relation to Gender and Successfulness of BCA 2nd Semester

Effect	Gender	Successfulness	Gender * Successfulness
Multivariate Test	Pillai's Trace		
Value	0.28	0.31	0.11
F	5.73**	6.64**	1.85
Hypothesis df	4	4	4
Error df	59	59	59
Sig.	0.00	0.00	0.13
Partial Eta Squared	0.28	0.31	0.11

**Significant at 0.01 level of confidence

The data reported in table 4.50 shows that the main effect of ‘Gender’ with Pillai trace, $V = 0.28$, $F(4, 59) = 5.73$, $p=0.00$, multivariate $\eta^2 = 0.28$ and for ‘Successfulness’ with Pillai trace, $V = 0.31$, $F(4, 59) = 6.64$, $p=0.00$, multivariate $\eta^2 = 0.31$ came out significant at 0.01 the level of confidence. Moreover, interaction effect (Gender*Successfulness) with Pillai trace, $V = 0.11$, $F(4, 59) = 1.85$, $p>0.05$, multivariate $\eta^2 = 0.11$ is not found to be significant even at the 0.05 level of confidence. Hence, the significant results of ‘Gender’ and ‘Successfulness’ demanded two-way ANOVA as a follow-up test to two-way MANOVA in order to determine significant group difference for each dependent variable. Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.52.

Table 4.51: Means and SDs of Sub-Groups of ANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of BCA 2nd Semester

	LoC									ST								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	5.87	5.49	5.58	5.9	6.69	6.4	5.89	6.24	6.13	2.73	5.57	4.92	4.81	6.42	5.83	4.32	6.1	5.53
σ	2.89	2.27	2.35	0.96	1.47	1.35	1.54	1.88	1.78	1.44	2.07	2.27	1.29	1.56	1.65	1.58	1.8	1.91
N	5	17	22	16	28	44	21	45	66	5	17	22	16	28	44	21	45	66
	EC									PC								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	3.07	4.88	4.47	5.06	6.11	5.73	4.59	5.64	5.31	5.87	6.27	6.18	5.33	6.43	6.03	5.46	6.37	6.08
σ	1.98	2.41	2.4	1.49	1.67	1.67	1.79	2.05	2.02	1.64	2.15	2.02	1.1	1.71	1.6	1.23	1.87	1.73
N	5	17	22	16	28	44	21	45	66	5	17	22	16	28	44	21	45	66

Table 4.52: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of BCA 2nd Semester

Source	Gender				Successfulness				Gender * Successfulness				Error			
	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC
SS	4.24	23.99	29.07	0.41	0.48	55.19	22.9	6.3	3.85	4.24	1.67	1.34	188.04	167.99	217.34	182.094
Df	1	1	1	1	1	1	1	1	1	1	1	1	62	62	62	62
MSS	4.24	23.99	29.07	0.41	0.48	55.19	22.9	6.3	3.85	4.24	1.67	1.34	3.03	2.71	3.51	2.94
F	1.4	8.85**	8.29**	0.14	0.16	20.37**	6.53**	2.14	1.27	1.57	0.48	0.46				
Sig.	0.24	0.00	0.01	0.71	0.69	0.00	0.01	0.15	0.26	0.22	0.49	0.5				

**Significant at 0.01 level

MAIN EFFECTS

GENDER

The data reported in table 4.52 shows that the F- values for 'Locus of Causality', and 'Personal Controllability' came out 1.40 and 0.14 respectively, which are not found to be significant at the 0.01 level of confidence. However, F-values for 'Stability' and 'External Controllability' came out 8.85, and 8.29 respectively, which are found to be significant at 0.01 level of confidence. This shows that male and female students differ significantly on the score of 'Stability' and 'External Controllability'. Thus, the hypothesis (2), "There is no significant difference in causal attribution of higher education students with respect to Gender" for BCA 2nd semester is rejected for 'Stability' and 'External Controllability' dimensions of Causal Attribution. On overseeing the mean scores table 4.51, it has been observed that in 'Stability' dimension, male students (5.83) have scored higher than female students (4.92). This shows that male students attributed stable factors like the ability than female students.

Further, in the 'External Controllability' dimension, male students (5.73) have scored higher than female students (4.47). This shows that male students perceived external causes more than female students for their achieved score. The present finding is in tune with the findings of Wolleat et al. (1980) and Beyer (1998) reported that males attributed ability attributions and females attributed to attention and effort attributions for their success. Beyer (1998) advocated that in case of failure situation, males attributed low interest and lack of efforts, while females attributed to lack of ability. Likewise, Lohbeck et al. (2017) reported that boys attributed high ability for their success, while girls attributed low ability and difficult task for their failure. Cochran et al. (2010) documented that female student scored more on effort attributions than male students. Dasinger (2013) reported that female students attributed internal factors for their achieved scores more than male students. However, Genc (2016) reported that female students were more inclined to attribute their success or failure to external factors as compared to their male counterparts. On the contrary, Lehmann (1987) reported no significant differences in attributions based on gender.

SUCCESSFULNESS

The data presented in table 4.52 shows that the F- values for ‘Locus of Causality’, and ‘Personal Controllability’ came out 0.16 and 2.14 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for ‘Stability’ and ‘External Controllability’ came out 20.37 and 6.53 respectively, which are found to be significant at 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the score of ‘Stability’ and ‘External Controllability’. Thus, the hypothesis (3), “There is no significant difference in causal attribution of higher education students with respect to Successfulness” for BCA 2nd semester is rejected for ‘Stability’ and ‘External Controllability’ dimensions of Causal Attribution. On overseeing the mean scores table 4.51, it has been observed that in ‘Stability’ dimension, successful students (6.10) unsuccessful students (4.32). Likewise, in ‘External Controllability’ dimension, successful students (5.64) have outperformed unsuccessful students (4.59). This indicates that successful students attributed stable factors (e.g. ability and study habits) and externally controllable factors (i.e. help from the teacher) for their achieved score. On the other side, the unsuccessful students attributed unstable factors (The present finding in tune with the finding of Hassaskhah and Vahabi (2010) who revealed a failure in language learning was attributed to lack of efforts by most of the unsuccessful students. Adiba (2004) reported that successful students reported stable causes like a high for their success and unsuccessful students reported luck and task difficulty attributions for their failure.

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

It is clear from the table 4.52 that the F- values for the interaction between gender and successfulness for ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ are found to be 1.27, 1.57, 0.48 and 0.46 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that there exists no interaction effect of gender and successfulness on the scores of the dimensions viz. ‘Locus of Causality’, ‘Stability’,

‘External Controllability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’. Thus, the Hypothesis (4), “There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher education students” for BCA 2nd semester is not rejected.

4.6.11 Summary of 2×2 Multivariate Analysis of Variance on the Scores of Causal Dimensions of BCA 4th Semester in relation to Gender and Successfulness

To study the significant differences in causal attribution of the students studying in BCA 4th semester, in the course, ‘Object Oriented Programming through C++’ with respect to Gender and Successfulness; two-way MANOVA was applied and Box’s test was computed to check the homogeneity of variance and covariance. All the four subscales of the causal dimension scale were analysed program wise and semester wise to make interpretations and results are reported below.

Table 4.53: Summary of Box's Test of Equality of Covariance Matrices with respect to Various Dimensions of Causal Attribution of BCA 4th Semester

Box's M	24.39
F	1.11
df1	20
df2	9844
Sig.	0.335

Table 4.53 clearly shows that Box’s M= 24.39, F (20, 9844) =1.11, p>0.001, which is not found to be significant. This indicates that the equality of variance and covariance can be assumed. Therefore, the assumption is not violated and Wilks’ Lambda was used to interpret two-way MANOVA results and reported in the following table 4.54.

Table 4.54: Summary of MANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of BCA 4th Semester

Effect	Gender	Successfulness	Gender * Successfulness
Multivariate Test	Wilks' Lambda		
Value	0.94	0.94	0.98
F	1.19	1.19	0.37
Hypothesis df	4	4	4
Error df	69	69	69
Sig.	0.32	0.32	0.83
Partial Eta Squared	0.07	0.07	0.02

The data reported in table 4.54 reveals that the main effect of ‘Gender’ with Wilk $\lambda = 0.94$, $F(4, 69) = 1.19$, $p > 0.05$, multivariate $\eta^2 = 0.07$ is not found to be significant even at the 0.05 level of confidence. Thus, Hypothesis (2), “There is no significant difference in causal attribution of higher education students with respect to Gender” for BCA 4th semester is not rejected. This shows that male and female students of BCA 4th semester do not differ significantly on the scores of ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’. The main effect of ‘Successfulness’ Wilk $\lambda = 0.94$, $F(4, 69) = 1.19$, $p > 0.05$, multivariate $\eta^2 = 0.07$ is not found to be significant even at the 0.05 level of confidence. Thus, the hypothesis (3), “There is no significant difference in causal attribution of higher education students with respect to Successfulness” for BCA 4th semester is not rejected. This shows that successful and unsuccessful students of BCA 4th semester do not differ significantly on the scores of ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’. Further, the interaction effect (Gender*Successfulness) with Wilk $\lambda = 0.98$, $F(4, 69) = 0.37$, $p > 0.05$, multivariate $\eta^2 = 0.02$ is not found to be significant even at the 0.05 level of confidence. Thus,

the Hypothesis (4), “There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher education students” for BCA 4th semester is not rejected. Meaning thereby that there exists no interaction effect of gender and successfulness on the scores of the dimensions viz. ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’.

4.6.12 Summary of 2×2 Multivariate Analysis of Variance on the Scores of Causal Dimensions of BCA 6th Semester in relation to Gender and Successfulness

To study the significant differences in causal attribution of the students studying in BCA 6th semester, in the course, ‘Java Programming’ with respect to Gender and Successfulness. For analysing the equality of covariance, Box’s test was computed and two-way MANOVA was applied and all the four subscales of causal dimension scale were analysed program wise and semester wise to make interpretations and results are reported below.

Table 4.55: Summary of Box's Test of Equality of Covariance Matrices with respect to Various Dimensions of Causal Attribution of BCA 6th Semester

Box's M	63.17
F	2.6*
df1	20
df2	1098
Sig.	0.000

*Significant at 0.001 level of confidence

The data presented in table 4.55 clearly shows that Box’s M=63.17, F (20,1098) =2.6, $p < 0.001$, which is found to be significant. As a result, the assumption of equal variance-covariance is violated. Therefore, ‘Pillai Trace’ was used to interpret two-way MANOVA results and reported in the following table 4.56.

Table 4.56: Summary of MANOVA for 2×2 Design with respect to various Dimensions of Causal Attribution in relation to Gender and Successfulness of BCA 6th Semester

Effect	Gender	Successfulness	Gender * Successfulness
Multivariate Test	Pillai's Trace		
Value	0.04	0.09	0.1
F	0.72	1.67	1.83
Hypothesis df	4	4	4
Error df	65	65	65
Sig.	0.58	0.17	0.13
Partial Eta Squared	0.04	0.09	0.1

The data inserted in table 4.56 shows that the main effect of ‘Gender’ with Pillai trace, $V = 0.04$, $F(4, 65) = 0.72$, $p > 0.05$, multivariate $\eta^2 = 0.04$ is not found to be significant even at the 0.05 level of confidence. Thus, Hypothesis (2), “There is no significant difference in causal attribution of higher education students with respect to Gender” for BCA 6th semester is not rejected. This shows that there exists no significant gender difference with respect to ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’. The main effect of ‘Successfulness’ with Pillai trace, $V = 0.09$, $F(4, 65) = 1.67$, $p > 0.05$, multivariate $\eta^2 = 0.09$ is not found to be significant even at the 0.05 level of confidence. Thus, the hypothesis (3), “There is no significant difference in causal attribution of higher education students with respect to Successfulness” for BCA 6th semester is not rejected. This shows that successful and unsuccessful students do not differ significantly on the scores of ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’. Further, the interaction effect (Gender × Successfulness) with Pillai trace, $V = 0.1$, $F(4, 65) = 1.83$, $p > 0.05$, multivariate $\eta^2 = 0.10$ is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (4), “There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher education students” for BCA 6th semester is not rejected. Meaning thereby that there exists no interaction

effect of gender and successfulness on the scores of the dimensions viz. 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' dimensions of 'Causal Attribution'.

DISCUSSION ON RESULTS

From the results, it is clear that no noticeable gender differences appeared in any of the semesters and programs at UG level except B. Com 2nd and BCA 2nd semester. Gender differences appeared on 'Stability' dimension and results indicated that male students of both B. Com 2nd and BCA 2nd semester attributed stable causes i.e. their ability more frequently for their achieved scores as compared to females. Further, noticeable differences appeared in causal attributions of successful and unsuccessful students in all programs and semesters of UG level. Successful students of B. Com 2nd semester attributed stable and externally controllable factors, in B. Com 4th and B. Com 6th semester attributed internal stable and personally controllable factors. As B.Com 2nd semester students attributed externally controlled cause i.e. favor by the teacher for their success, the probable reason may be as they were freshmen and new with the system and culture of the college or university due to this they could be more dependent on the teacher and teacher also show more concern and helpful to the freshmen.

In B.Sc. 2nd semester successful students attributed internal and stable factors like high ability, aptitude, continuous efforts followed by some externally controllable factors like help from teachers and luck, while B.Sc. 4th semester students attributed internal and stable factors like study habits, efforts, aptitude for their success and B.Sc. 6th semester students attributed stable and external controllable factors. While unsuccessful students blame luck, teachers and poor study habits for their failure. In BBA 2nd semester successful students attributed internal, stable factors followed by external controllable factors, BBA 4th semester successful students attributed internal and personally controllable factors and in BBA 6th semester they attributed stable and personally controllable factors. In BCA 2nd semester, successful students attributed stable and external controllable factors, no significant differences observed in BCA 4th and BCA 6th semester successful and unsuccessful students with respect to their causal attributions. It has been found that in B. Com and BBA programs, external control has been changed to personal

control as the students move from 2nd semester to 4th and 6th semesters. This indicates that 2nd semester students are more dependent on teachers for their help, as they move to higher semesters, they start relying on themselves.

It was clearly visible that successful students gave ability or effort attributions for their success more frequently. If students attributed the high ability to their success, it means that they have firm belief in their high ability or aptitude in the subject and as a result, they got success in the subject. High ability is the stable property of the successful students and will last across time and context. High ability always leads to hopefulness and hopefulness is likely to lead to the successful students believing that they will always get success in the future. Attributing success to ability is a stable and controllable cause and is not reinforcing and will not help in increasing perseverance. However, successful students attributed their sustained efforts throughout the year as the main reason for their success, motivation and perseverance of such students is likely to increase. The students with a high sense of controllability have high GPA and are less likely to drop out of the college (Perry et al., 1993, 2005). The students attributing ability and efforts for their success experience positive emotions like pride, happiness, satisfaction and self-confidence. Therefore, the Effort attribution might be particularly beneficial for all college students. In the same vein, most of the unsuccessful students attributed more adaptive internal- unstable- controllable attributions i.e. lack of efforts followed by lack of ability in the subject, bad mood and some maladaptive external attributions like bad luck, lack of help from the teacher, a biased teacher, difficult test paper etc. for their failure. Attributing lack of ability for the failure will reduce the motivation and perseverance as it results in producing negative emotions among students such as shame.

Attributing lack of ability for the failure is termed as learned helplessness (Diener and Dweck, 1978), where the learner consider that lack of ability is unchangeable and uncontrollable. However, attributing lack of efforts (external and unstable attribution) will not reduce the motivation and will give hopefulness to the students that on doing hard work they can improve their performance. A helpless student will focus only on the cause of the failure but the mastery-oriented student will search for the remedies in order to overcome failure. Covington (2007) believed that effort attribution often protects the self-esteem of the unsuccessful students and boost their morale to put more efforts to get success and for improving performance.

4.7 SUMMARY OF 2×2 MULTIVARIATE ANALYSIS OF VARIANCE ON THE SCORES OF CAUSAL DIMENSIONS WITH RESPECT TO GENDER AND SUCCESSFULNESS AT PG LEVEL

To study the significant differences in causal attribution of higher education students studying in the second semester of different programs at PG level with respect to Gender and Successfulness. Data was analyzed for different subjects studied at 2nd semester in different programs. The students studied the courses viz. Organizational Behaviour, Physical Chemistry, Programming in C and Managerial Economics have been taken from M. Com (2nd Semester), M.Sc. (2nd Semester), MCA (2nd Semester) and MBA (2nd Semester) respectively. Causal Attribution is studied in terms of four dimensions viz. ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’. To find out the significant difference on ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of causal attribution (Continuous dependent variables) due to Gender and Successfulness, two-way MANOVA was applied. In multivariate analysis, it is essential to check the assumption of homogeneity of variance-covariance. Homogeneity of variance-covariance was checked by Box’s test. Further, if Box’s test is not found to be significant ($p > 0.001$) then ‘Wilk Lambda’ (λ) test statistic was used for interpreting the MANOVA and if Box’s test came out significant ($p < 0.001$) then ‘Pillai Trace (V) test statistic was used for interpreting the MANOVA results. All the four subscales of the causal dimension scale were analyzed program wise and semester wise to make interpretations and results are reported below in the following headings.

4.7.1 Summary of 2×2 Multivariate Analysis of Variance on the Scores of Causal Dimensions of M.Com 2nd Semester with respect to Gender and Successfulness

To study the significant differences in causal attribution of the students studying in M. Com 2nd semester, in the course, ‘Organisational Behaviour’ with respect to Gender and Successfulness; two-way MANOVA was applied and Box’s test was computed to check the homogeneity of variance and covariance. All the four subscales of the causal dimension scale were analysed program wise and semester wise to make interpretations and results are reported below.

Table 4.57: Summary of Box's Test of Equality of Covariance Matrices with respect to Various Dimensions of Causal Attribution of M.Com 2nd Semester

Box's M	41.15
F	1.42
df1	20
df2	500
Sig.	0.11

Table 4.57 clearly shows that Box's $M=41.15$, $F(20,500) = 1.42$, $p > 0.001$, which is not found to be significant. This indicates that the equality of variance and covariance can be assumed. Therefore, the assumption is not violated and Wilks' Lambda was used to interpret two-way MANOVA results and reported in the following table 4.58.

Table 4.58: Summary of MANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of M.Com 2nd Semester

Effect	Gender	Successfulness	Gender * Successfulness
Multivariate Test	Wilks' Lambda		
Value	0.99	0.9	0.96
F	0.26	1.96	0.73
Hypothesis df	4	4	4
Error df	72	72	72
Sig.	0.9	0.11	0.58
Partial Eta Squared	0.01	0.1	0.04

Table 4.58 shows that the main effect of 'Gender' with Wilk $\lambda = 0.99$, $F(4, 72) = 0.26$, $p > 0.05$, multivariate $\eta^2 = 0.01$ is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (2), "There is no significant difference in causal attribution of higher education students with respect to Gender"

for M. Com 2nd semester is not rejected. This shows that male and female students M. Com 2nd semester do not differ significantly on the scores of 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' dimensions of 'Causal Attribution'. The main effect of 'Successfulness' Wilk $\lambda = 0.90$, $F(4, 72) = 1.96$, $p > 0.05$, multivariate $\eta^2 = 0.10$ is not found to be significant even at the 0.05 level of confidence. Thus, the hypothesis (3), "There is no significant difference in causal attribution of higher education students with respect to Successfulness" for M. Com 2nd semester is not rejected. This shows that successful and unsuccessful students do not differ significantly on the scores of 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' dimensions of 'Causal Attribution'. Further, the interaction effect (Gender*Successfulness) with Wilk $\lambda = 0.96$, $F(4, 72) = 0.73$, $p > 0.05$, multivariate $\eta^2 = 0.04$ is not found to be significant even at the 0.05 level of confidence. This indicates that there exists no significant group difference with respect to 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' dimensions of 'Causal Attribution'. Thus, the Hypothesis (4), "There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher education students" for M. Com 2nd semester is not rejected. Meaning thereby that there exists no interaction effect of gender and successfulness on the scores of the dimensions viz. 'Locus of Causality', 'Stability', 'External Controllability' and 'Personal Controllability' dimensions of 'Causal Attribution'.

4.7.2 Summary of 2×2 Multivariate Analysis of Variance on the Scores of Causal Dimensions of M.Sc. 2nd Semester with respect to Gender and Successfulness

To study the significant differences in causal attribution of the students studying in M. Sc 2nd semester, in the course, 'Physical Chemistry' with respect to Gender and Successfulness; two-way MANOVA was applied and Box's test was computed to check the homogeneity of variance and covariance. All the four subscales of the causal dimension scale were analysed program wise and semester wise to make interpretations and results are reported below.

Table 4.59: Summary of Box's Test of Equality of Covariance Matrices with respect to Various Dimensions of Causal Attribution of M.Sc. 2nd Semester

Box's M	50.49
F	1.45
df1	30
df2	1891
Sig.	0.05

Table 4.59 clearly shows that Box's $M = 50.49$, $F(30, 1891) = 1.45$, $p > 0.001$, which is not found to be significant. This indicates that the equality of variance and covariance can be assumed. Therefore, the assumption is not violated and Wilks' Lambda was used to interpret two-way MANOVA results and reported in the following table 4.60.

Table 4.60: Summary of MANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of M.Sc. 2nd Semester

Effect	Gender	Successfulness	Gender * Successfulness
Multivariate Test	Wilks' Lambda		
Value	0.96	0.89	0.96
F	1.48	4.62**	1.54
Hypothesis df	4	4	4
Error df	145	145	145
Sig.	0.21	0.00	0.19
Partial Eta Squared	0.04	0.11	0.04

**Significant at 0.01 level of confidence

Table 4.60 shows that the main effect of 'Gender' with Wilk $\lambda = 0.96$, $F(4, 145) = 1.48$, $p > 0.05$, multivariate $\eta^2 = 0.04$ is not found to be significant even at the 0.05 level of confidence. The main effect of 'Successfulness' Wilk $\lambda = 0.89$, $F(4, 145) = 4.62$, $p = 0.00$ multivariate $\eta^2 = 0.11$ is found to be significant at 0.01 level of confidence. Moreover, interaction effect (Gender*Successfulness) with Wilk $\lambda = 0.96$, $F(4, 145) = 1.54$, $p > 0.05$ and multivariate $\eta^2 = 0.04$ not found to be significant even at the 0.05 level of confidence.

Table 4.61: Means and SDs of Sub-Groups of ANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of M.Sc. 2nd Semester

	LoC									ST								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	6.09	6.83	6.61	5.14	6.42	6.08	5.94	6.76	6.52	4.33	6.29	5.72	4.86	5.44	5.28	4.42	6.14	5.64
σ	1.26	1.37	1.37	2.01	0.91	1.38	1.42	1.31	1.38	1.73	1.39	1.74	1.84	1.88	1.85	1.74	1.51	1.76
N	37	89	126	7	19	26	44	108	152	37	89	126	7	19	26	44	108	152
	EC									PC								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	4.5	5.42	5.15	4.38	4.47	4.45	4.48	5.25	5.03	5.57	6.89	6.5	5.38	6.35	6.09	5.54	6.8	6.43
σ	1.66	1.57	1.64	2.41	1.55	1.77	1.76	1.6	1.68	1.82	1.34	1.61	2.14	1.21	1.53	1.85	1.33	1.6
N	37	89	126	7	19	26	44	108	152	37	89	126	7	19	26	44	108	152

Table 4.62: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of M.Sc. 2nd Semester

Source	Gender				Successfulness				Gender * Successfulness				Error			
	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC
SS	7.83	0.46	4.81	2.26	17.37	27.59	4.43	22.49	1.25	8.13	2.95	0.54	260.86	361.32	393.46	331.95
Df	1	1	1	1	1	1	1	1	1	1	1	1	148	148	148	148
MSS	7.83	0.46	4.81	2.26	17.37	27.59	4.43	22.49	1.25	8.13	2.95	0.54	1.76	2.44	2.66	2.24
F	4.44*	0.19	1.81	1.01	9.86**	11.30**	1.67	10.03**	0.71	3.33	1.11	0.24				
Sig.	0.04	0.67	0.18	0.32	0.00	0.00	0.20	0.00	0.40	0.07	0.29	0.63				

*significant at 0.05 level of confidence **significant at 0.01 level of confidence

The significant result of ‘Successfulness’ demanded two-way ANOVA as a follow-up test to two way MANOVA in order to determine significant group difference for each dependent variable. Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.62.

MAIN EFFECTS

GENDER

The data reported in table 4.62 shows that the F- values for ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ came out 0.19, 1.81 and 1.01 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-value for ‘Locus of Causality’ came out 4.44. which has been found significant at 0.05 level of confidence. This shows that male and female students differ significantly on the scores of ‘Locus of Causality’. Thus, the hypothesis (2), “There is no significant difference in causal attribution of higher education students with respect to Gender” for M.Sc. 2nd semester is rejected for ‘Locus of Causality’ dimension of Causal Attribution. On overseeing the mean scores table 4.61 it has been found that female students (6.61) have scored higher than male students (6.08) on ‘Locus of Causality’ dimension of ‘Causal Attribution’. This shows that female students attributed internal causes like the ability, hard work, efforts and study habits more frequently as compared to male students. The present results are consistent with the results of Dasinger (2013) who reported that female students attributed internal factors for their achieved scores more than the male students. Likewise, Wolleat et al. (1980), Beyer (1998) and Lohbeck et al. (2017) who reported that females attributed to attention and effort attributions for their success and failure to lack of ability. Cochran et al. (2010) documented that female student scored more on effort attributions than male students. The present finding is in contrast with the finding of Genc (2016) who reported that female students were more inclined to attribute their success or failure to external factors as compared to their male counterparts and Lehmann (1987) reported no significant differences in attributions based on gender.

SUCCESSFULNESS

The data reported in table 4.62 reveals that the F- values for 'External Controllability' dimension came out 1.67, which is not found to be significant even at the 0.05 level of confidence. However, F- values for 'Locus of Causality', 'Stability' and 'Personal Controllability' dimensions came out 9.86, 11.30 and 10.03 respectively, which are found to be significant at 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of 'Locus of Causality', 'Stability' and 'Personal Controllability' dimensions of 'Causal Attribution'. Thus, the hypothesis (3), "There is no significant difference in causal attribution of higher education students with respect to Successfulness" for M.Sc. 2nd semester is rejected for 'Locus of Causality', 'Stability' and 'Personal Controllability' dimensions of Causal Attribution.

On overseeing the mean scores table 4.61, it has been found that in 'Locus of Causality' dimension, successful students (6.76) have scored higher than unsuccessful students (5.94). Likewise, in 'Stability' dimension successful students (6.14) have scored higher than unsuccessful students (4.42) and in 'Personal Controllability' dimension, successful students (6.8) outperformed unsuccessful students (5.54). This shows that successful students attributed internal, stable and personally controllable factors like study habits, efforts and the high ability for their success. Whereas, the unsuccessful students attributed to some internal, unstable and personally controllable reasons like lack of efforts for the exam and bad mood for their failure. The present finding in tune with the finding of Hassaskhah and Vahabi (2010) who reported that most of the students rated effort attribution for the failure in language. Likewise, Adiba (2004) reported that successful students reported effort and ability attributions for their success and unsuccessful students reported luck and task difficulty attributions for their failure. Previous researches supported that success is most likely attributed to internal stable and controllable factors (Williams et al., 2001; Graham, 2002; Dong et al., 2013; Solar, 2015).

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

It is clear from the table 4.62 that the F- values for the interaction between gender and successfulness for 'Locus of Causality', 'Stability', 'External

Controllability’ and ‘Personal Controllability’ are found to be 0.71, 3.33, 1.11 and 0.24 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that there exists no interaction effect of gender and successfulness on the scores of the dimensions viz. ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’. Thus, the Hypothesis (4), “There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher education students” for M.Sc. 2nd semester is not rejected.

4.7.3 Summary of 2×2 Multivariate Analysis of Variance on the Scores of Causal Dimensions of MBA 2nd Semester in relation to Gender and Successfulness

To study the significant differences in causal attribution of the students studying in MBA 2nd semester, in the course, ‘Managerial Economics’ with respect to Gender and Successfulness; two-way MANOVA was applied and Box’s test was computed to check the homogeneity of variance and covariance. All the four subscales of the causal dimension scale were analysed program wise and semester wise to make interpretations and results are reported below.

Table 4.63: Summary of Box's Test of Equality of Covariance Matrices with respect to Various Dimensions of Causal Attribution of MBA 2nd Semester

Box's M	40.17
F	1.24
df1	30
df2	10642
Sig.	0.17

Table 4.63 clearly shows that Box’s M= 40.17, F (30,10642) =1.24, p>0.001, which is not found to be significant. This indicates that the equality of variance and covariance can be assumed. Therefore, the assumption is not violated and Wilks’ Lambda was used to interpret two-way MANOVA results and reported in the following table 4.64.

Table 4.64: Summary of MANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of MBA 2nd Semester

Effect	Gender	Successfulness	Gender * Successfulness
Multivariate Test	Wilks' Lambda		
Value	0.97	0.82	0.98
F	1.4	9.30**	0.83
Hypothesis df	4	4	4
Error df	172	172	172
Sig.	0.24	0.00	0.51
Partial Eta Squared	0.03	0.18	0.02

**significant at 0.01 level of confidence

Table 4.64 shows that, the main effect of ‘Gender’ with Wilk $\lambda= 0.97$, $F(4, 172) = 1.40$, $p > 0.05$, multivariate $\eta^2 = 0.03$ is not found to be significant at 0.05 level of confidence and main effect of ‘Successfulness’ Wilk $\lambda= 0.82$, $F(4, 172) = 9.30$, $p=0.00$ multivariate $\eta^2 = 0.18$, which is found to be significant at 0.01 level of confidence. Moreover, interaction effect (Gender*Successfulness) with Wilk $\lambda = 0.98$, $F(4, 172) = 0.83$, $p > 0.05$, multivariate $\eta^2 = 0.02$ is not found to be significant even at the 0.05 level of confidence. The significant result of ‘Successfulness’ demanded two- way ANOVA as a follow-up test to two-way MANOVA in order to determine significant group difference for each dependent variable. The two-way ANOVA was computed on the obtained scores and the results are reported in table 4.66.

Table 4.65: Means and SDs of Sub-Groups of ANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of MBA 2nd Semester

	LoC									ST								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	5.5	6.6	6.4	5.76	6.24	6.14	5.63	6.44	6.28	3.74	5.63	5.27	4.26	5.43	5.19	3.99	5.54	5.24
σ	1.98	1.41	1.58	1.05	1.42	1.36	1.58	1.42	1.49	1.93	1.82	1.97	1.49	1.59	1.64	1.72	1.71	1.82
N	18	78	96	17	66	83	35	144	179	18	78	96	17	66	83	35	144	179
	EC									PC								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	4.26	4.27	4.27	5.12	4.88	4.93	4.68	4.55	4.57	5.26	6.59	6.34	5.16	6.57	6.28	5.21	6.58	6.31
σ	1.67	1.73	1.71	1.47	1.65	1.61	1.61	1.72	1.69	1.91	1.32	1.53	1.45	1.54	1.62	1.68	1.42	1.57
N	18	78	96	17	66	83	35	144	179	18	78	96	17	66	83	35	144	179

Table 4.66: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of MBA 2nd Semester

Source	Gender				Successfulness				Gender * Successfulness				Error			
	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC
SS	0.06	0.73	15.15	0.11	17.54	66.04	0.36	52.61	2.74	3.53	0.44	0.05	368.92	517.65	489.42	384.36
Df	1	1	1	1	1	1	1	1	1	1	1	1	175	175	175	175
MSS	0.06	0.73	15.15	0.11	17.54	66.04	0.36	52.61	2.74	3.53	0.44	0.05	2.11	2.96	2.8	2.2
F	0.03	0.25	5.42*	0.05	8.32**	22.33**	0.13	23.95**	1.3	1.2	0.16	0.02				
Sig.	0.86	0.62	0.02	0.83	0.00	0.00	0.72	0.00	0.26	0.28	0.69	0.88				

**significant at 0.01 level of confidence

MAIN EFFECTS

GENDER

The data reported in table 4.66 shows that the F- values for 'Locus of Causality', 'Stability' and 'Personal Controllability' dimensions came out 0.03, 0.25 and 0.05 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-value for 'External Controllability' came out 5.42, which has been found significant at 0.05 level of confidence. This shows that male and female students differ significantly on the scores of 'External Controllability'. Thus, the hypothesis (2), "There is no significant difference in causal attribution of higher education students with respect to Gender" for MBA 2nd semester is rejected for 'External Controllability' dimension of Causal Attribution. On overseeing mean scores table 4.65, it has been found that in 'External Controllability' male students (4.93) have scored higher than female students (4.27). This shows that male students perceived that the cause for their achieved score is externally controllable more than that of female students. The present finding is in contrast with the finding of Genc (2016) who reported that female students were more inclined to attribute their success or failure to external factors as compared to their male counterparts and Lehmann (1987) reported no significant differences in attributions based on gender.

SUCCESSFULNESS

The data presented in table 4.66 reveals that the F- values for 'External Controllability' dimension came out 0.13. which is not found to be significant even at the 0.05 level of confidence. However, F- values for 'Locus of Causality', 'Stability' and 'Personal Controllability' dimensions came out 8.32, 22.33 and 23.95 respectively, which are found significant at 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of 'Locus of Causality', 'Stability' and 'Personal Controllability' dimensions of 'Causal Attribution'. Thus, the hypothesis (3), "There is no significant difference in causal attribution of higher education students with respect to Successfulness" for MBA 2nd semester is rejected for 'Locus of Causality', 'Stability' and 'Personal Controllability' dimensions of Causal Attribution. It is clear from table 4.65 that in 'Locus of Causality' dimension, successful students (6.44) have scored higher than

unsuccessful students (5.63). Likewise, in ‘Stability’ dimension, successful students (5.54) have scored higher than unsuccessful students (3.99) and in ‘Personal Controllability’ dimension, successful students (6.58) have scored higher than unsuccessful students (5.21). This shows successful students attributed internal and personally controllable factors like study habits and efforts more than unsuccessful students. Further, the results indicate that successful students attributed stable factors like high ability, while unsuccessful students attributed unstable factors like lack of efforts for their achieved score. The present finding is in tune with the finding of Hassaskhah and Vahabi (2010) who revealed that unsuccessful students attributed to lack of effort for failure in language. Likewise, Adiba (2004) reported that successful students reported effort and ability attributions for their success and unsuccessful students reported luck and task difficulty attributions for their failure. Previous researches supported that success is most likely attributed to internal stable and controllable factors (Williams et al., 2001; Graham, 2002; Dong et al., 2013; Solar, 2015). Similarly, Mori et al. (2011) found that high proficiency Malaysian undergraduates attributed success to their effort and ability and failure to class and interest-related factors such as class atmosphere and interest in the task. Gobel and Mori (2007), Gobel et al. (2011), Thang et al. (2011) found that undergraduate students attributed their success to the teacher and the congenial environment of the classroom and attributed lack of ability and lack of effort for their unsuccessful scores.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

It is clear from the table 4.66 that the F- values for the interaction between gender and successfulness for ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ are found to be 1.30, 1.20, 0.16 and 0.02 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that there exists no interaction effect of gender and successfulness on the scores of the dimensions viz. ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’. Thus, the Hypothesis (4), “There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher education students” for MBA 2nd semester is not rejected.

4.7.4 Summary of 2×2 Multivariate Analysis of Variance on the Scores of Causal Dimensions of MCA 2nd Semester in relation to Gender and Successfulness

To study the significant differences in causal attribution of the students studying in MCA 2nd semester, in the course, ‘Programming in C’ with respect to Gender and Successfulness, two-way MANOVA was applied. Box’s test was computed to check the homogeneity of variance and covariance. All the four subscales of the causal dimension scale were analysed program wise and semester wise to make interpretations and results are reported below.

Table 4.67: Summary of Box's Test of Equality of Covariance Matrices with respect to Various Dimensions of Causal Attribution of MCA 2nd Semester

Box's M	83.2
F	2.4*
df1	30
df2	1858
Sig.	0.000

*significant at 0.001 level of confidence

Table 4.67 clearly shows that Box’s M= 83.20, F (30,1858) =2.40, $p < 0.001$, which is found to be significant. As a result, the assumption of equal variance-covariance is not met, therefore, ‘Pillai Trace’ test was used to interpret 2×2 MANOVA results and reported in the table 4.68.

Table 4.68 shows that, the main effect of ‘Gender’ with Pillai trace, $V = 0.05$, $F(4, 143) = 1.17$, $p > 0.05$, multivariate $\eta^2 = 0.05$ is not found to be significant even at the 0.05 level of confidence and main effect of ‘Successfulness’ with Pillai trace, $V = 0.14$, $F(4, 143) = 5.58$, $p = 0.00$, multivariate $\eta^2 = 0.14$ is found to be significant at the 0.01 level of confidence. Moreover, interaction effect (Gender*Successfulness) with Pillai trace, $V = 0.04$, $F(4, 143) = 1.66$, $p > 0.05$, multivariate $\eta^2 = 0.04$ is not found to be significant even at the 0.05 level of confidence.

Table 4.68: Summary of MANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of MCA 2nd Semester

Effect	Gender	Successfulness	Gender * Successfulness
Multivariate Test	Pillai Trace		
Value	0.05	0.14	0.04
F	1.77	5.58**	1.66
Hypothesis df	4	4	4
Error df	143	143	143
Sig.	0.14	0.00	0.16
Partial Eta Squared	0.05	0.14	0.04

**significant at 0.01 level of confidence

The significant result of ‘Successfulness’ demanded two-way ANOVA as a follow-up test to two-way MANOVA in order to determine significant group difference for each dependent variable. The two-way ANOVA was computed on the obtained scores and the results are reported in table 4.70.

MAIN EFFECTS

GENDER

The data reported in table 4.70 shows that the F- values for ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions came out 0.02, 0.51, 1.57 and 2.39 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that male and female students do not differ significantly on the scores of ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’. Thus, the hypothesis (2), “There is no significant difference in causal attribution of higher education students with respect to Gender” for MCA 2nd semester is not rejected. The finding of the present research is in tune with the findings of Travis et al. (1991), Hyde (2005), Wu (2011) & Pishghadam and Motakef (2011) who showed that male and female students were not significantly different in terms of causal attribution.

Table 4.69: Means and SDs of Sub-Groups of ANOVA for 2×2 Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of MCA 2nd Semester

	LoC									ST								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	4.9	5.87	5.78	4.93	5.75	5.52	4.93	5.82	5.66	4.09	5.59	5.46	4.75	5.48	5.27	4.58	5.54	5.37
σ	0.96	1.53	1.51	1.34	1.54	1.52	1.23	1.53	1.52	1.71	1.67	1.71	1.19	1.61	1.53	1.34	1.64	1.63
N	7	72	79	20	51	71	27	123	150	7	72	79	20	51	71	27	123	150
	EC									PC								
Gender	Female			Male			Total			Female			Male			Total		
Successfulness	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
M	3.52	4.89	4.77	4.35	4.97	4.8	4.14	4.93	4.78	3.76	6.03	5.83	5.08	5.94	5.7	4.74	5.99	5.77
σ	1.23	1.66	1.67	0.91	1.53	1.41	1.05	1.61	1.55	1.83	1.6	1.73	1.6	1.78	1.76	1.73	1.67	1.74
N	7	72	79	20	51	71	27	123	150	7	72	79	20	51	71	27	123	150

Table 4.70: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Causal Attribution in relation to Gender and Successfulness of MCA 2nd Semester

Source	Gender				Successfulness				Gender * Successfulness				Error			
Dependent Variable	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC	LoC	ST	EC	PC
SS	0.04	1.29	3.65	6.69	14.07	21.86	17.56	43.23	0.10	2.63	2.47	8.84	324.00	370.86	339.06	408.63
Df	1	1	1	1	1	1	1	1	1	1	1	1	146	146	146	146
MSS	0.04	1.29	3.65	6.69	14.07	21.86	17.56	43.23	0.10	2.63	2.47	8.84	2.22	2.54	2.32	2.80
F	0.02	0.51	1.57	2.39	6.34**	8.61**	7.56**	15.45**	0.04	1.04	1.06	3.16				
Sig.	0.90	0.48	0.21	0.12	0.01	0.00	0.01	0.00	0.84	0.31	0.31	0.08				

**significant at 0.01 level of confidence

SUCCESSFULNESS

The data inserted in table 4.70 shows that the F- values for ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions came out 6.34, 8.61, 7.56 and 15.45 respectively, which are found to be significant at 0.01 level of confidence.

This shows that successful and unsuccessful students differ significantly on the scores of ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’. Thus, the hypothesis (3), “There is no significant difference in causal attribution of higher education students with respect to Successfulness” for MCA 2nd semester is rejected. On overseeing mean score table 4.69, it has been found that mean score of successful students on ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ found to be 5.82, 5.54, 4.93 and 5.99 respectively, which are higher than the mean scores of unsuccessful students 4.93, 4.58, 4.14 and 4.74 respectively. This shows that successful students were more inclined to attribute internal, stable and controllable factors for their success as compared to their unsuccessful counterparts. The present finding enjoys support from the findings of Williams et al. (2001), Graham (2002), Dong et al. (2013), Solar (2015) who reported that success was the most likely attributed to internal stable and controllable factors.

INTERACTION EFFECT (GENDER* SUCCESSFULNESS)

It is clear from the table 4.70 that the F- values for the interaction between gender and successfulness for ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions are found to be 0.04, 1.04, 1.06 and 3.16 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that there exists no interaction effect of gender and successfulness on the scores of the dimensions viz. ‘Locus of Causality’, ‘Stability’, ‘External Controllability’ and ‘Personal Controllability’ dimensions of ‘Causal Attribution’. Thus, the Hypothesis (4), “There is no significant interaction effect of gender and successfulness on the causal attribution scores of higher education students” for MCA 2nd semester is not rejected.

DISCUSSION ON RESULTS

From the results, it is clear that no noticeable gender differences appeared in any of the programs at PG level except M.Sc. and MBA 2nd semester. Gender differences appeared on ‘Locus of Causality’ and ‘External controllability’ dimensions and results indicated that female students of M.Sc. 2nd semester attributed more stable causes i.e. their ability for their achieved scores as compared to males. However, in MBA 2nd semester, male students reported more external control over their success as compared to females, this indicates that male students often take help from their friends and teachers before or on the time of exam and perceive that other knowledgeable people play an important role for achieving good score in the exam. The results showed no interaction effect due to gender and successfulness among the students of any of the PG programs. Further, noticeable differences appeared in causal attributions of successful and unsuccessful students in M.Sc. (Chemistry), MBA and MCA 2nd semester students.

The results clearly revealed that in M.Sc. (Chemistry) and MBA 2nd semester successful students attributed internal, stable and personally controllable factors, while successful students of MCA 2nd semester attributed internal, stable, personally controllable and externally controllable factors as well. The probable reason for MCA successful students for giving external controllable attribution may be the practical nature of their field, as they need to develop new programs, websites with unique features, algorithms and new software. They are developing IOS and Android-based applications, online and offline games using different computer languages (Java, PHP and .NET etc.). Due to this, they need to learn and require help from other knowledgeable people i.e. teachers and along with it they need to work in a group, consequently, they attributed others for their success. In general, successful students attributed internal- stable- controllable factors for their success i.e. their overall study habits or their sustained/stable efforts. Successful students attributed their sustained efforts throughout the year as the main reason for their success, motivation and perseverance of such students is likely to increase. Students with a high sense of controllability have better GPA and are less likely to drop out of the college (Perry et al., 1993, 2005). The students attributing efforts for their

success experience positive emotions like pride, happiness, satisfaction and self-confidence. Therefore, the effort attribution might be particularly beneficial for all college students. In the same vein, most of the unsuccessful students attributed more adaptive internal- unstable- controllable attributions i.e. lack of efforts more frequently. Attributing failure to 'lack of efforts' which is an internal and unstable factor will not reduce the motivation and will give hope to the students that on doing hard work they can improve their performance. Covington (2007) believed that effort attribution often protects the self -esteem of the unsuccessful students and boost their morale to put more efforts to get success and improving performance.

4.8 SUMMARY OF 2×2 ANALYSIS OF VARIANCE ON SCORES OF SELF- REGULATED LEARNING STRATEGIES IN RELATION TO GENDER AND SUCCESSFULNESS AT UG LEVEL

To study the self-regulated learning strategies of students of UG programs with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies. For analyzing the variance of various dimensions and total score of self-regulated learning strategies of undergraduate students with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented below in following headings.

4.8.1 Summary of 2×2 Analysis of Variance on Scores of Self-Regulated Learning Strategies of B.Com 2nd Semester in relation to Gender and Successfulness

To study the self-regulated learning strategies of B.Com 2nd semester with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies and presented in the table 4.71. For analyzing the variance of various dimensions and total score of self-regulated learning strategies of B.Com 2nd semester with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented in table 4.72.

Table 4.71: Means and SDs of Sub-Groups of One Way ANOVA for Various Dimensions of Self-regulated Learning Strategies with respect to Gender and Successfulness of B.Com 2nd Semester

Gender	Female			Male			Total			Female			Male			Total		
Successfulness	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	IGO									EGO								
M	7	5.42	5.51	4.67	5.6	5.42	5.25	5.5	5.47	7	5.54	5.62	4.9	5.48	5.37	5.43	5.52	5.51
σ	0	1.35	1.36	1.37	0.82	0.99	1.58	1.14	1.19	0	1.03	1.06	1.7	0.93	1.11	1.74	0.98	1.08
N	2	33	35	6	25	31	8	58	66	2	33	35	6	25	31	8	58	66
Dimension	TV									CLB								
M	6.9	5.29	5.39	4.23	5.24	5.04	4.9	5.27	5.22	6.5	5.15	5.22	4.73	4.96	4.91	5.18	5.06	5.08
σ	0.14	1.08	1.11	1.43	0.91	1.08	1.73	1	1.1	0.71	0.95	0.99	1.17	1.01	1.03	1.31	0.97	1.01
Dimension	SELP									TA								
M	6.35	5.43	5.48	4.32	5.36	5.16	4.83	5.4	5.33	3.8	4.47	4.43	4.6	4.66	4.65	4.4	4.55	4.53
σ	0.07	1	0.99	1.12	0.77	0.93	1.34	0.9	0.97	2.26	1.16	1.2	0.82	1.04	0.99	1.16	1.1	1.1
Dimension	Motivation									REH								
M	37.28	31.12	31.47	27.16	30.97	30.23	29.69	31.05	30.89	6.65	5.25	5.33	3.68	5.16	4.88	4.43	5.21	5.12
σ	1.17	5.09	5.15	6.35	4.67	5.15	7.14	4.87	5.15	0.21	1.02	1.05	1.36	0.93	1.16	1.79	0.97	1.12

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	ELAB									ORG								
M	6.6	5.35	5.42	4.18	5.08	4.91	4.79	5.23	5.18	6.65	5.45	5.52	3.73	4.99	4.75	4.46	5.25	5.16
σ	0.14	1.09	1.09	1.32	1.1	1.18	1.58	1.09	1.16	0.21	1.18	1.18	1.4	1.04	1.2	1.8	1.14	1.24
Dimension	CT									MSR								
M	6.1	5.35	5.39	4.83	4.98	4.96	5.15	5.19	5.19	6.35	5.09	5.17	4	4.73	4.59	4.59	4.94	4.89
σ	0.14	0.97	0.96	1.42	0.91	1	1.33	0.95	0.99	0.35	0.86	0.88	0.95	0.58	0.71	1.36	0.77	0.85
Dimension	TSE									ER								
M	4.8	4.59	4.6	4.07	4.34	4.29	4.25	4.48	4.46	6.3	4.56	4.65	4.27	4.25	4.26	4.78	4.42	4.47
σ	0.71	0.7	0.69	0.92	0.46	0.57	0.89	0.62	0.65	0	1.03	1.08	1.01	0.77	0.81	1.27	0.93	0.97
Dimension	PL									HS								
M	6.65	5.19	5.27	3.83	4.96	4.75	4.54	5.09	5.02	5.5	4.91	4.94	4	4.84	4.68	4.38	4.88	4.82
σ	0.5	0.95	0.98	1.18	1.31	1.35	1.65	1.11	1.19	0.71	0.81	0.8	1.27	0.75	0.91	1.3	0.77	0.86
Dimension	Learning Strategies									Self Regulated Learning Strategies								
M	55.44	45.58	46.15	36.52	43.12	41.84	41.25	44.52	44.1	92.5	76.73	77.63	63.83	74.08	72.1	71	75.59	75.03
σ	0.69	6.97	7.15	8.43	6.3	7.12	11.29	6.75	7.4	2.12	11.53	11.79	13.7	10.32	11.55	17.6	11.01	11.92

Table 4.72: Summary of Two Way ANOVA for Various Dimensions of Self-regulated Learning Strategies in relation to Gender and Successfulness of B.Com 2nd Semester

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender																	
SS	6.32	6.3	10.07	5.19	6.01	1.35	143.15	12.66	9.81	15.48	3.62	10.01	1.3	7.4	12.52	3.34	620.31	1330.53
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	6.32	6.3	10.07	5.19	6.01	1.35	143.15	12.66	9.81	15.48	3.62	10.01	1.3	7.4	12.52	3.34	620.31	1330.53
F	4.7*	5.64*	9.24**	5.28*	7.08**	1.09	5.7*	12.39**	8.03**	11.91**	3.76	17.1**	3.15	8.6**	10.08**	4.86*	13.43**	10.64**
Sig.	0.03	0.02	0.00	0.03	0.01	0.3	0.02	0.00	0.01	0.00	0.06	0.00	0.08	0.01	0.00	0.03	0.00	0.00
Source	Successfulness																	
SS	0.56	1.04	0.49	1.74	0.02	0.72	7.53	0.01	0.17	0	0.49	0.38	0.01	4.2	0.15	0.08	14.29	41.44
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0.56	1.04	0.49	1.74	0.02	0.72	7.53	0.01	0.17	0	0.49	0.38	0.01	4.2	0.15	0.08	14.29	41.44
F	0.42	0.93	0.45	1.77	0.02	0.58	0.3	0.01	0.14	0	0.5	0.65	0.01	4.88*	0.12	0.12	0.31	0.33
Sig.	0.52	0.34	0.5	0.19	0.88	0.45	0.59	0.93	0.71	0.96	0.48	0.42	0.91	0.03	0.73	0.73	0.58	0.57

Contd. ...

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender * Successfulness																	
SS	8.54	5.67	9.23	3.38	5.23	0.49	134.67	11.25	6.24	8.19	1.1	5.34	0.33	4.07	9.14	2.78	367.58	918.64
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	8.54	5.67	9.23	3.38	5.23	0.49	134.67	11.25	6.24	8.19	1.1	5.34	0.33	4.07	9.14	2.78	367.58	918.64
F	6.35**	5.08*	8.47**	3.43	6.16*	0.4	5.37*	11.01**	5.12*	6.3*	1.14	9.14**	0.79	4.72*	7.36**	4.05	7.96**	7.35**
Sig.	0.01	0.03	0.01	0.07	0.02	0.53	0.02	0.00	0.03	0.02	0.29	0.00	0.38	0.03	0.01	0.05	0.01	0.01
Source	Error																	
SS	83.39	69.27	67.59	60.96	52.6	77.15	1555.85	63.33	75.69	80.55	59.73	36.25	25.47	53.4	76.98	42.59	2864.17	7751.72
df	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
MSS	1.35	1.12	1.09	0.98	0.85	1.24	25.09	1.02	1.22	1.3	0.96	0.59	0.41	0.86	1.24	0.69	46.2	125.03

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

MAIN EFFECTS

GENDER

The data reported in table 4.72 shows that F-value for 'Test Anxiety' dimension came out 1.09, which is not found to be significant even at the 0.05 level of confidence. However, F-value for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation' came out 4.70, 5.64, 9.24, 5.28, 7.08 and 5.70 respectively, which are found to be significant either at 0.05 or 0.01 level of confidence. This indicates that male and female students differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation'.

The F- values for 'Critical Thinking' and 'Time and study environment' came out 3.76 and 3.15 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Rehearsal', 'Elaboration', 'Organisation', the 'Metacognitive Self- Regulation', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self-regulated learning strategies' came out 12.39, 8.03, 11.91, 17.12, 8.60, 10.08, 4.86, 13.43 and 10.64 respectively, which are found to be significant either at 0.05 or 0.01 level of confidence. Thus, the Hypothesis (5), "There is no significant difference in Self-regulated learning strategies of higher education students with respect to Gender" for B.Com 2nd semester is rejected for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation', 'Rehearsal', 'Elaboration', 'Organisation', the 'Metacognitive Self-Regulation', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'.

Analysis of mean score table 4.71 shows that female students (5.51) have scored higher on 'Intrinsic Goal Orientation' dimension than male students (5.42). This shows that female students are more focussed on learning and improvement

than male students. They strive to master the task and possess a deep level of understanding of the content. They are curious to seek out challenging study tasks and more importantly they view their success or failure as a source of feedback for improving future performance. The female students have a high level of learning goal orientation as compared to their male student counterparts. The finding of the present study is in tune with the findings of Miller et al. (1990) & Meece and Holt (1993) who found that females have a high level of intrinsic goal orientation as compared to male students. However, Yu (1999) reported no significant gender difference in intrinsic goal orientation.

Analysis of mean score table 4.71 showed that female students (5.62) have scored higher on 'Extrinsic Goal Orientation' dimension than male students (5.37). This shows that female students are more concerned about their performance in relation to the other students in the class than male students. Their main focus is on getting good grades in order to prove their position in the class. They want to seek out rewards or approval from the peers, teachers or parents and possess a higher level of performance approach orientation as compared to the male students. The above finding is in contrast with the finding of Garcia (1993) & Anderman and Anderman (1999) who reported that male students have a high level of extrinsic goal orientation as compared to girls.

Analysis of mean score table 4.71 showed that female students (5.39) have scored higher on the 'Task Value' dimension than male students (5.04). This shows that female students attach a high value to the importance and usefulness of learning the subject as compared to male students. This value makes the female students dedicated and committed to accomplishing the targets. The above finding is consistent with the finding of Al-Harthy and Aldhafri (2014) who explored that female student give more value to the usefulness of learning the subject as compared to the male students. In contrast, Lynch and Trujillo (2011) found that the sense of the value of the learning task was considerably higher for male students as compared to female students.

Analysis of mean score table 4.71 showed that female students (5.22) have scored higher on 'Control of Learning Beliefs' dimension than male students (4.91).

This indicates that as compared to male students, female students possess a higher level of control of learning beliefs. The female students have a strong belief that they have considerable control over their learning outcomes. They work more strategically and effectively and know that their efforts will definitely make a difference. The present finding is in contrast with the finding of Lynch and Trujillo (2011) who reported that male students scored significantly higher on the sense of control over the learning as compared to females.

Analysis of mean score table 4.71 showed that female students (5.48) have scored higher on 'Self-Efficacy for Learning and Performance' dimension than male students (5.16). This shows that female students have a high sense of self-efficacy for learning and performance as compared to male students. The female students appraise their capability and confidence to perform a task, they have a firm belief that they are capable to master the situation and can produce desired outcomes. Due to the high level of self-efficacy for learning, they choose challenging learning tasks and therefore expend more persistence and efforts in order to get higher achievement outcomes. Their self-efficacy beliefs become instrumental to the goals and to the control over their environment. They show more resilience in the phase of adverse situations as compared to their male student counterparts. The above finding is in tune with the findings of Mills et al. (2007), Chyung (2007) and Britner (2008) who asserted that girls have a significantly higher level of self-efficacy as compared to male students. On the contrary, Pintrich and De Groot (1990), Yu (1999), Meece et al. (2006), Pajares (2002), Glynn et al. (2009), Lynch and Trujillo (2011) & Al-Harthy and Aldhafri (2014) reported that male students scored significantly higher on self-efficacy for learning as compared to the female students.

Analysis of mean score table 4.71 showed that female students (31.47) have scored higher on the total score of 'Motivation' than male students (30.23). This shows that female students are more motivated to regulate their learning process. They have a high sense of control over learning, self-efficacy and value of the learning task. They are more dynamic and ambitious by virtue motivation. They take the initiative to perform challenging tasks and have a high level of aspiration to succeed. The finding of the present study enjoys support from the findings of Maria

and Pedro (2004), Ghazvini and Khajehpour (2011), Simsek and Balaban (2010) & Marrs and Sigler (2012) who found that female students scored remarkably high on their motivation level as compared to their male student counterparts. Likewise, Gardner (2006), Carreira (2011) and Javid et al. (2012) documented that girls showed a high level of motivation in language learning as compared to boys. On the contrary, Obrentz (2012) found that male students scored higher on motivation level as compared to female ones. But, Glynn et al. (2007, 2009), Banarjee and Kumar (2014), Yukselturk and Bulut (2009) and Balam, (2015) showed no significant difference in the motivation of male and female students.

Analysis of mean score table 4.71 showed that female students (5.33) have scored higher on 'Rehearsal' dimension than male students (4.88). This shows that female students are more focused on leaning the content by practising it again and again. They use this strategy mainly to learn simple tasks. The female students are more likely to retain the things in their working memory and use memory strategies more often than male students. Artelt et al. (2003), Bidjerano (2005), Bembenutty (2009) & Simsek and Balaban (2010) found that female students use rehearsal or memory strategies more frequently than male students.

Analysis of mean score table 4.71 showed that female students (5.42) have scored higher on 'Elaboration' dimension than male students (4.91). This shows that as compared to male students, female students make good use of elaboration strategies like paraphrasing, summarizing, creating analogies, mnemonics, selecting key ideas from the text and making internal connections between what is being learned with the previous knowledge. They pull the information together from various sources viz. notes, lecture, readings, tutorials in order to make connections between them. Bidjerano (2005) & Simsek and Balaban (2010) found that female students scored more on the use of elaboration strategies as compared to male students. On the contrary, Artelt et al. (2003) reported that male students are most likely to use elaboration strategies than females.

Analysis of mean score table 4.71 showed that female students (5.52) have scored higher on the 'Organization' dimension than male students (4.75). This shows that as compared to male students, female students plan their learning more

strategically and make good use of organization strategies like summarizing, organizing, classifying, regrouping, connecting the information from different pieces and generating concept and mind maps. The present finding is in tune with the finding of Bidjerano (2005), Bembenutty (2009) & Simsek and Balaban (2010) who reported that female students scored higher on the use of organization strategies.

Analysis of mean score table 4.71 showed that female students (5.17) have scored higher on 'Metacognitive Self- Regulation' dimension than male students (4.59). This shows that female students are capable of thinking about their learning more explicitly than male students. They always plan, monitor, regulate and evaluate their learning. They set their goals and choose appropriate learning strategies to attain goals and evaluate one's progress. They strive to come up with better ways of learning. They often try to change their study style according to the requirement of the course and teaching style of the teacher. The above finding is in tune with the findings of Bidjerano (2005), Simsek and Balaban (2010) & Chuy and Nitulescu (2013) who found that female students reported higher on metacognitive self-regulation than male students. On the contrary, Bembenutty (2007) & Tang and Neber (2008) reported no significant gender difference in metacognitive self-regulation.

Analysis of mean score table 4.71 showed that female students (4.65) have scored higher on 'Effort Regulation' dimension than male students (4.26). This shows that as compared to male students, female students show a higher ability to regulate their efforts in the phase of distraction and monotonous tasks. They are committed to accomplish their set goals and never give up on complexities. They try to manage their efforts and attention in order to overcome the interruptions. The above finding is in tune with the finding of Bidjerano (2005) who found that female students surpass male students in regulating their efforts in overcoming the adverse situations. On the contrary, Yu (1999) & Ahmed and Khanam (2014) reported no significant gender difference with respect to effort regulation.

Analysis of mean score table 4.71 showed that female students (5.27) have scored higher on 'Peer Learning' dimension than male students (4.75). This shows that female students are more active in working and learning with peers than male

students. The female students generally discuss and debate in the group to clarify their doubts. Peer learning technique helps them to reach insights that they cannot be able to attain on their own. They often work with their friends in order to complete the tasks or assignment given by the teacher well on time. The present finding is in contrast with the finding of Bidjerano (2005) & Ahmed and Khanam (2014) who found no significant gender difference in peer learning.

Analysis of mean score table 4.71 showed that female students (4.94) have scored higher on 'Help-Seeking' dimension than male students (4.68). It has been found that female students showed a more positive attitude in seeking help from friends and teachers. The female students often monitor their academic performance therefore, on finding themselves unable to solve the problem they request assistance from other knowledgeable persons. Help-seeking behaviour can avert the possibility of failure and hence increase the likelihood of mastery and autonomous learning. The female students have the competency to seek help from others as they know when help is needed and how to request assistance in a socially appropriate way. The finding of the present study is consistent with the finding of Ryan et al. (1997) who found that women are more likely to seek help as compared to men. But Bidjerano (2005) & Gill and Kansal (2016) found no statistical difference between boys and girls with respect to help-seeking strategy.

Analysis of mean score table 4.71 showed that female students (46.15) have scored higher on the total score of 'Learning Strategies' dimension than male students (41.84). This shows that female students tend to use a wide variety of learning strategies than male students. The female students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate

with their peers for effective learning. The above finding goes in consonance with the finding of the previous researches that indicated female students scored remarkably high on learning strategies as compared to male students (Wolters, 1999; Niemivirta, 1997; Anderman and Young, 1994; Zimmerman and Martinez, 1990). In the same way, Dreyer and Oxford (1996), Green and Oxford (1995), Lan and Oxford (2003) & Lee and Oxford (2008) found that female students scored higher on the use of learning strategies for English language learning as compared to male students. On the contrary, Wharton (2000) reported that male students use more adaptive strategies in foreign language learning as compared to female students, Ghazvini and Khajepour (2011) reported that male students scored higher on the use of learning strategies as compared to female students.

Analysis of mean score table 4.71 showed that female students (77.63) have scored higher on the total score of 'Self Regulated Learning Strategies' than male students (72.1). This shows that female students are more self-regulated as compared to male students. The above finding is in tune with the finding of the previous researches which reported that female students scored higher on the use of self-regulated learning strategies as compared to their counterparts (Al Khatib, 2010; Balaban, 2010; DiBenedetto and Bembenuddy, 2011; Chuy and Nitulescu, 2013; Zimmerman and Martinez, 1990; Veloo et al., 2015). But, Peng (2001), Yukselturk and Bulut (2009) & Balam (2015) found no gender difference in regard to the use of motivated learning strategies.

SUCCESSFULNESS

The data reported in table 4.72 showed that F- values for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation' came out 0.42, 0.93, 0.45, 1.77, 0.02, 0.58, 0.30 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that successful and unsuccessful students do not differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for

Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation'.

The F- values for the 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self- Regulation', 'Time and Study Environment', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 0.01, 0.14, 0.00, 0.50, 0.65, 0.01, 0.12, 0.12, 0.31 and 0.33 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-value for 'Effort Regulation' came out 4.88, which is found to be significant at 0.05 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of effort regulation. Thus, the Hypothesis (6), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Successfulness" for B. Com 2nd semester is rejected for 'Effort Regulation' dimension. Analysis of mean score table 4.71 showed that unsuccessful students (4.78) have scored higher on 'Effort Regulation' dimension than successful students (4.42). This shows that in spite of the failure, unsuccessful students perceive that they would be able to get success if they could regulate their efforts in order to overcome adverse situations.

INTERACTION EFFECT (GENDER* SUCCESSFULNESS)

It is clear from the table 4.72 that F- values for the interaction between gender and successfulness on the scores of 'Control of Learning Beliefs' and 'Test Anxiety' came out 3.43 and 0.40 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value' and 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation' came out 6.35, 5.08, 8.47, 6.16 and 5.37 respectively, which are found to be significant either at the 0.05 or 0.01 level of confidence. It means students of B. Com 2nd semester differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value' and 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation'.

Table 4.72 shows that the F- values for the interaction between gender and successfulness on the scores of 'Rehearsal', 'Elaboration', 'Organization', 'Metacognitive Self- Regulation', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out significant either at 0.01 or 0.05 levels of confidence. It means that students of B. Com 2nd semester differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organization', 'Metacognitive Self- Regulation', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions and total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'.

Thus, the Hypothesis (7), "There is no significant interaction effect of gender and successfulness on the self-regulated learning strategies of higher education students" for B.Com 2nd semester is rejected for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value' and 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation', 'Rehearsal', 'Elaboration', 'Organisation', 'Metacognitive Self-Regulation', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'.

Further, for analyzing the significant difference between various groups due to the interaction between gender and successfulness. The t-values for the various subgroups were computed. The subgroups with significant t values are shown in table 4.73.

It is clear from the table 4.73 that unsuccessful female students of B. Com 2nd semester have scored higher than successful female, unsuccessful male and successful male students on 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value' and 'Self Efficacy for Learning and Performance' dimensions and total score of 'Motivation'. The results indicate that the female students who consider themselves as unsuccessful are curious, give more importance to the learning task, appraise their capabilities to perform a task and they have the urge of taking challenging tasks for getting good grades more as compared to successful female, unsuccessful male and successful male students.

Table 4.73: Summary of ‘t’-values for the Subgroups in respect of Different Dimensions of Motivation & Learning Strategies of B.Com 2nd Semester

Group 1	Group 2	IGO	EGO	TV	SELP	Motivation			
Unsuccessful Females	Successful Females	6.72**	8.14**	7.58**	5.08**	5.08**			
Unsuccessful Females	Unsuccessful Males	4.17**	3.03**	4.51**	4.41**	3.72**			
Unsuccessful Females	Successful Males	8.54**	8.17**	8.01**	6.12**	5.06**			
Group 1	Group 2	REH	ELAB	ORG	MSR	ER	PL	Learning Strategies	Mot & Learning Strategies
Unsuccessful Females	Successful Females	6.05**	5.84**	4.73**	4.36**	9.70**	3.74**	7.54**	6.30**
Unsuccessful Females	Unsuccessful males	5.17**	4.42**	5.45**	5.11**	4.92**	4.72**	5.44**	4.95**
Unsuccessful Females	Successful males	6.26**	6.30**	6.50**	5.93**	13.31**	3.84**	9.12**	7.22**
Successful Females	Unsuccessful males	2.69*	2.05*	3.33**	2.62**	0.64	2.67**	2.48**	2.17*
Unsuccessful Males	Successful Males	2.53*	1.55	2.56**	1.8	0.05	2.06**	1.8	1.72

*significant at 0.05 level of confidence, **significant at 0.01 level of confidence

It is clear from table 4.73 that t- values for 5 subgroups came out significant either at the 0.05 or 0.01 level of confidence. It is clear from the mean scores table 4.71 that unsuccessful female students have scored higher than successful female, unsuccessful male and successful male students on 'Rehearsal', 'Elaboration', 'Organisation', 'Metacognitive Self- Regulation', 'Effort Regulation', 'Peer Learning' dimensions and total score of 'Learning Strategies' and 'Self Regulated learning strategies. This indicates that the female students of B. Com 2nd semester who consider themselves as unsuccessful practice, paraphrase and summarise the content. They try to plan and monitor their learning tasks, manage time, ask for help from friends and teachers in case of doubt and possess overall good learning strategies more than successful female, unsuccessful male and successful male students. But still, they perceived themselves as unsuccessful, the reason behind this may be that they did not achieve according to the hard work they put at the time of test preparation.

Further, successful female students scored higher than unsuccessful male students on 'Rehearsal', 'Elaboration', 'Organisation', 'Metacognitive Self-Regulation', 'Peer Learning' dimensions and total score of 'Learning Strategies' & 'Self-Regulated Learning Strategies'. This indicates that successful female students are more focussed on rehearsing the content, they intelligently paraphrase and summarise the content for better clarity, thoughtful in planning, monitoring and managing study tasks and time and always collaborate with their peer group, discuss and debate with them order to clarify their doubts. As a result, it can be interpreted that successful female students of B.Com 2nd semester make good use of self-regulated learning strategies as compared to unsuccessful male counterparts.

Also, successful male students scored higher than unsuccessful male students on 'Rehearsal', 'Organisation' and 'Peer Learning' dimensions. This shows that successful male students give more priority to practising the content again and again and practice trigger their working memory. Apart from this, successful males put active, thoughtful and effortful endeavours in order to get involved in the task for better understanding and collaborate with their peer group, discuss and debate with them in order to clarify their doubts as compared to unsuccessful male students.

DISCUSSION ON RESULTS

From the results, it has been revealed that both male and female students of B.Com 2nd semester do not differ on 'Test Anxiety', this indicates that they do not show stress, tension, worry, fear of failure and somatic symptoms such as nausea, upset feeling, fastening of heartbeat before or during the exam. On the other side, the motivation of female students is inclined on getting mastery over the content therefore, they set mastery-oriented goals. The high level of internal goal orientation helps them to invest a great deal of time in using deep processing strategies like planning, organising and monitoring. The female students are more concerned about their performance in relation to the other students in the class. They want to seek out rewards or approval from the peers, teachers or parents and possess a higher level of performance approach orientation as compared to the male students. Therefore, they show highly competitive behaviour as they want to prove their unique existence in the classroom and set performance- oriented goals for them. Further, findings have proved that female students give more importance to the task in hand, along with it they hold an optimistic approach of getting success and have firm belief on their efforts. They appraise their capabilities and confidence in performing a task. Consequently, it is confirmed that female students have high motivational beliefs which affect their willingness to approach a task, devote sufficient time and energy to successfully complete that task. A specific goal orientation directs the behaviour of the person while, task value stimulates the strength or intensity of the behaviour (Schunk and Zimmerman, 1994). The high level of motivation is associated with the more frequent and judicious use of learning strategies in order to regulate the learning process.

From the results, it has been found that female students are more self-regulated as compared to male students. They are more active and put more efforts to learn. They are aware of their strengths and weaknesses and directed by personally set goals. They monitor their behaviour in terms of their set goals and self-reflect on their achieved effectiveness. On perceiving satisfactory goal progress, they feel more confident for attaining their targeted goals. High self-efficacy of the learners enables them to set new-fangled stimulating goals. They are motivated to learn through the self-regulated process and use a variety of learning strategies and understand the value of using these strategies in appropriate situations. The academic self-regulation makes them proactive and self-motivated. They seek out

additional resources when there is a need to master the content and manipulate the learning environment in order to meet their needs. The female students in comparison to male students are more optimistic about their future and work systematically to achieve the goals.

On the contrary, it has been found that male and female students do not differ significantly on the scores of 'Critical Thinking' and 'Time and study environment'. It can be comprehended that both male and female students think critically before accepting any conclusion and assertion and both manage their study time judiciously. In spite of no statistically significant difference, female students scored more on mean scores of both 'Critical Thinking' and 'Time and study environment'. This shows that female students are better than males in using the above-mentioned strategies. The probable reason behind this may be that parents, teachers and society are promoting girls in every field and they have numerous educational opportunities which have motivated the female students to compete with boys in every walk of the life and to prove their capabilities and capacities. Thinking critically before accepting any assertion and managing time is the basic nature of women which enables them to perform better than men.

The results also indicated that in B. Com 2nd semester, the successful female students are more focussed on rehearsing the content, they intelligently paraphrase and summarise the content for better clarity. They are more thoughtful in planning, monitoring and managing study tasks and time. They always collaborate with their peer group, discuss and debate with them in order to clarify their doubts. Also, successful male students give more priority to practising the content again and again than unsuccessful male students. This drill and practice trigger their working memory.

4.8.2 Summary of 2×2 Analysis of Variance on Scores of Self-Regulated Learning Strategies of B.Com 4th Semester in relation to Gender and Successfulness

To study the self-regulated learning strategies of B.Com 4th semester with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies and presented in the following table 4.74.

Table 4.74: Means and SDs of Sub-Groups of ANOVA for 2×2 Design with respect to Various Dimensions of Self-regulated Learning Strategies in relation to Gender and Successfulness of B.Com 4th Semester

Gender	Female			Male			Total			Female			Male			Total		
Successfulness	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimensions	IGO									EGO								
N	9	39	48	12	20	32	21	59	80	9	39	48	12	20	32	21	59	80
M	4.44	5.38	5.21	4.67	5	4.87	4.57	5.25	5.08	4.73	5.47	5.33	4.43	5.21	4.92	4.56	5.38	5.17
σ	1.67	1.09	1.25	1.07	0.97	1.01	1.33	1.06	1.17	1.55	1.15	1.25	1.3	0.99	1.16	1.39	1.1	1.23
Dimensions	TV									CLB								
M	4.6	5.31	5.18	4.59	5.19	4.96	4.6	5.27	5.09	4.22	5.27	5.07	4.62	5.01	4.86	4.45	5.18	4.99
σ	1.42	1.05	1.14	0.85	1.08	1.03	1.1	1.05	1.1	1.15	0.99	1.09	0.9	1.05	1	1.01	1.01	1.05
Dimensions	SELP									TA								
M	4.2	5.3	5.09	4.53	5.03	4.84	4.39	5.21	4.99	4.07	4.48	4.4	4.48	4.14	4.27	4.31	4.36	4.35
σ	1.29	0.92	1.07	0.9	0.88	0.91	1.07	0.91	1.01	0.55	1.08	1.01	1.04	1.44	1.3	0.87	1.21	1.13
Dimensions	Motivation									REH								
M	26.12	30.99	30.08	27.15	29.46	28.59	26.71	30.47	29.49	3.69	5.21	4.92	4.54	4.9	4.76	4.18	5.1	4.86
σ	5.77	4.34	4.96	4.44	4.34	4.45	4.94	4.36	4.79	0.83	1.01	1.14	0.66	1.11	0.97	0.84	1.04	1.07

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
Successfulness	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimensions	ELAB									ORG								
M	4.74	5.24	5.14	4.63	5.03	4.88	4.68	5.17	5.04	4.52	5.32	5.17	4.49	4.99	4.8	4.51	5.21	5.03
σ	1.37	1.03	1.1	0.7	0.92	0.85	1.01	0.99	1.01	1.31	1.13	1.19	1.07	1.05	1.07	1.15	1.11	1.15
Dimensions	CT									MSR								
M	4.47	5	4.9	4.6	4.69	4.66	4.54	4.9	4.8	4.37	4.77	4.69	4.27	4.83	4.62	4.31	4.79	4.66
σ	1.06	0.89	0.94	0.98	0.88	0.9	0.99	0.89	0.93	0.85	0.75	0.77	0.62	0.71	0.72	0.71	0.73	0.75
Dimensions	TSE									ER								
M	3.87	4.61	4.47	3.81	4.43	4.2	3.83	4.55	4.36	4.06	4.61	4.5	3.69	4.57	4.24	3.85	4.59	4.4
σ	0.85	0.57	0.69	1.08	1.03	1.07	0.96	0.75	0.87	0.58	0.72	0.72	1.05	0.77	0.97	0.88	0.73	0.83
Dimensions	PL									HS								
M	3.67	5.72	5.33	4.78	4.81	4.8	4.31	5.41	5.12	3.33	4.92	4.63	4.58	4.8	4.72	4.05	4.88	4.66
σ	1.33	1.04	1.35	0.83	0.99	0.92	1.19	1.1	1.22	1	0.93	1.12	0.9	0.83	0.85	1.12	0.89	1.02
Dimensions	Learning Strategies									Self Regulated Learning Strategies								
M	36.47	45.14	43.51	39.2	42.95	41.54	38.03	44.4	42.73	62.44	76.15	73.58	66.33	72.45	70.16	64.67	74.9	72.21
σ	5.79	5.63	6.56	6.02	5.7	6.02	5.93	5.7	6.38	11.07	9.3	10.95	8.92	8.55	9.06	9.83	9.15	10.31

Table 4.75: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Self-regulated Learning Strategies in relation to Gender and Successfulness of B.Com. 4th Semester Students

Dependent Variable	IGO	EGO	TV	CLB	SELP	TE	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender																	
SS	0.1	1.2	0.06	0.06	0.01	0.02	0.97	1.09	0.37	0.49	0.12	0.01	0.21	0.61	0.15	4.7	1.09	0.13
Df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0.1	1.2	0.06	0.06	0.01	0.02	0.97	1.09	0.37	0.49	0.12	0.01	0.21	0.61	0.15	4.7	1.09	0.13
F	0.08	0.85	0.06	0.06	0.01	0.02	0.05	1.15	0.37	0.39	0.14	0.01	0.31	1.02	0.14	5.68*	0.03	0
Sig.	0.78	0.36	0.82	0.81	0.91	0.89	0.83	0.29	0.55	0.54	0.71	0.92	0.58	0.32	0.71	0.02	0.86	0.97
Source	Successfulness																	
SS	6.01	8.59	6.27	7.63	9.51	0.02	190.65	12.94	2.92	6.25	1.44	3.45	6.88	7.52	15.91	12.08	572.26	1455.37
Df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	6.01	8.59	6.27	7.63	9.51	0.02	190.65	12.94	2.92	6.25	1.44	3.45	6.88	7.52	15.91	12.08	572.26	1455.37
F	4.65*	6.1*	5.43*	7.45**	10.49**	0.01	9.31**	13.6**	2.9	4.95*	1.7	6.46**	10.28**	12.54**	14.85**	14.6**	17.48**	16.94**
Sig.	0.03	0.02	0.02	0.01	0.00	0.91	0.00	0.00	0.09	0.03	0.2	0.01	0.00	0.00	0.00	0.00	0.00	0.00

Dependent Variable	IGO	EGO	TV	CLB	SELP	TE	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender * Successfulness																	
SS	1.36	0.01	0.05	1.61	1.3	2.1	24.41	5.01	0.03	0.34	0.73	0.1	0.05	0.38	15.25	6.98	89.52	213.45
Df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	1.36	0.01	0.05	1.61	1.3	2.1	24.41	5.01	0.03	0.34	0.73	0.1	0.05	0.38	15.25	6.98	89.52	213.45
F	1.06	0.01	0.04	1.57	1.43	1.63	1.19	5.26*	0.03	0.27	0.86	0.18	0.08	0.64	14.24**	8.44**	2.73	2.49
Sig.	0.31	0.94	0.84	0.21	0.24	0.21	0.28	0.03	0.86	0.61	0.36	0.67	0.78	0.43	0.00	0.01	0.1	0.12
Source	Error																	
SS	98.12	107.12	87.8	77.87	68.89	97.93	1556.05	72.33	76.44	95.87	64.44	40.63	50.84	45.59	81.42	62.89	2488.83	6528.92
Df	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
MSS	1.29	1.41	1.16	1.03	0.91	1.29	20.47	0.95	1.01	1.26	0.85	0.54	0.67	0.6	1.07	0.83	32.75	85.91

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

For analyzing the variance of various dimensions and total score of self-regulated learning strategies of B.Com 4th semester with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented in the table 4.75.

MAIN EFFECTS

GENDER

It is clear from the table 4.75 that F- values for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation' came out 0.08, 0.85, 0.06, 0.06, 0.01, 0.02 and 0.05 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that male and female students do not differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation'.

The F- values for the 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self- Regulation', 'Time and study environment', 'Effort Regulation', 'Peer Learning', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 1.15, 0.37, 0.39, 0.14, 0.01, 0.31, 1.02, 0.14, 0.03 and 0.00 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-value for 'Help-Seeking' came out 5.68, which is found to be significant at 0.05 level of confidence. This indicates that male and female students differ significantly on the scores of 'Help-Seeking'. Thus, the Hypothesis (5), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Gender" for B.Com 4th semester is rejected for 'Help-Seeking' dimension.

On overseeing the mean score table 4.74, it is clear that in 'Help-Seeking' dimension, the mean score of male students (4.72) is higher than female students (4.63). It has been found that male students showed a more positive attitude in seeking help from friends and teachers than female students. The male students

often monitor their academic performance therefore, on finding themselves unable to solve the problem they request assistance from other knowledgeable persons. Researches have proved that help-seeking behaviour can avert the possibility of failure and hence increase the likelihood of mastery and autonomous learning. The finding of the present study is not consistent with the finding of Ryan et al. (1997) who found that women are more likely to seek help as compared to men. But Bidjerano (2005) & Gill and Kansal (2016) found no statistical difference between boys and girls with respect to help-seeking dimension.

SUCCESSFULNESS

Table 4.75 shows that F- values for 'Test Anxiety' came out 0.01, which is not found to be significant even at the 0.05 level of confidence. However, F- values for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation' came out 4.65, 6.10, 5.43, 7.45, 10.49, 9.31 respectively, which are found to be significant either at 0.05 or 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation'.

The F- values for 'Elaboration', 'Critical Thinking' came out 2.90, 1.70, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Rehearsal', 'Organisation', 'Metacognitive Self-Regulation', 'Time and study environment', 'Effort Regulation', 'Peer Learning', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 13.60, 2.90, 4.95, 6.46, 10.28, 12.54, 14.85, 14.60, 17.48 and 16.94 respectively, which are found to be significant either at 0.05 or 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of 'Rehearsal', 'Organisation', 'Metacognitive Self- Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', the total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'. Thus, the Hypothesis (6), "There is no significant difference in self-regulated learning strategies of higher

education students with respect to Successfulness” for B.Com 4th semester is rejected for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’ dimensions and total score of ‘Motivation’, ‘Rehearsal’, ‘Organisation’, ‘Metacognitive Self- Regulation’, ‘Time and study environment’, ‘Effort Regulation’, ‘Peer Learning’, total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’.

The analysis of mean score table 4.74 reveals that successful students (5.25) have scored higher on ‘Intrinsic Goal Orientation’ dimension than unsuccessful students (4.57). This shows that successful students are more focused on learning and improvement than their unsuccessful counterparts. They strive to master the task and possess a deep level of understanding of the content. They are curious to seek out challenging study tasks and more importantly they view their success or failure as a source of feedback for improving future performance. The successful students have a higher level of learning goal orientation as compared to their unsuccessful student counterparts. The successful students spend a great deal of time in understanding the logic behind the concept and this adds to their pride, self-satisfaction with the success. The finding of the present research is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who reported that successful students scored higher on ‘Intrinsic Goal Orientation’ than their unsuccessful counterparts.

The analysis of mean score table 4.74 reveals that successful students (5.38) have scored higher on ‘Extrinsic Goal Orientation’ dimension than unsuccessful students (4.56). This shows that successful students are more concerned about their performance in relation to the other students in the class. Their main focus is on getting good grades in order to prove their position in the class. They want to seek out rewards or approval from the peers, teachers or parents and possess a higher level of performance approach orientation as compared to their unsuccessful counterparts. The above finding is in contrast with the finding of Al-Alwan (2008) who reported that unsuccessful students scored higher on ‘Extrinsic Goal Orientation’ than their successful counterparts.

The analysis of mean score table 4.74 reveals that successful students (5.27) have scored higher on the 'Task Value' dimension than unsuccessful students (4.6). This shows that as compared to unsuccessful students, successful students attach a high value to the importance and usefulness of learning the subject. This value makes the successful students dedicated and committed to accomplishing the targets. The finding of the present research is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who reported that successful students scored higher on 'Task Value' than their unsuccessful counterparts.

The analysis of mean score table 4.74 reveals that successful students (5.18) have scored higher on 'Control of Learning Beliefs' dimension than unsuccessful students (4.45). This indicates that as compared to unsuccessful students, successful students possess a higher level of control of learning beliefs. The successful students have a firm belief that they have considerable control over their learning outcomes. They work more strategically and effectively and know that their efforts will definitely make a difference. The finding of the present research is in tune with the finding of Al-Alwan (2008) who reported that successful students scored higher on 'Control of Learning Beliefs' than their unsuccessful counterparts.

The analysis of mean score table 4.74 reveals that successful students (5.21) have scored higher on 'Self-Efficacy for Learning and Performance' dimension than unsuccessful students (4.39). This shows that successful students possess a high sense of self-efficacy for learning and performance than unsuccessful students. The successful students appraise their capability and confidence to perform a task, they have a firm belief that they are capable to master the situation and can produce desired outcomes. Due to the high level of self-efficacy for learning, they choose challenging learning tasks and therefore expend more persistence and efforts in order to get higher achievement outcomes. Their self-efficacy beliefs become instrumental to the goals and to the control over their environment. They show more resilience in the phase of adverse situations as compared to their unsuccessful student counterparts. The finding of the present study is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who

reported that successful students scored higher on 'Self-Efficacy for Learning and Performance' than their unsuccessful counterparts.

The analysis of mean score table 4.74 reveals that successful students (30.47) have scored higher on the total score of 'Motivation' than unsuccessful students (26.71). This shows that successful students are more motivated to regulate their learning process. They have a high sense of control over learning, self-efficacy and value of the learning task. They are more dynamic and ambitious by virtue of motivation. They take the initiative to perform challenging tasks and have a high level of aspiration to succeed. They think critically and plan their learning more strategically as compared to unsuccessful students. The above finding is in tune with the findings of Simsek and Balaban (2010) & De Zoysa et al. (2014) who reported that successful students have a high level of motivation as compared to unsuccessful students.

The analysis of mean score table 4.74 reveals that successful students (5.1) have scored higher on 'Rehearsal' dimension than unsuccessful students (4.18). This indicates that successful students are more focused on learning the content by practising it again and again than unsuccessful students. They use this strategy to memorize simple tasks and to trigger their working memory. The present finding is in tune with the finding of Simsek and Balaban (2010) who reported that successful students make frequent use of rehearsal strategies in order to memorize the simple tasks. But Fathi-Ashtiani et al. (2007) reported no significant difference between successful and unsuccessful students with respect to the use of 'Rehearsal' strategy.

The analysis of mean score table 4.74 reveals that successful students (5.21) have scored higher on the 'Organization' dimension than unsuccessful students (4.51). This shows that as compared to unsuccessful students, successful students put more active, thoughtful and effortful endeavours in order to get involved in the task for better understanding. They strategically plan their learning and make good use of organization strategies like grouping, clustering, outlining and organizing the main points from the gathered information and often make good use of mind mapping technique. The above finding is in tune with the findings of Simsek and Balaban (2010), Kitsantas (2002) & Fathi-Ashtiani et al. (2007) who reported that

successful students use ‘organization’ strategy more frequently as compared to the unsuccessful students.

The analysis of mean score table 4.74 reveals that successful students (4.79) have scored higher on ‘Metacognitive Self-Regulation’ dimension than unsuccessful students (4.31). This shows that successful students are capable of thinking about their learning more explicitly than unsuccessful students. They always plan activities to achieve the goals, track or monitor their attention in order to remain focused. They try to regulate and make a fine-tuning of their cognitive activities and try to come up with better ways of learning. The finding of the present study is in tune with the findings of Al-Alwan (2008), Simsek and Balaban (2010), De Zoysa et al. (2014) and Tang (2015) who have found that successful students surpassed unsuccessful students in metacognitive self-regulation.

The analysis of mean score table 4.74 reveals that successful students (4.55) have scored higher on ‘Time and Study Environment’ dimension than unsuccessful students (3.83). This shows that successful students are a good manager of their time and are capable to structure their environment for optimal learning more than unsuccessful students. They always schedule, plan and manage their study time and very much particular in following the work schedule made by them. They always keep a particular place for the study, where they can be able to concentrate on reading and studying. The above finding is in tune with the findings of Chen (2002), Al-Alwan (2008) & Ahmed and Khanam (2014) who reported that successful students outperformed unsuccessful students in managing time and study environment.

The analysis of mean score table 4.74 that successful students (4.59) have scored higher on ‘Effort Regulation’ dimension than unsuccessful students (3.85). This indicates that in the phase of distraction and monotonous tasks, the successful students show more commitment and regulate their efforts for achieving their set targets. They never give up on complexities as they are capable of managing their efforts and attention in order to overcome the interruptions more than unsuccessful students. The above finding is in tune with the finding of Ahmed and Khanam

(2014) who reported that successful students are more able to regulate their efforts as compared to the unsuccessful students. But Al-Alwan (2008) found no significant difference between the students with high GPA and low GPA with regard to 'Effort Regulation'.

The analysis of mean score table 4.74 reveals that successful students (4.81) have scored higher on 'Peer Learning' dimension than unsuccessful students (4.78). This shows that successful students are more active in working and learning with peers than unsuccessful students. The successful students generally discuss and debate in the group to clarify their doubts. Peer learning technique helps them to reach insights that they cannot be able to attain on their own. They often work with their friends in order to complete the tasks or assignment given by the teacher well on time. Ahmed and Khanam (2014) reported that high achievers use 'Peer Learning' strategy more often as compared to low achievers. But Al-Alwan (2008) found no significant difference between the students with high GPA and low GPA with respect to 'Peer Learning'.

The analysis of mean score table 4.74 reveals that successful students (44.4) have scored higher on the total score of 'Learning Strategies' than unsuccessful students (38.03). This shows that successful students tend to use a wide variety of learning strategies than unsuccessful students. The successful students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate with their peers for effective learning. The present finding enjoys support from the findings of Paris and Myers (1981), Tait and Entwistle (1996), Yip and Chung (2005), Cho and Ahn (2003), Yip (2007, 2009, 2012, 2013), Ahmed and Khanam (2014), and De Zoysa et al. (2014) who reported that successful students use more adaptive learning strategies as compared to unsuccessful students.

The analysis of mean score table 4.74 reveals that successful students (74.9) have scored higher on the total score of 'Self-Regulated Learning Strategies' than unsuccessful students (64.67). The result shows that self-regulated learning of successful students was markedly higher than unsuccessful students. This shows that successful students have the ability to control their actions and responses, which is very much essential for the progress in varied contexts. The successful students are able to control their behaviour, emotions and cognition for the purpose of pursuing the goals. They set proximal achievable goals which are learning-oriented not performance-oriented. They know that different learning tasks require different learning strategies. They own a "Tool Kit" of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations. They possess a high level of academic self-efficacy and have the ability to control their performance. They observe the intermediate outcomes of their learning process. They precisely attribute the learning outcome to the causes of performance. The above finding is in tune with the findings of Paris and Myers (1981), Pintrich and DeGroot (1990), Tait and Entwistle (1996), Stoynoff (1996), McWhaw and Abrami (2001), Chen (2002), Cho and Ahn (2003), Schunk (2005), Simsek and Balaban (2010) & Son and Simon (2012) who reported that high achieving students use more adaptive self-regulated learning strategies as compared to low achieving students.

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

The data reported in table 4.75 shows that F- values for the interaction between gender and successfulness on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' 'Test Anxiety' dimensions total score of 'Motivation' came out 1.06, 0.01, 0.04, 1.57, 1.43, 1.63 and 1.19 respectively, which are not found to be significant even at the 0.05 level of confidence. This indicates that subgroups of B.Com 4th semester as a result of interaction of gender and successfulness do not differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' 'Test Anxiety' dimensions and total score of 'Motivation'.

The F- values for the interaction between gender and successfulness on the scores of ‘Elaboration’, ‘Organisation’, ‘Critical Thinking’, ‘Metacognitive Self-Regulation’ ‘Time and study environment’, ‘Effort Regulation’, total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’ came out 0.03, 0.27, 0.86, 0.18, 0.08, 0.64, 2.73 and 2.49 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for ‘Rehearsal’, ‘Peer Learning’, ‘Help-Seeking’ came out 5.26, 14.24 and 8.44 respectively, which are found to be significant either at 0.05 or 0.01 levels of confidence. Thus, the Hypothesis (7), “There is no significant interaction effect of gender and successfulness on the self-regulated learning strategies of higher education students” for B.Com 4th semester is rejected for ‘Rehearsal’, ‘Peer Learning’ and ‘Help-Seeking’ dimensions.

To further analyse the significant difference between various subgroups as a result of interaction between gender and successfulness, t-values for the various subgroups were calculated and the subgroups for which the t value is found significant are presented in the table 4.76.

Table 4.76: Summary of ‘t’-values for the Subgroups of B.Com 4th Semester in respect of ‘Rehearsal’, ‘Peer Learning’, ‘Help-Seeking’ Dimensions of B.Com 4th Semester

Group 1	Group 2	REH	PL	HS
Unsuccessful Females	Successful Females	4.74**	4.33**	4.36**
Unsuccessful Females	Unsuccessful Males	2.53*	2.20	2.96**
Unsuccessful Females	Successful Males	3.26**	2.30	3.85**
Successful Females	Unsuccessful Males	2.68**	3.22**	1.14
Successful Females	Successful Males	1.05	3.28**	0.50

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

Table 4.76 clearly shows that in ‘Rehearsal’ dimension, t- values between the group of unsuccessful females- successful females came out significant at 0.01

level of confidence, it means they differ significantly on the scores of 'Rehearsal'. On comparing the mean scores table 4.82, it has been found that the mean score of successful females (5.21) is greater than unsuccessful females (3.69). Meaning thereby that successful female students are more involved in practising the content taught in the class, reading notes over and over again, enlisting important points and memorizing them as compared to unsuccessful female students. The findings of this study enjoy the support from the results of Simsek and Balaban (2010) who found that high achieving students scored higher on Rehearsal than low achieving students.

Further, t-values of the groups of unsuccessful females-unsuccessful males and unsuccessful females-successful males came out significant at 0.01 level of confidence. On overseeing the mean scores table 4.74, it has been found that the mean score of unsuccessful males (4.54) and successful males (4.9) is higher than unsuccessful females (3.69). Meaning thereby that unsuccessful and successful males practice the content more than unsuccessful females. To add to this, t-value of the groups of successful females- unsuccessful males came out significant at 0.01 level of confidence. On overseeing the mean scores table 4.74, it has been found that the mean score of successful females (5.21) is greater than successful males (4.54). Meaning thereby that successful females do more rehearsal of the content taught in the class and they make notes in the class, read them again and again in order to memorize them as compared to unsuccessful males. The similar finding was reported by Bembenutty (2007) who explored that males had lower Rehearsal scores than females.

In 'Peer Learning' dimension, the t- value between the group unsuccessful females- successful females came out significant at 0.01 level of confidence, it means they differ significantly on the scores 'Peer Learning'. On overseeing the mean scores table 4.74, it is clear that the mean score of successful females (5.72) is higher than unsuccessful females (3.67). It may be due to that the successful female students know the importance of peer group learning and often explain and ask the things in peer group than unsuccessful females. Peer learning has always an important influence on the success of the individuals as the discussion among the peers always leads to the better insight that one may not have attained on one's own. Further, the t- values between the groups of successful females-unsuccessful males

and successful females- successful males came out significant at 0.01 level of confidence, it means they differ significantly on the scores 'Peer Learning'. On overseeing the mean scores table 4.74, it is clear that the mean score of successful females (5.72) is higher than the mean score of unsuccessful males (4.78) and successful males (4.81). This shows that successful females adopt peer learning as one of the resource management strategies in order to get success than successful males and unsuccessful males. But the results of the present study are inconsistent with the findings of Gill and Kansal (2016), who found no significant difference between male and female secondary school students on 'Peer Learning'.

In 'Help-Seeking' dimension the t value of the group unsuccessful females-successful females, unsuccessful females-unsuccessful males and unsuccessful females- successful males came out significant at 0.01 level of confidence. This shows that the subgroups differ on the scores of 'Help-Seeking' dimension. It is clear from the mean scores table 4.74 that successful females (4.92) scored higher on 'Help-Seeking' dimension than unsuccessful females (3.33). This shows that successful female students often seek assistance from friends and teachers in order to clarify their doubts as compared to unsuccessful female students. Researches have also shown that peer help, peer tutoring, and individual teacher assistance facilitate student's achievement. Likewise, unsuccessful males (4.58) scored higher on 'Help-Seeking' dimension than unsuccessful females (3.33). This shows that unsuccessful male students seek assistance from friends and teachers in order to clarify their doubts as compared to unsuccessful female students. In the same way that successful males (4.8) scored higher on 'Help-Seeking' dimension than unsuccessful females (3.33). This shows that successful male students seek assistance from friends and teachers in order to clarify their doubts as compared to unsuccessful female students.

DISCUSSION ON RESULTS

The results showed that both male and female students of B. Com 4th semester do not differ significantly on any of the dimension of motivation and learning strategies except help-seeking dimension. It has been found that female students showed a more positive attitude in seeking help from friends and teachers. The female students often monitor their academic performance therefore, on finding

themselves unable to solve the problem they request assistance from another knowledgeable person. The help-seeking behaviour can avert the possibility of failure and hence increase the likelihood of mastery and autonomous learning. The female students have the competency to seek help from others as they know when help is needed and how to request assistance in a socially appropriate way.

Further, results highlighted that both successful and unsuccessful students of B. Com 4th semester do not differ on 'Test Anxiety' this indicates that they do not show stress, tension, worry, fear of failure and somatic symptoms such as nausea, upset feeling, fastening of a heartbeat before or during the exam. On the other side, the motivation of successful students is inclined on getting mastery over the content, therefore, the successful students set mastery-oriented goals, their high level of internal goal orientation helps them to invest a great deal of time in using deep processing strategies like planning, organizing and monitoring. They are more concerned about their performance in relation to the other students in the class. They want to seek out rewards or approval from the peers, teachers or parents and possess a higher level of performance-approach orientation as compared to the unsuccessful students.

Further, findings have proved that successful students give more importance to the task in hand, they hold an optimistic approach of getting success and have a firm belief in their efforts. They judge their capabilities and confidence for performing a task. Consequently, it is confirmed that successful students have high motivational beliefs which affect their willingness to approach a task, devote sufficient time and energy to successfully complete that task. A specific goal orientation directs the behaviour of the person while, task value stimulates the strength or intensity of the behaviour (Garcia and Pintrich, 1994; Schunk and Zimmerman, 1998). The high level of motivation is associated with the more frequent and judicious use of learning strategies in order to regulate the learning process.

The results have shown that successful students are more self-regulated as compared to unsuccessful students. They are proactive in their efforts to learn as they are aware of their strengths and limitations and directed by personally set goals and task-related strategies. They monitor their behaviour in terms of their set goals

and self-reflect on their achieved effectiveness. If they perceive satisfactory goal progress, they feel competent in improving their skills and goal attainment. High self-efficacy of the learners enables them to set new-fangled stimulating goals. They are motivated to learn through the self-regulated process and use a variety of learning strategies and understand the value of using these strategies in appropriate situations. The self-regulated learners voluntarily offer answers to questions in the classroom, seek out additional resources when needed to master the content. They are aware of their strengths and weaknesses and manipulate their learning environment in order to meet their needs. The successful students in comparison to unsuccessful students are more optimistic about their future and work systematically to achieve their goals.

4.8.3 Summary of 2×2 Analysis of Variance on Scores of Self-Regulated Learning Strategies of B.Com 6th Semester

To study the Self-regulated learning strategies of B. Com 6th semester with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies and presented in the following table 4.77. For analyzing the variance of various dimensions and total score of self-regulated learning strategies of B.Com 6th semester with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented in table 4.78.

MAIN EFFECTS

GENDER

It is clear from the table 4.78 that F- values for ‘Intrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’, ‘Test Anxiety’ dimensions and total score of ‘Motivation’ came out 0.40, 3.04, 1.77, 1.83, 0.64 and 3.70 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-value for ‘Extrinsic Goal Orientation’ came out 3.82, which is found to be significant at 0.05 level of confidence. This shows that male and female students differ significantly on the scores of ‘Extrinsic Goal Orientation’.

Table 4.77: Means and SDs of Sub-Groups of ANOVA for 2×2 Design of Various Dimensions of Self-regulated Learning Strategies with respect to Gender and Successfulness of B.Com 6th Semester

Gender	Female			Male			Total			Female			Male			Total		
Successfulness	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	IGO									EGO								
M	4.67	5.46	5.27	4.30	5.50	5.13	4.50	5.48	5.22	5.03	5.71	5.55	4.22	5.21	4.90	4.66	5.53	5.30
σ	0.78	0.91	0.94	1.34	1.19	1.34	1.06	1.01	1.11	1.19	1.22	1.23	1.53	1.49	1.55	1.38	1.33	1.39
N	12	39	51	10	22	32	22	61	83	12	39	51	10	22	32	22	61	83
Dimension	TV									CLB								
M	4.72	5.44	5.27	4.11	5.13	4.81	4.44	5.33	5.09	4.94	5.34	5.25	4.44	5.1	4.89	4.71	5.26	5.11
σ	0.64	0.9	0.89	1.29	1.31	1.37	1.01	1.07	1.12	1.23	1.03	1.08	1.26	1.12	1.19	1.24	1.06	1.13
Dimension	SELP									TA								
M	4.73	5.26	5.13	4.15	5.19	4.87	4.47	5.23	5.03	4.53	4.07	4.18	3.86	4.23	4.11	4.23	4.13	4.15
σ	0.63	0.89	0.86	1.24	1.05	1.2	0.98	0.94	1.01	1.26	1.26	1.26	1.05	1.38	1.28	1.19	1.29	1.26
Dimension	Motivation									REH								
M	28.54	31.09	30.49	25.14	30.13	28.57	27	30.75	29.75	4.43	5	4.87	4.1	4.83	4.6	4.28	4.94	4.76
σ	3.24	3.69	3.72	5.22	5.86	6.05	4.49	4.56	4.81	0.98	1.03	1.04	1.45	1.04	1.21	1.2	1.03	1.11

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	ELAB									ORG								
M	4.48	5.02	4.89	4.32	5.29	4.98	4.41	5.12	4.93	4.87	5.21	5.13	4.18	5.12	4.83	4.56	5.18	5.01
σ	1.13	1.12	1.14	1.16	1.15	1.22	1.12	1.13	1.17	1.35	1.09	1.15	1.51	1.35	1.45	1.43	1.18	1.28
Dimension	CT									MSR								
M	4.23	4.75	4.63	4.46	5.15	4.93	4.34	4.9	4.75	4.54	4.69	4.66	4.13	4.95	4.69	4.36	4.78	4.67
σ	0.95	0.95	0.97	1.01	1.02	1.05	0.96	0.99	1.01	0.85	0.75	0.77	1.11	0.77	0.95	0.97	0.76	0.84
Dimension	TSE									ER								
M	4.12	4.53	4.43	3.79	4.51	4.28	3.97	4.52	4.37	4.28	4.07	4.12	3.96	4.02	4	4.14	4.06	4.08
σ	0.47	0.76	0.72	0.82	0.93	0.95	0.66	0.82	0.81	0.74	1.15	1.07	1.29	0.84	0.98	1.01	1.04	1.03
Dimension	PL									HS								
M	4.6	4.82	4.77	4.28	4.75	4.6	4.46	4.8	4.71	4.17	4.79	4.65	4.4	4.82	4.69	4.27	4.8	4.66
σ	1.36	0.98	1.07	1.64	1.47	1.51	1.47	1.17	1.25	1.4	1.2	1.26	1.08	0.91	0.97	1.24	1.09	1.15
Dimension	Learning Strategies									Self Regulated Learning Strategies								
M	39.41	42.6	41.85	37.44	43.13	41.35	38.51	42.79	41.66	67.92	73.77	72.39	62.8	73.18	69.94	65.59	73.56	71.45
σ	6.48	6.03	6.22	10.14	7.09	8.43	8.19	6.38	7.11	8.66	8.5	8.82	13.48	11.71	13.02	11.13	9.69	10.626

Table 4.78: Summary of 2×2 ANOVA Design of Various Dimensions of Self-Regulated Learning Strategies with respect to Gender and Successfulness of B.Com 6th Semester

Dependent Variable	IGO	EGO	TV	CLB	SELP	TE	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender																	
SS	0.42	6.77	3.33	2.18	1.66	1.03	74.88	0.96	0.05	2.4	1.5	0.1	0.46	0.55	0.62	0.26	8.14	127.88
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0.42	6.77	3.33	2.18	1.66	1.03	74.88	0.96	0.05	2.4	1.5	0.1	0.46	0.55	0.62	0.26	8.14	127.88
F	0.4	3.82*	3.04	1.77	1.83	0.64	3.7	0.81	0.04	1.53	1.57	0.14	0.75	0.51	0.39	0.2	0.17	1.25
Sig.	0.53	0.05	0.09	0.19	0.18	0.43	0.06	0.37	0.84	0.22	0.21	0.71	0.39	0.48	0.54	0.66	0.68	0.27
Source	Successfulness																	
SS	15.64	10.88	11.92	4.43	9.61	0.04	223.62	6.71	8.95	6.48	5.72	3.65	5	0.08	1.86	4.3	309.93	1035.87
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	15.64	10.88	11.92	4.43	9.61	0.04	223.62	6.71	8.95	6.48	5.72	3.65	5	0.08	1.86	4.3	309.93	1035.87
F	14.72**	6.14*	10.9**	3.6	10.62**	0.02	11.06**	5.71*	6.93**	4.12*	5.98*	5.45*	8.09**	0.08	1.17	3.28	6.41**	10.12**
Sig.	0.00	0.02	0.00	0.06	0.00	0.88	0.00	0.02	0.01	0.05	0.02	0.02	0.01	0.78	0.28	0.07	0.01	0.00

Contd. ...

Dependent Variable	IGO	EGO	TV	CLB	SELP	TE	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender * Successfulness																	
SS	0.65	0.39	0.34	0.26	1.05	2.73	23.47	0.1	0.71	1.38	0.11	1.75	0.38	0.29	0.23	0.17	24.81	80.63
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0.65	0.39	0.34	0.26	1.05	2.73	23.47	0.1	0.71	1.38	0.11	1.75	0.38	0.29	0.23	0.17	24.81	80.63
F	0.61	0.22	0.31	0.21	1.16	1.69	1.16	0.08	0.55	0.88	0.11	2.61	0.61	0.27	0.15	0.13	0.51	0.79
Sig.	0.44	0.64	0.58	0.65	0.28	0.2	0.29	0.78	0.46	0.35	0.74	0.11	0.44	0.61	0.71	0.72	0.48	0.38
Source	Error																	
SS	83.96	139.85	86.42	97.19	71.55	127.6	1596.9	92.83	102.06	124.32	75.56	52.94	48.84	86.11	126.16	103.7	3821.79	8084.71
df	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79
MSS	1.06	1.77	1.09	1.23	0.91	1.62	20.21	1.18	1.29	1.57	0.96	0.67	0.62	1.09	1.6	1.31	48.38	102.34

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

Table 4.78 shows that, F-value for the 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self- Regulation', 'Time and study environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 0.81, 0.04, 1.53, 1.57, 0.14, 0.75, 0.51, 0.39, 0.20, 0.17 and 1.25 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that male and female students of B. Com 6th semester do not differ significantly on the scores of all the dimensions and total scores of 'Learning Strategies' & 'Self Regulated Learning Strategies'. This indicates that both male and female students are equally motivated in using self-learning strategies for accomplishing their goals. Thus, the Hypothesis (5), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Gender" for B. Com 6th semester is rejected for 'Extrinsic Goal Orientation' dimension.

On overseeing the mean scores table 4.77 it has been found that in 'Extrinsic Goal Orientation' dimension mean score of female students (5.55) is higher than male students (4.9). This shows that female students are more concerned about their performance in relation to the other students in the class. Their main focus is on getting good grades in order to prove their position in the class. They want to seek out rewards and approval from the peers, teachers or parents and possess a higher level of performance-approach orientation as compared to the male students. The present finding is in contrast with the previous findings of Garcia (1993), Roeser et al. (1996) & Anderman and Anderman (1999) who reported that male students have a high level of extrinsic motivational orientation as compared to girls.

SUCCESSFULNESS

Table 4.78 shows that F- values for 'Control of Learning Beliefs' and 'Test Anxiety' came out 3.60 and 0.02 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-value for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation' came out 14.72, 6.14,

10.90, 10.62 and 11.06 respectively, which are found to be significant either at the 0.01 or 0.05 level of confidence.

The F- values for 'Effort Regulation', 'Peer Learning' and 'Help-Seeking' dimensions came out 0.08, 1.17, 3.28 respectively, which are not found to be significant even at the 0.05 level of confidence. However, 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out to be 5.71, 6.93, 4.12, 5.98, 5.45, 8.09, 6.41 and 10.12 respectively, which are found to be significant either at 0.05 or 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self-Regulation', 'Time and Study Environment' dimensions, the total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'. Thus, the Hypothesis (6), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Successfulness" for B.Com 6th semester is rejected for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation', 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self-Regulation', 'Time and Study Environment' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'.

The analysis of mean score table 4.77 reveals that successful students (5.48) have scored higher on 'Intrinsic Goal Orientation' dimension than unsuccessful students (4.50). This shows that successful students are more focused on learning and improvement. They strive to master the task and possess a deep level of understanding of the content. They are curious to seek out challenging study tasks and more importantly they view their success or failure as a source of feedback for improving future performance. The successful students have a higher level of learning goal orientation as compared to their unsuccessful student counterparts. The successful students spend a great deal of time in understanding the logic behind the concept and adds to their pride, self-satisfaction with the success. The present finding is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009)

& Ayotola and Adedeji (2009) who reported that successful students scored higher on 'Intrinsic Goal Orientation' than their unsuccessful counterparts.

The analysis of mean score table 4.77 reveals that successful students (5.53) have scored higher on 'Extrinsic Goal Orientation' dimension than unsuccessful students (4.66). This shows that successful students are more concerned about their performance in relation to the other students in the class. Their main focus is on getting good grades in order to prove their position in the class. They want to seek out rewards or approval from the peers, teachers or parents and possess a higher level of performance-approach orientation as compared to the unsuccessful students. The finding of the present study is in contrast with the finding of Al-Alwan (2008) who reported that unsuccessful students scored higher on 'Extrinsic Goal Orientation' than their successful counterparts.

The analysis of mean score table 4.77 reveals that successful students (5.33) have scored higher on the 'Task Value' dimension than unsuccessful students (4.44). This shows that successful students attach a high value to the importance and usefulness of learning the subject as compared to unsuccessful students. The above finding is in consonance with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who reported that successful students scored higher on 'Task Value' than their unsuccessful counterparts.

The analysis of mean score table 4.77 reveals that successful students (5.23) have scored higher on 'Self-Efficacy for Learning and Performance' dimension than unsuccessful students (4.47). This shows that the successful students appraise their capability and confidence to perform a task, they have a firm belief that they are capable to master the situation and can produce desired outcomes. Due to the high level of self-efficacy for learning and performance, they choose challenging learning tasks and therefore expend more persistence and efforts in order to get higher achievement outcomes. They show more resilience in the phase of adverse situations as compared to their unsuccessful student counterparts. The above finding is in tune with the findings of Al-Alwan (2008) who reported that successful students scored higher on 'Control of Learning Beliefs' than their unsuccessful counterparts.

The analysis of mean score table 4.77 reveals that successful students (5.23) have scored higher on the total score of 'Motivation' than unsuccessful students (4.47). This shows that successful students are more motivated to regulate their learning process. They have a high sense of control over learning, self-efficacy and value of the learning task. They are more dynamic and ambitious by virtue motivation. They take the initiative to perform challenging tasks and have a higher level of aspiration to succeed as compared to unsuccessful students. The above finding is in tune with the findings of Simsek and Balaban (2010) & De Zoysa et al. (2014) who reported that successful students have a higher level of motivation as compared to unsuccessful students.

The analysis of mean score table 4.77 reveals that successful students (4.94) have scored higher on 'Rehearsal' dimension than unsuccessful students (4.28). This indicates that successful students are more focused on learning the content by practising it again and again. They use this strategy to memorize simple tasks and to trigger their working memory. The present finding enjoys the support from the finding of Simsek and Balaban (2010) who reported that successful students make frequent use of rehearsal strategies in order to memorize the simple tasks. But Fathi-Ashtiani et al. (2007) reported no significant difference between successful and unsuccessful students with respect to the use of 'Rehearsal' strategy.

The analysis of mean score table 4.77 reveals that successful students (5.12) have scored higher on 'Elaboration' dimension than unsuccessful students (4.41). This shows that as compared to unsuccessful students, successful students make good use of elaboration strategies like paraphrasing, summarizing, creating analogies, mnemonics, selecting key ideas from the text and making internal connections between what is being learned with the previous knowledge. They pull the information together from various sources viz. notes, lecture, readings, tutorials in order to make connections between them. The above finding is in tune with the finding of Boulton-Lewis et al. (2004) who reported that successful students use 'Elaboration' strategies more frequently than unsuccessful students.

The analysis of mean score table 4.77 reveals that successful students (5.18) have scored higher on the 'Organization' dimension than unsuccessful students

(4.56). This shows that successful students put more active, thoughtful and effortful endeavours in order to get involved in the task for better understanding than unsuccessful students. They strategically plan their learning and make good use of organization strategies like grouping, clustering, outlining and organizing the main points from the gathered information. They often make good use of mind mapping technique as compared to unsuccessful students. Simsek and Balaban (2010) & Kitsantas (2002) who reported that successful students use organization strategy more frequently as compared to the unsuccessful students. Fathi-Ashtiani et al. (2007) reported no significant difference between successful and unsuccessful students of Mathematics and Humanities in the use of 'Organization' Strategy but found a significant difference between successful and unsuccessful students of Experimental Sciences with respect to 'Organization' Strategy.

The analysis of mean score table 4.77 reveals that successful students (4.9) have scored higher on the 'Critical Thinking' dimension than unsuccessful students (4.34). This shows that successful students question themselves before getting convinced about the idea taught in the class and try to find good supporting shreds of evidence in order to accept any conclusion, assertion about the concept taught in the class. They always play around with their ideas in order to develop a convincing explanation of the content as compared to unsuccessful students.

The analysis of mean score table 4.77 reveals that successful students (4.78) have scored higher on 'Metacognitive Self-Regulation' dimension than unsuccessful students (4.36). The successful students are capable of thinking about their learning more explicitly than unsuccessful students. They always plan, monitor, regulate and evaluate their learning. They set their goals and choose appropriate learning strategies to attain those goals and evaluate their progress. They strive to come up with better ways of learning. They try to change their study style according to the requirement of the course and teaching style of the teacher. The finding of the present study enjoys support from the findings of Al-Alwan (2008), Simsek and Balaban (2010), De Zoysa et al. (2014) and Tang (2015) who have found that successful students surpassed unsuccessful students in terms of metacognitive strategy use.

The analysis of mean score table 4.77 reveals that successful students (4.52) have scored higher on 'Time and Study Environment' dimension than unsuccessful students (3.97). This shows that successful students are a good manager of their time and are capable to structure their environment for optimal learning more than unsuccessful students. They always schedule, plan and manage their study time and very much particular in following the work schedule made by them. They always keep a particular place for the study, where they can be able to concentrate on reading and studying. The above finding is in tune with the findings of Chen (2002), Al-Alwan (2008) & Ahmed and Khanam (2014) who reported that successful students outperformed unsuccessful students in managing time and study environment.

The analysis of mean score table 4.77 reveals that successful students (42.79) have scored higher on scores of 'Learning Strategies' dimension than unsuccessful students (38.51). This shows that successful students tend to use a wide variety of learning strategies than unsuccessful students. The successful students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate with their peers for effective learning. The finding of the present research enjoys support from the findings of Paris and Myers (1981), Tait and Entwistle (1996), Cho and Ahn (2003), Yip (2007, 2009, 2012, 2013), Yip & Chung, 2002), Ahmed and Khanam (2014) & De Zoysa et al. (2014) who reported that successful students use more adaptive learning strategies both in variety and frequency than their counterparts.

The analysis of mean score table 4.77 reveals that successful students (73.56) have scored higher on 'Self-Regulated Learning Strategies' than unsuccessful students (65.59). The result shows that self-regulated learning of successful students

was markedly higher than unsuccessful students. This shows that successful students have the ability to control their actions and responses, which is very much essential for the progress in varied contexts. The successful students are able to control their behaviour, emotions and cognition for the purpose of pursuing the goals. They set proximal achievable goals which are learning-oriented not performance-oriented. They know that different learning tasks require different learning strategies. They own a “Tool Kit” of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations. They possess a high level of academic self-efficacy and have the ability to control their performance. They observe the intermediate outcomes of their learning process. They precisely attribute the learning outcome to the causes of performance. The above finding is in tune with the findings of Paris and Myers (1981), Pintrich and DeGroot (1990), Tait and Entwistle (1996), Stoyhoff (1996), McWhaw and Abrami (2001), Chen (2002), Cho and Ahn (2003), Schunk (2005), Simsek and Balaban (2010) & Son and Simon (2012) who reported that high achieving students use more adaptive self-regulated learning strategies as compared to low achieving students.

DISCUSSION ON RESULTS

From the results, it has been found that both male and female students of B.Com 6th semester do not differ significantly on all dimensions of Self-regulated learning strategies. This indicates that both male and female students equally possess ‘Intrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’, ‘Test Anxiety’ and both are equally motivated towards using good learning strategies for accomplishing their set goals. However, female students possess a high level of ‘Extrinsic Goal Orientation’ as compared to boys. This shows that female students are more concerned about their performance in relation to the other students in the class. Their main focus is on getting good grades in order to prove their position in the class. They want to seek out rewards or approval from the peers, teachers or parents and a possess a higher level of performance approach orientation as compared to the male students.

From the results, it has been revealed that both successful and unsuccessful students do not differ on 'Control of Learning Beliefs' and 'Test Anxiety'. This shows that both successful and unsuccessful students have belief on their efforts and both do not show stress, tension, worry, fear of failure and somatic symptoms such as nausea, upset feeling, fastening of a heartbeat before or during the exam. On the other side, the motivation of successful students is inclined to get mastery over the content so, successful students set mastery-oriented goals, high level of internal goal orientation help them to invest a great deal of time in using deep processing strategies like planning, organizing and monitoring, along with internal motivation they are also externally motivated in order to get approval or recognition from others, they show highly competitive behavior as they want to prove their unique existence in the classroom and set performance-oriented goals for them. Further, findings have proved that successful students give more importance to the task in hand, along with it they hold an optimistic approach of getting success and have firm belief on their efforts.

They judge their capabilities and confidence for performing a task. Consequently, it is confirmed that successful students have high motivational beliefs which affect their willingness to approach a task, devote sufficient time and energy to successfully complete that task. A specific goal orientation directs the behaviour of the person while, task value stimulates the strength or intensity of the behaviour (Schunk and Zimmerman, 1994). The high level of motivation is associated with the more frequent and judicious use of learning strategies in order to regulate the learning process. The successful students are more self-regulated as compared to unsuccessful students. They are proactive in their efforts to learn as they are aware of their strengths and limitations and directed by personally set goals and task-related strategies. They monitor their behaviour in terms of their set goals and self-reflect on their achieved effectiveness. If they perceive satisfactory goal progress, they feel competent in improving their skills and goal attainment. High self-efficacy of the learners enables them to set new-fangled stimulating goals. They are motivated to learn through the self-regulated process and use a variety of learning strategies and understand the value of using these strategies in appropriate situations. The better self-regulated learning strategies among successful students help them to

be proactive and self-motivating in comparison to their unsuccessful counterparts. Self-regulated learners voluntarily offer answers to questions in the classroom, seek out additional resources when needed to master the content, they are aware of their strengths and weaknesses and manipulate their learning environment in order to meet their needs. Successful students in comparison to unsuccessful students are optimistic about their future and work systematically to achieve the goals. Further, it has been found that successful and unsuccessful students do not differ significantly on the scores of 'Effort Regulation', 'Peer Learning' and 'Help-Seeking' dimensions. It can be comprehended that both successful and unsuccessful students equally regulate their efforts for learning, discuss and debate in the peer group and seek help from others in order to clarify their doubts.

INTERACTION EFFECT (GENDER \times SUCCESSFULNESS)

The data reported in table 4.78 shows that F- values for the interaction between gender and successfulness on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation' came out 0.61, 0.22, 0.31, 0.21, 1.16, 1.69 and 1.16, which are not found to be significant even at the 0.05 level of confidence.

The F- values for the interaction between gender and successfulness on the scores of 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self-Regulated Learning Strategies' came out 0.08, 0.55, 0.88, 0.11, 2.61, 0.61, 0.27, 0.15, 0.13, 0.51 and 0.79 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that subgroups of B. Com 6th semester as a result of interaction between gender and successfulness do not differ significantly on the scores of all the dimensions of self-regulated learning strategies. Thus, the Hypothesis (7), "There is no significant interaction effect of gender and successfulness on the self-regulated learning strategies of higher education students" for B. Com 6th semester is not rejected.

4.8.4 Summary of 2×2 Analysis of Variance on Scores of Self-Regulated Learning Strategies of B.Sc. 2nd Semester

To study the self-regulated learning strategies of B.Sc. 2nd semester with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of Self-regulated learning strategies and presented in the table 4.79. For analyzing the variance of various dimensions and total score of self-regulated learning strategies of B.Sc. 2nd semester with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented in the table 4.80.

MAIN EFFECTS

GENDER

It is clear from the table 4.80 that F- values for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’, ‘Test Anxiety’ dimensions and total score of ‘Motivation’ came out to be 0.08, 0.85, 0.06, 0.06, 0.01 and 0.02 respectively, which are not found to be significant even at the 0.05 level of confidence. This indicates that male and female students do not differ significantly on the scores of all the dimensions and total score of ‘Motivation’. This shows that both male and female students are equally motivated in using adaptive learning strategies for accomplishing their goals.

The F- values for the ‘Rehearsal’, ‘Elaboration’, ‘Organisation’, ‘Critical Thinking’, ‘Metacognitive Self- Regulation’, ‘Time and study environment’, ‘Effort Regulation’, ‘Peer Learning’ dimensions, total score of ‘Learning Strategies’ and ‘Self-Regulated Learning Strategies’ came out 1.15, 0.37, 0.39, 0.14, 0.01, 0.31, 1.02, 0.14, 0.86 and 0.00, which are not found to be significant even at the 0.05 level of confidence. However, F-value for ‘Help-Seeking’ dimension came out 5.68, which is significant at 0.05 level of confidence. This shows that male and females students differ significantly on the score of ‘Help-Seeking’ dimension. Thus, the Hypothesis (5), “There is no significant difference in self-regulated learning strategies of higher education students with respect to Gender” for B.Sc. 2nd semester is rejected for ‘Help-Seeking’ dimension.

Table 4.79: Means and SDs of Sub-Groups of ANOVA for 2×2 Design of Various Dimensions of Self-regulated Learning Strategies with respect to Gender and Successfulness of B.Sc 2nd Semester

Gender	Female			Male			Total			Female			Male			Total		
Successfulness	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	IGO									EGO								
N	33	30	63	9	18	27	42	48	90	33	30	63	9	18	27	42	48	90
M	5.24	5.17	5.21	4.67	5.17	5	5.12	5.17	5.14	5.65	5.45	5.56	5.08	5.57	5.41	5.53	5.5	5.51
σ	0.9	1.18	1.03	0.71	1.25	1.11	0.89	1.19	1.06	1.06	1.29	1.17	1.09	1.24	1.19	1.08	1.26	1.17
Dimension	TV									CLB								
M	4.93	5.2	5.06	4.36	5.15	4.89	4.81	5.18	5.01	5.44	5.19	5.32	5.11	4.99	5.03	5.37	5.12	5.23
σ	1.04	1.15	1.09	0.9	0.96	1	1.03	1.07	1.06	1.15	1.09	1.12	0.96	1.09	1.03	1.11	1.09	1.1
Dimension	SELP									TA								
M	4.98	5.15	5.06	4.87	5.22	5.1	4.96	5.17	5.07	4.49	4.67	4.58	3.76	4.26	4.09	4.33	4.52	4.43
σ	0.98	1.04	1	1.14	0.85	0.95	1	0.96	0.98	1.11	1.02	1.06	1.1	1.17	1.15	1.14	1.09	1.11
Dimension	Motivation									REH								
M	30.45	30.72	30.58	27.62	30.14	29.3	29.84	30.5	30.19	5.09	5.22	5.15	4.22	5.11	4.82	4.9	5.18	5.05
σ	4.63	5.01	4.78	3.49	3.65	3.73	4.52	4.52	4.51	0.93	1.03	0.97	0.74	1.21	1.14	0.95	1.09	1.03

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	ELAB									ORG								
M	4.92	5.05	4.98	4.62	4.94	4.84	4.86	5.01	4.94	5.14	4.9	5.03	4.52	5.29	5.03	5.01	5.05	5.03
σ	0.96	1.11	1.03	0.66	1.01	0.91	0.9	1.07	0.99	0.85	1.16	1.01	1.03	1.11	1.12	0.92	1.14	1.04
Dimension	CT									MSR								
M	4.98	4.79	4.89	4.42	5.02	4.82	4.86	4.88	4.87	4.61	4.84	4.72	4.52	4.98	4.83	4.59	4.9	4.75
σ	0.83	1	0.91	0.87	1.18	1.11	0.86	1.06	0.97	0.73	0.69	0.72	0.56	0.77	0.73	0.69	0.72	0.72
Dimension	TSE									ER								
M	4.41	4.54	4.47	4.39	4.45	4.43	4.41	4.51	4.46	4.13	4.07	4.11	3.71	4.15	4	4.04	4.1	4.07
σ	0.7	0.67	0.68	0.65	0.87	0.79	0.68	0.74	0.71	0.69	1.06	0.88	0.8	0.86	0.85	0.72	0.98	0.87
Dimension	PL									HS								
M	5.09	5.12	5.1	4.19	4.69	4.52	4.89	4.96	4.93	5.06	5.13	5.1	4.11	4.83	4.59	4.86	5.02	4.94
σ	1.06	1.16	1.1	1.01	1.59	1.42	1.1	1.34	1.23	1	1.01	1	0.78	1.3	1.19	1.03	1.12	1.07
Dimension	Learning Strategies									Self Regulated Learning Strategies								
M	43.16	43.39	43.27	38.59	43.19	41.66	42.18	43.32	42.79	73.52	74.13	73.81	66.33	73.39	71.04	71.98	73.85	72.98
σ	5.54	5.88	5.66	4.09	7.08	6.55	5.55	6.28	5.95	9.32	10.23	9.69	6.63	9.97	9.49	9.24	10.03	9.66

Table 4.80: Summary of 2×2 ANOVA Design of Various Dimensions of Self-regulated Learning Strategies with respect to Gender and Successfulness of B.Sc 2nd Semester Students

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender																	
SS	0.1	1.2	0.06	0.06	0.01	0.02	0.97	1.09	0.37	0.49	0.12	0.01	0.21	0.61	0.15	4.7	1.09	0.13
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0.1	1.2	0.06	0.06	0.01	0.02	0.97	1.09	0.37	0.49	0.12	0.01	0.21	0.61	0.15	4.7	1.09	0.13
F	0.08	0.85	0.06	0.06	0.01	0.02	0.05	1.15	0.37	0.39	0.14	0.01	0.31	1.02	0.14	5.68*	0.03	0.00
Sig.	0.78	0.36	0.82	0.81	0.91	0.89	0.83	0.29	0.55	0.54	0.71	0.92	0.58	0.32	0.71	0.02	0.86	0.97
Source	Successfulness																	
SS	6.01	8.59	6.27	7.63	9.51	0.02	190.65	12.94	2.92	6.25	1.44	3.45	6.88	7.52	15.91	12.08	572.26	1455.37
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	6.01	8.59	6.27	7.63	9.51	0.02	190.65	12.94	2.92	6.25	1.44	3.45	6.88	7.52	15.91	12.08	572.26	1455.37
F	4.65*	6.18*	5.43*	7.45**	10.49**	0.01	9.31**	13.6**	2.9	4.95*	1.7	6.46**	10.28**	12.54**	14.85**	14.6**	17.48**	16.94**
Sig.	0.03	0.02	0.02	0.01	0.00	0.91	0.00	0.00	0.09	0.03	0.2	0.01	0.00	0.00	0.00	0.00	0.00	0.00

Contd. ...

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender * successfulness																	
SS	1.36	0.01	0.05	1.61	1.3	2.1	24.41	5.01	0.03	0.34	0.73	0.1	0.05	0.38	15.25	6.98	89.52	213.45
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	1.36	0.01	0.05	1.61	1.3	2.1	24.41	5.01	0.03	0.34	0.73	0.1	0.05	0.38	15.25	6.98	89.52	213.45
F	1.06	0.01	0.04	1.57	1.43	1.63	1.19	5.26*	0.03	0.27	0.86	0.18	0.08	0.64	14.24**	8.44**	2.73	2.49
Sig.	0.31	0.94	0.84	0.21	0.24	0.21	0.28	0.03	0.86	0.61	0.36	0.67	0.78	0.43	0.00	0.01	0.1	0.12
Source	Error																	
SS	98.12	107.12	87.8	77.87	68.89	97.93	1556.05	72.33	76.44	95.87	64.44	40.63	50.84	45.59	81.42	62.89	2488.83	6528.92
df	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
MSS	1.29	1.41	1.16	1.03	0.91	1.29	20.47	0.95	1.01	1.26	0.85	0.54	0.67	0.6	1.07	0.83	32.75	85.91

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

On comparing the mean scores table 4.79, it is clear that in 'Help-Seeking' dimension mean score of female students (5.10) has been found to be higher than male students (4.59). It has been found that female students showed a more positive attitude in seeking help from friends and teachers. The female students often monitor their academic performance therefore, on finding themselves unable to solve the problem they request assistance from other knowledgeable persons. The help-seeking behaviour can avert the possibility of failure and hence increase the likelihood of mastery and autonomous learning. The female students have the competency to seek help from others as they know when help is needed and how to request assistance in a socially appropriate way. The finding of the present study is consistent with the findings of Ablard and Lip Schultz (1998), Peklaj and Pecjak (2002) & Virtanen and Nevgi (2010) who reported that female students seek help from others more often as compared to male students. But Ahmed and Khanam (2014) reported no significant gender difference in 'Help-seeking' dimension.

SUCCESSFULNESS

Table 4.80 shows that F-value for 'Test Anxiety' came out 0.01, which is not found to be significant even at the 0.05 level of confidence. However, F-value for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation' came out to be 4.65, 6.10, 5.43, 7.45, 10.49 and 9.31 respectively, which are found to be significant at either at 0.01 or 0.05 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation'.

The F- values for 'Elaboration', 'Critical Thinking' dimensions came out 2.90, 1.70 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Rehearsal', 'Organization', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self-Regulated Learning Strategies' came out 13.60, 4.95, 6.46, 10.28, 12.54,

14.85, 14.60, 17.48 and 16.94 respectively, which are found to be significant at either at 0.01 or 0.05 level of confidence. This shows that successful and unsuccessful students differ significantly on the score of 'Rehearsal', 'Organization', 'Metacognitive Self-Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions and total score of 'Learning Strategies' and 'Self-Regulated Learning Strategies'.

Thus, the Hypothesis (6), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Successfulness" for B.Sc. 2nd semester is rejected for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation', 'Rehearsal', 'Organization', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self-Regulated Learning Strategies'.

The analysis of mean score table 4.79 shows that successful students (5.17) have scored higher on 'Intrinsic Goal Orientation' dimension than unsuccessful students (5.12). This shows that successful students are more focused on learning and improvement than unsuccessful students. They strive to master the task and possess a deep level of understanding of the content. They are curious to seek out challenging study tasks and more importantly they view their success or failure as a source of feedback for improving future performance. The successful students have a higher level of learning goal orientation as compared to their unsuccessful student counterparts. They spend a great deal of time in understanding the logic behind the concept and this adds to their pride, self-satisfaction with the success. This finding is in consonance with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who reported that successful students scored higher on 'Intrinsic Goal Orientation' than their unsuccessful counterparts.

The analysis of mean score table 4.79 shows that unsuccessful students (5.53) have scored higher on 'Extrinsic Goal Orientation' dimension than successful students (5.50). This shows that successful students are more concerned about their performance in relation to the other students in the class. Their main focus is on

getting good grades in order to prove their position in the class. They want to seek out rewards or approval from the peers, teachers or parents and possess a higher level of performance-approach orientation as compared to the unsuccessful students. The above finding is in contrast with the finding of Al-Alwan (2008) who reported that unsuccessful students scored higher on 'Extrinsic Goal Orientation' than their successful counterparts.

The analysis of mean score table 4.79 shows that successful students (5.18) have scored higher on the 'Task Value' dimension than unsuccessful students (4.81). As compared to unsuccessful students, successful students attach a high value to the importance and usefulness of learning the subject. This value makes the successful students dedicated and committed to accomplishing the targets. The finding of the present study is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who reported that successful students scored higher on 'Task Value' than their unsuccessful counterparts.

The analysis of mean score table 4.79 shows that unsuccessful students (5.37) have scored higher on 'Control of Learning Beliefs' dimension than successful students (5.12). As these students were first-year students and they may face numerous challenges in the new learning environment that may lead to failure in the subject. In spite of the failure, unsuccessful students have a firm belief in their efforts, they hold an optimistic approach that their hard work will definitely lead towards positive and successful outcomes.

The analysis of mean score table 4.79 shows that successful students (5.17) have scored higher on 'Self-Efficacy for Learning and Performance' dimension than unsuccessful students (4.96). This means that successful students appraise their capability and confidence to perform a task, they have a firm belief that they are capable to master the situation and can produce desired outcomes. Due to the high level of self-efficacy for learning and performance, they choose challenging learning tasks and therefore expend more persistence and efforts in order to get higher achievement outcomes. They show more resilience in the phase of adverse situations as compared to the unsuccessful students. The finding of the present study is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and

Adedeji (2009) who reported that successful students possess a higher level of self-efficacy for learning and performance than their unsuccessful counterparts.

The analysis of mean score table 4.79 shows that successful students (30.5) have scored higher on the total score of 'Motivation' than unsuccessful students (29.84). This shows that successful students are more motivated to regulate their learning process. They have a high sense of control over learning, self-efficacy and value of the learning task. They are more dynamic and ambitious by virtue motivation. They take the initiative to perform challenging tasks and have a higher level of aspiration to succeed than unsuccessful students. The above finding is in tune with the findings of Simsek and Balaban (2010) & De Zoysa et al. (2014) who reported that successful students scored higher possess a higher level of motivation as compared to the unsuccessful students.

The analysis of mean score table 4.79 shows that successful students (5.18) have scored higher on 'Rehearsal' dimension than unsuccessful students (4.9). As compared to unsuccessful students, successful students are more focused on learning the content by practising it again and again. They use this strategy in order to memorize the simple tasks and to trigger their working memory. The present finding goes in tune with the finding of Simsek and Balaban (2010) who reported that successful students make frequent use of rehearsal strategies in order to memorize the simple tasks. But Fathi-Ashtiani et al. (2007) reported no significant difference in successful and unsuccessful students with respect to the use of 'Rehearsal' strategy.

The analysis of mean score table 4.79 shows that successful students (5.05) have scored higher on the 'Organization' dimension than unsuccessful students (5.01). This shows that successful students put active, thoughtful and effortful endeavours in order to get involved in the task for better understanding. They strategically plan their learning and make good use of organization strategies like grouping, clustering, outlining and organizing the main points from the gathered information, they often make good use of mind mapping technique as compared to unsuccessful students. The of the present study is in tune with the findings of

Simsek and Balaban (2010) & Kitsantas (2002) who reported that successful students use organization strategies more frequently as compared to the unsuccessful students. Fathi-Ashtiani et al. (2007) reported no significant difference between successful and unsuccessful students of Mathematics and Humanities in the use of organization strategy but found a significant difference between successful and unsuccessful students of Experimental Sciences with respect to the use of organization strategies.

The analysis of mean score table 4.79 shows that successful students (4.9) have scored higher on 'Metacognitive Self-Regulation' dimension than unsuccessful students (4.59). This shows that successful students are capable of thinking about their learning more explicitly than unsuccessful students. They always plan, monitor, regulate and evaluate their learning. They set their goals and choose appropriate learning strategies to attain goals and evaluate their progress. They strive to come up with better ways of learning. They try to change their study style according to the requirement of the course and teaching style of the teacher. The same results have been found by Al-Alwan (2008), Simsek and Balaban (2010), De Zoysa et al. (2014) & Tang (2015) who have found that successful students surpassed unsuccessful students in terms of metacognitive strategy use.

The analysis of mean score table 4.79 shows that successful students (4.51) have scored higher on 'Time and Study Environment' dimension than unsuccessful students (4.41). This shows that successful students are a good manager of their time and are capable to structure their environment for optimal learning more than unsuccessful students. They always schedule, plan and manage their study time and very much particular in following the work schedule made by them. They always keep a particular place for the study, where they can be able to concentrate on reading and studying. The finding of the present is in tune with the findings of Chen (2002), Al-Alwan (2008) & Ahmed and Khanam (2014) who reported that successful students outperformed unsuccessful students in managing time and structuring their study environment.

The analysis of mean score table 4.79 shows that successful students (4.1) have scored higher on 'Effort Regulation' dimension than unsuccessful students

(4.04). As compared to unsuccessful students, successful students show a higher ability to regulate their efforts in the phase of distraction and monotonous tasks. They are committed to accomplish their set goals and never give up on complexities. They try to manage their efforts and attention in order to overcome the interruptions. Likewise, Ahmed and Khanam (2014) reported that successful students outperformed unsuccessful students in Effort Regulation. But Al-Alwan (2008) found no significant difference between first-year students with high and low GPA with respect to 'Effort Regulation'.

The analysis of mean score table 4.79 shows that successful students (4.96) have scored higher on 'Peer Learning' dimension than unsuccessful students (4.89). This shows that successful students are more active in working and learning with peers than unsuccessful students. The successful students generally discuss and debate in the group to clarify their doubts. Peer learning technique helps them to reach insights that they cannot be able to attain on their own. They often work with their friends in order to complete the tasks or assignment given by the teacher well on time. The finding of the present study is in tune with the finding of Ahmed and Khanam (2014) who reported that high achievers prefer to learn in peers as compared to low achievers. But Al-Alwan (2008) found no significant difference between the students with high GPA and low GPA with respect to 'Peer Learning'.

The analysis of mean score table 4.79 shows that successful students (5.02) have scored higher on 'Help-Seeking' dimension than unsuccessful students (4.86). This indicates that successful students often monitor their academic performance therefore, on finding themselves unable to solve the problem they request assistance from other knowledgeable persons. Help-seeking behavior can avert the possibility of failure and hence increase the likelihood of mastery and autonomous learning. Many researchers have proved that peer help, peer teaching, and individualized teacher assistance facilitate student's accomplishment in the learning process. The finding of the present is consistent with the findings of Kitsantas (2002) & Ahmed and Khanam (2014) who found a significant difference between high and low achieving students and confirmed that high achieving students often seek help from knowledgeable others as compared to low achieving students.

The analysis of mean score table 4.79 shows that successful students (43.32) have scored higher on the total score of 'Learning Strategies' than unsuccessful students (42.18). This shows that successful students tend to use a wide variety of learning strategies than unsuccessful students. The successful students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate with their peers for effective learning. The present finding enjoys support from the findings of Paris and Myers (1981), Tait and Entwistle (1996), Cho and Ahn (2003), Yip (2007, 2009, 2012, 2013), Yip and Chung (2005), Ahmed and Khanam (2014) & De Zoysa et al. (2014) who reported that successful students use more adaptive learning strategies both in variety and frequency.

The analysis of mean score table 4.79 shows that successful students (73.85) have scored higher on the total score of 'Self-Regulated Learning Strategies' than unsuccessful students (71.98). The result shows that self-regulated learning of successful students was markedly higher than unsuccessful students. This shows that successful students have the ability to control their actions and responses, which is very much essential for the progress in varied contexts. The successful students are able to control their behaviour, emotions and cognition for the purpose of pursuing the goals. They set proximal achievable goals which are learning-oriented not performance-oriented. They know that different learning tasks require different learning strategies. They own a "Tool Kit" of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations. They possess a high level of academic self-efficacy and have the ability to control their performance. They observe the intermediate outcomes of their learning process. They precisely attribute the learning outcome to the causes of performance. The above finding is in tune with the findings of Paris and Myers (1981), Pintrich and DeGroot (1990), Tait and

Entwhistle (1996), Stoynoff (1996), McWhaw and Abrami (2001), Chen (2002), Cho and Ahn (2003), Schunk (2005), Simsek and Balaban (2010) & Son and Simon (2012) who reported that high achieving students use more adaptive self-regulated learning strategies as compared to low achieving students.

DISCUSSION ON RESULTS

It is clear from the results that male and female students of B.Sc. 2nd semester differs significantly on the 'Help-Seeking' dimension. This shows that female students showed a more positive attitude in seeking help from friends and teachers. The female students often monitor their academic performance therefore, on finding themselves unable to solve the problem they request assistance from other knowledgeable persons. The help-seeking behaviour can avert the possibility of failure and hence increase the likelihood of mastery and autonomous learning. The female students have the competency to seek help from others as they know when help is needed and how to request assistance in a socially appropriate way.

From the results, it has been revealed that both successful and unsuccessful students do not differ on 'Test Anxiety' this indicates that they do not show stress, tension, worry, fear of failure and somatic symptoms such as nausea, upset feeling, fastening of a heartbeat before or during the exam. On the other side, the motivation of successful students is inclined to get mastery over the content so, successful students set mastery-oriented goals, high level of internal goal orientation help them to invest a great deal of time in using deep processing strategies like planning, organizing and monitoring, along with internal motivation they are also externally motivated in order to get approval or recognition from others, they show highly competitive behaviour as they want to prove their unique existence in the classroom and set performance-oriented goals for them. Further, findings have proved that successful students give more importance to the task in hand, along with it they hold an optimistic approach of getting success and have a firm belief in their efforts. They judge their capabilities and confidence for performing a task. Consequently, it is confirmed that successful students have high motivational beliefs which affect their willingness to approach a task, devote sufficient time and energy to successfully complete that task. A specific goal orientation directs the behaviour of the person while, task value stimulates the strength or intensity of the behaviour

(Schunk and Zimmerman, 1994). The high level of motivation is associated with the more frequent and judicious use of learning strategies in order to regulate the learning process. The successful students are more self-regulated as compared to unsuccessful students. They are proactive in their efforts to learn as they are aware of their strengths and limitations and directed by personally set goals and task-related strategies. They monitor their behaviour in terms of their set goals and self-reflect on their achieved effectiveness. If they perceive satisfactory goal progress, they feel competent in improving their skills and goal attainment. High self-efficacy of the learners enables them to set new-fangled stimulating goals. They are motivated to learn through the self-regulated process and use a variety of learning strategies and understand the value of using these strategies in appropriate situations. The better self-regulated learning strategies among successful students help them to be proactive and self-motivating in comparison to their unsuccessful counterparts.

Self-regulated learners voluntarily offer answers to questions in the classroom, seek out additional resources when needed to master the content, they are aware of their strengths and weaknesses and manipulate their learning environment in order to meet their needs. Successful students in comparison to unsuccessful students are optimistic about their future and work systematically to achieve the goals. Further, it has been found that successful and unsuccessful students do not differ significantly on the scores of 'Elaboration' and 'Critical Thinking'. It can be comprehended that both successful and unsuccessful students use elaboration strategies like paraphrasing, summarizing, making internal connections between the items to be learned and new knowledge with the previous knowledge equally, both think critically before accepting any conclusion and assertion. In spite of no statistically significant differences in 'Elaboration' and 'Critical Thinking' dimensions, successful students scored more on both 'Elaboration' and 'Critical Thinking' strategies. This shows that successful students are better than unsuccessful students in using 'Elaboration' and 'Critical Thinking' strategies.

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

Table 4.80 shows that, F- values for the interaction between gender and successfulness on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal

Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation' came out 1.06, 0.01, 0.04, 1.57, 1.43, 1.63 and 1.19 respectively, which are not found to be significant even at the 0.05 level of confidence. This indicates that subgroups of B.Sc. 2nd semester as a result of interaction of gender and successfulness do not differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation'. This shows that male and female students are equally motivated in regulating

Table 4.80 shows that F- values for the interaction between gender and successfulness on the scores of 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 0.03, 0.27, 0.86, 0.18, 0.08, 0.64, 2.73 and 2.49 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Rehearsal', 'Peer Learning', 'Help-Seeking' came out 5.26, 14.24 and 8.44 respectively, which are found to be significant either at 0.01 or 0.05 level of confidence. Thus, the Hypothesis (7), "There is no significant interaction effect of gender and successfulness on the self-regulated learning strategies of higher education students" for B.Sc. 2nd semester is rejected for 'Rehearsal', 'Peer Learning', 'Help-Seeking' dimensions.

To further analyze the significant difference between various subgroups as a result of interaction between gender and successfulness, t-values for the various subgroups were calculated and the subgroups for which the t value is found significant are presented in the table 4.81.

It is clear from the table 4.81 that in 'Rehearsal' dimension, the t-value between the group of unsuccessful females-unsuccessful males, successful females-unsuccessful males and unsuccessful males-successful males came out significant at the 0.01 level of confidence.

Table 4.81: Summary of ‘t’-values for the Subgroups of B.Sc 2nd Semester in respect of ‘Rehearsal’, ‘Peer Learning’ and ‘Help-Seeking’ Dimensions

Group 1	Group 2	REH	PL	HS
Unsuccessful Females	Unsuccessful Males	2.95**	2.34*	3.04**
Unsuccessful Females	Successful Males	0.06	33.29**	0.65
Successful Females	Unsuccessful Males	3.22**	2.34*	3.20**
Successful Females	Successful Males	0.32	33.24**	0.84
Unsuccessful Males	Successful Males	2.36*	33.42**	1.79

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

On overseeing the mean score table 4.79, it has been found that the mean score of unsuccessful females and successful females came out higher than unsuccessful males. This shows that unsuccessful females and successful females give more emphasis on drill and practice as compared to unsuccessful males. On comparing the mean scores of successful and unsuccessful males, it has been found that successful males achieved a high mean score as compared to unsuccessful males. This shows that successful male students practice the content over and again as compared to their unsuccessful counterparts.

In ‘Peer Learning’ dimension, the t-value for the groups viz. unsuccessful females- unsuccessful males, unsuccessful females- successful males, successful females-unsuccessful males, successful females-successful males and unsuccessful males-successful males came out to be significant at 0.01 level of confidence. This shows that the subgroups differ significantly on the score of ‘Peer Learning’. On comparing the mean scores table 4.79, it has been found that the mean score of unsuccessful females is found to be higher than successful males and unsuccessful males. Furthermore, the mean score of successful females is found to be higher than successful males and unsuccessful males. This indicates that females whether successful or unsuccessful prefer peer learning approach more as compared to their successful and unsuccessful male counterparts. The female students often have dialogue among peer group about the given assignment and try to complete the allotted task well on time. On comparing the mean scores of successful and

unsuccessful males, it has been found that successful male students prefer to work and discuss in peer group as compared to unsuccessful male students.

In 'Help-Seeking' dimension, the t-value for the groups viz. unsuccessful females- unsuccessful males, successful females-unsuccessful males came out to be significant at 0.01 level of confidence. This shows that the subgroups differ significantly on 'Help-Seeking' dimension. Further, on comparing the mean scores table 4.79, it has been found that the mean score of unsuccessful females and successful females is found to be than unsuccessful males. This shows that successful females and unsuccessful females prefer to seek assistance from friends and teachers on facing difficult academic tasks as compared to unsuccessful males.

4.8.5 Summary of 2×2 Analysis of Variance on Scores of Self-Regulated Learning Strategies of B.Sc 4th Semester

To study the self-regulated learning strategies of B.SC 4th semester students with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies and presented in the table 4.82. For analyzing the variance of various dimensions and total score of self-regulated learning strategies of B.Sc. 4th semester with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented in table 4.83.

MAIN EFFECTS

GENDER

It is clear from the table 4.83 that F- values for 'Extrinsic Goal Orientation', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions came out to be 0.81, 1.84 and 1.68 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Intrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs' dimensions and total score of 'Motivation' came out 6.27, 4.53, 5.95 and 7.54 respectively, which are found to be significant either at 0.01 or at 0.05 level of confidence. It shows that male and female students differ significantly on the scores of 'Intrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs' dimensions and total score of 'Motivation'.

Table 4.82: Means and SDs of Sub-Groups of ANOVA for 2×2 Design of Various Dimensions of Self-regulated Learning Strategies with respect to Gender and Successfulness of B.Sc 4th Semester

Gender	Female			Male			Total			Female			Male			Total		
Successfulness	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	IGO									EGO								
N	12	28	40	12	13	25	24	41	65	12	28	40	12	13	25	24	41	65
M	5.83	5.5	5.6	4.92	5.08	5	5.38	5.37	5.37	5.76	5.66	5.69	5.52	5.5	5.51	5.64	5.61	5.62
σ	0.58	1.11	0.98	1.08	1.04	1.04	0.97	1.09	1.04	0.57	0.85	0.77	1.09	0.76	0.91	0.86	0.81	0.82
Dimension	TV									CLB								
M	5.58	5.6	5.59	4.76	5.5	5.14	5.17	5.57	5.42	6.16	5.61	5.77	5.29	5.16	5.22	5.73	5.47	5.56
σ	1	0.85	0.88	0.73	0.63	0.76	0.95	0.78	0.86	0.46	1.1	0.98	1.16	1.05	1.08	0.97	1.09	1.05
Dimension	SELP									TA								
M	5.25	5.43	5.38	4.88	5.18	5.04	5.07	5.35	5.25	4.87	4.39	4.53	4.62	3.8	4.19	4.74	4.2	4.4
σ	1.21	0.78	0.92	0.65	0.84	0.76	0.97	0.8	0.87	1.29	1.26	1.27	0.97	1.26	1.18	1.12	1.28	1.24
Dimension	Motivation									REH								
M	33.28	32.03	32.41	29.97	30.04	30	31.62	31.4	31.48	5.55	5.24	5.34	5.01	5.21	5.11	5.28	5.23	5.25
σ	2.84	4.41	4.01	3.13	2.79	2.9	3.38	4.04	3.78	1.13	0.86	0.95	1.32	0.91	1.11	1.23	0.87	1.01

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	ELAB									ORG								
M	5.63	5.27	5.38	4.84	4.82	4.83	5.23	5.13	5.17	5.56	5.44	5.48	4.48	4.94	4.72	5.02	5.28	5.18
σ	0.47	0.83	0.75	1.11	0.84	0.96	0.93	0.85	0.87	1.14	0.85	0.93	1.57	1.27	1.41	1.45	1.01	1.19
Dimension	CT									MSR								
M	5.58	4.96	5.15	4.82	5.09	4.96	5.2	5	5.07	5.06	5.13	5.11	4.41	4.26	4.33	4.73	4.85	4.81
σ	0.91	0.95	0.97	1.23	0.72	0.99	1.13	0.88	0.98	0.73	0.67	0.68	1.08	0.74	0.9	0.96	0.79	0.85
Dimension	TSE									ER								
M	4.14	4.65	4.5	4.2	4.32	4.26	4.17	4.55	4.41	4.38	4.22	4.27	3.71	4.39	4.06	4.05	4.27	4.19
σ	0.32	0.5	0.51	0.95	0.61	0.78	0.69	0.55	0.63	1.01	1.11	1.07	1.12	0.88	1.04	1.1	1.03	1.05
Dimension	PL									HS								
M	5.61	5.03	5.21	4.51	4.45	4.48	5.06	4.85	4.93	5.25	5.21	5.23	4.67	4.62	4.64	4.96	5.02	5
σ	0.76	1.2	1.11	1.45	1.06	1.24	1.26	1.18	1.2	0.62	0.83	0.77	0.78	0.87	0.81	0.75	0.88	0.83
Dimension	Learning Strategies									Self Regulated Learning Strategies								
M	46.34	44.81	45.27	40.23	41.83	41.06	43.28	43.86	43.65	79.5	76.82	77.62	70.08	71.92	71.04	74.79	75.27	75.09
σ	4.43	5.15	4.94	8.01	3.69	6.07	7.06	4.89	5.74	6.08	8.71	8.03	10.2	5.52	7.99	9.52	8.1	8.58

Table 4.83: Summary of 2×2 ANOVA Design of Various Dimensions of Self-regulated Learning Strategies with respect to Gender and Successfulness of B.Sc 4th Semester Students

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender																	
SS	6.43	0.57	3.04	6.17	1.39	2.5	100.68	1.19	5.4	8.99	1.43	8.2	0.26	0.94	10.09	5	295.89	733.68
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	6.43	0.57	3.04	6.17	1.39	2.5	100.68	1.19	5.4	8.99	1.43	8.2	0.26	0.94	10.09	5	295.89	733.68
F	6.27*	0.81	4.53*	5.95*	1.84	1.68	7.54**	1.15	7.63**	6.82**	1.54	13.43**	0.71	0.85	7.51**	7.89**	10.03**	11.29**
Sig.	0.02	0.37	0.04	0.02	0.18	0.2	0.01	0.29	0.01	0.01	0.22	0.00	0.4	0.36	0.01	0.01	0.00	0.00
Source	Successfulness																	
SS	0.11	0.05	2.04	1.66	0.81	6.03	4.87	0.04	0.51	0.43	0.44	0.02	1.43	0.95	1.42	0.03	0.02	2.52
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0.11	0.05	2.04	1.66	0.81	6.03	4.87	0.04	0.51	0.43	0.44	0.02	1.43	0.95	1.42	0.03	0.02	2.52
F	0.11	0.07	3.04	1.6	1.08	4.06*	0.36	0.04	0.71	0.32	0.48	0.04	3.9*	0.86	1.06	0.04	0	0.04
Sig.	0.75	0.79	0.09	0.21	0.3	0.05	0.55	0.84	0.4	0.57	0.49	0.85	0.05	0.36	0.31	0.84	0.98	0.85

Contd. ...

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender * Successfulness																	
SS	0.87	0.03	1.9	0.64	0.04	0.4	6.21	0.92	0.41	1.22	2.91	0.16	0.53	2.52	0.97	0	35.21	73.09
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0.87	0.03	1.9	0.64	0.04	0.4	6.21	0.92	0.41	1.22	2.91	0.16	0.53	2.52	0.97	0	35.21	73.09
F	0.85	0.04	2.83	0.61	0.06	0.27	0.47	0.89	0.58	0.92	3.14	0.27	1.45	2.28	0.73	0	1.19	1.13
Sig.	0.36	0.85	0.1	0.44	0.81	0.6	0.5	0.35	0.45	0.34	0.08	0.61	0.23	0.14	0.4	0.97	0.28	0.29
Source	Error																	
SS	62.51	42.91	40.92	63.27	45.97	90.62	814.97	63.12	43.16	80.37	56.55	37.24	22.32	67.31	81.95	38.71	1799.94	3962.95
df	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
MSS	1.03	0.7	0.67	1.04	0.75	1.49	13.36	1.04	0.71	1.32	0.93	0.61	0.37	1.1	1.34	0.64	29.51	64.97

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

The F- values for the 'Rehearsal', 'Critical Thinking', 'Time and study environment', 'Effort Regulation' came out 1.15, 1.54, 0.71 and 0.85 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Elaboration', 'Organisation', 'Metacognitive Self- Regulation', 'Peer Learning' and 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 7.63, 6.82, 13.43, 7.51, 7.89, 10.03 and 11.29 respectively, which are found to be significant at the 0.01 level of confidence. It shows that male and female students differ significantly on the scores of 'Elaboration', 'Organisation', 'Metacognitive Self- Regulation', 'Peer Learning' and 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'. Thus, the Hypothesis (5), There is no significant difference in self-regulated learning strategies of higher education students with respect to Gender" for B.Sc. 4th semester is rejected for 'Intrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs' dimensions and total score of 'Motivation', 'Elaboration', 'Organisation', 'Metacognitive Self- Regulation', 'Peer Learning' and 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'.

The analysis of mean score table 4.82 reveals that female students (5.6) have scored higher on 'Intrinsic Goal Orientation' dimension than male students (5). This shows that female students are more focused on learning and improvement. They strive to master the task and possess a deep level of understanding of the content. They are curious to seek out challenging study tasks and more importantly they view their success or failure as a source of feedback for improving future performance. The female students have a higher level of learning goal orientation as compared to their male student counterparts. The finding of the present study is in tune with the finding of Miller et al. (1990) & Meece and Holt (1993) who found that female students showed the high level of intrinsic motivation orientation as compared to male students. However, Yu (1999) reported no significant gender difference in intrinsic goal orientation.

The analysis of mean score table 4.82 reveals that female students (5.59) have scored higher on the 'Task Value' dimension than male students (5.14). This shows that female students attach a high value to the importance and usefulness of

learning the subject than male students. This value makes the female students dedicated and committed to accomplishing the targets. The finding of the present study is consistent with the finding of Al-Harthy and Aldhafri (2014) who explored that female student give more value to the importance and usefulness of the task in hand than male students.

The analysis of mean score table 4.82 reveals that female students (5.77) have scored higher on 'Control of Learning Beliefs' dimension than male students (5.22). This indicates that as compared to male students, female students possess a higher level of control of learning beliefs. The female students have a strong belief that they have considerable control over their learning outcomes. They work more strategically and effectively and know that their efforts will definitely make a difference. The present finding is in contrast with the finding of Lynch and Trujillo (2011) who reported that male students scored significantly higher on a sense of control over the learning as compared to females.

The analysis of mean score table 4.82 reveals that female students (5.77) have scored higher on the total score of 'Motivation' than male students (5.22). This shows that female students are more motivated to regulate their learning process. They have a high sense of control over learning, self-efficacy and value of the learning task. They are more dynamic and ambitious by virtue motivation. They take the initiative to perform challenging tasks and have a high level of aspiration to succeed. The finding of the present study enjoys support from the findings of Maria and Pedro (2004), Ghazvini and Khajehpour (2011), Simsek and Balaban (2010) & Marrs and Sigler (2012) who found that female students scored remarkably high on the dimension of motivation as compared to their male student counterparts. Likewise, Gardner (2006), Carreira (2011) and Javid et al. (2012) showed that girls showed a high level of motivation in language learning as compared to boys. On the contrary, Obrentz (2012) found that male students scored higher on motivation score than female students. But, Glynn et al. (2007, 2009), Banarjee and Kumar (2014), Yukselturk and Bulut (2009) & Balam (2015) showed no significant difference between male and female students with respect to their motivation.

The analysis of mean score table 4.82 reveals that female students (5.38) have scored higher on 'Elaboration' dimension than male students (4.83). This shows that female students make good use of elaboration strategies like paraphrasing, summarizing, making internal connections between the items to be learned and previous knowledge. They pull the information together from various sources viz. notes, lecture, readings, tutorials and make connections between them.

The analysis of mean score table 4.82 reveals that female students (5.48) have scored higher on the 'Organization' dimension than male students (4.72). This shows that female students put active, thoughtful and effortful endeavours in order to get involved in the task for better understanding. They strategically plan their learning and make good use of organization strategies like grouping, clustering, outlining and organizing the main points from the gathered information, they often make good use of mind mapping technique as compared to male students. Bidjerano (2005) & Simsek and Balaban (2010) found that female students surpassed male students in terms of their use of 'Elaboration' strategy. On the contrary, Artelt et al. (2003) reported that male students are most likely to use elaboration strategies than females.

The analysis of mean score table 4.82 reveals that female students (5.11) have scored higher on 'Metacognitive Self-Regulation' dimension than male students (4.33). The female students are capable of thinking about their learning more explicitly than male students. They always plan, monitor, regulate and evaluate their learning. They set their goals and choose appropriate learning strategies to attain goals and evaluate one's progress. They strive to come up with better ways of learning. They try to change their study style according to the requirement of the course and teaching style of the teacher. The present finding goes in tune with the findings of Bidjerano (2005), Simsek and Balaban (2010), Chuy and Nitulescu (2013) who found that female students have higher metacognitive self-regulation skills than male students. On the contrary, Bembenutty (2007), Tang & Neber (2008) reported no significant gender difference in metacognitive self-regulation.

The analysis of mean score table 4.82 reveals that female students (5.21) have scored higher on 'Peer Learning' dimension than male students (4.48). This

shows that female students are more active in working and learning with peers than male students. The female students generally discuss and debate in the group to clarify their doubts. Peer learning technique helps them to reach insights that they cannot be able to attain on their own. They often work with their friends in order to complete the tasks or assignment given by the teacher well on time.

The analysis of mean score table 4.82 reveals that female students (5.23) have scored higher on 'Help-Seeking' dimension than male students (4.64). It has been found that female students showed a more positive attitude in seeking help from friends and teachers. The female students often monitor their academic performance therefore, on finding themselves unable to solve the problem they request assistance from other knowledgeable persons. The female students have the competency to seek help from others as they know when help is needed and how to request assistance in a socially appropriate way. Help-seeking behaviour can avert the possibility of failure and hence increase the likelihood of mastery and autonomous learning. Researches have shown that peer help, peer tutoring, and individual teacher assistance facilitate student achievement. Ryan et al. (1997), Ablard and Lip Schultz (1998), Peklaj and Pecjak (2002) & Virtanen and Nevgi (2010) who found that women are more likely to seek help as compared to men.

The analysis of mean score table 4.82 reveals that female students (45.27) have scored higher on the total score of 'Learning Strategies' than male students (41.06). This shows that female students tend to use a wide variety of learning strategies than male students. The female students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate with their peers for effective learning. The above finding goes in consonance with the findings of the previous researches that indicated female students scored remarkably high on

learning strategies as compared to male students (Wolters, 1999; Niemivirta, 1997; Anderman and Young, 1994; Zimmerman and Martinez, 1990). In the same way, Dreyer and Oxford (1996), Green and Oxford (1995), Lan and Oxford (2003) & Lee and Oxford (2008) found that female students scored higher on the use of learning strategies for English language learning as compared to male students. On the contrary, Wharton (2000) reported that male students used more adaptive strategies for foreign language learning as compared to female students, Ghazvini and Khajehpour (2011) reported that male students scored higher on use of learning strategies as compared to female students.

The analysis of mean score table 4.82 reveals that female students (77.62) have scored higher on the total score of 'Self Regulated Learning Strategies' than male students (71.04). The result shows that self-regulated learning of female students was markedly higher than male students. This shows that female students have the ability to control their actions and responses, which is very much essential for progress in varied contexts. The female students are able to control their behaviour, emotions and cognition for the purpose of pursuing the goals. They set proximal achievable goals which are learning-oriented not performance-oriented. They know that different learning tasks require different learning strategies. They own a "Tool Kit" of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations. They possess a high level of academic self-efficacy and have the ability to control their performance. They observe the intermediate outcomes of their learning process. They precisely attribute the learning outcome to the causes of performance. The finding of the present study is consistent with the findings of the previous researches, which reported that female students scored higher on using self-regulated learning strategies as compared to their male student counterparts (Al Khatib, 2010; Balaban, 2010; DiBenedetto and Bembenuddy, 2011; Chuy and Nitulescu, 2013; Banarjee and Kumar, 2014; Veloo et al., 2015). But, Peng (2001), Yukselturk and Bulut (2009) & Balam (2015) showed that male and female students did not differ significantly in regard to the use of motivated self-regulated learning strategies.

DISCUSSION ON RESULTS

From the results, it has been revealed that both male and female students of B.Sc. 4th semester does not differ on 'Extrinsic Goal Orientation', 'Self-Efficacy for Learning and Performance' and 'Test Anxiety' dimensions. This shows that both male and female students have the same level of extrinsic goal orientation, they equally appraise their capability and confidence to perform that task. Both male and female have a firm belief that they are capable to master the situation and can produce desired outcomes. Both male and female do not show stress, tension, worry, fear of failure and somatic symptoms such as nausea, upset feeling, fastening of a heartbeat before or during the exam. On the other side, the motivation of female students is inclined on getting mastery over the content, therefore, female students set mastery-oriented goals, their high level of internal goal orientation helps them to invest a great deal of time in using deep processing strategies like planning, organizing and monitoring, along with internal motivation.

The female students are more concerned about their performance in relation to the other students in the class. Their main focus is on getting good grades in order to prove their position in the class. They want to seek out rewards or approval from the peers, teachers or parents and possess a higher level of performance approach orientation as compared to the male students. Further, findings have proved that female students give more importance to the task in hand, along with it they hold an optimistic approach of getting success and have a firm belief in their efforts. They judge their capabilities and confidence for performing a task. Consequently, it is confirmed that female students have high motivational beliefs which affect their willingness to approach a task, devote sufficient time and energy to successfully complete that task. A specific goal orientation directs the behaviour of the person while, task value stimulates the strength or intensity of the behaviour (Schunk and Zimmerman, 1994). The high level of motivation is associated with the more frequent and judicious use of learning strategies in order to regulate the learning process.

On discussing the use of learning strategies, it has been found that both male and students showed the same level of using 'Rehearsal', 'Critical Thinking', 'Time and study environment' and 'Effort Regulation' strategies. Both male and female students give importance to learn the content by practising it again and again. They

think critically before accepting any conclusion, manage their time well and regulate their efforts in the phase of monotonous tasks. Further, female students are more self-regulated as compared to male students. They are proactive in their efforts to learn as they are aware of their strengths and limitations and directed by personally set goals and task-related strategies. They monitor their behaviour in terms of their set goals and self-reflect on their achieved effectiveness. If they perceive satisfactory goal progress, they feel competent in improving their skills and goal attainment. High self-efficacy of the learners enables them to set new-fangled stimulating goals. They are motivated to learn through the self regulated process and use a variety of learning strategies and understand the value of using these strategies in appropriate situations. The better self-regulated learning strategies among females help them to be proactive and self-motivating in comparison to their male counterparts. Females self- regulated learners voluntarily offer answers to questions in the classroom, seek out additional resources when needed to master the content, they are aware of their strengths and limitations and manipulate their learning environment in order to meet their needs. Females in comparison to males are more optimistic about their future and work systematically to achieve the goals.

SUCCESSFULNESS

Table 4.83 shows that F-value for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’ dimensions and total score of ‘Motivation’ came out 0.11, 0.07, 3.04, 1.60, 1.08, 0.36 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-value for ‘Test Anxiety’ came out 4.06, which is found to be significant at 0.05 level of confidence. It shows that successful and unsuccessful students differ significantly on the score of ‘Test Anxiety’ dimension.

The F-values for ‘Rehearsal’, ‘Elaboration’, ‘Organisation’, ‘Critical Thinking’, ‘Metacognitive Self -Regulation’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’ dimensions and total score of ‘Learning Strategies’ and ‘Self-Regulated Learning Strategies’ came out 0.04, 0.71, 0.32, 0.48, 0.04, 0.86, 1.06, 0.04, 0.00 and 0.04 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-value for ‘Time and Study Environment’ dimension came out 3.90, which is found to be significant at 0.05 level of

confidence. It shows that successful and unsuccessful students differ significantly on the score of 'Time and Study Environment' dimension. Thus, the Hypothesis (6), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Successfulness" for B.Sc. 4th semester is rejected for 'Test Anxiety' and 'Time and Study Environment' dimensions.

On comparing mean score table 4.82, it has been found that in 'Test Anxiety' dimension, the mean score of successful students (4.52) is found to be higher than unsuccessful students (4.33). This shows that successful students show more test anxiety as compared to unsuccessful students. This may be due to the reason that successful students want to achieve high scores and maintain their successful image within the peer group, in front of the teachers and parents as compared to unsuccessful students. The result got support from the views of Haig (2015) who revealed another side of anxiety, which can trigger the motivation and attention of the learner to give best. The study got partial support from the results of Sinha (1966) who reported that students with high intelligence have a moderate level of test anxiety as compared to low achievers. On the contrary, Tewari and Rai (1976) and Molly & Lakshminaryanan (1988) reported no significant difference between high and low achievers with respect to test anxiety.

On comparing mean score table 4.82, it has been found that in 'Time and Study Environment' dimension, the mean score of successful students (4.55) is found to be higher than unsuccessful students (4.17). This shows that successful students are a good manager of their time and are capable to structure their environment for optimal learning more than unsuccessful students. They always schedule, plan and manage their study time and very much particular in following the work schedule made by them. They always keep a particular place for the study, where they can be able to concentrate on reading and studying. The finding of the present study is in tune with the findings of Chen (2002), Al-Alwan (2008) & Ahmed and Khanam (2014) who reported that successful students outperformed unsuccessful students in managing time and study environment.

INTERACTION EFFECT (GENDER* SUCCESSFULNESS)

Table 4.83 shows that F- values for the interaction between gender and successfulness on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal

Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation' came out 0.85, 0.04, 2.83, 0.61, 0.06, 0.27, 0.47 respectively, which are not found to be significant at 0.05 level of confidence. This shows that subgroups as a result of interaction between gender and successfulness do not differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation'.

The F- values for the interaction between gender and successfulness on the scores of 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 0.89, 0.58, 0.92, 3.13, 0.27, 1.45, 2.28, 0.73, 0.00, 1.19, 1.13 respectively, which are not found to be significant at 0.05 level of confidence. This shows that subgroups as a result of interaction between gender and successfulness do not differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self-Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self-Regulated Learning Strategies'. Thus, the Hypothesis (7), "There is no significant interaction effect of gender and successfulness on the self-regulated learning strategies of higher education students for B.Sc. 4th semester is not rejected.

4.8.6 Summary of 2×2 Analysis of Variance on Scores of Self-Regulated Learning Strategies of B.Sc 6th Semester

To study the self-regulated learning strategies of B.Sc. 6th semester with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of Self-regulated learning strategies and presented in the table 4.84. For analyzing the variance of various dimensions and total score of self-regulated learning strategies of B.Sc. 6th semester with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented in table 4.85.

Table 4.84: Means and SDs of Sub-Groups of ANOVA for 2×2 Design of Various Dimensions of Self-regulated Learning Strategies with respect to Gender and Successfulness of B.Sc 6th Semester

Gender	Female			Male			Total			Female			Male			Total		
Successfulness	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	IGO									EGO								
M	4.79	5.55	5.27	4.5	4.76	4.7	4.69	5.13	5	5.42	5.54	5.50	5.61	5.04	5.16	5.49	5.28	5.34
σ	1.03	1.00	1.06	1.17	1.27	1.25	1.07	1.21	1.18	1.35	1.06	1.17	0.81	1.23	1.17	1.18	1.17	1.17
N	19	33	52	10	37	47	29	70	99	19	33	52	10	37	47	29	70	99
Dimension	TV									CLB								
M	4.64	5.28	5.04	4.40	4.80	4.71	4.56	5.02	4.89	5.43	5.51	5.48	5.35	5.14	5.19	5.40	5.31	5.34
σ	0.89	0.87	0.92	0.97	1.16	1.12	0.91	1.05	1.03	0.78	1.03	0.94	1.45	1.13	1.19	1.04	1.09	1.07
Dimension	SELP									TA								
M	4.85	5.14	5.04	4.67	4.97	4.90	4.79	5.05	4.97	4.80	4.56	4.65	5.00	4.34	4.48	4.87	4.45	4.57
σ	0.94	0.81	0.86	1.21	0.92	0.98	1.02	0.87	0.92	1.17	0.74	0.91	1.15	1.35	1.32	1.14	1.10	1.13
Dimension	Motivation									REH								
M	29.75	31.38	30.78	29.36	28.83	28.94	29.62	30.03	29.91	4.81	5.21	5.07	4.20	4.73	4.62	4.60	4.96	4.85
σ	4.87	4.29	4.53	5.38	5.23	5.20	4.96	4.94	4.93	1.06	0.97	1.01	1.60	1.18	1.28	1.28	1.10	1.16

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
Successfulness	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	ELAB									ORG								
M	4.95	5.19	5.10	4.27	4.81	4.70	4.72	4.99	4.91	4.95	5.12	5.06	4.30	4.77	4.67	4.72	4.94	4.88
σ	0.77	0.88	0.85	0.88	0.93	0.94	0.86	0.92	0.91	1.16	0.97	1.03	1.12	1.01	1.04	1.17	1.00	1.05
Dimension	CT									MSR								
M	4.43	5.11	4.86	4.54	4.64	4.62	4.47	4.86	4.75	4.58	4.90	4.78	4.32	4.60	4.54	4.49	4.74	4.67
σ	0.97	0.96	1.01	0.81	1.09	1.03	0.91	1.05	1.02	0.67	0.70	0.70	0.95	0.78	0.82	0.77	0.75	0.76
Dimension	TSE									ER								
M	4.43	4.36	4.38	4.00	4.51	4.40	4.28	4.44	4.39	4.60	4.11	4.29	3.63	4.21	4.09	4.27	4.16	4.19
σ	0.63	0.48	0.53	0.92	0.62	0.71	0.76	0.56	0.62	0.87	0.93	0.93	1.28	1.00	1.08	1.11	0.96	1.00
Dimension	PL									HS								
M	4.88	5.01	4.96	3.74	4.49	4.33	4.49	4.73	4.66	4.58	4.61	4.60	4.00	4.49	4.38	4.38	4.54	4.49
σ	0.92	1.03	0.98	1.25	1.29	1.30	1.16	1.19	1.18	1.07	0.86	0.93	1.25	0.90	0.99	1.15	0.88	0.96
Dimension	Learning Strategies									Self Regulated Learning Strategies								
M	42.04	43.39	42.90	36.90	41.06	40.17	40.27	42.16	41.60	71.89	74.82	73.75	66.20	69.89	69.11	69.93	72.21	71.55
σ	5.66	5.44	5.51	6.60	5.72	6.09	6.39	5.67	5.92	10.19	9.27	9.62	10.97	9.66	9.94	10.63	9.73	10.00

Table 4.85: Summary of 2×2 ANOVA Design of Various Dimensions of Self-regulated Learning Strategies with respect to Gender and Successfulness of B.Sc 6th Semester Students

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender																	
SS	5.54	0.48	2.47	0.95	0.6	0	41.14	5.69	5.29	4.75	0.63	1.5	0.36	3.54	13.1	2.32	265.81	537.27
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	5.54	0.48	2.47	0.95	0.6	0	41.14	5.69	5.29	4.75	0.63	1.5	0.36	3.54	13.1	2.32	265.81	537.27
F	4.29*	0.35	2.47	0.82	0.71	0	1.73	4.39*	6.81**	4.41*	0.63	2.65	0.94	3.66	10.14**	2.52	8.16**	5.64*
Sig.	0.04	0.55	0.12	0.37	0.4	0.96	0.19	0.04	0.01	0.04	0.43	0.11	0.34	0.06	0.00	0.12	0.01	0.02
Source	Successfulness																	
SS	4.89	0.93	5.06	0.09	1.66	3.82	5.64	4.13	2.87	2.01	2.86	1.71	0.93	0.04	3.64	1.26	143.96	208.43
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	4.89	0.93	5.06	0.09	1.66	3.82	5.64	4.13	2.87	2.01	2.86	1.71	0.93	0.04	3.64	1.26	143.96	208.43
F	3.78	0.68	5.05*	0.08	1.96	3.05	0.24	3.18	3.69	1.87	2.86	3	2.47	0.04	2.81	1.36	4.42*	2.19
Sig.	0.06	0.41	0.03	0.79	0.17	0.08	0.63	0.08	0.06	0.18	0.09	0.09	0.12	0.84	0.1	0.25	0.04	0.14

Contd. ...

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender * Successfulness																	
SS	1.19	2.24	0.27	0.38	0	0.85	22.19	0.08	0.46	0.42	1.6	0.01	1.6	5.53	1.89	1.01	37.6	2.81
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	1.19	2.24	0.27	0.38	0	0.85	22.19	0.08	0.46	0.42	1.6	0.01	1.6	5.53	1.89	1.01	37.6	2.81
F	0.92	1.63	0.27	0.33	0	0.68	0.93	0.06	0.59	0.39	1.6	0.02	4.24*	5.71*	1.46	1.09	1.16	0.03
Sig.	0.34	0.21	0.61	0.57	1	0.41	0.34	0.81	0.44	0.54	0.21	0.9	0.04	0.02	0.23	0.3	0.29	0.86
Source	Error																	
SS	122.65	130.62	95.16	109.83	80.47	119.23	2260.22	123.25	73.81	102.44	95.14	53.92	35.87	92.06	122.74	87.75	3093.13	9055.87
df	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
MSS	1.29	1.38	1	1.16	0.85	1.26	23.79	1.3	0.78	1.08	1	0.57	0.38	0.97	1.29	0.92	32.56	95.33

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

MAIN EFFECTS

GENDER

It is clear from the table 4.85 that F- values for 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation' came out 0.35, 2.47, 0.82, 0.71, 0.00 and 1.73 respectively, which are found to be significant at 0.05 level of confidence. However, F- values for 'Intrinsic Goal Orientation' came out 4.29, which is found to be significant at 0.05 level of confidence. This shows that male and female students differ significantly on the score of 'Intrinsic Goal Orientation' dimension.

The F-values for 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Help-Seeking' came out 0.63, 2.65, 0.94, 3.66 and 2.52 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Rehearsal', 'Elaboration', 'Organisation', 'Peer Learning' dimensions, total score of 'Learning Strategies' and 'Self-Regulated Learning Strategies' came out 4.39, 6.81, 4.41, 10.14, 8.16 and 5.64 respectively, which are found to be significant either at the 0.01 or at 0.05 level of confidence. This shows that male and female students differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organisation', 'Peer Learning' dimensions, the total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'. Thus, the Hypothesis (5), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Gender" for B.Sc. 6th semester is rejected for 'Intrinsic Goal Orientation', 'Rehearsal', 'Elaboration', 'Organisation', 'Peer Learning' dimensions, the total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'.

The analysis of mean score table 4.84 shows that female students (5.27) have scored higher on 'Intrinsic Goal Orientation' dimension than male students (4.7). This shows that female students are more focused on learning and improvement. They strive to master the task and possess a deep level of understanding of the content. They are curious to seek out challenging study tasks and more importantly they view their success or failure as a source of feedback for improving future

performance. The female students have a higher level of learning goal orientation as compared to their male student counterparts. The finding of the present study is in tune with the findings of Miller et al. (1990) & Meece and Holt (1993) who found that female students have a higher level of intrinsic motivation orientation as compared to male students. However, Yu (1999) reported no significant gender difference in intrinsic goal orientation.

The analysis of mean score table 4.84 shows that female students (5.07) have scored higher on 'Rehearsal' dimension than male students (4.62). This indicates that female students are more focused in learning the content by practicing it again and again than male students. They use this strategy in order to memorize the simple tasks and to trigger their working memory. The above finding is in tune with the finding of Artelt et al. (2003), Bidjerano (2005), Bembenutty (2009) & Simsek and Balaban (2010) who found that female students surpassed male students in terms of their use of 'Rehearsal' strategies.

The analysis of mean score table 4.84 shows that female students (5.10) have scored higher on 'Elaboration' dimension than male students (4.70). This shows that as compared to male students, the female students make good use of elaboration strategies like paraphrasing, summarizing, making internal connections between the items to be learned and the previous knowledge. They pull the information together from various sources viz. notes, lecture, readings, tutorials and make connections between them. The present finding is in tune with the findings of Bidjerano (2005) & Simsek and Balaban (2010) who reported that female students surpassed male students in terms of their use of 'Elaboration' strategies. On the contrary, Artelt et al. (2003) reported that male students are most likely to use elaboration strategies than females.

The analysis of mean score table 4.84 shows that female students (5.06) have scored higher on the 'Organization' dimension than male students (4.67). This shows that in comparison to male students, female students put active, thoughtful and effortful endeavours in order to get involved in the task for better understanding. They strategically plan their learning and make good use of organization strategies like grouping, clustering, outlining and organizing the main points from the gathered

information and make good use of mind mapping technique. The present finding is in tune with the findings of Bidjerano (2005), Bembenutty (2009) & Simsek and Balaban (2010) who reported that female students surpassed male students in terms of their use of 'Organization' strategies.

The analysis of mean score table 4.84 shows that female students (4.96) have scored higher on 'Peer Learning' dimension than male students (4.33). This shows that female students are more active in working and learning with peers than male students. The female students generally discuss and debate in the group to clarify their doubts. Peer learning technique helps them to reach insights that they cannot be able to attain on their own. They often work with their friends in order to complete the tasks or assignment given by the teacher well on time. The present finding is not in consonance with the findings of Bidjerano (2005) & Ahmed and Khanam (2014) who reported no significant gender difference in peer learning.

The analysis of mean score table 4.84 shows that female students (42.90) have scored higher on the total score of 'Learning Strategies' than male students (40.17). This shows that female students tend to use a wide variety of learning strategies than male students. The female students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate with their peers for effective learning. The above finding goes in consonance with the findings of the previous researches that indicated female students scored remarkably high on learning strategies as compared to male students (Wolters, 1999; Niemivirta, 1997; Anderman and Young, 1994; Zimmerman and Martinez, 1990). In the same way, Dreyer and Oxford (1996), Green and Oxford (1995), Lan and Oxford (2003) & Lee and Oxford (2008) found that female students scored higher on the use of learning strategies for English language learning as compared to male students. On the contrary, Wharton (2000) reported that male students used more adaptive strategies

for foreign language learning as compared to female students, Ghazvini and Khajehpour (2011) reported that male students scored higher on use of learning strategies as compared to female students.

The analysis of mean score table 4.84 shows that female students (73.75) have scored higher on the total score of 'Self Regulated Learning Strategies' than male students (69.11). The result shows that self-regulated learning of female students was markedly higher than male students. This shows that female students have the ability to control their actions and responses, which is very much essential for progress in varied contexts. The female students are able to control their behaviour, emotions and cognition for the purpose of pursuing the goals. They set proximal achievable goals which are learning-oriented not performance-oriented. They know that different learning tasks require different learning strategies. They own a "Tool Kit" of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations. They possess a high level of academic self-efficacy and have the ability to control their performance. They observe the intermediate outcomes of their learning process. They precisely attribute the learning outcome to the causes of performance. The finding of the present study is consistent with the findings of the previous researches which reported that female students scored higher on using self-regulated learning strategies as compared to their male student counterparts (Al Khatib, 2010; Balaban, 2010; DiBenedetto and Bembenuddy, 2011; Chuy and Nitulescu, 2013; Banarjee and Kumar, 2014; Veloo et al., 2015). However, Peng (2001), Yukselturk and Bulut (2009) & Balam (2015) showed that male and female students do not differ significantly in regard to the use of motivated learning strategies.

DISCUSSION ON RESULTS

From the results, it has been found that female students are more self-regulated as compared to male students. They are proactive in their efforts to learn as they are aware of their strengths and limitations and directed by personally set goals and task-related strategies. They monitor their behaviour in terms of their set goals and self-reflect on their achieved effectiveness. If they perceive satisfactory goal progress then they feel competent in improving their skills and goal attainment.

High level of self-efficacy of the female students enables them to set new-fangled stimulating goals. They are more motivated to learn in a self-regulated process. They possess a “Tool Kit” of different learning strategies in order to deal with the academic challenges. They are motivated to use an appropriate learning strategy in an appropriate situation. Their proactive qualities and self-motivating abilities distinguish them from their peers. They voluntarily offer answers to questions in the classroom, seek out additional resources when needed to master the content. They are aware of their strengths and weaknesses and manipulate their learning environment in order to meet their needs.

Positive motivation and good learning strategies not only help the self-regulated learner to succeed academically but enable them to view their future optimistically. To add to this, female students show a high level of ‘Intrinsic Goal Orientation’ as compared to male students, this shows that female students believe in getting mastery over the content and set mastery-oriented goals. On the contrary, both male and female students show equal level of using ‘Critical Thinking’, ‘Metacognitive Self-Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Help-Seeking’ dimensions. This means that both male and female students think critically before accepting any conclusion and assertion taught in the classroom. They are capable of thinking about their learning more explicitly. They always plan, monitor, regulate and evaluate their learning. They always change their study style according to the requirement of the course and teaching style of the teacher. Both male and female students try to manage their time and study environment according to their needs and regulate their efforts in the phase of distraction in order to maintain their concentration and both are equally active for seeking help from knowledgeable others.

SUCCESSFULNESS

Table 4.85 shows that F- values for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’, ‘Test Anxiety’ dimensions and total score of ‘Motivation’ came out 3.78, 0.68, 0.08, 1.96, 3.05 and 0.24 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-value for ‘Task Value’ came out 5.05, which was significant at 0.05 level of confidence. This shows that

successful and unsuccessful students differ significantly on the score of 'Task Value'.

The F-values for 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, and total score of 'Self-Regulated Learning Strategies' came out 3.18, 3.69, 1.87, 2.86, 3.00, 2.47, 0.04, 2.81, 1.36 and 2.19 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-value for scores of 'Learning Strategies' came out 4.42, which is found to be significant at the 0.05 level of confidence. Thus, the Hypothesis (6), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Successfulness" for B.Sc. 6th semester is rejected for 'Task Value' and 'Learning Strategies'.

On reviewing the corresponding means in the table 4.84 shows that successful students (5.02) have scored higher on 'Task Value' dimension than unsuccessful students (4.56). This shows that successful students attach a high value to the importance and usefulness of learning the subject as compared to unsuccessful students. The present finding is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who reported that successful students give more value and importance to the task in hand than their unsuccessful counterparts.

The analysis of mean score table 4.84 shows that successful students (42.16) have scored higher on the total score of 'Learning Strategies' than unsuccessful students (40.27). This shows that successful students tend to use a wide variety of learning strategies than unsuccessful students. The successful students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate

with their peers for effective learning. The finding of the present study enjoys support from the findings of Paris and Myers (1981), Tait and Entwistle (1996), Cho and Ahn (2003), Yip (2007, 2009, 2012, 2013), Yip and Chung (2005) and Ahmed and Khanam (2014) and De Zoysa et al. (2014) who reported that successful students use more adaptive learning strategies both in variety and frequency.

INTERACTION EFFECT (GENDER* SUCCESSFULNESS)

Table 4.85 shows that F- values for the interaction between gender and successfulness on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation' came out 0.92, 1.63, 0.27, 0.33, 0.00, 0.68 and 0.93 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that subgroups as a result of interaction between gender and successfulness do not differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation'.

The F- values for the interaction between gender and successfulness on the scores of 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 0.06, 0.59, 0.39, 1.60, 0.02, 1.46, 1.09 and 1.16 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Time and Study Environment' and 'Effort Regulation' dimensions came out 4.24 and 5.71 respectively, which are found to be significant at 0.05 level of confidence. Thus, the hypothesis (7), "There is no significant interaction effect of gender and successfulness on the self-regulated learning strategies of higher education students" for B.Sc. 6th semester is rejected for 'Time and Study Environment' and 'Effort Regulation' dimensions.

To further analyze the significant difference between various groups as a result of interaction between gender and successfulness on 'Time and Study

Environment’ and ‘Effort Regulation’ dimensions, t-values for the various subgroups were calculated and the subgroups for which the t value is found to be significant are presented in table 4.86.

Table 4.86: Summary of ‘t’-values for the Subgroups in respect of ‘Effort Regulation’ Dimension of Learning Strategies for B.Sc 6th Semester

Group 1	Group 2	ER
Unsuccessful Females	Unsuccessful Males	2.14*

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

It is clear from table 4.86 that the t- value for the group unsuccessful females and unsuccessful males in ‘Effort Regulation’ dimension came out significant at 0.05 level of confidence. This shows that unsuccessful females and unsuccessful males differ significantly on the score of ‘Effort Regulation’. The analysis of mean score table 4.84 shows that unsuccessful female student (4.60) have scored higher on ‘Effort Regulation’ dimension than unsuccessful male students (3.63). This shows that unsuccessful female students never give up on complexities and try to regulate their efforts and attention in the phase of distraction. They are more committed to accomplishing tasks than unsuccessful male students.

4.8.7 Summary of 2×2 Analysis of Variance on Scores of Self-Regulated Learning Strategies of BBA 2nd Semester

To study the self-regulated learning strategies of BBA 2nd semester with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies and presented in the table 4.87. For analyzing the variance of various dimensions and total score of self-regulated learning strategies of BBA 2nd semester with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented in table 4.88.

Table 4.87: Means and SDS of Sub-groups of ANOVA for 2×2 Design of Various Dimensions of Self-regulated Learning Strategies with respect to Gender and Successfulness of BBA 2nd Semester

Gender	Female			Male			Total			Female			Male			Total		
	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimensions	IGO									EGO								
M	4.78	5.71	5.35	5.06	4.74	4.88	4.96	5.11	5.05	5.37	5.56	5.48	4.89	4.58	4.72	5.06	4.95	5
σ	1.64	1.07	1.37	1.09	1.39	1.27	1.28	1.35	1.31	1.28	0.95	1.07	1.15	1.29	1.23	1.19	1.25	1.22
N	9	14	23	17	23	40	26	37	63	9	14	23	17	23	40	26	37	63
Dimensions	TV									CLB								
M	4.7	5.61	5.25	4.97	4.92	4.94	4.87	5.18	5.05	4.88	5.15	5.04	4.77	4.91	4.85	4.81	5	4.92
σ	1.55	0.93	1.26	0.96	1.13	1.05	1.17	1.1	1.13	1.1	1.27	1.19	1.28	1.11	1.17	1.2	1.16	1.17
Dimensions	SELP									TA								
M	4.98	5.58	5.34	4.85	4.71	4.77	4.9	5.04	4.98	4.29	4.83	4.62	4.64	4.52	4.57	4.52	4.64	4.59
σ	1.32	0.77	1.04	0.79	1.14	0.99	0.98	1.09	1.04	1.66	0.84	1.22	1.05	1.12	1.08	1.27	1.02	1.12
Dimensions	Motivation									REH								
M	28.98	32.15	30.91	29.08	28.2	28.57	29.05	29.69	29.43	5.17	5.46	5.35	4.89	4.77	4.83	4.99	5.04	5.02
σ	5.45	4.19	4.87	4.26	5.31	4.85	4.6	5.23	4.95	1.62	0.72	1.13	1.06	1.23	1.15	1.25	1.11	1.16

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
Successfulness	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimensions	ELAB									ORG								
M	5.06	5.48	5.31	4.8	4.75	4.77	4.89	5.03	4.97	5.26	5.66	5.5	4.85	4.81	4.83	4.99	5.13	5.08
σ	1.87	1.35	1.55	1.18	1.04	1.09	1.42	1.2	1.29	1.49	1.26	1.33	1.03	1.24	1.14	1.19	1.3	1.25
Dimensions	CT									MSR								
M	5.07	5.49	5.32	4.85	4.52	4.66	4.92	4.89	4.9	4.62	4.98	4.84	4.34	4.59	4.49	4.44	4.74	4.61
σ	1.79	0.82	1.26	1.22	1.25	1.23	1.41	1.19	1.27	0.84	0.69	0.75	0.87	0.85	0.85	0.85	0.8	0.83
Dimensions	TSE									ER								
M	4.72	4.61	4.65	4.17	4.26	4.22	4.36	4.39	4.38	4.57	4.08	4.27	3.99	4.19	4.1	4.19	4.15	4.16
σ	0.63	0.73	0.68	0.82	0.8	0.8	0.79	0.79	0.78	0.85	1	0.96	0.7	0.83	0.77	0.79	0.88	0.84
Dimensions	PL									HS								
M	5.31	5.38	5.35	4.65	4.56	4.6	4.88	4.87	4.88	4.67	4.93	4.83	4.41	4.65	4.55	4.5	4.76	4.65
σ	1.76	1.21	1.41	1.25	1.34	1.29	1.45	1.34	1.37	1.12	1.07	1.07	0.62	0.94	0.82	0.81	0.98	0.92
Dimensions	Learning Strategies									Self Regulated Learning Strategies								
M	44.1	45.87	45.18	40.75	40.87	40.82	41.91	42.76	42.41	73.11	77.93	76.04	69.88	69.09	69.43	71	72.43	71.84
σ	10.24	5.63	7.59	6.13	6.97	6.54	7.76	6.87	7.2	15.05	9.71	11.99	8.82	11.16	10.11	11.17	11.36	11.21

Table 4.88: Summary of 2×2 ANOVA Design of Various Dimensions of Self-regulated Learning Strategies with respect to Gender and Successfulness of BBA 2nd Semester Students

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender																	
SS	1.69	7.35	0.63	0.43	3.44	0.01	51.98	3.26	3.39	5.46	4.92	1.57	2.86	0.78	7.65	0.99	244.51	511.49
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	1.69	7.35	0.63	0.43	3.44	0.01	51.98	3.26	3.39	5.46	4.92	1.57	2.86	0.78	7.65	0.99	244.51	511.49
F	1.02	5.26*	0.51	0.3	3.38	0	2.23	2.44	2.04	3.62	3.15	2.34	4.81*	1.1	4.15*	1.16	4.94*	4.3*
Sig.	0.32	0.03	0.48	0.59	0.07	0.95	0.14	0.12	0.16	0.06	0.08	0.13	0.03	0.3	0.05	0.29	0.03	0.04
Source	Successfulness																	
SS	1.34	0.05	2.6	0.59	0.75	0.64	18.3	0.11	0.49	0.46	0.03	1.29	0	0.29	0	0.89	12.62	56.79
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	1.34	0.05	2.6	0.59	0.75	0.64	18.3	0.11	0.49	0.46	0.03	1.29	0	0.29	0	0.89	12.62	56.79
F	0.81	0.04	2.1	0.42	0.73	0.49	0.79	0.08	0.3	0.31	0.02	1.92	0.01	0.42	0	1.04	0.26	0.48
Sig.	0.37	0.85	0.15	0.52	0.4	0.49	0.38	0.78	0.59	0.58	0.89	0.17	0.94	0.52	0.97	0.31	0.62	0.49

Contd. ...

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender * Successfulness																	
SS	5.54	0.89	3.2	0.06	1.93	1.5	57.65	0.61	0.78	0.68	1.95	0.04	0.14	1.66	0.09	0	9.57	110.6
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	5.54	0.89	3.2	0.06	1.93	1.5	57.65	0.61	0.78	0.68	1.95	0.04	0.14	1.66	0.09	0	9.57	110.6
F	3.34	0.63	2.58	0.05	1.89	1.16	2.47	0.46	0.47	0.45	1.24	0.06	0.24	2.34	0.05	0	0.19	0.93
Sig.	0.07	0.43	0.11	0.83	0.17	0.29	0.12	0.5	0.5	0.5	0.27	0.81	0.63	0.13	0.83	0.97	0.66	0.34
Source	Error																	
SS	97.79	82.46	73.06	83.66	60.09	76.4	1376.48	78.77	97.94	88.91	92.24	39.62	35.08	41.71	108.73	50.26	2920.31	7019.41
df	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
MSS	1.66	1.4	1.24	1.42	1.02	1.3	23.33	1.34	1.66	1.51	1.56	0.67	0.6	0.71	1.84	0.85	49.5	118.97

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

MAIN EFFECTS

GENDER

It is clear from the table 4.88 that F- values for 'Intrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation' came out 1.02, 0.51, 0.30, 3.38, 0.00 and 2.23 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Extrinsic Goal Orientation' came out 5.26, which is found to be significant at 0.05 level of confidence. This shows that male and female students differ significantly on the score of 'Extrinsic Goal Orientation' dimension.

The F-values for 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Effort Regulation', 'Help-Seeking' came out 2.44, 2.04, 3.62, 3.15, 2.34, 1.10 and 1.16 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Time and Study Environment', 'Peer Learning' dimensions and scores of 'Learning Strategies', scores of 'Self Regulated Learning Strategies' came out 4.81, 4.15, 4.94, 4.30 respectively, which are found to be significant at 0.05 level of confidence. Thus, the Hypothesis (5), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Gender" for BBA 2nd semester is rejected for 'Extrinsic Goal Orientation', 'Time and Study Environment', 'Peer Learning' dimensions and scores of 'Learning Strategies', scores of 'Self Regulated Learning Strategies'.

The analysis of mean score table 4.87 shows that female students (5.48) have scored higher on 'Extrinsic Goal Orientation' dimension than male students (4.72). This shows that female students are more concerned about their performance in relation to the other students in the class. Their main focus is on getting good grades in order to prove their position in the class. They want to seek out rewards or approval from the peers, teachers or parents and possess a higher level of performance-approach orientation as compared to the male students.

The analysis of mean score table 4.87 shows that female students (4.65) have scored higher on 'Time and Study Environment' dimension than male students (4.22). This shows that the female students are a good manager of their time and are capable to structure their environment for optimal learning more than male students. They always schedule, plan and manage their study time and very much particular in following the work schedule made by them. They always keep a particular place for the study, where they can be able to concentrate on reading and studying. The above finding is in tune with the findings of Bidjerano (2005), Ghazvini and Khajehpour (2011) & Marrs and Sigler (2012) who reported that female students scored more on managing their time than male students. But Ahmed and Khanam (2014) found no significant gender difference in the use of 'Time and Study Environment' strategy.

The analysis of mean score table 4.87 shows that female students (5.35) have scored higher on 'Peer Learning' dimension than male students (4.6). This shows that female students are more active in working and learning with peers than male students. The female students generally discuss and debate in the group to clarify their doubts. Peer learning technique helps them to reach insights that they can not be able to attain on their own. They often work with their friends in order to complete the tasks or assignment given by the teacher well on time. The finding of the present study is not consistent with the finding of Bidjerano (2005) & Ahmed and Khanam (2014) who reported no significant gender difference in peer learning.

The analysis of mean score table 4.87 shows that female students (45.18) have scored higher on the total score of 'Learning Strategies' than male students (40.82). This shows that female students tend to use a wide variety of learning strategies than male students. The female students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate with their peers for

effective learning. The finding of the present study goes in consonance with the findings of the previous researches (Wolters, 1999; Niemivirta, 1997; Anderman and Young, 1994; Zimmerman and Martinez, 1990; Oxford, 1996; Green and Oxford, 1995; Lan and Oxford, 2003 & Lee and Oxford, 2008). On the contrary, Wharton (2000) & Ghazvini and Khajehpour (2011) reported that male students use more adaptive learning strategies than female students.

The analysis of mean score table 4.87 shows that female students (45.18) have scored higher on the total score of 'Self Regulated Learning Strategies' than male students (40.82). The result shows that self-regulated learning of female students was markedly higher than male students. This shows that female students have the ability to control their actions and responses, which is very much essential for progress in varied contexts. The female students are able to control their behaviour, emotions and cognition for the purpose of pursuing the goals. They set proximal achievable goals which are learning-oriented not performance-oriented. They know that different learning tasks require different learning strategies. They own a "Tool Kit" of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations. They possess a high level of academic self-efficacy and have the ability to control their performance. They observe the intermediate outcomes of their learning process. They precisely attribute the learning outcome to the causes of performance. The finding of the present study is consistent with the findings of previous researches that have reported that female students are more self-regulated learners as compared to their male student counterparts (Al Khatib, 2010; Balaban, 2010; DiBenedetto and Bembenuddy, 2011; Chuy and Nitulescu, 2013; Balam & Platt, 2014; Banarjee and Kumar, 2014; Veloo et al., 2015). But Peng (2001), Yukselturk and Bulut (2009) & Balam (2015) showed that male and female students do not differ significantly in regard to the use of self-regulated learning strategies.

DISCUSSION ON RESULTS

From the results, it has been found that female students are more self-regulated as compared to male students. Female students keep themselves focused

on self-improvement and exhibit a high sense of achievement. They are proactive in their efforts to learn as they are aware of their strengths and weaknesses. They monitor their behaviour in terms of their set goals and self-reflect on their achieved effectiveness. They show a high-level self-efficacy, which enables them to set new-fangled stimulating goals. They are motivated to learn through the self-regulated process and use appropriate learning strategies in appropriate situations. They actively engage in the teaching-learning process in the classroom and voluntarily offer answers to questions. They seek out additional resources when needed to master the content. They are aware of their strengths and limitations and manipulate their learning environment in order to meet their needs. The females in comparison to males are optimistic about their future and work systematically to achieve their goals.

On the other side, it has been found that both male and female students use 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self-Regulation', 'Effort Regulation' and 'Help-Seeking' strategies for regulating their learning process. Both give importance to memorize the simple tasks, make good use of elaboration strategies like paraphrasing and summarizing in order to make internal connections between new knowledge and previous knowledge. They pull the information together from various sources viz. notes, lecture, readings, tutorials and make connections between them. They often question themselves before getting convinced about the idea taught in the class and try to find good supporting pieces of evidence in order to accept any conclusion and assertion. They always play around with their ideas in order to develop a convincing explanation of the content. They plan, monitor and regulate their learning and have the ability to control their efforts and attention in the phase of distraction and monotonous tasks and show their commitment in accomplishing their tasks. They never give up on complexities rather they manage their efforts and attention in order to overcome the interruptions. Additionally, they believe in seeking help from knowledgeable others in order to clarify their doubts.

SUCCESSFULNESS

Table 4.88 shows that F- values for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’, ‘Test Anxiety’ dimensions and total score of ‘Motivation’ came out 0.81, 0.04, 2.10, 0.42, 0.73, 0.49 and 0.79 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows successful and unsuccessful students do not differ significantly on the scores of ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’, ‘Test Anxiety’ dimensions and total score of ‘Motivation’.

Table 4.88 shows F- values for ‘Rehearsal’, ‘Elaboration’, ‘Organisation’, ‘Critical Thinking’, ‘Metacognitive Self -Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’ dimensions, total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’ came out 0.08, 0.30, 0.31, 0.02, 1.92, 0.01, 0.42, 0.00, 1.04, 0.26 and 0.48 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that male and female students do not differ significantly on the scores of ‘Rehearsal’, ‘Elaboration’, ‘Organisation’, ‘Critical Thinking’, ‘Metacognitive Self -Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’ dimensions, total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’. Thus, the Hypothesis (6), “There is no significant difference in self-regulated learning strategies of higher education students with respect to Successfulness” for BBA 2nd semester is not rejected.

INTERACTION EFFECT (GENDER* SUCCESSFULNESS)

Table 4.88 shows that F- values for the interaction between gender and successfulness on the scores of ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’, ‘Test Anxiety’ dimensions and total score of ‘Motivation’ came out 3.34, 0.63, 2.58, 0.05, 1.89, 1.16, 2.47 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that

subgroups as a result of interaction between gender and successfulness do not differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation'.

The F-values for the interaction between gender and successfulness on the scores of 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, scores of 'Learning Strategies' and scores of 'Self Regulated Learning Strategies' came out 0.46, 0.47, 0.45, 1.24, 0.06, 0.24, 2.34, 0.05, 0.00, 0.19 and 0.93 respectively, which are not found to be significant at 0.05 level of confidence. This shows that subgroups as a result of interaction between gender and successfulness do not differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self-Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'. Thus, the hypothesis (7), "There is no significant interaction effect of gender and successfulness on the self-regulated learning strategies of higher education students" for BBA 2nd semester is not rejected.

4.8.8 Summary of 2×2 Analysis of Variance on Scores of Self-Regulated Learning Strategies of BBA 4th Semester

To study the self-regulated learning strategies of BBA 4th semester with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies and presented in the table 4.89. For analyzing the variance of various dimensions and total score of self-regulated learning strategies of BBA 4th semester with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented in table 4.90.

Table 4.89: Means and SDs of Sub-Groups of ANOVA for 2×2 Design of Various Dimensions of Self-regulated Learning Strategies with respect to Gender and Successfulness of BBA 4th Semester

Gender	Female			Male			Total			Female			Male			Total		
	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimensions	IGO									EGO								
M	5	5.39	5.23	4	5.5	5	4.63	5.44	5.14	5.12	5.37	5.27	3.41	5.71	4.95	4.49	5.52	5.14
σ	1.13	1.38	1.28	1.83	0.94	1.45	1.46	1.19	1.34	0.98	0.89	0.92	0.51	0.84	1.33	1.18	0.87	1.11
N	12	18	30	7	14	21	19	32	51	12	18	30	7	14	21	19	32	51
Dimensions	TV									CLB								
M	5.13	5.02	5.06	2.39	5.42	4.41	4.12	5.19	4.79	5.15	4.97	5.04	3.94	5.51	4.99	4.71	5.21	5.02
σ	1.38	1.27	1.29	0.79	0.79	1.66	1.79	1.09	1.47	1.15	1.16	1.14	0.78	0.82	1.09	1.17	1.05	1.11
Dimensions	SELP									TA								
M	4.88	5.24	5.1	3.2	5.11	4.48	4.26	5.18	4.84	4.25	4.21	4.23	3.8	4.53	4.29	4.08	4.35	4.25
σ	0.83	1.05	0.97	1.4	0.57	1.29	1.33	0.86	1.14	1.1	1.35	1.24	1.71	1.03	1.3	1.33	1.21	1.25
Dimensions	Motivation									REH								
M	29.44	30	29.78	20.5	31.59	27.9	26.15	30.7	29	4.78	5.07	4.95	2.59	4.89	4.12	3.97	4.99	4.61
σ	4.97	5.19	5.02	3.61	2.37	6.02	6.25	4.21	5.48	1.35	1.09	1.19	1.39	0.73	1.47	1.71	0.94	1.36

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
Successfulness	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimensions	ELAB									ORG								
M	4.53	5.24	4.96	3.56	4.84	4.41	4.17	5.07	4.74	4.85	5.52	5.25	3.23	5.2	4.54	4.25	5.38	4.96
σ	1.59	1.25	1.41	1.34	0.77	1.14	1.54	1.07	1.33	1.39	1.2	1.3	1.22	0.77	1.32	1.52	1.03	1.34
Dimensions	CT									MSR								
M	4.58	5	4.83	2.89	4.89	4.22	3.96	4.95	4.58	4.44	4.79	4.65	3.73	4.49	4.24	4.18	4.66	4.48
σ	1.41	0.95	1.15	1.92	0.7	1.54	1.77	0.84	1.34	0.91	0.86	0.88	1.05	0.65	0.86	1	0.78	0.89
Dimensions	TSE									ER								
M	4.12	4.31	4.23	3.09	4.49	4.02	3.74	4.38	4.14	3.98	4.51	4.3	3.66	4.26	4.06	3.86	4.4	4.2
σ	0.94	0.59	0.74	0.92	0.56	0.96	1.04	0.57	0.83	0.58	0.87	0.8	0.77	0.81	0.83	0.66	0.84	0.81
Dimensions	PL									HS								
M	4.18	4.68	4.48	2.99	4.69	4.12	3.74	4.69	4.33	5.25	4.5	4.8	3.57	4.93	4.48	4.63	4.69	4.67
σ	1.45	1.6	1.54	1.01	1.08	1.32	1.4	1.38	1.45	1.49	0.79	1.16	0.54	0.62	0.87	1.46	0.74	1.05
Dimensions	Learning Strategies									Self Regulated Learning Strategies								
M	40.43	43.44	42.24	29.24	42.54	38.11	36.31	43.05	40.54	69.75	73.39	71.93	49.86	74.14	66.05	62.42	73.72	69.51
σ	9.15	6.88	7.86	4.5	3.95	7.58	9.41	5.72	7.94	13.79	11.49	12.36	7.18	4.35	12.86	15.18	8.97	12.78

Table 4.90: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Self-regulated Learning Strategies in relation to Gender and Successfulness of BBA 4th Semester Students

DV	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender																	
SS	2.24	5.24	15.43	1.25	9.26	0.05	152.67	15.81	5.38	10.64	9.3	2.92	2.05	0.95	3.94	4.42	413.3	1037.16
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	2.24	5.24	15.43	1.25	9.26	0.05	152.67	15.81	5.38	10.64	9.3	2.92	2.05	0.95	3.94	4.42	413.3	1037.16
F	1.35	7.08**	12.01**	1.18	10.3**	0.03	8.15**	12.64**	3.47	8**	6.68**	4.06	3.9*	1.57	2.11	5.02*	9.48**	9.97**
Sig.	0.25	0.01	0.00	0.28	0.00	0.86	0.01	0.00	0.07	0.01	0.01	0.05	0.05	0.22	0.15	0.03	0.00	0.00
Source	Successfulness																	
SS	10.1	18.49	24.26	5.5	14.59	1.35	384.34	19.12	11.29	19.71	16.54	3.53	7.15	3.6	13.9	1.04	753.3	2207.93
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	10.1	18.49	24.26	5.5	14.59	1.35	384.34	19.12	11.29	19.71	16.54	3.53	7.15	3.6	13.9	1.04	753.3	2207.93
F	6.11*	24.98**	18.88**	5.19*	16.23**	0.84	20.52**	15.29**	7.28	14.83**	11.88**	4.92*	13.6**	5.92*	7.42**	1.19	17.27**	21.23**
Sig.	0.02	0.00	0.00	0.03	0.00	0.37	0.00	0.00	0.01	0.00	0.00	0.03	0.00	0.02	0.01	0.28	0.00	0.00

DV	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender * Successfulness																	
SS	3.5	11.84	27.99	8.66	6.88	1.67	313.66	11.5	0.94	4.82	7.1	0.48	4.15	0.02	4.07	12.57	299.5	1207.03
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	3.5	11.84	27.99	8.66	6.88	1.67	313.66	11.5	0.94	4.82	7.1	0.48	4.15	0.02	4.07	12.57	299.5	1207.03
F	2.11	15.98**	21.78**	8.17**	7.66**	1.03	16.75**	9.2**	0.6	3.63	5.1*	0.67	7.9**	0.02	2.17	14.28**	6.87**	11.61**
Sig.	0.15	0.01	0.01	0.01	0.01	0.31	0.01	0.01	0.44	0.06	0.03	0.42	0.01	0.88	0.15	0.01	0.01	0.01
Source	Error																	
SS	77.78	34.8	60.4	49.82	42.24	75.78	880.17	58.78	72.88	62.47	65.44	33.72	24.71	28.61	88.01	41.39	2049.95	4887.1
df	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
MSS	1.66	0.74	1.29	1.06	0.9	1.61	18.73	1.25	1.55	1.33	1.39	0.72	0.53	0.61	1.87	0.88	43.62	103.98

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

MAIN EFFECTS

GENDER

It is clear from the table 4.90 that F- values for 'Intrinsic Goal Orientation', 'Control of Learning Beliefs' and 'Test Anxiety' came out 1.35, 1.18, 0.03 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-values for 'Extrinsic Goal Orientation', 'Task Value', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation' came out 7.08, 12.01, 10.30, 8.15 respectively, which are found to be significant either at 0.01 or at 0.05 level of confidence. This shows that male and female students differ significantly on the scores of 'Extrinsic Goal Orientation', 'Task Value', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation'.

The F- values for 'Elaboration', 'Effort Regulation' and 'Peer Learning' came out 3.47, 1.57 and 2.11 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Rehearsal', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Help-Seeking' dimensions and scores of 'Learning Strategies', scores of 'Self Regulated Learning Strategies' came out 12.64, 8, 6.68, 4.06, 3.90, 5.02, 9.48 and 9.97 respectively, which are found to be significant either at 0.01 or at 0.05 level of confidence. This shows that male and female students differ significantly on the scores of 'Rehearsal', 'Organisation', 'Critical Thinking', 'Metacognitive Self-Regulation', 'Time and Study Environment', 'Help-Seeking' dimensions and scores of 'Learning Strategies', scores of 'Self Regulated Learning Strategies'. Thus, the Hypothesis (5), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Gender" for BBA 4th semester is not rejected for 'Extrinsic Goal Orientation', 'Task Value', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation', 'Rehearsal', 'Organisation', 'Critical Thinking', 'Metacognitive Self-Regulation', 'Time and Study Environment', 'Help-Seeking' dimensions and scores of 'Learning Strategies', scores of 'Self Regulated Learning Strategies'.

The analysis of mean score table 4.89 reveals that female students (5.27) have scored higher on 'Extrinsic Goal Orientation' dimension than male students (4.95). This shows that female students are more concerned about their performance in relation to the other students in the class. Their main focus is on getting good grades in order to prove their position in the class. They want to seek out rewards or approval from the peers, teachers or parents and possess a higher level of performance-approach orientation as compared to the male students. This result is in contradiction to the previous findings of Garcia (1993) & Anderman and Anderman (1999) who reported that male students have a high level of extrinsic motivational orientation as compared to girls.

The analysis of mean score table 4.89 reveals that female students (5.06) have scored higher on the 'Task Value' dimension than male students (4.41). This shows that female students attach a high value to the importance and usefulness of learning the subject. This value makes the female students dedicated and committed to accomplishing the targets. The results of the present study are consistent with the results of Al-Harthy & Aldhafri (2014) who explored that female students surpassed male students in task value.

The analysis of mean score table 4.89 reveals that female students (5.1) have scored higher on 'Self-Efficacy for Learning and Performance' dimension than male students (4.48). This shows that female students possess a high sense of self-efficacy for learning and performance than male students. The female students appraise their capability and confidence to perform a task, they have a firm belief that they are capable to master the situation and can produce desired outcomes. Due to the high level of self-efficacy for learning, they choose challenging learning tasks and therefore expend more persistence and efforts in order to get higher achievement outcomes. Their self-efficacy beliefs become instrumental to the goals and to the control over their environment. They show more resilience in the phase of adverse situations as compared to their male student counterparts. The above finding is in tune with the findings of Mills et al. (2007), Chyung (2007) and Britner (2008) who asserted that girls have a significantly higher level of self-efficacy as compared to male students. On the contrary, Pintrich and De Groot (1990), Yu (1999), Meece et al. (2006), Pajares (2002), Glynn et al. (2009), Lynch and Trujillo (2011) & Al-

Harthy and Aldhafri (2014) reported that male students scored significantly higher on self-efficacy for learning as compared to the female students.

The analysis of mean score table 4.89 reveals that female students (29.78) have scored higher on the total score of 'Motivation' than male students (27.9). This shows that female students are more motivated to regulate their learning process. They have a high sense of control over learning, self-efficacy and value of the learning task. They are more dynamic and ambitious by virtue motivation. They take the initiative to perform challenging tasks and have a high level of aspiration to succeed. The results of the present study enjoy the support from the results of Maria and Pedro (2004), Ghazvini and Khajehpour (2011), Simsek and Balaban (2010) & Marrs and Sigler (2012) who found that female students scored remarkably high on the dimension of motivation as compared to their male student counterparts. Likewise, Gardner (2006), Carreira (2011) and Javid et al. (2012) showed that girls showed a high level of motivation in language learning as compared to boys. On the contrary, Obrentz (2012) found that male students scored higher on motivation score as compared to female students. But, Glynn et al. (2007, 2009), Banarjee and Kumar (2014), Yukselturk and Bulut (2009) & Balam, (2015) showed no significant difference between male and female students with respect to their motivation.

The analysis of mean score table 4.89 reveals that female students (4.95) have scored higher on 'Rehearsal' dimension than male students (4.12). This indicates that female students are more focused on learning the content by practising it than male students. They use this strategy in order to memorize the simple tasks and to trigger their working memory. The above finding is in tune with the finding of Artelt et al. (2003), Bidjerano (2005), Bembenutty (2009) & Simsek and Balaban (2010) who found that female students surpassed male students in terms of their use of 'Rehearsal' strategies.

The analysis of mean score table 4.89 reveals that female students (5.25) have scored higher on the 'Organization' dimension than male students (4.54). This shows that female students put active, thoughtful and effortful endeavours in order to get involved in the task for better understanding. They strategically plan to learn and make good use of organization strategies like grouping, clustering, outlining and

organizing the main points from the gathered information, they often make good use of mind mapping technique as compared to male students. The finding of the present study is in tune with the findings of Bidjerano (2005), Bembenutty (2009) & Simsek and Balaban (2010) who reported that female students surpassed male students in terms of their use of 'Organization' strategies.

The analysis of mean score table 4.89 reveals that female students (4.83) have scored higher on the 'Critical Thinking' dimension than male students (4.22). The female students question themselves before getting convinced about the idea taught in the class and try to find good supporting shreds of evidence in order to accept any conclusion and assertion. They always play around with their ideas in order to develop a convincing explanation of the content. But Bidjerano (2005) found no significant gender difference with respect to 'Critical Thinking'.

The analysis of mean score table 4.89 reveals that female students (4.65) have scored higher on 'Metacognitive Self -Regulation' dimension than male students (4.24). The female students are capable of thinking about their learning more explicitly. They always plan, monitor, regulate and evaluate their learning. They set their goals and choose appropriate learning strategies to attain goals and evaluate one's progress. They strive to come up with better ways of learning. They try to change their study style according to the requirement of the course and teaching style of the teacher. The above finding is in tune with the findings of Bidjerano (2005), Simsek and Balaban (2010) & Chuy and Nitulescu (2013) who found that female students reported higher on metacognitive self-regulation than male students. On the contrary, Bembenutty (2007) & Tang and Neber (2008) reported no significant gender difference in metacognitive self-regulation.

The analysis of mean score table 4.89 reveals that female students (4.23) have scored higher on 'Time and Study Environment' dimension than male students (4.02). This shows that the female students are a good manager of their time and are capable to structure their environment for optimal learning more than male students. They always schedule, plan and manage their study time and very much particular in following the work schedule made by them. They always keep a particular place for the study, where they can be able to concentrate on reading and studying. The above

finding is in tune with the finding of Bidjerano (2005) Ghazvini and Khajehpour (2011) & Marrs and Sigler (2012). But Ahmed and Khanam (2014) found no significant gender difference in 'Time and study environment' management skills.

The analysis of mean score table 4.89 reveals that female students (4.8) have scored higher on the 'Help-Seeking' dimension than male students (4.48). This shows that female students often seek assistance from friends and teachers in order to clarify their doubts. Researches have shown that peer help, peer tutoring, and individual teacher assistance facilitate student achievement. The results are in consonance with the results of Ablard and Lip Schultz (1998), Peklaj and Pecjak (2002) & Virtanen and Nevgi (2010). But Ahmed and Khanam (2014) found no significant gender difference in 'Help-Seeking'.

The analysis of mean score table 4.89 reveals that female students (42.24) have scored higher on the total score of 'Learning Strategies' than male students (38.11). This shows that female students tend to use a wide variety of learning strategies than male students. The female students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate with their peers for effective learning. The above finding goes in consonance with the results of the previous researches that indicated female students scored remarkably high on learning strategies as compared to male students (Wolters, 1999; Niemivirta, 1997; Anderman and Young, 1994; Zimmerman and Martinez, 1990). In the same way, Dreyer and Oxford (1996), Green and Oxford (1995), Lan and Oxford (2003) & Lee and Oxford (2008) found that female students outperformed male students in using Learning Strategies for English language learning. On the contrary, Wharton (2000) reported that male students use more adaptive strategies for foreign language learning. Likewise, Ghazvini and Khajehpour (2011) reported that male students outperformed female students in the use of learning strategies.

The analysis of mean score table 4.89 reveals that female students (42.24) have scored higher on the total score of 'Self Regulated Learning Strategies' than male students (38.11). The result shows that self-regulated learning of female students was markedly higher than male students. This shows that female students have the ability to control their actions and responses, which is very much essential for progress in varied contexts. The female students are able to control their behaviour, emotions and cognition for the purpose of pursuing the goals. They set proximal achievable goals which are learning-oriented not performance-oriented. They know that different learning tasks require different learning strategies. They own a "Tool Kit" of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations. They possess a high level of academic self-efficacy and have the ability to control their performance. They observe the intermediate outcomes of their learning process. They precisely attribute the learning outcome to the causes of performance. The above finding is consistent with the results of the previous researches, which reported that female students scored higher on using self-regulated learning strategies as compared to their male student counterparts (Al Khatib, 2010; Balaban, 2010; DiBenedetto and Bembenuddy, 2011; Chuy and Nitulescu, 2013; Balam & Platt, 2014; Banarjee and Kumar, 2014; Veloo et al., 2015). But, Peng (2001), Yukselturk and Bulut (2009) & Balam (2015) showed that male and female students did not differ significantly in regard to the use of motivated learning strategies.

DISCUSSION ON RESULTS

From the results, it has been revealed that both male and female students do not differ on 'Intrinsic Goal Orientation', 'Control of Learning Beliefs' and 'Test Anxiety'. This shows that both male and female students set mastery-oriented goals, show firm belief on their efforts and do not show stress, tension, worry, fear of failure and somatic symptoms such as nausea, upset feeling, fastening of a heartbeat before or during the exam. On the other side, the motivation of female students is inclined to get mastery over the content so, female students set mastery-oriented goals, high level of internal goal orientation help them to invest a great deal of time in using deep processing strategies like planning, organising and monitoring, along

with internal motivation they are also externally motivated in order to get approval or recognition from others, they show highly competitive behaviour as they want to prove their unique existence in the classroom and set performance-oriented goals for them. Further, findings have proved that female students give more importance to the task in hand, along with it they hold an optimistic approach of getting success and have a firm belief in their efforts. They judge their capabilities and confidence for performing a task. Consequently, it is confirmed that female students have high motivational beliefs which affect their willingness to approach a task, devote sufficient time and energy to successfully complete that task. A specific goal orientation directs the behaviour of the person while, task value stimulates the strength or intensity of the behaviour (Garcia and Pintrich, 1994; Schunk and Zimmerman, 1994). The high level of motivation is associated with the more frequent and judicious use of learning strategies in order to regulate the learning process.

From the results, it has been found that female students are more self-regulated as compared to male students. They are proactive in their efforts to learn as they are aware of their strengths and limitations and directed by personally set goals and task-related strategies. They monitor their behaviour in terms of their set goals and self-reflect on their achieved effectiveness. If they perceive satisfactory goal progress, they feel competent in improving their skills and goal attainment. High self-efficacy of the learners enables them to set new-fangled stimulating goals. They are motivated to learn through the self-regulated process and use a variety of learning strategies and understand the value of using these strategies in appropriate situations. The better self-regulated learning strategies among females help them to be proactive and self-motivating in comparison to their male counterparts. Females self-regulated learners voluntarily offer answers to questions in the classroom, seek out additional resources when needed to master the content, they are aware of their strengths and limitations and manipulate their learning environment in order to meet their needs. Females in comparison to males are optimistic about their future and work systematically to achieve the goals.

On the other side, it has been found that male and female students do not differ significantly on the scores of 'Elaboration', 'Effort Regulation' and 'Peer

Learning'. It can be comprehended that both male and female students use elaboration strategies like paraphrasing, summarising, making internal connections between the items to be learned and new knowledge with the previous knowledge, have the ability to control their effort and attention in the phase of distraction and monotonous tasks and show their commitment to accomplishing tasks, they never give up on complexities rather they manage their efforts and attention in order to overcome the interruptions and prefer to learn in peer group. Researches have shown that peer help, peer tutoring, and individual teacher assistance facilitate student achievement.

SUCCESSFULNESS

Table 4.90 shows that F-value for 'Test Anxiety' dimension came out 0.84. which was significant at 0.05 level of confidence. However, F- values for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation' came out 6.11, 24.98, 18.88, 5.19, 16.23 and 20.52 respectively, which are found to be significant either at 0.01 or at 0.05 level of confidence. This shows that male and female students differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation'.

Table 4.90 showed that F-value for 'Help-Seeking' dimension came out 1.19, which is not found to be significant even at the 0.05 level of confidence. However, F-values for 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 15.29, 7.28, 14.83, 11.88, 4.92, 13.60, 5.92, 7.42, 17.27 and 21.23 respectively, which are found to be significant at either at 0.01 or at 0.05 level of confidence. This shows that male and female students differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning' dimensions, total score of

‘Learning Strategies’ and ‘Self Regulated Learning Strategies’. Thus, the Hypothesis (6), “There is no significant difference in self-regulated learning strategies of higher education students with respect to Successfulness” for BBA 4th semester is rejected for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’ dimensions and total score of ‘Motivation’, ‘Rehearsal’, ‘Elaboration’, ‘Organization’, ‘Critical Thinking’, ‘Metacognitive Self-Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’ dimensions, total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’ dimensions.

The analysis of mean score table 4.89 reveals that successful students (5.44) have scored higher on ‘Intrinsic Goal Orientation’ dimension than unsuccessful students (4.63). This shows that successful students are more focused on learning and improvement than unsuccessful students. They strive to master the task and possess a deep level of understanding of the content. They are curious to seek out challenging study tasks and more importantly they view their success or failure as a source of feedback for improving future performance. The successful students have a higher level of learning goal orientation as compared to their unsuccessful student counterparts. The successful students spend a great deal of time in understanding the logic behind the concept and this adds to their pride, self-satisfaction with the success. The finding of the present study is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who reported that successful students scored higher on ‘Intrinsic Goal Orientation’ than their unsuccessful counterparts.

The analysis of mean score table 4.89 reveals that successful students (5.52) have scored higher on ‘Extrinsic Goal Orientation’ dimension than unsuccessful students (4.49). This shows that successful students are more concerned about their performance in relation to the other students in the class. Their main focus is on getting good grades in order to prove their position in the class. They want to seek out rewards or approval from the peers, teachers or parents and possess a higher level of performance-approach orientation as compared to the unsuccessful students. The above finding is in contrast with the finding of Al-Alwan (2008) who reported

that unsuccessful students scored higher on 'Extrinsic Goal Orientation' than their successful counterparts.

The analysis of mean score table 4.89 reveals that successful students (5.19) have scored higher on the 'Task Value' dimension than unsuccessful students (4.12). As compared to unsuccessful students, successful students attach a high value to the importance and usefulness of learning the subject. This value makes the successful students dedicated and committed to accomplishing the targets. The above finding is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009), Ayotola and Adedeji (2009) who reported that successful students scored higher on 'Task Value' than their unsuccessful counterparts.

The analysis of mean score table 4.89 reveals that successful students (4.35) have scored higher on 'Control of Learning Beliefs' dimension than unsuccessful students (4.08). This shows that successful students have a firm belief in their efforts, they hold an optimistic approach that their hard work will definitely lead towards positive and successful outcomes. Above finding is in tune with the findings of Al-Alwan (2008) who reported that successful students scored higher on 'Control of Learning Beliefs' than their unsuccessful counterparts.

The analysis of mean score table 4.89 reveals that successful students (5.18) have scored higher on 'Self-Efficacy for Learning and Performance' dimension than unsuccessful students (4.26). This shows that successful students possess a high sense of self-efficacy for learning and performance than unsuccessful students. The successful students appraise their capability and confidence to perform a task, they have a firm belief that they are capable to master the situation and can produce desired outcomes. Due to the high level of self-efficacy for learning, they choose challenging learning tasks and therefore expend more persistence and efforts in order to get higher achievement outcomes. Their self-efficacy beliefs become instrumental to the goals and to the control over their environment. They show more resilience in the phase of adverse situations as compared to their unsuccessful student counterparts. The finding of the present study is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who reported that successful students scored higher on 'Self-Efficacy for Learning and Performance' than their unsuccessful counterparts.

The analysis of mean score table 4.89 reveals that successful students (30.7) have scored higher on the total score of 'Motivation' than unsuccessful students (26.15). This shows that successful students are more motivated to regulate their learning process than unsuccessful students. They have a high sense of control over learning, self-efficacy and value of the learning task. They are more dynamic and ambitious by virtue motivation. They take the initiative to perform challenging tasks and have a high level of aspiration to succeed. They think critically and plan their learning more strategically as compared to unsuccessful students. The above finding is in tune with the finding of Simsek and Balaban (2010) & De Zoysa et al. (2014) who reported that successful students possess a higher level of motivation as compared to unsuccessful students.

The analysis of mean score table 4.89 reveals that successful students (4.99) have scored higher on 'Rehearsal' dimension than unsuccessful students (3.97). This indicates that successful students are more focused on learning the content by practising it again and again than unsuccessful students. They use this strategy in order to memorize the simple tasks and to trigger their working memory. This finding goes in tune with the finding of Simsek and Balaban (2010) who reported that successful students make frequent use of rehearsal strategies in order to memorize the simple tasks. But Fathi-Ashtiani et al. (2007) reported no significant difference between successful and unsuccessful students with respect to the use of 'Rehearsal' strategies.

The analysis of mean score table 4.89 reveals that successful students (5.07) have scored higher on 'Elaboration' dimension than unsuccessful students (4.17). This shows that as compared to unsuccessful students, successful students make good use of elaboration strategies like paraphrasing, summarizing, creating analogies, mnemonics, selecting key ideas from the text and making internal connections between what is being learned with the previous knowledge. They pull the information together from various sources viz. notes, lecture, readings, tutorials in order to make connections between them. The above finding is in tune with the finding of Boulton-Lewis et al. (2004) who reported that successful students use 'Elaboration' strategies more frequently than unsuccessful students.

The analysis of mean score table 4.89 reveals that successful students (5.38) have scored higher on the 'Organization' dimension than unsuccessful students (4.25). This shows that successful students put active, thoughtful and effortful endeavours in order to get involved in the task for better understanding. They strategically plan their learning and make good use of organization strategies like grouping, clustering, outlining and organizing the main points from the gathered information, they often make good use of mind mapping technique as compared to unsuccessful students. The above finding is in tune with the findings of Simsek and Balaban (2010) & Kitsantas (2002) who reported that successful students use 'organization' strategy more frequently as compared to the unsuccessful students. Fathi-Ashtiani et al. (2007) reported no significant differences between successful and unsuccessful students of Mathematics and Humanities in the use of 'Organization' Strategy but found significant differences between successful and unsuccessful students of Experimental Sciences with respect to 'Organization' Strategy.

The analysis of mean score table 4.89 reveals that successful students (4.95) have scored higher on the 'Critical Thinking' dimension than unsuccessful students (3.96). This shows that successful students often question themselves before getting convinced about the idea taught in the class and try to find good supporting shreds of evidence in order to accept any conclusion and assertion. They always play around with their ideas in order to develop a convincing explanation of the content.

The analysis of mean score table 4.89 reveals that successful students (4.66) have scored higher on 'Metacognitive Self-Regulation' dimension than unsuccessful students (4.18). This shows that successful students are capable of thinking about their learning more explicitly than unsuccessful students. They always plan, monitor, regulate and evaluate their learning. They set their goals and choose appropriate learning strategies to attain goals and evaluate their progress. They strive to come up with better ways of learning. They try to change their study style according to the requirement of the course and teaching style of the teacher. The present finding is in line with the findings of Al-Alwan (2008), Simsek and Balaban (2010), De Zoysa et al. (2014) and Tang (2015) who have found that successful students surpassed unsuccessful students in terms of metacognitive self-regulation.

The analysis of mean score table 4.89 reveals that successful students (4.38) have scored higher on 'Time and Study Environment' dimension than unsuccessful students (3.74). This shows that successful students are a good manager of their time and are capable to structure their environment for optimal learning more than unsuccessful students. They always schedule, plan and manage their study time and very much particular in following the work schedule made by them. They always keep a particular place for the study, where they can be able to concentrate on reading and studying. The above finding is in tune with the findings of Chen (2002), Al-Alwan (2008) and Ahmed and Khanam (2014) who reported that successful students outperformed unsuccessful students in managing time and study environment.

The analysis of mean score table 4.89 reveals that successful students (4.4) have scored higher on 'Effort Regulation' dimension than unsuccessful students (3.86). As compared to unsuccessful students, successful students show a higher ability to regulate their efforts in the phase of distraction and monotonous tasks. They are committed to accomplish their set goals and never give up on complexities. They try to manage their efforts and attention in order to overcome the interruptions. The above finding is in tune with the finding of Ahmed and Khanam (2014) who reported that successful students outperformed unsuccessful students in Effort Regulation. But Al-Alwan (2008) found no significant difference between the students of the first semester of the first year with a high GPA and low GPA with respect to 'Effort Regulation'.

The analysis of mean score table 4.89 reveals that successful students (4.69) have scored higher on 'Peer Learning' dimension than unsuccessful students (3.74). This shows that successful students are more active in working and learning with peers than unsuccessful students. The successful students generally discuss and debate in the group to clarify their doubts. Peer learning technique helps them to reach insights that they cannot be able to attain on their own. They often work with their friends in order to complete the tasks or assignment given by the teacher well on time. The present finding got support from the findings of Ahmed and Khanam (2014) reported that high achievers believe in learning with peers more than low

achievers. But Al-Alwan (2008) found no significant difference between the first-year students with high and low GPA in 'Peer Learning' dimension.

The analysis of mean score table 4.89 reveals that successful students (43.05) have scored higher on the total score of 'Learning Strategies' than unsuccessful students (36.31). This shows that successful students tend to use a wide variety of learning strategies than unsuccessful students. The successful students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate with their peers for effective learning. The results enjoy support from the results of Paris and Myers (1981), Tait and Entwistle (1996) & Cho and Ahn (2003), Yip (2007, 2009, 2012, 2013), Yip and Chung (2005), Ahmed and Khanam (2014) & De Zoysa et al. (2014) who reported that successful students use more adaptive learning strategies both in variety and frequency.

Analysis of mean score table 4.89 reveals that successful students (43.05) have scored higher on the total score of 'Self-Regulated Learning Strategies' than unsuccessful students (36.31). The result shows that self-regulated learning of successful students was markedly higher than unsuccessful students. This shows that successful students have the ability to control their actions and responses, which is very much essential for the progress in varied contexts. The successful students are able to control their behaviour, emotions and cognition for the purpose of pursuing the goals. They set proximal achievable goals which are learning-oriented not performance-oriented. They know that different learning tasks require different learning strategies. They own a "Tool Kit" of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations. They possess a high level of academic self-efficacy and have the ability to control their performance. They observe the

intermediate outcomes of their learning process. They precisely attribute the learning outcome to the causes of performance. The above finding is in tune with the finding of Paris and Myers (1981), Pintrich and DeGroot (1990), Tait and Entwistle (1996), Stoyhoff (1996), McWhaw and Abrami (2001), Chen (2002), Cho and Ahn (2003), Schunk (2005), Simsek and Balaban (2010) & Son and Simon (2012) who reported that high achieving students use more adaptive self-regulated learning strategies as compared to low achieving students.

DISCUSSION ON RESULTS

From the results, it has been revealed that both successful and unsuccessful students do not differ on 'Test Anxiety', this indicates that they do not show stress, tension, worry, fear of failure and somatic symptoms such as nausea, upset feeling, fastening of a heartbeat before or during the exam. On the other side, the motivation of successful students is inclined to get mastery over the content so, successful students set mastery-oriented goals, high level of internal goal orientation help them to invest a great deal of time in using deep processing strategies like planning, organizing and monitoring, along with internal motivation they are also externally motivated in order to get approval or recognition from others, they show highly competitive behavior as they want to prove their unique existence in the classroom and set performance-oriented goals for them. Further, findings have proved that successful students give more importance to the task in hand, along with it they hold an optimistic approach of getting success and have firm belief in their efforts. They judge their capabilities and confidence for performing a task. Consequently, it is confirmed that successful students have high motivational beliefs which affect their willingness to approach a task, devote sufficient time and energy to successfully complete that task. A specific goal orientation directs the behaviour of the person while, task value stimulates the strength or intensity of the behaviour (Garcia and Pintrich, 1994; Schunk and Zimmerman, 1998). The high level of motivation is associated with the more frequent and judicious use of learning strategies in order to regulate the learning process.

From the results, it has been found that successful students are more self-regulated as compared to unsuccessful students. They are proactive in their efforts to

learn as they are aware of their strengths and weaknesses. They monitor their behaviour in terms of their set goals and self-reflect on their achieved effectiveness. If they perceive satisfactory goal progress, they feel competent in improving skills and goal attainment. The high level of self-efficacy enables them to set new-fangled stimulating goals. They are motivated to learn through the self-regulated process and use a variety of learning strategies and understand the value of using these strategies in appropriate situations. The better self-regulated learning strategies among successful students help them to be proactive and self-motivating in comparison to their unsuccessful counterparts. Self-regulated learners voluntarily offer answers to questions in the classroom, seek out additional resources when needed to master the content, they are aware of their strengths and weaknesses and manipulate their learning environment in order to meet their needs. Successful students in comparison to unsuccessful students are optimistic about their future and work systematically to achieve the goals. On the other side, it has been found that successful and unsuccessful students do not differ significantly on the scores of 'Help-Seeking' dimension. It shows that both successful and unsuccessful students believe in seeking help from knowledgeable others.

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

Table 4.90 showed that F- values for the interaction between gender and successfulness on the scores of 'Intrinsic Goal Orientation', 'Test Anxiety' came out 2.11, 1.03 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', dimensions and total score of 'Motivation' came out 15.98, 21.78, 8.17, 7.66 and 16.75 respectively, which are found to be significant either at 0.01 or at 0.05 level of confidence.

Table 4.90 shows that the F- values for the interaction between gender and successfulness on the scores of 'Elaboration', 'Organisation', 'Metacognitive Self - Regulation', 'Effort Regulation' and 'Peer Learning' came out 0.60, 3.63, 0.67, 0.02, 2.17 respectively, which are not found to be significant even at the 0.05 level

of confidence. However, F- values for 'Rehearsal', 'Critical Thinking', 'Time and Study Environment', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 9.20, 5.10, 7.90, 14.28, 6.87 and 11.61 respectively, which are found to be significant at either at 0.01 or at 0.05 level of confidence. Thus, the Hypothesis (7), "There is no significant interaction effect of gender and successfulness on the self-regulated learning strategies of higher education students" for BBA 4th semester is rejected for 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', total score of 'Motivation', 'Rehearsal', 'Critical Thinking', 'Time and Study Environment', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' dimensions.

To further analyze the significant difference between various groups, t-test was applied on 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', total score of 'Motivation', 'Rehearsal', 'Critical Thinking', 'Time And Study Environment', 'Help-Seeking' Dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' and obtained results are presented in table 4.99 and table 4.91.

The data reported in table 4.91 reveals that in 'Extrinsic Goal Orientation' dimension, the t-value for the subgroup of unsuccessful females- unsuccessful males, successful females-unsuccessful males, unsuccessful males- successful males came out to be significant at 0.01 level of confidence. The analysis of mean score table 4.89 shows that unsuccessful female students (5.12) and successful female students (5.37) and successful male students (5.71) have scored high than unsuccessful male students (3.41). This indicates that female students whether successful or unsuccessful and successful male students are triggered by some external reasons as well, such as getting good scores, competition, getting rewards from the teachers and parents for the good performance as compared to unsuccessful male students.

Table 4.91: Summary of ‘t’-values for the Subgroups in respect of ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’ and Total Score of ‘Motivation’, ‘Rehearsal’, ‘Critical Thinking’, ‘Time and Study Environment’, ‘Help-Seeking’ Dimensions, Scores of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’ of BBA 4th Semester

Group 1	Unsuccessful Females	Unsuccessful Females	Successful Females	Successful Females	Unsuccessful Males
Group 2	Unsuccessful Males	Successful Males	Unsuccessful Males	Successful Males	Successful Males
EGO	5.00**	1.63	6.88**	1.11	7.77**
TV	5.50**	0.64	6.22**	1.09	8.29**
CLB	2.73**	0.91	2.56*	1.54	4.27**
SELP	2.89**	0.19	3.49**	0.11	1.46
Motivation	1.02	0.25	5.18**	1.15	7.37**
REH	3.35**	0.25	4.24**	0.56	4.10**
TSE	2.34*	1.19	3.26**	0.88	3.70**
HS	3.53**	0.69	3.37**	1.73	5.17**
Learning Strategies	3.56**	0.74	6.04**	0.47	6.64**
Self Regulated Learning Strategies	4.13**	6.61**	6.14**	10.61**	2.51*

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

The data reported in table 4.91 reveals that in ‘Task Value’ dimension, the t-value for the subgroup of unsuccessful females-unsuccessful males, successful females- unsuccessful males and unsuccessful males- successful males came out significant at 0.01 level of confidence. The analysis of mean score table 4.89 shows that unsuccessful female students (5.13), successful female students (5.02) and successful male students (5.42) have scored higher on ‘Task Value’ dimension than unsuccessful male students (2.39).

The data inserted in table 4.91 reveals that in 'Control of Learning Beliefs' dimension, the t-value for the subgroup of unsuccessful females-unsuccessful males, successful females- unsuccessful males and successful males- unsuccessful males came out significant at 0.01 level of confidence. This shows that unsuccessful females and unsuccessful males differ significantly on the score of 'Control of Learning Beliefs' dimension. The analysis of mean score table 4.89 shows that unsuccessful female students (5.15) and successful female students (4.97) have scored higher on 'Control of Learning Beliefs' dimension than unsuccessful male students (3.94).

The data reported in table 4.91 shows that in 'Self-Efficacy for Learning and Performance' dimension, the t-value for the subgroup of unsuccessful females-unsuccessful males, successful females- unsuccessful males and unsuccessful males-successful males came out significant at 0.01 level of confidence. The analysis of mean score table 4.89 shows that unsuccessful female students (4.88), successful female students (5.24) and successful male students (5.11) have scored higher on 'Self-Efficacy for Learning and Performance' dimension than unsuccessful male students (3.2).

The data reported in table 4.91 shows that the t-value on the total score of 'Motivation' for the subgroup of unsuccessful females- unsuccessful males, successful females-unsuccessful males and unsuccessful males- successful males came out significant at 0.01 level of confidence. This shows that unsuccessful females- unsuccessful males, successful females-unsuccessful males and unsuccessful males- successful males differ significantly on the total score of 'Motivation'. The analysis of mean score table 4.89 shows that successful female students (30) and successful male students (31.59) have scored higher on the total score of 'Motivation' than unsuccessful male students (20.5).

The data reported in table 4.91 shows that in 'Rehearsal' dimension, the t-value for the subgroup of unsuccessful females- unsuccessful males, successful females- unsuccessful males and unsuccessful males- successful males came out significant at 0.01 level of confidence. The analysis of mean score table 4.89 shows that unsuccessful female students (4.78), successful female students (5.07) and

successful male students (4.89) have scored higher on 'Rehearsal' dimension than unsuccessful male students (2.59).

The data reported in table 4.91 shows that in 'Time and Study Environment' dimension, the t-value for the subgroup of unsuccessful females-unsuccessful males, successful females- unsuccessful males and unsuccessful males- successful males came out significant at 0.01 level of confidence. The analysis of mean score table 4.89 shows that unsuccessful female students (4.12), successful female students (4.31) and successful male students (4.93) have scored higher on 'Time and Study Environment' dimension than unsuccessful male students (3.09).

The data reported in table 4.91 reveals that in 'Help-seeking' dimension, the t-value for the subgroup of unsuccessful females- unsuccessful males, successful females- unsuccessful males and unsuccessful males- successful males came out significant at 0.01 level of confidence. The analysis of mean score table 4.89 shows that unsuccessful female students (5.25), successful female students (4.5) and successful male students (4.49) have scored higher on 'Help-Seeking' dimension than unsuccessful male students (3.57).

The data reported in table 4.91 reveals that the t-value on the total score of 'Learning Strategies' for the subgroup of unsuccessful females- unsuccessful males, successful females-unsuccessful males and unsuccessful males- successful males came out significant at 0.01 level of confidence. The analysis of mean score table 4.89 shows that unsuccessful female students (40.43), successful female students (43.44) and successful male students (42.54) have scored higher on the total score of 'Learning Strategies' than unsuccessful male students (29.24).

The data reported in table 4.91 shows that the t-value on the total score of 'Self Regulated Learning Strategies' for the subgroup of unsuccessful females-unsuccessful males, unsuccessful females-successful males, successful females-unsuccessful males and successful females- successful males, unsuccessful males-successful males came out significant at 0.01 level of confidence.

The analysis of mean score table 4.89 shows that on the total score of 'Self Regulated Learning Strategies' unsuccessful female students (69.75) have scored higher than unsuccessful male students (49.86) and successful male students (74.14)

have scored higher than unsuccessful female students (49.86). Further, successful female students (73.39) have scored higher than unsuccessful male students (49.86) and successful male students (74.14) have scored higher than successful female students (73.39), further, successful male students (74.14) have scored higher than unsuccessful male students (49.86).

DISCUSSION ON RESULTS

It has been found from the results that female students whether successful or unsuccessful and successful male students are triggered by some external reasons as well, such as getting good scores, competition, getting rewards from the teachers and parents for the good performance, give more value to the importance, usefulness and cost of the task in hand. They have a firm belief in their efforts, they hold optimistic approach that their hard work will definitely lead towards positive and successful outcomes, appraise their capability and confidence to perform that task, they are confident enough to learn the difficult material of the course, master the skills and receive excellent grades in the classroom. They are more focused on learning the content by practising it again and again. They use this strategy in order to memorise the simple tasks and trigger their working memory.

Apart from this, these students always schedule, plan and manage their study time and very much particular in following the work schedule made by them and often seek assistance from friends and teachers in order to clarify their doubts as compared to the unsuccessful male students. The results suggest that there is an interaction effect between gender and successfulness. The successful and unsuccessful female students are making good use of self-regulated learning strategies as compared to unsuccessful male students and successful male students are more academically more self-regulated as compared to unsuccessful students. Bidjerano (2005) documented that female students outperformed male students on some self-regulated strategies like the rehearsal, elaboration organization, metacognition, time management skills and effort regulation and no significant differences were reported on peer learning, help-seeking and critical thinking skills. Proctor et al. (2006), Hong et al. (2006), Fathi-Ashtiani et al. (2007) reported that high achieving students are more efficiently able to regulate their learning process as compared to low achieving students.

4.8.9 Summary of 2×2 Analysis of Variance on Scores of Self-Regulated Learning Strategies of BBA 6th Semester

To study the self-regulated learning strategies of BBA 6th semester with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies and presented in the table 4.92. For analyzing the variance of various dimensions and total score of self-regulated learning strategies of BBA 6th semester with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented in table 4.93.

MAIN EFFECTS

GENDER

It is clear from the table 4.93 that F- values for ‘Control of Learning Beliefs’ and ‘Test Anxiety’ dimensions came out 3.05, 0.05 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Self-Efficacy for Learning and Performance’ dimensions and total score of ‘Motivation’ came out 7.91, 9.19, 4.01, 6.12 and 6.37 respectively, which are found to be significant either at 0.01 or at 0.05 level of confidence. This shows that male and female students differ significantly on the scores of for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Self-Efficacy for Learning and Performance’ dimensions and total score of ‘Motivation’.

It is clear from the table 4.93 that the F-values for ‘Elaboration’, ‘Critical Thinking’, ‘Metacognitive Self -Regulation’, ‘Effort Regulation’ and ‘Help-Seeking’ dimensions came out 1.01, 0.80, 0.85, 1.47, 0.40 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-values for ‘Rehearsal’, ‘Organization’, ‘Time and Study Environment’, ‘Peer Learning’, total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’ came out 5.47, 5.76, 15.15, 6.52, 5.50 and 6.56 respectively, which are found to be significant either at 0.01 or at 0.05 level of confidence. This shows that male and female students differ significantly on the scores of ‘Rehearsal’, ‘Organization’, ‘Time and Study Environment’, ‘Peer Learning’, the total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’.

Table 4.92: Means and SDs of Sub-Groups of ANOVA for 2×2 Design of Various Dimensions of Self-regulated Learning Strategies with respect to Gender and Successfulness of BBA 6th Semester

Gender	Female			Male			Total			Female			Male			Total		
	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimensions	IGO									EGO								
N	12	15	27	15	11	26	27	26	53	12	15	27	15	11	26	27	26	53
M	4.5	5.67	5.15	3.6	4.73	4.08	4	5.27	4.62	5.14	5.61	5.4	3.61	4.91	4.16	4.29	5.32	4.79
σ	1	1.23	1.26	1.06	1.42	1.32	1.11	1.37	1.39	1.4	1.45	1.42	0.9	1.57	1.37	1.37	1.51	1.52
Dimensions	TV									CLB								
M	4.6	5.64	5.18	3.65	5.19	4.3	4.07	5.45	4.75	5.12	5.09	5.1	3.98	4.97	4.4	4.49	5.04	4.76
σ	1.3	1.19	1.33	1.06	1.52	1.47	1.24	1.33	1.45	1.23	1.32	1.26	1.4	1.19	1.38	1.42	1.24	1.36
Dimensions	SELP									TA								
M	4.64	5.46	5.1	3.46	5.05	4.13	3.99	5.29	4.62	4.42	4.49	4.46	4.48	4.62	4.54	4.45	4.55	4.5
σ	1.27	1.15	1.25	0.77	1.48	1.36	1.17	1.29	1.38	1.49	1.6	1.52	1.17	1.86	1.47	1.29	1.68	1.48
Dimensions	Motivation									REH								
M	28.27	31.89	30.28	22.64	29.36	25.49	25.14	30.82	27.93	4.77	5.47	5.16	3.91	4.73	4.25	4.29	5.16	4.72
σ	4.87	6.19	5.83	4.17	7.89	6.79	5.24	6.93	6.71	1.26	1.02	1.17	1.26	1.45	1.38	1.31	1.25	1.34

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
Successfulness	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimensions	ELAB									ORG								
M	4.74	5.12	4.95	3.85	5.27	4.45	4.24	5.19	4.71	4.86	5.77	5.36	3.92	5.18	4.45	4.34	5.52	4.92
σ	1.14	1.31	1.23	1.12	1.75	1.56	1.2	1.48	1.41	1.07	1.11	1.17	1.05	1.37	1.33	1.14	1.24	1.32
Dimensions	CT									MSR								
M	4.08	5.35	4.79	3.53	5.22	4.25	3.78	5.29	4.52	4.46	4.69	4.59	3.96	4.75	4.29	4.18	4.72	4.44
σ	0.98	1.67	1.53	1.11	1.59	1.55	1.07	1.61	1.55	0.62	0.81	0.73	0.99	1.01	1.05	0.87	0.88	0.91
Dimensions	TSE									ER								
M	4.3	4.88	4.62	3.55	4.2	3.82	3.88	4.59	4.23	4.13	4.39	4.27	3.72	4.2	3.92	3.9	4.31	4.1
σ	0.87	0.62	0.78	0.71	0.28	0.65	0.86	0.6	0.82	0.98	0.81	0.88	0.8	1	0.91	0.89	0.88	0.9
Dimensions	PL									HS								
M	4.39	5.47	4.99	3.34	4.58	3.87	3.81	5.09	4.44	4.25	4.67	4.48	3.8	4.73	4.19	4	4.69	4.34
σ	1.26	1.43	1.44	0.99	1.78	1.49	1.22	1.62	1.56	1.22	0.9	1.05	1.01	1.35	1.23	1.11	1.09	1.14
Dimensions	Learning Strategies									Self Regulated Learning Strategies								
M	39.84	45.53	43	33.37	42.61	37.28	36.24	44.29	40.19	68.08	77.47	73.3	56.07	72	62.81	61.41	75.15	68.15
σ	6.8	6.86	7.29	6.43	9	8.79	7.25	7.8	8.49	11.24	11.76	12.27	9.98	16.46	15.12	12	13.91	14.6

Table 4.93: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Self-regulated Learning Strategies in relation to Gender and Successfulness of BBA 6th Semester Students

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender																	
SS	11	16.3	6.33	5.14	8.28	0.12	216.37	8.39	1.79	7.54	1.5	0.65	6.68	1.16	12.19	0.49	286.63	993.79
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	11	16.3	6.33	5.14	8.28	0.12	216.37	8.39	1.79	7.54	1.5	0.65	6.68	1.16	12.19	0.49	286.63	993.79
F	7.91**	9.19**	4.01*	3.05	6.12*	0.05	6.37*	5.47*	1.01	5.76*	0.8	0.85	15.15**	1.47	6.52**	0.4	5.5*	6.56**
Sig.	0.01	0.00	0.05	0.09	0.02	0.83	0.02	0.02	0.32	0.02	0.38	0.36	0.00	0.23	0.01	0.53	0.02	0.01
Source	Successfulness																	
SS	17.11	10.23	21.6	3.06	18.79	0.15	347.66	7.58	10.59	15.31	28.26	3.39	4.95	1.82	17.45	5.87	724.26	2083.82
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	17.11	10.23	21.6	3.06	18.79	0.15	347.66	7.58	10.59	15.31	28.26	3.39	4.95	1.82	17.45	5.87	724.26	2083.82
F	12.31**	5.77*	13.7**	1.81	13.9**	0.07	10.24**	4.95*	5.99*	11.7**	15.1**	4.45*	11.22**	2.3	9.33**	4.78*	13.9**	13.75**
Sig.	0.00	0.02	0.00	0.19	0.00	0.8	0.00	0.03	0.02	0.00	0.00	0.04	0.00	0.14	0.00	0.03	0.00	0.00

Contd. ...

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender * Successfulness																	
SS	0.01	2.24	0.81	3.36	1.91	0.01	30.97	0.04	3.57	0.41	0.58	0.99	0.02	0.15	0.09	0.85	40.97	139.49
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0.01	2.24	0.81	3.36	1.91	0.01	30.97	0.04	3.57	0.41	0.58	0.99	0.02	0.15	0.09	0.85	40.97	139.49
F	0	1.27	0.51	1.99	1.41	0.01	0.91	0.03	2.02	0.31	0.31	1.3	0.04	0.18	0.05	0.69	0.79	0.92
Sig.	0.95	0.27	0.48	0.17	0.24	0.94	0.34	0.87	0.16	0.58	0.58	0.26	0.84	0.67	0.83	0.41	0.38	0.34
Source	Error																	
SS	68.12	86.91	77.34	82.65	66.33	113.81	1663.23	75.11	86.55	64.16	92.08	37.28	21.6	38.8	91.7	60.17	2555.7	7427.58
df	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
MSS	1.39	1.77	1.58	1.69	1.35	2.32	33.94	1.53	1.77	1.31	1.88	0.76	0.44	0.79	1.87	1.23	52.16	151.58

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

Thus, the Hypothesis (5), “There is no significant difference in self-regulated learning strategies of higher education students with respect to Gender” for BBA 6th semester is rejected for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Self-Efficacy for Learning and Performance’ dimensions and total score of ‘Motivation’. ‘Rehearsal’, ‘Organization’, ‘Time and Study Environment’, ‘Peer Learning’, the total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’.

The analysis of mean score table 4.92 shows that female students (5.15) have scored higher on ‘Intrinsic Goal Orientation’ dimension than male students (4.08). This shows that female students are more focused on learning and improvement. They strive to master the task and possess a deep level of understanding of the content. They are curious to seek out challenging study tasks and more importantly they view their success or failure as a source of feedback for improving future performance. The female students have a higher level of learning goal orientation as compared to their male student counterparts. The finding of the present study is in tune with the findings of Miller et al. (1990) & Meece and Holt (1993) who found that female students possess a higher level of intrinsic motivation orientation as compared to male students. However, Yu (1999) reported no significant gender difference in intrinsic goal orientation.

The analysis of mean score table 4.92 shows that female students (5.4) have scored higher on ‘Extrinsic Goal Orientation’ dimension than male students (4.16). This shows that female students are more concerned about their performance in relation to the other students in the class. Their main focus is on getting good grades in order to prove their position in the class. They want to seek out rewards or approval from the peers, teachers or parents and possess a higher level of performance-approach orientation as compared to the male students. This finding is in contradiction to the previous findings of Garcia (1993) & Anderman and Anderman (1999) who reported that male students have a high level of extrinsic motivational orientation as compared to girls.

The analysis of mean score table 4.92 shows that female students (5.18) have scored higher on the ‘Task Value’ dimension than male students (4.3). This shows

that female students attach a high value to the importance and usefulness of learning the subject. This value makes the female students dedicated and committed to accomplishing the targets. The present finding is consistent with the findings of Al-Harthy and Aldhafri (2014) who explored that female students surpassed male students in task value.

The analysis of mean score table 4.92 shows that female students (5.1) have scored higher on 'Self-Efficacy for Learning and Performance' dimension than male students (4.13). This shows that female students possess a high sense of self-efficacy for learning and performance than male students. The female students appraise their capability and confidence to perform a task, they have a firm belief that they are capable to master the situation and can produce desired outcomes. Due to the high level of self-efficacy for learning, they choose challenging learning tasks and therefore expend more persistence and efforts in order to get higher achievement outcomes. Their self-efficacy beliefs become instrumental to the goals and to the control over their environment. They show more resilience in the phase of adverse situations as compared to their male student counterparts. The above finding is in tune with the findings of Mills et al. (2007), Chyung (2007) and Britner (2008) who asserted that girls have a significantly higher level of self-efficacy as compared to male students. On the contrary, Pintrich and De Groot (1990), Yu (1999), Meece et al. (2006), Pajares (2002), Glynn et al. (2009), Lynch and Trujillo (2011) & Al-Harthy and Aldhafri (2014) reported that male students scored significantly higher on self-efficacy for learning as compared to the female students.

The analysis of mean score table 4.92 shows that female students (30.28) have scored higher on the total score of 'Motivation' than male students (25.49). This shows that female students are more motivated to regulate their learning process. They have a high sense of control over learning, self-efficacy and value of the learning task. They are more dynamic and ambitious by virtue motivation. They take the initiative to perform challenging tasks and have a high level of aspiration to succeed. The findings of the present study enjoy the support from the results of Maria and Pedro (2004), Ghazvini and Khajehpour (2011), Simsek and Balaban (2010) & Marrs and Sigler (2012) who found that female students scored remarkably high on the dimension of motivation as compared to their male student

counterparts. Likewise, Gardner (2006), Carreira (2011) and Javid et al. (2012) showed that girls showed a high level of motivation in language learning as compared to boys. On the contrary, Obrentz (2012) found that male students scored higher on motivation score as compared to female students. But, Glynn et al. (2007, 2009), Banarjee and Kumar (2014), Yukselturk and Bulut (2009) & Balam, (2015) showed no significant difference between male and female students with respect to their motivation.

The analysis of mean score table 4.92 shows that female students (5.16) have scored higher on 'Rehearsal' dimension than male students (4.25). This shows that female students are more focused on learning the content by practising it again and again. They use this strategy mainly to learn simple tasks. The female students are more likely to retain the things in their working memory and use memory strategies more often than male students. The above finding is in tune with the findings of Artelt et al. (2003), Bidjerano (2005), Bembenutty (2009) & Simsek and Balaban (2010) who found that Female students surpassed male students in terms of their use of 'Rehearsal' strategies.

The analysis of mean score table 4.92 shows that female students (5.36) have scored higher on the 'Organization' dimension than male students (4.45). As compared to male students, the female students plan their learning more strategically and This shows that as compared to male students, female students plan their learning more strategically and make good use of organization strategies like summarizing, organizing, classifying, regrouping, connecting the information from different pieces and generating concept and mind maps. The present finding is in tune with the findings of Bidjerano (2005), Bembenutty (2009) & Simsek and Balaban (2010) who reported that female students surpassed male students in terms of their use of 'Organization' strategies.

The analysis of mean score table 4.92 shows that female students (4.62) have scored higher on 'Time and Study Environment' dimension than male students (3.82). This shows that the female students are a good manager of their time and are capable to structure their environment for optimal learning more than male students. They always schedule, plan and manage their study time and very much particular in

following the work schedule made by them. They always keep a particular place for the study, where they can be able to concentrate on reading and studying. The above finding is in tune with the finding of Bidjerano (2005) Ghazvini and Khajehpour (2011) & Marrs and Sigler (2012) who reported that female students surpassed male students in time and study environment management skills. But Ahmed and Khanam (2014) found no significant gender difference in time and study management skills.

The analysis of mean score table 4.92 shows that female students (4.99) have scored higher on 'Peer Learning' dimension than male students (3.87). This shows that female students are more active in working and learning with peers than male students. The female students generally discuss and debate in the group to clarify their doubts. Peer learning technique helps them to reach insights that they cannot be able to attain on their own. They often work with their friends in order to complete the tasks or assignment given by the teacher well on time. In contrast, Bidjerano (2005) & Ahmed and Khanam (2014) found no significant gender difference in peer learning.

The analysis of mean score table 4.92 shows that female students (43) have scored higher on the total score of 'Learning Strategies' than male students (37.28). This shows that female students tend to use a wide variety of learning strategies than male students. The female students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate with their peers for effective learning. The above finding goes in consonance with the results of the previous researches that indicated female students scored remarkably high on Learning Strategies as compared to male students (Wolters, 1999; Niemivirta, 1997; Anderman and Young, 1994; Zimmerman and Martinez, 1990). In the same way, Dreyer and Oxford (1996), Green and Oxford (1995), Lan and Oxford (2003) & Lee and Oxford (2008) found that female students scored higher on the use of learning

strategies for English language learning as compared to male students. On the contrary, Wharton (2000) reported that male students used more adaptive strategies for foreign language learning as compared to female students, Ghazvini and Khajehpour (2011) reported that male students scored higher on use of learning strategies as compared to female students.

The analysis of mean score table 4.92 shows that female students (73.3) have scored higher on the total score of 'Self Regulated Learning Strategies' than male students (62.81). The result shows that self-regulated learning of female students was markedly higher than male students. This shows that female students have the ability to control their actions and responses, which is very much essential for progress in varied contexts. The female students are able to control their behaviour, emotions and cognition for the purpose of pursuing the goals. They set proximal achievable goals which are learning-oriented not performance-oriented. They know that different learning tasks require different learning strategies. They own a "Tool Kit" of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations. They possess a high level of academic self-efficacy and have the ability to control their performance. They observe the intermediate outcomes of their learning process. They precisely attribute the learning outcome to the causes of performance. The findings of the present study are consistent with the findings of the previous researches, which reported that female students scored higher on using self-regulated learning strategies as compared to their male student counterparts (Al Khatib, 2010; Balaban, 2010; DiBenedetto and Bembenuddy, 2011; Chuy and Nitulescu, 2013; Banarjee and Kumar, 2014; Veloo et al., 2015). However, Peng (2001), Yukselturk and Bulut (2009) & Balam (2015) showed that male and female students did not differ significantly in regard to the use of motivated learning strategies.

DISCUSSION ON RESULTS

From the results, it has been revealed that both male and female students do not differ on 'Control of Learning Beliefs' and 'Test Anxiety', this indicates that they have firm belief on their efforts and do not show stress, tension, worry, fear of

failure and somatic symptoms such as nausea, upset feeling, fastening of heartbeat before or during the exam. On the other side, the motivation of female students is inclined to getting mastery over the content so, female students set mastery-oriented goals, high level of internal goal orientation help them to invest a great deal of time in using deep processing strategies like planning, organizing and monitoring, along with internal motivation they are also externally motivated in order to get approval or recognition from others, they show highly competitive behavior as they want to prove their unique existence in the classroom and set performance-oriented goals for them. Further, findings have proved that female students give more importance to the task in hand, along with it they hold an optimistic approach of getting success and have a firm belief in their efforts. They judge their capabilities and confidence for performing a task. Consequently, it is confirmed that female students have high motivational beliefs which affect their willingness to approach a task, devote sufficient time and energy to successfully complete that task. A specific goal orientation directs the behaviour of the person while, task value stimulates the strength or intensity of the behaviour (Garcia and Pintrich, 1994; Schunk and Zimmerman, 1998). The high level of motivation is associated with the more frequent and judicious use of learning strategies in order to regulate the learning process.

From the results, it has been found that female students are more self-regulated as compared to male students. They are proactive in their efforts to learn as they are aware of their strengths and limitations and directed by personally set goals and task-related strategies. They monitor their behaviour in terms of their set goals and self-reflect on their achieved effectiveness. If they perceive satisfactory goal progress, they feel competent in improving their skills and goal attainment. The high level of self-efficacy of the learners enables them to set new-fangled stimulating goals. They are motivated to learn through the self-regulated process and use a variety of learning strategies and understand the value of using these strategies in appropriate situations. The better self-regulated learning strategies among females help them to be proactive and self-motivating in comparison to their male counterparts. Females self-regulated learners voluntarily offer answers to questions in the classroom, seek out additional resources when needed to master the content,

they are aware of their strengths and limitations and manipulate their learning environment in order to meet their needs. Females in comparison to males are optimistic about their future and work systematically to achieve the goals. On the other side, it has been found that male and female students do not differ significantly on the scores of 'Elaboration', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Effort Regulation' and 'Help-Seeking'. This shows that both male and female students make good use of elaboration strategies, think critically before accepting any conclusion and assertion, plan, organize, regulate and monitor their learning process and always seek help from others in case of doubts.

SUCCESSFULNESS

Table 4.93 shows that F-value for 'Control of Learning Beliefs' and 'Test Anxiety' dimensions came out 1.81, 0.07 respectively, which is insignificant even at the 0.05 level of confidence. However, F-value for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation' came out 12.31, 5.77, 13.69, 13.88 and 10.24 respectively, which are found to be significant at either at 0.01 or at 0.05 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation'.

Table 4.93 shows that F-value for 'Effort Regulation' came out 2.30, which is insignificant even at the 0.05 level of confidence. However, F-values for 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self-Regulated Learning Strategies' came out 4.95, 5.99, 11.69, 15.04, 4.45, 11.22, 9.33, 4.78, 13.89 and 13.75 respectively, which are found to be significant either at 0.01 or at 0.05 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated

Learning Strategies'. Thus, the Hypothesis (6), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Successfulness" for BBA 6th semester is rejected for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation', 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self-Regulation', 'Time and Study Environment', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self-Regulated Learning Strategies'.

The analysis of mean score table 4.92 shows that successful students (5.27) have scored higher on 'Intrinsic Goal Orientation' dimension than unsuccessful students (4). This shows that successful students are more focused on learning and improvement than unsuccessful students. They strive to master the task and possess a deep level of understanding of the content. They are curious to seek out challenging study tasks and more importantly they view their success or failure as a source of feedback for improving future performance. The successful students have a higher level of learning goal orientation as compared to their unsuccessful student counterparts. The successful students spend a great deal of time in understanding the logic behind the concept and this adds to their pride, self-satisfaction with the success. The present finding is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who reported that successful students scored higher on 'Intrinsic Goal Orientation' than their unsuccessful counterparts.

The analysis of mean score table 4.92 shows that successful students (5.32) have scored higher on 'Extrinsic Goal Orientation' dimension than unsuccessful students (4.29). This shows that successful students are more concerned about their performance in relation to the other students in the class. Their main focus is on getting good grades in order to prove their position in the class. They want to seek out rewards or approval from the peers, teachers or parents and possess a higher level of performance-approach orientation as compared to the unsuccessful students. The above finding is in contrast with the finding of Al-Alwan (2008) who reported that unsuccessful students scored higher on 'Extrinsic Goal Orientation' than their successful counterparts.

The analysis of mean score table 4.92 shows that successful students (5.45) have scored higher on the 'Task Value' dimension than unsuccessful students (4.07). As compared to unsuccessful students, successful students attach a high value to the importance and usefulness of learning the subject. This value makes the successful students dedicated and committed to accomplishing the targets. The present finding is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who reported that successful students give more value and importance to the task than their unsuccessful counterparts.

The analysis of mean score table 4.92 shows that successful students (5.29) have scored higher on 'Self-Efficacy for Learning and Performance' dimension than unsuccessful students (3.99). This shows that successful students possess a high sense of self-efficacy for learning and performance than unsuccessful students. The successful students appraise their capability and confidence to perform a task, they have a firm belief that they are capable to master the situation and can produce desired outcomes. Due to the high level of self-efficacy for learning, they choose challenging learning tasks and therefore expend more persistence and efforts in order to get higher achievement outcomes. Their self-efficacy beliefs become instrumental to the goals and to the control over their environment. They show more resilience in the phase of adverse situations as compared to their unsuccessful student counterparts. The present finding is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotolan and Adedeji (2009) who reported that successful students scored higher on 'Self-Efficacy for Learning and Performance' than their unsuccessful counterparts.

The analysis of mean score table 4.92 shows that successful students (30.82) have scored higher on the total score of 'Motivation' than unsuccessful students (25.14). This shows that successful students are more motivated to regulate their learning process than unsuccessful students. They have a high sense of control over learning, self-efficacy and value of the learning task. They are more dynamic and ambitious by virtue motivation. They take the initiative to perform challenging tasks and have a high level of aspiration to succeed. They think critically and plan their learning more strategically as compared to unsuccessful students. The above finding is in tune with the finding of Simsek and Balaban (2010) & De Zoysa et al. (2014)

who reported that successful students scored higher on 'Motivation' dimension as compared to unsuccessful students.

The analysis of mean score table 4.92 shows that successful students (5.16) have scored higher on 'Rehearsal' dimension than unsuccessful students (4.29). This shows that successful students are more focused on learning the content by practising it again and again. They use this strategy mainly to learn simple tasks. The successful students are more likely to retain the things in their working memory and use memory strategies more often than unsuccessful students. The present finding goes in tune with the findings of Simsek and Balaban (2010) who reported that successful students make frequent use of rehearsal strategies in order to memorize the simple tasks. But Fathi-Ashtiani et al. (2007) reported no significant difference between successful and unsuccessful students with respect to the use of 'Rehearsal' strategy.

The analysis of mean score table 4.92 shows that successful students (5.19) have scored higher on 'Elaboration' dimension than unsuccessful students (4.24). This shows that as compared to unsuccessful students, successful students make good use of elaboration strategies like paraphrasing, summarizing, creating analogies, mnemonics, selecting key ideas from the text and making internal connections between what is being learned with the previous knowledge. They pull the information together from various sources viz. notes, lecture, readings, tutorials in order to make connections between them. The above finding is in tune with the finding of Boulton-Lewis et al. (2004) who reported that successful students use 'Elaboration' strategies more frequently than unsuccessful students.

The analysis of mean score table 4.92 shows that successful students (5.29) have scored higher on the 'Critical Thinking' dimension than unsuccessful students (3.78). This shows that successful students often question themselves before getting convinced about the idea taught in the class and try to find good supporting shreds of evidence in order to accept any conclusion and assertion. They always play around with their ideas in order to develop a convincing explanation of the content.

The analysis of mean score table 4.92 shows that successful students (4.72) have scored higher on 'Metacognitive Self-Regulation' dimension than unsuccessful

students (4.18). This shows that successful students are capable of thinking about their learning more explicitly than unsuccessful students. They always plan, monitor, regulate and evaluate their learning. They set their goals and choose appropriate learning strategies to attain goals and evaluate their progress. They strive to come up with better ways of learning. They try to change their study style according to the requirement of the course and teaching style of the teacher. The finding of the present study is in tune with the findings of Al-Alwan (2008), Simsek and Balaban (2010), De Zoysa et al. (2014) and Tang (2015) who have found that successful students surpassed unsuccessful students in terms of metacognitive strategy use.

The analysis of mean score table 4.92 shows that successful students (4.59) have scored higher on 'Time and Study Environment' dimension than unsuccessful students (3.88). This shows that successful students are a good manager of their time and are capable to structure their environment for optimal learning more than unsuccessful students. They always schedule, plan and manage their study time and very much particular in following the work schedule made by them. They always keep a particular place for the study, where they can be able to concentrate on reading and studying. The present finding is in tune with the findings of Chen (2002), Al-Alwan (2008) and Ahmed and Khanam (2014) who reported that successful students outperformed unsuccessful students in managing time and study environment.

The analysis of mean score table 4.92 shows that successful students (5.09) have scored higher on 'Peer Learning' dimension than unsuccessful students (3.81). This shows that successful students are more active in working and learning with peers than unsuccessful students. The successful students generally discuss and debate in the group to clarify their doubts. Peer learning technique helps them to reach insights that they cannot be able to attain on their own. They often work with their friends in order to complete the tasks or assignment given by the teacher well on time. The present result goes in consonance with the result of Ahmed and Khanam (2014) who reported that high achievers believe in peer learning more than low achievers. But Al-Alwan (2008) found no significant difference between the students with high GPA and low GPA with respect to 'Peer Learning'.

The analysis of mean score table 4.92 shows that successful students (4.69) have scored higher on the 'Help-Seeking' dimension than unsuccessful students (4). This indicates that successful students showed a more positive attitude in seeking help from friends and teachers. The successful students often monitor their academic performance therefore, on finding themselves unable to solve the problem they request assistance from other knowledgeable persons. The prior researches have shown that help-seeking behaviour can avert the possibility of failure and hence increase the likelihood of mastery and autonomous learning. The finding of the present study is consistent with the findings of Kitsantas (2002) & Ahmed and Khanam (2014) found a significant difference between high and low achieving students and confirmed that high achieving students more often seek help from knowledgeable others as compared to low achieving students.

The analysis of mean score table 4.92 shows that successful students (44.29) have scored higher on the total score of 'Learning Strategies' than unsuccessful students (36.24). This shows that successful students tend to use a wide variety of learning strategies than unsuccessful students. The successful students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate with their peers for effective learning. The present finding enjoys support from the findings of Paris and Myers (1981), Tait & Entwistle (1996) and Cho and Ahn (2003), Yip (2007, 2009, 2012, 2013), Yip and Chung (2005), Ahmed and Khanam (2014), De Zoysa et al. (2014) who reported that successful students use more adaptive learning strategies both in variety and frequency.

The analysis of mean score table 4.92 shows that successful students (75.15) have scored higher on the total score of 'Self-Regulated Learning Strategies' than unsuccessful students (61.41). The result shows that self-regulated learning of successful students was markedly higher than unsuccessful students. This shows that

successful students have the ability to control their actions and responses, which is very much essential for the progress in varied contexts. The successful students are able to control their behaviour, emotions and cognition for the purpose of pursuing the goals. They set proximal achievable goals which are learning-oriented not performance-oriented. They know that different learning tasks require different learning strategies. They own a “Tool Kit” of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations. They possess a high level of academic self-efficacy and have the ability to control their performance. They observe the intermediate outcomes of their learning process. They precisely attribute the learning outcome to the causes of performance. The above finding is in tune with the findings of Paris and Myers (1981), Pintrich and DeGroot (1990), Tait and Entwistle (1996), Stoyhoff (1996), McWhaw and Abrami (2001), Chen (2002), Cho and Ahn (2003), Schunk (2005), Simsek and Balaban (2010) & Son and Simon (2012) who reported that high achieving students use more adaptive self-regulated learning strategies as compared to low achieving students.

DISCUSSION ON RESULTS

From the results, it has been revealed that both successful and unsuccessful students do not differ on ‘Control of Learning Beliefs’ and ‘Test Anxiety’, this indicates that they have firm belief in their efforts, they hold optimistic approach that their hard work will definitely lead towards positive and successful outcomes and do not show stress, tension, worry, fear of failure and somatic symptoms such as nausea, upset feeling, fastening of heartbeat before or during the exam. On the other side, the motivation of female students is inclined to getting mastery over the content so, female students set mastery-oriented goals, high level of internal goal orientation help them to invest a great deal of time in using deep processing strategies like planning, organizing and monitoring, along with internal motivation they are also externally motivated in order to get approval or recognition from others, they show highly competitive behavior as they want to prove their unique existence in the classroom and set performance-oriented goals for them. Further, findings have proved that female students give more importance to the task in hand, along with it they hold an optimistic approach of getting success and have a firm

belief in their efforts. They judge their capabilities and confidence for performing a task. Consequently, it is confirmed that female students have high motivational beliefs which affect their willingness to approach a task, devote sufficient time and energy to successfully complete that task. A specific goal orientation directs the behavior of the person while, task value stimulates the strength or intensity of the behavior (Garcia and Pintrich, 1994; Schunk and Zimmerman, 1998). The high level of motivation is associated with the more frequent and judicious use of learning strategies in order to regulate the learning process. From the results, it has been found that successful students are more self-regulated as compared to unsuccessful students. They are proactive in their efforts to learn as they are aware of their strengths and limitations and directed by personally set goals and task-related strategies. They monitor their behavior in terms of their set goals and self-reflect on their achieved effectiveness. If they perceive satisfactory goal progress, they feel competent in improving their skills and goal attainment. They exhibit a high level of self-efficacy, which enables them to set new-fangled stimulating goals. They are motivated to learn through the self-regulated process and use a variety of learning strategies and understand the value of using these strategies in appropriate situations. The better self-regulated learning strategies among successful students help them to be proactive and self-motivating in comparison to their unsuccessful counterparts. Self-regulated learners voluntarily offer answers to questions in the classroom, seek out additional resources when needed to master the content, they are aware of their strengths and weaknesses and manipulate their learning environment in order to meet their needs. Successful students in comparison to unsuccessful students are optimistic about their future and work systematically to achieve the goals. On the other side, it has been found that male and female students do not differ significantly on the scores of 'Effort Regulation', this shows that have the ability to control their effort and attention in the phase of distraction and monotonous tasks.

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

Table 4.93 showed that F- values for the interaction between gender and successfulness on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of

‘Motivation’ came out 0.00, 1.27, 0.51, 1.99, 1.41, 0.01 and 0.91 respectively, which are not found to be significant at 0.05 level of confidence. This shows that subgroups as a result of interaction between gender and successfulness do not differ significantly on the scores of ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’, ‘Test Anxiety’ dimensions and total score of ‘Motivation’.

The F- values for the interaction between gender and successfulness on the scores of ‘Rehearsal’, ‘Elaboration’, ‘Organization’, ‘Critical Thinking’, ‘Metacognitive Self -Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’ dimensions, total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’ came out 0.03, 2.02, 0.31, 0.31, 1.30, 0.04, 0.18, 0.05, 0.69, 0.79 and 0.92 respectively, which are not found to be significant at 0.05 level of confidence. This shows that subgroups as a result of interaction between gender and successfulness do not differ significantly on the scores of ‘Rehearsal’, ‘Elaboration’, ‘Organization’, ‘Critical Thinking’, ‘Metacognitive Self-Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’ dimensions, total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’. Thus, the Hypothesis (6), “There is no significant interaction effect of gender and successfulness on the self-regulated learning strategies of higher education students” for BBA 6th semester is not rejected.

4.8.10 Summary of 2×2 Analysis of Variance on Scores of Self-Regulated Learning Strategies of BCA 2nd Semester

To study the self-regulated learning strategies of BCA 2nd semester with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies and presented in the table 4.94. For analyzing the variance of various dimensions and total score of self-regulated learning strategies of BCA 2nd semester with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented in table 4.95.

Table 4.94: Means and SDs of Sub-Groups of ANOVA for 2×2 Design of Various Dimensions of Self-regulated Learning Strategies with respect to Gender and Successfulness of BCA 2nd Semester

Gender	Female			Male			Total			Female			Male			Total		
Successfulness	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	IGO									EGO								
M	6.6	5.29	5.59	5.19	5.57	5.43	5.52	5.47	5.48	6.52	5.41	5.66	5.09	5.1	5.1	5.43	5.22	5.29
σ	0.89	1.31	1.33	1.28	1.17	1.21	1.33	1.22	1.24	0.75	1.5	1.43	1.23	1.43	1.35	1.28	1.45	1.39
N	5	17	22	16	28	44	21	45	66	5	17	22	16	28	44	21	45	66
Dimension	TV									CLB								
M	6.16	5.62	5.75	5.13	5.22	5.18	5.37	5.37	5.37	6.72	5.54	5.81	5	5.18	5.11	5.41	5.32	5.35
σ	0.74	1.46	1.33	1.09	1.32	1.23	1.1	1.37	1.28	0.52	1.23	1.21	0.84	1.25	1.11	1.07	1.24	1.18
Dimension	SELP									TA								
M	5.6	5.3	5.37	4.68	5.22	5.02	4.9	5.25	5.14	4.44	5.18	5.01	4.71	4.83	4.79	4.65	4.96	4.86
σ	0.99	1.52	1.4	0.86	1.16	1.08	0.96	1.29	1.2	1.4	1.3	1.33	1.19	1.42	1.33	1.21	1.37	1.32
Dimension	Motivation									REH								
M	35.83	32.19	33.02	29.6	30.92	30.44	31.08	31.4	31.3	5.22	5.09	5.12	4.41	5.26	4.95	4.6	5.2	5.01
σ	2.62	7.72	7.01	4.34	6.75	5.96	4.79	7.07	6.4	0.35	1.29	1.14	1.43	1.14	1.3	1.3	1.19	1.24

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	ELAB									ORG								
M	5.5	5.1	5.19	4.95	5.26	5.15	5.08	5.2	5.16	5.92	5.39	5.51	4.77	5.13	5	5.04	5.23	5.17
σ	0.5	1.48	1.32	1	1.08	1.05	0.93	1.24	1.14	0.7	1.57	1.42	1.27	1.2	1.22	1.25	1.34	1.3
Dimension	CT									MSR								
M	5.16	4.64	4.76	4.7	5.24	5.04	4.81	5.01	4.95	5.16	4.96	5.01	4.59	4.83	4.74	4.72	4.88	4.83
σ	0.52	1.37	1.23	1.1	1.07	1.1	1	1.21	1.14	0.84	1.04	0.98	0.62	0.7	0.68	0.7	0.84	0.79
Dimension	TSE									ER								
M	4.54	4.56	4.56	4.2	4.36	4.31	4.28	4.44	4.39	4.8	4.28	4.4	4.26	4.22	4.23	4.39	4.24	4.29
σ	0.5	0.84	0.77	0.72	0.43	0.55	0.68	0.62	0.63	1.15	1	1.03	0.96	0.5	0.69	1.01	0.72	0.82
Dimension	PL									HS								
M	5.06	4.88	4.92	4.86	5.33	5.16	4.91	5.16	5.08	5.2	4.82	4.91	4.56	4.89	4.77	4.71	4.87	4.82
σ	0.84	1.47	1.34	1.43	1.24	1.32	1.3	1.33	1.32	0.84	1.13	1.07	0.81	0.79	0.8	0.85	0.92	0.89
Dimension	Learning Strategies									Self Regulated Learning Strategies								
M	46.31	43.4	44.06	41.05	44.21	43.06	42.3	43.91	43.4	82.2	75.59	77.09	70.69	75.04	73.45	73.43	75.24	74.67
σ	3.86	9.56	8.61	6.35	6.51	6.57	6.21	7.71	7.26	5.89	17	15.33	9.93	12.81	11.92	10.3	14.35	13.15

Table 4.95: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Self-regulated Learning Strategies in relation to Gender and Successfulness of BCA 2nd Semester Students

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender																	
SS	3.61	8.5	5.81	12.15	2.84	0.02	157.75	1.15	0.42	5.62	0.06	1.4	0.8	1.02	0.16	0.9	55.38	407.7
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	3.61	8.5	5.81	12.15	2.84	0.02	157.75	1.15	0.42	5.62	0.06	1.4	0.8	1.02	0.16	0.9	55.38	407.7
F	2.43	4.53*	3.57	9.65**	1.99	0.01	3.92*	0.77	0.31	3.34	0.04	2.21	1.99	1.5	0.09	1.12	1.05	2.37
Sig.	0.12	0.04	0.06	0.00	0.16	0.93	0.05	0.38	0.58	0.07	0.84	0.14	0.16	0.23	0.77	0.29	0.31	0.13
Source	Successfulness																	
SS	2.38	3.42	0.55	2.8	0.17	2.04	15.1	1.46	0.02	0.08	0	0	0.09	0.88	0.24	0.01	0.19	14.35
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	2.38	3.42	0.55	2.8	0.17	2.04	15.1	1.46	0.02	0.08	0	0	0.09	0.88	0.24	0.01	0.19	14.35
F	1.6	1.83	0.34	2.23	0.12	1.14	0.38	0.98	0.02	0.05	0	0.01	0.23	1.31	0.13	0.01	0	0.08
Sig.	0.21	0.18	0.56	0.14	0.74	0.29	0.54	0.33	0.9	0.83	0.99	0.94	0.63	0.26	0.72	0.93	0.95	0.77

Contd. ...

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender * Successfulness																	
SS	8	3.46	1.11	5.16	1.99	1.08	69.12	2.72	1.43	2.2	3.15	0.54	0.06	0.66	1.17	1.4	103.25	336.44
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	8	3.46	1.11	5.16	1.99	1.08	69.12	2.72	1.43	2.2	3.15	0.54	0.06	0.66	1.17	1.4	103.25	336.44
F	5.39*	1.84	0.68	4.1*	1.4	0.61	1.72	1.82	1.07	1.31	2.44	0.85	0.15	0.97	0.66	1.74	1.96	1.95
Sig.	0.02	0.18	0.41	0.05	0.24	0.44	0.2	0.18	0.31	0.26	0.12	0.36	0.7	0.33	0.42	0.19	0.17	0.17
Source	Error																	
SS	92.02	116.21	101.03	78.08	88.35	110.32	2494.14	92.7	82.88	104.27	79.9	39.26	24.98	41.99	109.75	49.89	3274.65	10675.32
df	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
MSS	1.48	1.87	1.63	1.26	1.43	1.78	40.23	1.5	1.34	1.68	1.29	0.63	0.4	0.68	1.77	0.81	52.82	172.18

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

MAIN EFFECTS

GENDER

It is clear from the table 4.95 that F- values for 'Intrinsic Goal Orientation', 'Task Value', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions came out 2.43, 3.57, 1.99 and 0.01 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Extrinsic Goal Orientation', 'Control of Learning Beliefs' dimensions and total score of 'Motivation' came out 4.53, 9.65 and 3.92 respectively, which are found to be significant either at 0.01 or at 0.05 level of confidence. This shows that male and female students differ significantly on the scores of 'Extrinsic Goal Orientation', 'Control of Learning Beliefs' and total score of 'Motivation'.

The F- values for 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 0.77, 0.31, 3.34, 0.04, 2.21, 1.99, 1.50, 0.09, 1.12, 1.05 and 2.37 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that male and female students do not differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'. Thus, the Hypothesis (6), "There is no significant difference in learning strategies of higher education students with respect to Gender" for BCA 2nd semester is rejected for 'Extrinsic Goal Orientation', 'Control of Learning Beliefs' and total score of 'Motivation'. This shows that male and female students are equally motivated for using adaptive learning strategies for accomplishing their targets.

The analysis of mean score table 4.94 shows that female students (5.66) have scored higher on 'Extrinsic Goal Orientation' dimension than male students (5.1). This shows that female students are more focused on learning and improvement. They strive to master the task and possess a deep level of understanding of the

content. They are curious to seek out challenging study tasks and more importantly they view their success or failure as a source of feedback for improving future performance. The female students have a higher level of learning goal orientation as compared to their male student counterparts. This present finding is in contradiction to the previous findings of Garcia (1993) & Anderman and Anderman (1999) who reported that male students have a high level of extrinsic motivational orientation as compared to females.

The analysis of mean score table 4.94 shows that female students (5.81) have scored higher on 'Control of Learning Beliefs' dimension than male students (5.11). This indicates that as compared to male students, female students possess a higher level of control of learning beliefs. The female students have a strong belief that they have considerable control over their learning outcomes. They work more strategically and effectively and know that their efforts will definitely make a difference.

The analysis of mean score table 4.94 shows that female students (33.02) have scored higher on the total score of 'Motivation' than male students (30.44). This shows that female students are more motivated to regulate their learning process. They have a high sense of control over learning, self-efficacy and value of the learning task. They are more dynamic and ambitious by virtue motivation. They take the initiative to perform challenging tasks and have a high level of aspiration to succeed. The finding of the present study enjoys the support from the findings of Maria and Pedro (2004), Ghazvini and Khajehpour (2011), Simsek and Balaban (2010) & Marrs and Sigler (2012) who found that female students scored remarkably high on the dimension of motivation as compared to their male student counterparts. Likewise, Gardner (2006), Carreira (2011) and Javid et al. (2012) showed that girls showed a high level of motivation in language learning as compared to boys. On the contrary, Obrentz (2012) found that male students scored higher on motivation score as compared to female students. But, Glynn et al. (2007, 2009), Banarjee and Kumar (2014), Yukselturk and Bulut (2009) & Balam, (2015) showed no significant difference between male and female students with respect to their motivation.

DISCUSSION ON RESULTS

From the results, it has been revealed that both male and female students do not differ on 'Intrinsic Goal Orientation', 'Task Value', 'Self-Efficacy for Learning and Performance', 'Test Anxiety', this indicates that both set mastery-oriented goals, value the importance of the task in hand, have firm belief on their efforts and do not show stress, tension, worry, fear of failure and somatic symptoms such as nausea, upset feeling, fastening of heartbeat before or during the exam. On the other side, the motivation of female students is inclined to getting mastery over the content so, female students set mastery-oriented goals, high level of internal goal orientation help them to invest a great deal of time in using deep processing strategies like planning, organising and monitoring, along with internal motivation they are also externally motivated in order to get approval or recognition from others, they show highly competitive behaviour as they want to prove their unique existence in the classroom and set performance-oriented goals for them. Further, findings have proved that female students give more importance to the task in hand, along with it they hold an optimistic approach of getting success and have firm belief on their efforts. They judge their capabilities and confidence for performing a task. Consequently, it is confirmed that female students have high motivational beliefs which affect their willingness to approach a task, devote sufficient time and energy to successfully complete that task. A specific goal orientation directs the behaviour of the person while, task value stimulates the strength or intensity of the behaviour (Garcia and Pintrich, 1994; Schunk and Zimmerman, 1998). The high level of motivation is associated with the more frequent and judicious use of learning strategies in order to regulate the learning process.

SUCCESSFULNESS

Table 4.95 showed that F-value for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' and total score of 'Motivation' came out 1.60, 1.83, 0.34, 2.23., 0.12, 1.14 and 0.38 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that successful and unsuccessful students do not differ significantly on the scores of Intrinsic Goal

Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' and total score of 'Motivation'.

Table 4.95 showed that F-value for 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' 0.98, 0.02, 0.05, 0.00, 0.01, 0.23, 1.31, 0.13, 0.01 0.00 and 0.08 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that successful and unsuccessful students do not differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'. Thus, the Hypothesis (6), There is no significant difference in self-regulated learning strategies of higher education students with respect to Successfulness for BCA 2nd semester is not rejected.

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

Table 4.95 shows that F- values, 'Extrinsic Goal Orientation', 'Task Value', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' and total score of 'Motivation' came out 5.39, 1.84, 0.68, 1.40, 0.61 and 1.72 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Intrinsic Goal Orientation' and 'Control of Learning Beliefs' came out 5.39, 4.10 respectively, which are found to be significant either at 0.01 or at 0.05 level of confidence.

Further, the F- values for the interaction between gender and successfulness on the scores of 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 1.82, 1.07, 1.31, 2.44, 0.85, 0.15, 0.97, 0.66, 1.74, 1.96 and 1.95 respectively, which are not found to be significant at 0.05 level of confidence. This shows that subgroups as a result of interaction

between gender and successfulness do not differ significantly on the scores of ‘Rehearsal’, ‘Elaboration’, ‘Organization’, ‘Critical Thinking’, ‘Metacognitive Self - Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’ dimensions, total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’. Thus, the Hypothesis (7), “There is no significant interaction effect of gender and successfulness on the self-regulated learning strategies of higher education students” for BCA 2nd semester is rejected for ‘Intrinsic Goal Orientation’ and ‘Control of Learning Beliefs’ dimensions.

To further analyze the significant difference between various groups, t-test was applied on ‘Intrinsic Goal Orientation’ and ‘Control of Learning Beliefs’ and obtained results are presented in table 4.96.

Table 4.96: Summary of ‘t’-values for the Subgroups in respect ‘Intrinsic Goal Orientation’ and ‘Control of Learning Beliefs’ Dimensions for BCA 2nd Semester Students

Group 1	Group2	IGO	CLB
Unsuccessful Females	Successful Females	2.57*	3.12*
Unsuccessful Females	Unsuccessful Males	2.76**	5.49*
Unsuccessful Females	Successful Males	2.26*	4.65*

*significant at 0.01 level of confidence

** significant at 0.05 level of confidence

The data inserted in table 4.96 reveals that the t-value on the total score of ‘Intrinsic Goal Orientation’ for the subgroup of successful females-unsuccessful females, unsuccessful females-unsuccessful males and unsuccessful females-successful males came out significant either at 0.05 or 0.01 level of confidence. The analysis of mean score table 4.92 shows that unsuccessful female students (6.6) have scored high than successful female students (5.29), unsuccessful male students (5.19) and successful male students (5.57) on ‘Intrinsic Goal Orientation’ dimension.

The data reported in table 4.96 shows that the t-value on the total score of 'Control of Learning Beliefs' for the subgroup of successful females-unsuccessful females, unsuccessful females-unsuccessful males and unsuccessful females-successful males came out significant at 0.05 level of confidence. The analysis of mean score table 4.94 shows that unsuccessful female students (6.72) have scored high than successful female students (5.54), unsuccessful male students (5) and successful male students (5.18) on 'Control of Learning Beliefs' dimension.

This indicates that the unsuccessful female students of BCA 2nd semester scored higher on internal goal orientation and control of learning beliefs than successful females, successful males and unsuccessful male students. This is indicative of the fact that the female students who have perceived themselves unsuccessful have curiosity, the urge of taking challenging study tasks and getting mastery over the content, they use deep information processing strategies like developing manifold examples of a single concept. They spend a great deal of time in understanding the logic behind the concept and have a firm belief on their efforts, they hold optimistic approach that their hard work will definitely lead towards positive and successful outcomes. Despite the high level of intrinsic goal orientation and control of learning beliefs, they perceived themselves as unsuccessful, the plausible reason behind this may be the lack of effective learning environment, which is promoting problem-based learning and lack of challenging academic tasks. The present results are contradicting with the previous studies, where McCollum and Kajs (2007) & Froiland et al. (2012) advocated that intrinsic goal orientation is the best predictor of academic success.

4.8.11 Summary of 2×2 Analysis of Variance on Scores of Self-Regulated Learning Strategies of BCA 4th Semester

To study the self-regulated learning strategies of BCA 4th semester with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies and presented in table 4.97. For analyzing the variance of various dimensions and total score of self-regulated learning strategies of BCA 4th semester with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented in table 4.98.

Table 4.97: Means and SDs of Sub-Groups of ANOVA for 2×2 Design of Various Dimensions of Self-Regulated Learning Strategies with respect to Gender and Successfulness of BCA 4th Semester

Gender	Female			Male			Total			Female			Male			Total		
Successfulness	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	IGO									EGO								
M	5	5	5	5.47	5.23	5.31	5.4	5.14	5.21	5.83	5.25	5.32	5.51	4.87	5.08	5.56	5.01	5.16
σ	1	1.18	1.14	0.72	1.14	1.02	0.75	1.15	1.06	1.15	1.22	1.2	1.04	1.21	1.19	1.03	1.22	1.19
N	3	21	24	17	35	52	20	56	76	3	21	24	17	35	52	20	56	76
Dimension	TV									CLB								
M	5.4	5.18	5.2	5.52	5.15	5.27	5.5	5.16	5.25	5.87	4.9	5.02	5.28	4.81	4.96	5.37	4.84	4.98
σ	0.52	1.27	1.2	0.88	1.31	1.19	0.83	1.28	1.18	0.51	1.32	1.28	1.16	1.23	1.22	1.1	1.26	1.23
Dimension	SELP									TA								
M	4.9	5.13	5.1	5.31	5.13	5.19	5.25	5.13	5.16	5.13	4.11	4.24	4.84	4.22	4.42	4.88	4.18	4.36
σ	0.76	1.13	1.08	1.12	0.81	0.92	1.07	0.93	0.97	0.76	1.26	1.24	1.19	1.09	1.15	1.12	1.14	1.17
Dimension	Motivation									REH								
M	31.94	29.42	29.74	31.75	29.2	30.04	31.77	29.29	29.94	4.8	5.29	5.23	5.22	4.85	4.97	5.16	5.01	5.05
σ	3.35	5.9	5.65	4.26	5.03	4.9	4.06	5.32	5.11	1	1.21	1.18	0.99	1.23	1.16	0.98	1.23	1.16

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	ELAB									ORG								
M	4.47	5.22	5.13	4.99	4.83	4.89	4.92	4.98	4.96	5.13	5.27	5.25	5.29	4.96	5.07	5.27	5.08	5.13
σ	0.76	1.04	1.03	1.2	1.2	1.19	1.15	1.15	1.14	0.58	1.39	1.31	1.17	1.26	1.23	1.09	1.31	1.25
Dimension	CT									MSR								
M	4.73	4.79	4.78	5.26	4.82	4.96	5.18	4.81	4.91	4.57	4.92	4.88	4.69	4.78	4.75	4.67	4.83	4.79
σ	0.95	1.3	1.24	1.02	0.98	1	1	1.1	1.08	0.49	1.02	0.97	0.7	0.86	0.81	0.67	0.92	0.86
Dimension	TSE									ER								
M	4.47	4.76	4.72	4.46	4.35	4.39	4.46	4.51	4.49	4.43	4.75	4.71	3.78	4.47	4.25	3.88	4.58	4.39
σ	0.42	0.98	0.93	0.71	0.9	0.84	0.67	0.94	0.88	0.51	1.25	1.18	0.96	1.17	1.14	0.93	1.2	1.17
Dimension	PL									HS								
M	4	4.81	4.71	5.06	4.3	4.55	4.9	4.49	4.6	4	4.95	4.83	4.59	4.37	4.44	4.5	4.59	4.57
σ	0.89	1.12	1.11	1.3	1.38	1.39	1.29	1.3	1.31	0	1.07	1.05	1.18	1.09	1.11	1.1	1.11	1.1
Dimension	Learning Strategies									Self Regulated Learning Strategies								
M	40.36	44.53	44.01	43.22	41.43	42.01	42.79	42.59	42.64	72.33	73.86	73.67	75	70.57	72.02	74.6	71.8	72.54
σ	4.44	8.79	8.42	6.86	7.65	7.38	6.54	8.16	7.72	7.57	13.55	12.84	10.08	11.93	11.45	9.62	12.54	11.85

U-Unsuccessful, S- Successful

Table 4.98: Summary of 2x2 ANOVA Design with respect to Various Dimensions of Self-Regulated Learning Strategies in relation to Gender and Successfulness of BCA 4th Semester Students

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender																	
SS	1.04	1.03	0.02	0.99	0.35	0.08	0.36	0	0.04	0.05	0.65	0	0.36	1.84	0.63	0	0.13	0.82
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	1.04	1.03	0.02	0.99	0.35	0.08	0.36	0	0.04	0.05	0.65	0	0.36	1.84	0.63	0	0.13	0.82
F	0.91	0.75	0.01	0.65	0.37	0.06	0.01	0	0.03	0.03	0.55	0	0.47	1.42	0.38	0	0	0.01
Sig.	0.34	0.39	0.91	0.42	0.55	0.81	0.91	0.98	0.86	0.87	0.46	0.98	0.5	0.24	0.54	0.99	0.96	0.94
Source	Successfulness																	
SS	0.13	3.2	0.75	4.44	0.01	5.72	54.54	0.03	0.76	0.08	0.32	0.42	0.07	2.15	0.01	1.16	12.08	18.02
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0.13	3.2	0.75	4.44	0.01	5.72	54.54	0.03	0.76	0.08	0.32	0.42	0.07	2.15	0.01	1.16	12.08	18.02
F	0.11	2.31	0.52	2.95	0.01	4.31	2.1	0.02	0.57	0.05	0.27	0.56	0.1	1.67	0	0.98	0.2	0.13
Sig.	0.74	0.13	0.47	0.09	0.94	0.04	0.15	0.88	0.45	0.82	0.61	0.46	0.76	0.2	0.95	0.33	0.66	0.72

Contd. ...

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender * Successfulness																	
SS	0.13	0.01	0.05	0.54	0.35	0.34	0	1.56	1.81	0.47	0.53	0.15	0.33	0.3	5.3	2.92	75.87	75.65
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0.13	0.01	0.05	0.54	0.35	0.34	0	1.56	1.81	0.47	0.53	0.15	0.33	0.3	5.3	2.92	75.87	75.65
F	0.11	0	0.03	0.36	0.37	0.26	0	1.15	1.37	0.3	0.45	0.19	0.43	0.23	3.21	2.47	1.26	0.53
Sig.	0.74	0.95	0.86	0.55	0.55	0.61	0.99	0.29	0.25	0.59	0.5	0.66	0.51	0.63	0.08	0.12	0.27	0.47
Source	Error																	
SS	82.4	99.42	103.4	108.5	69.26	95.64	1868.7	98.1	95.31	114.9	84.56	54.39	55.29	92.96	118.94	85.24	4324	10248
df	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
MSS	1.15	1.38	1.44	1.51	0.96	1.33	25.96	1.36	1.32	1.6	1.17	0.76	0.77	1.29	1.65	1.18	60.06	142.3

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

MAIN EFFECTS

GENDER

It is clear from the table 4.98 that F- values for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’, ‘Test Anxiety’ and total score of ‘Motivation’ came out 0.91, 0.75, 0.01, 0.65, 0.37, 0.06, 0.01 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that male and female students do not differ significantly on the scores of ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’, ‘Test Anxiety’ dimensions and total score of ‘Motivation’.

Furthermore, F-values for ‘Rehearsal’, ‘Elaboration’, ‘Organization’, ‘Critical Thinking’, ‘Metacognitive Self -Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’, total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’ came out 0.00, 0.03, 0.03, 0.55, 0.00, 0.47, 1.42, 0.38, 0.00, 0.00, 0.01 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that male and female students do not differ significantly on the scores of all dimensions and total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’. This shows that both male and female students are equally using adaptive learning strategies. Thus, the Hypothesis (5), “There is no significant difference in self-regulated learning strategies of higher education students with respect to Gender” for BCA 4th semester is not rejected.

SUCCESSFULNESS

Table 4.98 showed that F-value for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’ dimensions and total score of ‘Motivation’ came out 0.11, 2.31, 0.52, 2.95, 0.01, 2.10 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-value for ‘Test Anxiety’ dimension came out 4.31, which is significant at 0.01 level of confidence.

Table 4.98 showed that F-value for ‘Rehearsal’, ‘Elaboration’, ‘Organisation’, ‘Critical Thinking’, ‘Metacognitive Self -Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’ dimensions, total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’ 0.02, 0.57, 0.05, 0.27, 0.56, 0.10, 1.67, 0.00, 0.98, 0.20, 0.13 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that successful and unsuccessful students do not differ significantly on the scores of ‘Rehearsal’, ‘Elaboration’, ‘Organisation’, ‘Critical Thinking’, ‘Metacognitive Self -Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’ dimensions, total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’. Thus, the Hypothesis (6), “There is no significant difference in self-regulated learning strategies of higher education students with respect to Successfulness” for BCA 4th semester is rejected for ‘Test Anxiety’.

The analysis of mean score table 4.97 shows that unsuccessful students (4.88) have scored higher on ‘Test Anxiety’ dimension than male students (4.18). This shows that unsuccessful students show more stress, tension, worry, fear of failure and somatic symptoms such as nausea, upset feeling, fastening of a heartbeat before or during the exam. They could not able to differentiate between poor strategies which are causing anxiety. The research indicated that high-anxious students are more focused on rote memorization, which they attributed to lack of ability and the inability to offer more time to deeper learning strategies (Naveh-Benjamin et al., 1987 and Al-Alwan, 2008).

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

Table 4.98 showed that F- values for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’, ‘Test Anxiety’ and total score of ‘Motivation’ came out 0.11, 0.00, 0.03, 0.36, 0.37, 0.26 and 0.00 respectively, which are not found to be significant at even at the 0.05 level of confidence. This shows that subgroups as a

result of interaction between gender and successfulness do not differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' and total score of 'Motivation'.

The F- values for the interaction between gender and successfulness on the scores of 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 1.15, 1.37, 0.30, 0.45, 0.19, 0.43, 0.23, 3.21, 2.47, 1.26 and 0.53 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that subgroups as a result of interaction between gender and successfulness do not differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self-Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'. Thus, the Hypothesis (7), "There is no significant interaction effect of gender and successfulness on the self-regulated learning strategies of higher education students" for BCA 4th semester is not rejected.

4.8.12 Summary of 2×2 Analysis of Variance on Scores of Self-Regulated Learning Strategies of BCA 6th Semester

To study the self-regulated learning strategies of BCA 6th semester with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies and presented in the table 4.99. For analyzing the variance of various dimensions and total score of self-regulated learning strategies of BCA 6th semester with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented in table 4.100.

Table 4.99: Means and SDs of Sub-Groups of ANOVA for 2×2 Design of Various Dimensions of Self-Regulated Learning Strategies with respect to Gender and Successfulness of BCA 6th Semester

Gender	Female			Male			Total			Female			Male			Total		
	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimensions	IGO									EGO								
M	5.5	5.5	5.5	5	5.33	5.26	5.18	5.43	5.39	6.5	5.14	5.28	4.97	5.36	5.28	5.53	5.24	5.28
σ	1.92	1.08	1.16	1.16	1	1.02	1.4	1.04	1.1	1	1.18	1.22	1.61	0.89	1.06	1.56	1.06	1.14
N	4	34	38	7	27	34	11	61	72	4	34	38	7	27	34	11	61	72
Dimensions	TV									CLB								
M	6.08	5.28	5.36	5.56	5.24	5.3	5.75	5.26	5.34	4.25	5.14	5.05	4.97	5.43	5.33	4.71	5.27	5.18
σ	0.83	1.13	1.12	0.85	0.88	0.87	0.84	1.02	1	2.5	1.07	1.27	1.03	0.95	0.97	1.63	1.02	1.14
Dimensions	SELP									TA								
M	6.33	5.21	5.33	4.84	5.24	5.16	5.38	5.22	5.25	4.6	4.59	4.59	3.2	4.73	4.41	3.71	4.65	4.51
σ	0.94	0.96	1.01	0.72	0.9	0.87	1.07	0.93	0.94	1.63	1.13	1.17	1.35	1.19	1.36	1.55	1.15	1.26
Dimensions	Motivation									REH								
M	33.06	30.65	30.91	28.47	31.11	30.57	30.14	30.86	30.75	5.33	5.03	5.06	4.59	5.1	5	4.86	5.06	5.03
σ	5.28	4.81	4.84	3.23	4.48	4.35	4.47	4.63	4.59	1.14	1.12	1.11	0.95	0.98	0.98	1.03	1.05	1.05

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
Successfulness	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimensions	ELAB									ORG								
M	5.48	5.24	5.26	4.96	4.93	4.94	5.15	5.1	5.11	4.83	5.18	5.15	5.04	5.28	5.23	4.96	5.23	5.19
σ	0.95	1.27	1.23	1.18	0.86	0.92	1.08	1.11	1.1	2.08	1.07	1.17	0.86	0.75	0.76	1.33	0.93	0.99
Dimensions	CT									MSR								
M	4.9	5.05	5.03	4.91	4.9	4.91	4.91	4.98	4.97	5.1	4.94	4.95	4.77	4.84	4.82	4.89	4.89	4.89
σ	0.96	1.21	1.18	1.17	1.05	1.06	1.04	1.14	1.12	0.91	0.83	0.83	1.08	0.58	0.69	0.99	0.73	0.76
Dimensions	TSE									ER								
M	4.58	4.68	4.67	4.56	4.43	4.46	4.56	4.57	4.57	4.2	4.53	4.5	4.56	4.33	4.38	4.43	4.44	4.44
σ	0.31	0.8	0.76	0.59	0.56	0.56	0.49	0.71	0.68	1.29	1.01	1.03	1.17	0.66	0.77	1.16	0.87	0.91
Dimensions	PL									HS								
M	6.25	5.28	5.38	4.43	5.1	4.97	5.09	5.2	5.19	5.25	4.62	4.68	4.71	4.7	4.71	4.91	4.66	4.69
σ	0.96	1.04	1.07	1.78	1.23	1.36	1.74	1.12	1.22	0.5	0.74	0.74	0.95	0.78	0.8	0.83	0.75	0.76
Dimensions	Learning Strategies									Self Regulated Learning Strategies								
M	45.53	44.33	44.46	42.43	43.49	43.27	43.56	43.96	43.9	78.25	74.91	75.26	70.71	74.56	73.76	73.45	74.75	74.56
σ	6.29	7.47	7.28	5.38	5.52	5.43	5.63	6.63	6.46	11.3	11.7	11.55	7.61	9.46	9.14	9.35	10.68	10.44

Table 4.100: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Self-Regulated Learning Strategies in relation to Gender and Successfulness of BCA 6th Semester Students

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender																	
SS	0.97	3.76	0.68	2.2	4.6	3.47	37.19	0.95	1.46	0.21	0.04	0.4	0.15	0.05	8.68	0.44	33.77	135.6
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0.97	3.76	0.68	2.2	4.6	3.47	37.19	0.95	1.46	0.21	0.04	0.4	0.15	0.05	8.68	0.44	33.77	135.6
F	0.79	3.01	0.68	1.74	5.48*	2.4	1.77	0.86	1.19	0.21	0.03	0.66	0.32	0.06	6.1*	0.75	0.79	1.22
Sig.	0.38	0.09	0.41	0.19	0.02	0.13	0.19	0.36	0.28	0.65	0.87	0.42	0.57	0.8	0.02	0.39	0.38	0.27
Source	Successfulness																	
SS	0.24	2.07	2.71	3.94	1.14	4.99	0.12	0.11	0.15	0.76	0.04	0.02	0	0.02	0.19	0.9	0.04	0.55
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0.24	2.07	2.71	3.94	1.14	4.99	0.12	0.11	0.15	0.76	0.04	0.02	0	0.02	0.19	0.9	0.04	0.55
F	0.2	1.66	2.69	3.1	1.35	3.45	0.01	0.09	0.12	0.75	0.03	0.04	0	0.03	0.13	1.54	0	0.01
Sig.	0.66	0.2	0.11	0.08	0.25	0.07	0.94	0.76	0.73	0.39	0.86	0.85	0.97	0.87	0.72	0.22	0.98	0.94

Contd. ...

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender * Successfulness																	
SS	0.24	6.61	0.49	0.42	4.97	5.15	55.48	1.45	0.1	0.03	0.05	0.12	0.11	0.68	5.9	0.84	10.99	112.22
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0.24	6.61	0.49	0.42	4.97	5.15	55.48	1.45	0.1	0.03	0.05	0.12	0.11	0.68	5.9	0.84	10.99	112.22
F	0.2	5.29*	0.49	0.33	5.92*	3.56	2.64	1.3	0.08	0.03	0.04	0.19	0.24	0.79	4.14*	1.44	0.26	1.01
Sig.	0.66	0.02	0.49	0.57	0.02	0.06	0.11	0.26	0.77	0.86	0.84	0.66	0.62	0.38	0.05	0.24	0.62	0.32
Source	Error																	
SS	83.5	84.96	68.5	86.4	57.1	98.33	1431.8	75.79	83.34	69.34	88.38	40.96	31.88	58.38	96.89	39.84	2923.01	7573.58
df	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
MSS	1.23	1.25	1.01	1.27	0.84	1.45	21.06	1.12	1.23	1.02	1.3	0.6	0.47	0.86	1.43	0.59	42.99	111.38

*Significant at 0.05 level of confidence

MAIN EFFECTS

GENDER

It is clear from the table 4.100 that F-values for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Test Anxiety' and total score of 'Motivation' came out 0.79, 3.01, 0.68, 1.74, 2.40 and 1.77 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-value for 'Self-Efficacy for Learning and Performance' dimension came out 5.48, which is found to be significant at 0.05 level of confidence.

Further, the F- values for 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Help-Seeking', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 0.86, 1.19, 0.21, 0.03, 0.66, 0.32, 0.06, 0.75, 0.79 and 1.22 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-value for 'Peer Learning' came out 6.10, which was significant at 0.05 level of confidence. This shows that male and female students differ significantly on the score of 'Peer Learning'. Thus, the Hypothesis (5), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Gender" for BCA 6th semester is rejected for 'Self-Efficacy for Learning and Performance' and 'Peer Learning' dimensions.

This shows that male and female students differ significantly on the score of 'Self-Efficacy for Learning and Performance'. The analysis of mean score table 4.99 shows that female students (5.33) have scored higher on 'Self-Efficacy for Learning and Performance' dimension than male students (5.16). This shows that female students possess a high sense of self-efficacy for learning and performance than male students. The female students appraise their capability and confidence to perform a task, they have a firm belief that they are capable to master the situation and can produce desired outcomes. Due to the high level of self-efficacy for learning, they choose challenging learning tasks and therefore expend more persistence and efforts in order to get higher achievement outcomes. Their self-efficacy beliefs become instrumental to the goals and to the control over their

environment. They show more resilience in the phase of adverse situations as compared to their male student counterparts. The above finding is in tune with the findings of Mills et al. (2007), Chyung (2007) and Britner (2008) who asserted that girls have a significantly higher level of self-efficacy as compared to male students. On the contrary, Pintrich and De Groot (1990), Yu (1999), Meece et al. (2006), Pajares (2002), Glynn et al. (2009), Lynch and Trujillo (2011) & Al-Harthy and Aldhafri (2014) reported that male students scored significantly higher on self-efficacy for learning as compared to the female students.

The analysis of mean score table 4.99 reveals that female students (5.38) have scored higher on 'Peer Learning' dimension than male students (4.97). This shows that female students always collaborate with their peer group, discuss and debate with them in order to clarify their doubts and reach insights that, one cannot attain on one's own, they often spare time for doing discussion in peer group in order to complete the tasks well on time as compared to male students. But Bidjerano (2005) & Ahmed and Khanam (2014) who reported no significant gender difference in peer learning.

SUCCESSFULNESS

It is clear from the table 4.100 that F-values for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' and total score of 'Motivation' came out 0.20, 1.66, 2.69, 3.10, 1.35, 3.45, 0.01 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that successful and unsuccessful students do not differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' and total score of 'Motivation'.

Table 4.100 shows that F-value for 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' 0.09, 0.12, 0.75, 0.03, 0.04, 0.00, 0.03, 0.13, 1.54, 0.00 and 0.01 respectively, which are not found to be significant even at the 0.05 level of

confidence. This shows that successful and unsuccessful students do not differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'. Thus, the Hypothesis (6), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Successfulness" for BCA 6th semester is not rejected.

INTERACTION EFFECT (GENDER* SUCCESSFULNESS)

Table 4.100 shows that F- values for 'Intrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Test Anxiety' and total score of 'Motivation' came out 0.20, 0.49, 0.33, 3.56 and 2.64 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Extrinsic Goal Orientation' and 'Self-Efficacy for Learning and Performance' dimensions came out 5.29, 5.92 respectively, which are found to be significant at 0.05 level of confidence.

The F- values for the interaction between gender and successfulness on the scores of 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Help-Seeking', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 1.30, 0.08, 0.03, 0.04, 0.19, 0.24, 0.79, 1.44, 0.26 and 1.01 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-value for 'Peer Learning' dimension came out 4.14, which was significant at the 0.05 level of confidence. Thus, the Hypothesis (7), "There is no significant interaction effect of gender and successfulness on the self-regulated learning strategies of higher education students" for BCA 6th semester is rejected for 'Extrinsic Goal Orientation', 'Self-Efficacy for Learning and Performance' and 'Peer Learning' dimensions.

To further analyse the significant difference between various groups, t-test was applied on the 'Extrinsic Goal Orientation' and 'Self-Efficacy for Learning and Performance' and 'Peer Learning' dimensions and obtained results are presented in the table 4.101.

Table 4.101: Summary of ‘t’-values for the Subgroups in respect ‘Extrinsic Goal Orientation’ and ‘Self-Efficacy for Learning and Performance’ Dimensions for BCA 6th Semester Students

Dimension		EGO	SELP
Group 1	Group 2	t -value	t- value
Unsuccessful females	Successful Females	2.52*	2.25*
Unsuccessful Females	Unsuccessful Males	1.94	2.74**
Unsuccessful Females	Successful Males	2.16*	2.18*

*Significant at 0.05 level of confidence

The data presented in table 4.101 shows that the t-value on the total score of ‘Extrinsic Goal Orientation’ for the subgroup of unsuccessful females- successful females, unsuccessful females- unsuccessful males and unsuccessful females- successful males came out significant at 0.05 level of confidence. The analysis of mean score table 4.99 shows that unsuccessful female students (6.5) have scored higher on ‘Extrinsic Goal Orientation’ dimension than successful female students (5.14), unsuccessful male students (4.97) and successful male students (5.36).

The data reported in table 4.101 shows that the t-value on the total score of ‘Self-Efficacy for Learning and Performance’ for the subgroup of unsuccessful females and successful females, unsuccessful females- unsuccessful males and unsuccessful females- successful males came out significant at 0.05 level of confidence. The analysis of mean score table 4.99 shows that unsuccessful female students (6.33) have scored high than successful female students (5.21), unsuccessful male students (4.84) and successful male students (5.24). on ‘Self-Efficacy for Learning and Performance’ dimension.

It can be summarized from the above results that the female students of BCA 6th semester who perceived themselves as unsuccessful are generally motivated by some external reasons as well, such as getting good scores, competition, getting rewards from the teachers and parents for the good performance and have the ability

to appraise their capabilities and confidence to perform a task. Fencil and Scheel (2005) opined that different teaching pedagogies viz. cooperative learning, collaborative learning and inquiring-based lab activities improve the self-efficacy of learning and performance. Although the unsuccessful female students of BCA 6th semester have a high level of self-efficacy for learning and performance, they perceived themselves as unsuccessful. This may be due to that the teacher is not using a variety of pedagogies in order to teach different topics and not encouraging inquiry-based lab activities. Hence, it can be concluded that ineffective learning environment is not able to meet the needs of the learners and hindering their academic performance.

4.9 SUMMARY OF 2×2 ANALYSIS OF VARIANCE ON SCORES OF SELF-REGULATED LEARNING STRATEGIES OF STUDENTS AT PG LEVEL PROGRAMS

In order to study the self-regulated learning strategies of students in PG programs with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies. For analyzing the variance of various dimensions and total score of self-regulated learning strategies with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented below in the following headings.

4.9.1 Summary of 2×2 Analysis of Variance on Scores of Self-Regulated Learning Strategies of M.Com 2nd Semester in relation to Gender and Successfulness

To study the self-regulated learning strategies of M.Com 2nd semester with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies and presented in the table 4.102. For analysing the variance of various dimensions and total score of self-regulated learning strategies of M.Com 2nd semester with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented in table 4.103.

Table 4.102: Means and SDs of Sub-Groups of ANOVA for 2×2 Design of Various Dimensions of Self-Regulated Learning Strategies with respect to Gender and Successfulness of M.Com 2nd Semester

Gender	Female			Male			Total			Female			Male			Total		
Successfulness	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Source	IGO									EGO								
M	4.25	5.39	5.32	3	5.11	4.36	3.56	5.36	5.15	4.58	5.65	5.58	3.82	5.24	4.74	4.16	5.59	5.43
σ	2.06	1.22	1.29	0.71	1.69	1.74	1.51	1.27	1.42	2.05	1.19	1.26	0.98	1.59	1.53	1.49	1.24	1.34
N	4	61	65	5	9	14	9	70	79	4	61	65	5	9	14	9	70	79
Dimension	TV									CLB								
M	4.18	5.46	5.38	2.8	5.23	4.36	3.41	5.43	5.2	4.03	5.49	5.4	2.82	4.57	3.94	3.36	5.37	5.14
σ	1.81	1.16	1.23	0.72	1.68	1.83	1.42	1.22	1.4	1.91	1.07	1.17	0.72	1.91	1.78	1.42	1.23	1.4
Dimension	SELP									TA								
M	4.5	5.25	5.21	2.9	4.88	4.17	3.61	5.2	5.02	4.25	4.27	4.27	3.04	4.98	4.29	3.58	4.36	4.27
σ	1.1	0.97	0.99	0.63	1.16	1.38	1.17	1	1.13	1.04	1.26	1.24	1.61	1.64	1.84	1.45	1.32	1.35
Dimension	Motivation									REH								
M	25.48	31.34	30.98	18.17	29.69	25.57	21.42	31.13	30.02	3.78	5.29	5.19	2.64	4.7	3.96	3.14	5.21	4.98
σ	9.39	4.75	5.23	2.51	8.13	8.69	7.15	5.26	6.27	0.67	1.18	1.21	0.32	1.11	1.36	0.76	1.18	1.31

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	ELAB									ORG								
M	3.88	5.21	5.13	3	4.96	4.26	3.39	5.17	4.97	4.03	5.54	5.45	3.14	5.49	4.65	3.53	5.53	5.31
σ	0.46	1.11	1.12	0.5	1.17	1.36	0.65	1.11	1.21	1.23	1.14	1.19	0.42	1.13	1.49	0.93	1.13	1.28
Dimension	CT									MSR								
M	3.45	5.1	4.99	2.92	5.07	4.3	3.16	5.09	4.87	3.78	4.86	4.79	3.08	4.89	4.24	3.39	4.86	4.69
σ	0.85	1.03	1.09	0.48	1.23	1.46	0.68	1.05	1.19	0.37	0.96	0.97	0.33	1.11	1.27	0.49	0.97	1.04
Dimension	TSE									ER								
M	4.2	4.41	4.4	3.66	3.96	3.85	3.9	4.35	4.3	3.7	4.33	4.29	3.62	3.86	3.77	3.66	4.27	4.2
σ	0.55	0.87	0.85	0.68	0.9	0.81	0.65	0.88	0.87	0.85	1.02	1.02	0.82	1.15	1.02	0.78	1.04	1.03
Dimension	PL									HS								
M	3.85	5.02	4.95	2.58	4.6	3.88	3.14	4.97	4.76	3.75	4.82	4.75	3.2	3.89	3.64	3.44	4.7	4.56
σ	1.35	1.44	1.45	0.89	1.44	1.59	1.24	1.43	1.52	0.5	1.1	1.1	0.84	1.54	1.34	0.73	1.2	1.22
Dimension	Learning Strategies									Self Regulated Learning Strategies								
M	34.12	44.38	43.75	27.54	41.32	36.4	30.46	43.99	42.45	59.75	75.74	74.75	45.8	71.11	62.07	52	75.14	72.51
σ	4.73	7.39	7.64	1.39	7.13	8.88	4.62	7.38	8.31	11.09	11.35	11.9	3.11	13.99	16.79	10.25	11.71	13.67

U-Unsuccessful, S- Successful

Table 4.103: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Self-Regulated Learning Strategies in relation to Gender and Successfulness of M.Com 2nd Semester Students

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender																	
SS	4.07	2.32	4.45	7.87	6.74	0.44	139.38	5.12	2.20	1.52	0.54	0.76	1.71	0.54	4.95	3.80	160.97	597.55
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	4.07	2.32	4.45	7.87	6.74	0.44	139.38	5.12	2.20	1.52	0.54	0.76	1.71	0.54	4.95	3.80	160.97	597.55
F	2.42	1.43	2.90	5.33*	6.94**	0.25	4.81*	4.05*	1.92	1.22	0.51	0.87	2.34	0.51	2.49	2.98	3.21	4.62*
Sig.	0.12	0.24	0.09	0.02	0.01	0.62	0.03	0.05	0.17	0.27	0.48	0.35	0.13	0.48	0.12	0.09	0.08	0.04
Source	Successfulness																	
SS	18.34	10.78	23.95	17.90	12.89	6.63	523.20	22.07	18.71	25.84	24.90	14.48	0.44	1.30	17.64	5.36	1001.22	2953.38
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	18.34	10.78	23.95	17.90	12.89	6.63	523.20	22.07	18.71	25.84	24.90	14.48	0.44	1.30	17.64	5.36	1001.22	2953.38
F	10.9**	6.64**	15.63**	12.12**	13.27**	3.82*	18.05**	17.43**	16.32**	20.72**	23.56**	16.51**	0.60	1.25	8.88**	4.21*	19.99**	22.83**
Sig.	0.00	0.01	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.27	0.00	0.04	0.00	0.00

Contd. ...

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender * Successfulness																	
SS	1.62	0.22	2.28	0.13	2.61	6.38	55.50	0.52	0.67	1.21	0.44	0.91	0.01	0.27	1.25	0.25	21.49	150.52
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	1.62	0.22	2.28	0.13	2.61	6.38	55.50	0.52	0.67	1.21	0.44	0.91	0.01	0.27	1.25	0.25	21.49	150.52
F	0.96	0.13	1.49	0.09	2.68	3.68	1.92	0.41	0.59	0.97	0.41	1.04	0.02	0.26	0.63	0.20	0.43	1.16
Sig.	0.33	0.72	0.23	0.76	0.11	0.06	0.17	0.52	0.45	0.33	0.52	0.31	0.89	0.61	0.43	0.66	0.51	0.28
Source	Error																	
SS	126.20	121.83	114.91	110.81	72.87	130.09	2173.93	94.98	85.97	93.53	79.25	65.77	54.68	78.1	148.96	95.46	3755.95	9702.24
df	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
MSS	1.68	1.62	1.53	1.48	0.97	1.74	28.99	1.27	1.15	1.25	1.06	0.88	0.73	1.04	1.99	1.27	50.08	129.36

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

MAIN EFFECTS

GENDER

It is clear from the table 4.103 that the F- values for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Test Anxiety' dimensions came out 2.42, 1.43, 2.90 and 0.25 respectively, which are not significant even at the 0.05 level of confidence. However, F- values for 'Control of Learning Beliefs', 'Self Efficacy for Learning and Performance' dimensions and total score of 'Motivation' came out 5.33, 6.94, 4.81 respectively, which are found to be significant either at 0.05 or 0.01 level of confidence. This shows that male and female students differ significantly on the scores of 'Control of Learning Beliefs', 'Self Efficacy for Learning and Performance' dimensions and total score of 'Motivation'.

It is clear from the table 4.103 that the F- values for 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions and total score of 'Learning Strategies' came out 1.92, 1.22, 0.51, 0.87, 2.34, 0.51, 2.49, 2.98 and 3.21 respectively, which are not found to be significant even at the 0.05 level of confidence. However, the F- values for 'Rehearsal' and total score of 'Self Regulated Learning Strategies' came out 4.05 and 4.62 respectively, which are significant at 0.05 level of confidence. This shows that male and female students do not differ significantly on the scores of 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self-Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions and total score of 'Learning Strategies' but differ significantly on 'Rehearsal' and total score of 'Self Regulated Learning Strategies'. Thus, the Hypothesis (5), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Gender" for M.Com 2nd semester is rejected for 'Control of Learning Beliefs', 'Self Efficacy for Learning and Performance' dimensions, total score of 'Motivation', 'Rehearsal' and total score of 'Self Regulated Learning Strategies'.

The analysis of mean score table 4.102 shows that the mean score of female students in 'Control of Learning Beliefs'(5.4) and 'Self Efficacy for Learning and

Performance' (5.21) is higher than the mean score of male students in 'Control of Learning Beliefs' (3.94) and 'Self Efficacy for Learning and Performance'(4.17). This shows that female students have a firm belief in their efforts, they hold an optimistic approach that their hard work will definitely lead towards positive and successful outcomes. They appraise their capability and confidence to perform that task. they are confident enough to learn the difficult material of the course, master the skills and receive excellent grades in the classroom as compared to male students. The results of the present study are in tune with the results of Mills et al. (2007) who explored that girls showed higher self-efficacy in French language learning as compared to boys. Likewise, Chyung (2007) found that female students of distance education showed a significantly high level of self- efficacy as compared to male students. In the same way, Britner (2008) reported that female students scored higher in self- efficacy and performed well in the Earth Sciences subject. On the contrary, Pintrich and De Groot (1990), Yu (1999), Meece et al. (2006), Pajares (2002), Glynn et al. (2009) & Al-Harthy and Aldhafri (2014) reported that male students outperformed female students in self-efficacy.

The analysis of mean score table 4.102 reveals that female students (30.98) have scored higher on the total score of 'Motivation' dimension than male students (25.57). This shows that female students are more motivated to regulate their learning, have mastery over the content, get good grades in the class. The high level of motivation encourages them to have control over their academic performance, think critically and plan their leaning strategically as compared to male students. The finding of the present study enjoy the support from the findings of Maria and Pedro (2004), Ghazvini and Khajehpour (2011), Simsek and Balaban (2010) & Marrs and Sigler (2012) who found that female students scored remarkably high on the dimension of motivation as compared to their male student counterparts. Likewise, Gardner (2006), Carreira (2011) and Javid et al. (2012) showed that girls showed a high level of motivation in language learning as compared to boys. On the contrary, Obrentz (2012) found that male students scored higher on motivation score as compared to female students. But, Glynn et al. (2007, 2009), Banarjee and Kumar (2014), Yukselturk and Bulut (2009) & Balam, (2015) showed no significant difference between male and female students with respect to their motivation.

It is clear from the table 4.102 that in 'Rehearsal' the mean score of female students (5.19) is higher than male students (3.96) and in the total score of 'Self Regulated Learning Strategies' the mean score of female students (74.75) is higher than male students (62.07). This indicates that female students are highly motivated than male students and overall make good use of self-regulated learning strategies. The results of the present study are in tune with the results of the previous researches conducted by Bidjerano (2005), Mills et al. (2007), Kadhiravan (2012), & Banarjee and Kumar (2014) who reported that female students surpassed male students in making good use of self-regulated learning strategies.

DISCUSSION ON RESULTS

It is clear from the results that female students differ significantly on the scores of 'Control of Learning Beliefs', 'Self Efficacy for Learning and Performance' dimensions, the total score of 'Motivation', 'Rehearsal' and total score of 'Self Regulated Learning Strategies' from male students of M.Com 2nd semester. This shows that female students have a firm belief in their efforts, they hold an optimistic approach that their hard work will definitely lead towards positive and successful outcomes. They appraise their capability and confidence to perform that task, they are confident enough to learn the difficult material of the course, master the skills and receive excellent grades in the classroom. The female students are more focused on learning the content by practising it again and again. They use this strategy in order to memorise the simple tasks and to trigger their working memory. This shows that female students are better self-regulated learners than male students. They are motivated to learn through the self-regulated process and use a variety of learning strategies and understand the value of using these strategies in appropriate situations. The better self-regulated learning strategies among females help them to be proactive and self-motivating in comparison to their male counterparts. Females self-regulated learners voluntarily offer answers to questions in the classroom, seek out additional resources when needed to master the content, they are aware of their strengths and limitations and manipulate their learning environment in order to meet their needs. Females in comparison to males are optimistic about their future and work systematically to achieve the goals. Previous researches have also supported

that female students are more efficient in regulating their learning process as compared to male students.

SUCCESSFULNESS

It is clear from the table 4.103 that the F- values for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation' came out 10.9, 6.64, 15.63, 12.12, 13.27, 3.82 and 18.05 respectively, which are found to be significant at the 0.05 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation'.

Table 4.103 shows that the F-value for 'Time and Study Environment' and 'Effort Regulation' came out to be 0.60 and 1.25 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F values for 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Peer Learning', 'Help-seeking 'dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 17.43, 16.32, 20.72, 23.56, 16.51, 8.88, 4.21, 19.99, 22.83 respectively, which are found to be significant either at 0.05 or 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Peer Learning', 'Help-seeking 'dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'. Thus, the Hypothesis (6), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Successfulness for M.Com 2nd semester is rejected for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation', 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Peer Learning', 'Help-seeking 'dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'.

The data from table 4.102 showed that in ‘Intrinsic Goal Orientation’ successful students (5.36) have scored higher than unsuccessful students (3.56). This shows that successful students are more focused on learning and improvement than unsuccessful students. They strive to master the task and possess a deep level of understanding of the content. They are curious to seek out challenging study tasks and more importantly they view their success or failure as a source of feedback for improving future performance. The successful students have a higher level of learning goal orientation as compared to their unsuccessful student counterparts. The successful students spend a great deal of time in understanding the logic behind the concept and this adds to their pride, self-satisfaction with the success. The finding of the present research is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who reported that successful students scored higher on ‘Intrinsic Goal Orientation’ than their unsuccessful counterparts.

The data from table 4.102 showed that in ‘Extrinsic Goal Orientation’ successful students (5.59) have scored higher than unsuccessful students (4.16). This shows that successful students are more concerned about their performance in relation to the other students in the class. Their main focus is on getting good grades in order to prove their position in the class. They want to seek out rewards or approval from the peers, teachers or parents and possess a higher level of performance-approach orientation as compared to the unsuccessful students. The above finding is in contrast with the finding of Al-Alwan (2008) who reported that unsuccessful students scored higher on ‘Extrinsic Goal Orientation’ than their successful counterparts.

The data from table 4.102 showed that in ‘Task Value’ successful students (5.43) have scored higher than unsuccessful students (3.41). As compared to unsuccessful students, successful students attach a high value to the importance and usefulness of learning the subject. This value makes the successful students dedicated and committed to accomplishing the targets. The finding of the present research is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who reported that successful students scored higher on ‘Task Value’ than their unsuccessful counterparts.

The data from table 4.102 showed that in 'Control of Learning Beliefs' successful students (5.37) have scored higher than unsuccessful students (3.36). This shows that as compared to unsuccessful students, successful students possess a higher level of control of learning beliefs. The successful students possess the firm belief that they have considerable control over their learning outcomes. They work more strategically and effectively and know that their efforts will definitely make a difference. The finding of the present research is in tune with the finding of Al-Alwan (2008) who reported that successful students scored higher on 'Control of Learning Beliefs' than their unsuccessful counterparts.

The data from table 4.102 showed that in 'Self-Efficacy for Learning and Performance' successful students (5.20) have scored higher than unsuccessful students (3.61). This shows that successful students possess a high sense of self-efficacy for learning and performance than unsuccessful students. The successful students appraise their capability and confidence to perform a task, they have a firm belief that they are capable to master the situation and can produce desired outcomes. Due to the high level of self-efficacy for learning, they choose challenging learning tasks and therefore expend more persistence and efforts in order to get higher achievement outcomes. Their self-efficacy beliefs become instrumental to the goals and to the control over their environment. They show more resilience in the phase of adverse situations as compared to their unsuccessful student counterparts. The above finding is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who reported that successful students scored higher on 'Self-Efficacy for Learning and Performance' than their unsuccessful counterparts.

The data from table 4.102 showed that in 'Test Anxiety' successful students (4.36) have scored higher than unsuccessful students (3.58). This shows that successful students show more test anxiety as compared to unsuccessful students. This may be due to the reason that successful students want to achieve high scores and maintain their successful image within the peer group, in front of the teachers and parents as compared to unsuccessful students. The result got support from the views of Haig (2015) who revealed another side of anxiety, which can trigger the motivation and attention of the learner to give best. The study got partial support

from the results of Sinha (1966) who reported that high achievers with high intelligence, better adjustment have a moderate level of test anxiety as compared to low achievers. On the contrary, Tewari and Rai (1976) and Molly & Lakshminaryanan (1988) reported that there exists no significant difference between high and low achievers with respect to test anxiety.

The data from table 4.102 showed that in the total score of 'Motivation' successful students (31.13) have scored higher than unsuccessful students (21.42). This shows that successful students are more motivated to regulate their learning process than unsuccessful students. They have a high sense of control over learning, self-efficacy and value of the learning task. They are more dynamic and ambitious by virtue motivation. They take the initiative to perform challenging tasks and have a high level of aspiration to succeed. They think critically and plan their learning more strategically as compared to unsuccessful students. The above finding is in tune with the findings of Simsek and Balaban (2010) & De Zoysa et al. (2014) who reported that successful students scored high on 'Motivation' dimension as compared to unsuccessful students.

The data from table 4.102 showed that in 'Rehearsal' successful students (5.21) have scored higher than unsuccessful students (3.14). This shows that successful students are more focused on leaning the content by practising it again and again. They use this strategy mainly to learn simple tasks. The successful students are more likely to retain the things in their working memory and use memory strategies more often than unsuccessful students. The present finding goes in tune with the findings of Simsek and Balaban (2010) who reported that successful students make frequent use of rehearsal strategies in order to memorize the simple tasks. But Fathi-Ashtiani et al. (2007) reported no significant difference between successful and unsuccessful students with respect to the use of 'Rehearsal' strategies.

The data from table 4.102 showed that in 'Elaboration' successful students (5.17) have scored higher than unsuccessful students (3.39). This indicates that as compared to unsuccessful students, successful students make good use of elaboration strategies like paraphrasing, summarizing, creating analogies, mnemonics, selecting key ideas from the text and making internal connections

between what is being learned with the previous knowledge. They pull the information together from various sources viz. notes, lecture, readings, tutorials in order to make connections between them. The above finding is in tune with the finding of Boulton-Lewis et al. (2004) who reported that successful students use 'Elaboration' strategies more frequently than unsuccessful students.

The data from table 4.102 showed that in 'Organization' successful students (5.53) have scored higher than unsuccessful students (3.53). This shows that as compared to unsuccessful students, the successful students plan their learning more strategically and make good use of organization strategies like summarizing, organizing, classifying, regrouping, connecting the information from different pieces and generating concept and mind maps. The present finding is in tune with the findings of Simsek and Balaban (2010), Kitsantas (2002) & Fathi-Ashtiani et al. (2007) who reported that successful students use 'organization' strategy more frequently as compared to the unsuccessful students.

The data from table 4.102 showed that in 'Critical Thinking' successful students (5.09) have scored higher than unsuccessful students (3.16). This shows that successful students question themselves before getting convinced about the idea taught in the class and try to find good supporting pieces of evidence in order to accept any conclusion, the assertion about the concept taught in the class. They always play around with their ideas in order to develop a convincing explanation of the content as compared to unsuccessful students.

The data from table 4.102 showed that in 'Metacognitive Self -Regulation' successful students (4.86) have scored higher than unsuccessful students (3.39). This shows that successful students are capable of thinking about their learning more explicitly than unsuccessful students. They always plan, monitor, regulate and evaluate their learning. They set their goals and choose appropriate learning strategies to attain goals and evaluate their progress. They strive to come up with better ways of learning. They try to change their study style according to the requirement of the course and teaching style of the teacher. The present finding is in tune with the findings of Al-Alwan (2008), Simsek and Balaban (2010), De Zoysa et al. (2014) and Tang (2015) who have found that successful students surpassed unsuccessful students in terms of metacognitive self-regulation.

The data from table 4.102 showed that in 'Peer Learning' successful students (4.97) have scored higher than unsuccessful students (3.14). This shows that successful students are more active in working and learning with peers than unsuccessful students. The successful students generally discuss and debate in the group to clarify their doubts. Peer learning technique helps them to reach insights that they cannot be able to attain on their own. They often work with their friends in order to complete the tasks or assignment given by the teacher well on time. Ahmed and Khanam (2014) reported that high achievers use 'Peer Learning' strategy more often as compared to low achievers. But Al-Alwan (2008) found no significant difference between the students of the first semester of the first year with a high GPA and low GPA with respect to 'Peer Learning'.

The data from table 4.102 showed that in 'Help-Seeking' successful students (4.70) have scored higher than unsuccessful students (3.44). It has been found that successful students showed a more positive attitude in seeking help from friends and teachers. The successful students often monitor their academic performance therefore, on finding themselves unable to solve the problem they request assistance from other knowledgeable persons. The prior researches have shown that help-seeking behaviour can avert the possibility of failure and hence increase the likelihood of mastery and autonomous learning. The finding of the present study is consistent with the finding of Kitsantas (2002) who reported that high achievers outperformed low achievers in the 'Help-Seeking' dimension. Likewise, Ahmed and Khanam (2014) found a significant difference between high and low achieving students and confirmed that high achieving students more often seek help from knowledgeable others as compared to low achieving students.

The data from table 4.102 showed that in the total score of 'Learning Strategies' successful students (43.99) have scored higher than unsuccessful students (30.46). This shows that successful students tend to use a wide variety of learning strategies than unsuccessful students. The successful students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and

structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate with their peers for effective learning. The present finding enjoys support from the results of Paris and Myers (1981), Tait and Entwistle (1996), Yip and Chung (2005), Cho and Ahn (2003), Yip (2007, 2009, 2012, 2013), Ahmed and Khanam (2014), and De Zoysa et al. (2014) who reported that successful students use more adaptive learning strategies both in variety and frequency.

The data from table 4.102 showed that in the total score of ‘Self Regulated Learning Strategies’ successful students (75.14) have scored higher than unsuccessful students (52). The result shows that self-regulated learning of successful students was markedly higher than unsuccessful students. This shows that successful students have the ability to control their actions and responses, which is very much essential for the progress in varied contexts. The successful students are able to control their behaviour, emotions and cognition for the purpose of pursuing the goals. They set proximal achievable goals which are learning-oriented not performance-oriented. They know that different learning tasks require different learning strategies. They own a “Tool Kit” of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations. They possess a high level of academic self-efficacy and have the ability to control their performance. They observe the intermediate outcomes of their learning process. They precisely attribute the learning outcome to the causes of performance. The present finding is in tune with the findings of Paris and Myers (1981), Pintrich and DeGroot (1990), Tait and Entwistle (1996), Stoyloff (1996), McWhaw and Abrami (2001), Chen (2002), Cho and Ahn (2003), Schunk (2005), Simsek and Balaban (2010) & Son and Simon (2012) who reported that high achieving students use more adaptive self-regulated learning strategies as compared to low achieving students.

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

Table 4.103 showed that F-values for the interaction between gender and successfulness on the scores of ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal

Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' and total score of 'Motivation' came out 1.62, 0.22, 2.28, 0.13, 2.61, 6.38 and 55.50 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that subgroups as a result of interaction between gender and successfulness do not differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation'.

Table 4.103 shows that the F- values for the interaction between gender and successfulness on the scores of 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking', scores of 'Learning Strategies' and 'Motivation & Learning Strategies Total' came out 0.52, 0.67, 1.21, 0.44, 0.91, 0.01, 0.27, 1.25, 0.25, 21.49 and 150.52 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that subgroups as a result of interaction between gender and successfulness do not differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self-Regulated Learning Strategies'. Thus, the Hypothesis (7), "There is no significant interaction effect of gender and successfulness on the self-regulated learning strategies of higher education students" for M. Com 2nd semester is not rejected.

4.9.2 Summary of 2×2 Analysis of Variance on Scores of Self-Regulated Learning Strategies of M.Sc. 2nd Semester in relation to Gender and Successfulness

To study the self-regulated learning strategies of M.Sc. 2nd semester with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of Self-regulated learning strategies and presented in the Table 4.104. For analyzing the variance of various dimensions and total score of self-regulated learning strategies of M.Sc. 2nd semester with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented in table 4.105.

Table 4.104: Means and SDs of Sub-Groups of ANOVA for 2×2 Design of Various Dimensions of Self-Regulated Learning Strategies with respect to Gender and Successfulness of M.Sc. 2nd Semester

Gender	Female			Male			Total			Female			Male			Total		
	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	IGO									EGO								
M	5.46	5.36	5.39	5.86	5.26	5.42	5.52	5.34	5.39	5.61	5.27	5.37	5.27	5.32	5.3	5.56	5.28	5.36
σ	1.52	1.08	1.22	0.9	1.05	1.03	1.44	1.07	1.19	1.16	1.07	1.1	0.98	1.1	1.05	1.13	1.07	1.09
N	37	89	126	7	19	26	44	108	152	37	89	126	7	19	26	44	108	152
Dimension	TV									CLB								
M	5.16	5.31	5.27	5.4	4.9	5.03	5.2	5.24	5.23	5.57	5.12	5.25	5.43	4.72	4.91	5.54	5.05	5.2
σ	1.14	0.95	1.01	1.07	1.15	1.13	1.12	1	1.03	1.07	1	1.04	1.06	1.16	1.16	1.06	1.04	1.06
Dimension	SELP									TA								
M	5.28	5.26	5.27	5.91	5.27	5.45	5.38	5.27	5.3	4.82	4.22	4.4	3.31	4.55	4.22	4.58	4.28	4.37
σ	1.2	0.87	0.97	0.96	0.9	0.94	1.18	0.87	0.97	1.36	1.06	1.18	0.99	1.15	1.22	1.41	1.07	1.19
Dimension	Motivation									REH								
M	31.74	30.34	30.75	31.04	29.81	30.14	31.63	30.25	30.65	5.02	5.16	5.12	4.67	4.94	4.87	4.97	5.12	5.08
σ	5.63	4.1	4.62	3.62	4.28	4.08	5.33	4.12	4.53	1.15	0.94	1.01	0.73	1	0.93	1.1	0.95	0.99

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
Successfulness	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	ELAB									ORG								
M	5.17	5.22	5.21	5.69	4.82	5.05	5.25	5.15	5.18	5.25	5.29	5.28	5.7	4.97	5.17	5.32	5.23	5.26
σ	1.09	0.91	0.96	1.15	0.93	1.05	1.1	0.92	0.97	1.17	0.99	1.05	1.16	0.96	1.04	1.17	0.99	1.04
Dimension	CT									MSR								
M	4.95	5.03	5	5.49	5.05	5.17	5.04	5.03	5.03	4.59	4.9	4.81	4.96	4.6	4.7	4.65	4.85	4.79
σ	1.24	0.97	1.06	1.21	0.71	0.87	1.24	0.93	1.02	0.82	0.61	0.69	0.82	0.65	0.7	0.82	0.63	0.69
Dimension	TSE									ER								
M	4.14	4.48	4.38	4.49	4.5	4.5	4.2	4.48	4.4	3.92	4.18	4.11	3.84	4.26	4.15	3.91	4.2	4.11
σ	0.67	0.65	0.67	0.94	0.51	0.64	0.72	0.62	0.66	1	0.88	0.92	1.06	0.72	0.82	0.99	0.85	0.9
Dimension	PL									HS								
M	4.66	5.22	5.05	5.14	4.78	4.88	4.74	5.14	5.02	4.54	4.81	4.73	4.43	4.68	4.62	4.52	4.79	4.71
σ	1.15	1.05	1.1	1.14	0.99	1.02	1.15	1.05	1.09	1.28	0.85	1	0.79	0.82	0.8	1.21	0.84	0.97
Dimension	Learning Strategies									Self Regulated Learning Strategies								
M	41.97	44.07	43.45	44.18	42.26	42.78	42.32	43.75	43.34	73.7	74.44	74.22	75.29	71.95	72.85	73.95	74	73.99
σ	6.59	5.72	6.04	6.44	5.05	5.39	6.54	5.63	5.92	11.27	8.62	9.43	8.5	7.75	7.93	10.8	8.49	9.18

Table 4.105: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Self-Regulated Learning Strategies in relation to Gender and Successfulness of M.Sc. 2nd Semester Students

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender																	
SS	0.39	0.37	0.14	1.24	1.8	5.98	6.58	1.38	0.05	0.08	1.35	0.02	0.58	0	0.01	0.24	0.68	3.53
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0.39	0.37	0.14	1.24	1.8	5.98	6.58	1.38	0.05	0.08	1.35	0.02	0.58	0	0.01	0.24	0.68	3.53
F	0.27	0.31	0.13	1.14	1.93	4.56*	0.32	1.39	0.06	0.07	1.28	0.05	1.36	0	0.01	0.26	0.02	0.04
Sig.	0.6	0.58	0.72	0.29	0.17	0.03	0.57	0.24	0.81	0.79	0.26	0.83	0.25	0.99	0.93	0.61	0.89	0.84
Source	Successfulness																	
SS	2.06	0.39	0.54	5.65	1.83	1.72	29.68	0.71	2.83	2.01	0.55	0.01	0.53	2.02	0.16	1.18	0.13	28.98
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	2.06	0.39	0.54	5.65	1.83	1.72	29.68	0.71	2.83	2.01	0.55	0.01	0.53	2.02	0.16	1.18	0.13	28.98
F	1.45	0.32	0.5	5.2*	1.95	1.31	1.45	0.72	3.03	1.84	0.52	0.02	1.24	2.49	0.14	1.25	0	0.34
Sig.	0.23	0.57	0.48	0.02	0.17	0.25	0.23	0.4	0.08	0.18	0.47	0.89	0.27	0.12	0.71	0.27	0.95	0.56

Contd. ...

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender * Successfulness																	
SS	1.04	0.65	1.84	0.3	1.69	14.36	0.12	0.08	3.67	2.52	1.1	1.92	0.45	0.1	3.57	0	68.89	71
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	1.04	0.65	1.84	0.3	1.69	14.36	0.12	0.08	3.67	2.52	1.1	1.92	0.45	0.1	3.57	0	68.89	71
F	0.74	0.54	1.73	0.28	1.8	10.94**	0.01	0.08	3.92*	2.32	1.04	4.1	1.05	0.12	3.12	0	1.98	0.83
Sig.	0.39	0.46	0.19	0.6	0.18	0.00	0.94	0.78	0.05	0.13	0.31	0.05	0.31	0.73	0.08	0.98	0.16	0.36
Source	Error																	
SS	210.2	177.1	157.6	160.6	138.6	194.3	3027	146.8	138.5	161.11	156.8	69.1	63.05	120.2	169.55	138.7	5152.6	12616.1
df	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148	148
MSS	1.42	1.2	1.07	1.09	0.94	1.31	20.45	0.99	0.94	1.09	1.06	0.47	0.43	0.81	1.15	0.94	34.82	85.24

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

MAIN EFFECTS

GENDER

It is clear from the table 4.105 that F- values for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation' came out 0.27, 0.31, 0.13, 1.14, 1.93 and 0.32 respectively, which are not found to be significant even at the 0.05 level of confidence. However, the F-value for 'Test Anxiety' dimension came out 4.56, which is found to be significant at the 0.05 level of confidence.

Table 4.105 shows that the F- values for 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self-Regulated Learning Strategies' came out 1.39, 0.06, 0.07, 1.28, 0.05, 1.36, 0.00, 0.01, 0.26, 0.02 and 0.04 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that male and female students do not differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self-Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self-Regulated Learning Strategies'. Thus, the Hypothesis (5), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Gender" for M.Sc. (Chemistry) is rejected for 'Test Anxiety' dimension.

The analysis of mean score table 4.104 shows that female students (4.4) have scored higher on 'Test Anxiety' dimension than male students (4.22). This shows that female students show more stress, tension, worry, fear of failure and somatic symptoms such as nausea, upset feeling, fastening of a heartbeat before or during the exam. They could not able to differentiate between poor strategies which are causing anxiety. The research indicated that high-anxious students are more focused on rote memorization, which they attributed to a lack of ability and the inability to offer more time to deeper learning strategies. The results get support from the results of

Naveh-Benjamin et al. (1987), Garcia (1993), Yu (1999) & Ongowo and Hungi (2014) who explored that female student reported a high level of test anxiety as compared to male students.

SUCCESSFULNESS

It is clear from the table 4.105 that F- values for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Self-Efficacy for Learning and Performance’, ‘Test Anxiety’ dimensions and total score of ‘Motivation’ came out 1.45, 0.32, 0.50, 1.95, 1.31 and 1.45 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F-value for ‘Control of Learning Beliefs’ came out 5.20. which is significant at the 0.05 level of confidence. This shows that successful and unsuccessful students differ significantly on the score of ‘Control of Learning Beliefs’.

Table 4.105 shows that F-value for ‘Rehearsal’, ‘Elaboration’, ‘Organisation’, ‘Critical Thinking’, ‘Metacognitive Self-Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’, total score of ‘Learning Strategies’ and ‘Self-Regulated Learning Strategies’ came out 0.72, 3.03, 1.84, 0.52, 0.02, 1.24, 2.49, 0.14, 1.25, 0.00 and 0.34 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that successful and unsuccessful students do not differ significantly on the scores of ‘Rehearsal’, ‘Elaboration’, ‘Organisation’, ‘Critical Thinking’, ‘Metacognitive Self-Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’, total score of ‘Learning Strategies’ and ‘Self-Regulated Learning Strategies’. Thus, the Hypothesis (6), “There is no significant difference in self-regulated learning strategies of higher education students with respect to Successfulness” for M.Sc. (Chemistry) is rejected for ‘Control of Learning Beliefs’ dimension.

The analysis of mean score table 4.104 reveals that unsuccessful students (5.54) have scored higher on ‘Control of Learning Beliefs’ dimension than successful students (5.05). This shows that unsuccessful students have belief in their efforts, they hold an optimistic approach that if they work hard they can get success.

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

Table 4.105 shows that F- values for the interaction between gender and successfulness on the scores of ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’, and total score of ‘Motivation’ came out 0.74, 0.54, 1.73, 0.28, 1.80 and 0.01 respectively, which are not found to be significant even at the 0.05 level of confidence. However, the F-value for ‘Test Anxiety’ dimension came out 10.94, which is found to be significant at 0.01 level of confidence.

The F-values for the interaction between gender and successfulness on the scores of ‘Rehearsal’, ‘Organisation’, ‘Critical Thinking’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’, total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’ came out 0.08, 2.32, 1.04, 1.05, 0.12, 3.12, 0.00, 1.98 and 0.83 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for ‘Elaboration’ and ‘Metacognitive Self-Regulation’ came out 3.92, 4.10 respectively, which are found to be significant at 0.05 level of confidence. Thus, the Hypothesis (7), “There is no significant interaction effect of gender and successfulness on the self-regulated learning strategies of higher education students” for M.Sc. (Chemistry) is rejected for ‘Test Anxiety’, ‘Elaboration’ and ‘Metacognitive Self - Regulation’ dimensions.

To further analyze the significant difference between various subgroups, t-test was applied on the ‘Test Anxiety’, ‘Elaboration’ and ‘Metacognitive Self - Regulation’ dimensions and obtained results are presented in the table 4.106.

Table 4.106: Summary of ‘t’-values for the Subgroups in respect of ‘Test Anxiety’ and Dimension ‘Metacognitive Self-Regulation’ Dimensions for M.Sc. 2nd Semester Students

Group 1	Group 2	TA	MSR
Unsuccessful Females	Successful Females	2.40*	2.07*
Unsuccessful Females	Unsuccessful Males	3.46**	-
Successful Females	Unsuccessful Males	2.33*	-
Unsuccessful Males	Successful Males	2.71**	-

*significant at 0.05 level of confidence, **significant at 0.01 level of confidence

The data presented in table 4.106 shows that the t-value of 'Test Anxiety' dimension for the subgroup of unsuccessful females-successful females, unsuccessful females- unsuccessful males, successful females-unsuccessful males and unsuccessful males-successful males came out significant at 0.05 level of confidence. The analysis of mean score table 4.104 shows that unsuccessful female students (4.82) have scored high than successful female students (4.22) and unsuccessful male students (3.31). This indicates that unsuccessful female students show more stress, tension, worry, fear of failure and somatic symptoms such as nausea, upset feeling, fastening of a heartbeat before or during the exam. They could not able to differentiate between poor strategies which are causing anxiety. Further, successful female students (4.22) have scored high than unsuccessful male students (3.31). This shows that female students take more stress of exam as compared to unsuccessful male students. Yukselturk and Bulut (2009) reported that female students showed more test anxiety as compared to male students. Further, successful male students (4.55) have scored high than unsuccessful male students (3.31) on 'Test Anxiety' dimension.

This shows that successful male students are more anxious than unsuccessful male students. The result is indicating that successful students showed more test anxiety than their counterparts. This may be due to the reason that successful students want to achieve high scores and maintain their successful image within the peer group, in front of the teachers and parents as compared to unsuccessful students. The result got support from the views of Haig (2015) who revealed another side of anxiety, which can trigger the motivation and attention of the learner to give best. The study got partial support from the results of Sinha (1966) who reported that high achievers with high intelligence, better adjustment have a moderate level of test anxiety as compared to low achievers. On the contrary, Tewari and Rai (1976) and Molly & Lakshminaryanan (1988) reported that there exists no significant difference between high and low achievers with respect to test anxiety.

The data inserted in table 4.106 reveals that the t-value of 'Metacognitive Self-Regulation' dimension for the subgroup unsuccessful females and successful females came out significant at 0.01 level of confidence. This shows that

unsuccessful females and successful females differ significantly on the score of 'Metacognitive Self-Regulation' dimension. The analysis of mean score table 4.104 shows that successful female students (4.9) have scored higher on 'Metacognitive Self -Regulation' dimension than unsuccessful female students (4.59). This shows that successful female students always plan, monitor and regulate their learning. They change their study style according to the requirement of the course and teaching style of the teacher and set goals for themselves in order to direct their activities in each study period as compared to unsuccessful female students.

4.9.3 Summary of 2×2 Analysis of Variance on Scores of Self-Regulated Learning Strategies of MBA 2nd Semester in relation to Gender and Successfulness

To study the self-regulated learning strategies of MBA 2nd semester with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies and presented in the table 4.107. For analysing the variance of various dimensions and total score of self-regulated learning strategies of MBA 2nd semester with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented in table 4.108.

MAIN EFFECTS

GENDER

It is clear from the table 4.108 that F- values for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' and total score of 'Motivation' came out 0.72, 0.28, 0.34, 0.08, 0.08, 1.41 and 0.91 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that male and female students do not differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' and total score of 'Motivation'.

Table 4.107: Means and SDs of Sub-groups of ANOVA for 2×2 Design of Various Dimensions of Self-Regulated Learning Strategies with respect to Gender and Successfulness of MBA 2nd Semester

Gender	Female			Male			Total			Female			Male			Total		
	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Source	IGO									EGO								
M	4.72	5.38	5.26	4.82	4.91	4.89	4.77	5.17	5.09	4.48	5.48	5.29	4.77	4.96	4.92	4.62	5.24	5.12
σ	1.36	1	1.1	1.47	1.21	1.26	1.4	1.12	1.19	1.34	1.06	1.18	1.44	1.16	1.21	1.38	1.13	1.21
N	18	78	96	17	66	83	35	144	179	18	78	96	17	66	83	35	144	179
Dimension	TV									CLB								
M	4.61	5.36	5.22	4.64	5.11	5.01	4.62	5.25	5.13	4.6	5.2	5.09	4.56	5.12	5.01	4.58	5.17	5.05
σ	1.41	0.92	1.06	1.27	0.99	1.06	1.32	0.96	1.06	1.25	1.15	1.19	1.24	1.1	1.15	1.22	1.13	1.17
Dimension	SELP									TA								
M	4.42	5.27	5.11	4.65	4.93	4.88	4.53	5.11	5	4.44	4.26	4.3	4.14	4.02	4.04	4.3	4.15	4.18
σ	1.21	0.93	1.03	1.21	0.9	0.97	1.2	0.93	1.01	1.32	1.36	1.34	0.99	1.1	1.07	1.17	1.25	1.23
Dimension	Motivation									REH								
M	27.13	30.78	30.09	27.35	28.83	28.53	27.24	29.89	29.37	4.47	5.12	5	4.69	4.58	4.61	4.57	4.88	4.82
σ	5.05	4.74	4.99	6.07	4.35	4.75	5.49	4.65	4.93	1.43	1.15	1.23	1.01	1.1	1.08	1.23	1.16	1.17

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	ELAB									ORG								
M	4.31	5.24	5.07	4.89	4.72	4.75	4.59	5	4.92	4.84	5.38	5.28	4.85	4.76	4.78	4.84	5.1	5.05
σ	1.32	1.13	1.21	1.01	0.83	0.87	1.2	1.03	1.07	1.46	1.09	1.18	1.19	1.15	1.15	1.32	1.16	1.19
Dimension	CT									MSR								
M	4.16	5.12	4.94	4.58	4.46	4.49	4.36	4.82	4.73	4.27	4.84	4.73	4.37	4.52	4.49	4.32	4.69	4.62
σ	0.99	0.96	1.03	1.02	0.96	0.97	1.01	1.01	1.02	0.97	0.7	0.79	0.77	0.63	0.66	0.87	0.69	0.74
Dimension	TSE									ER								
M	4.12	4.62	4.53	4.15	4.17	4.17	4.14	4.42	4.36	4.13	4.46	4.4	3.94	4.44	4.34	4.04	4.45	4.37
σ	0.78	0.72	0.75	0.61	0.68	0.66	0.69	0.74	0.73	1.23	0.95	1.01	0.87	0.84	0.87	1.06	0.9	0.94
Dimension	PL									HS								
M	4.3	5.08	4.94	4.41	4.76	4.69	4.35	4.94	4.82	4.44	4.72	4.67	4.82	4.64	4.67	4.63	4.68	4.67
σ	1.48	1.1	1.21	1.55	1.09	1.2	1.49	1.1	1.21	1.04	0.92	0.95	0.81	0.97	0.94	0.94	0.94	0.94
Dimension	Learning Strategies									Self Regulated Learning Strategies								
M	38.82	44.36	43.32	40.51	40.84	40.77	39.64	42.75	42.14	65.94	75.13	73.41	67.88	69.67	69.3	66.89	72.63	71.5
σ	8.84	6.33	7.15	7.22	5.26	5.67	8.02	6.1	6.61	13.1	10.4	11.46	12.28	8.95	9.67	12.56	10.11	10.83

U-Unsuccessful, S- Successful

Table 4.108: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Self-Regulated Learning Strategies in relation to Gender and Successfulness of MBA 2nd Semester Students

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender																	
SS	0.98	0.38	0.37	0.11	0.08	2.14	20.78	0.71	0.02	2.63	0.37	0.35	1.24	0.31	0.32	0.62	23.59	87.22
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0.98	0.38	0.37	0.11	0.08	2.14	20.78	0.71	0.02	2.63	0.37	0.35	1.24	0.31	0.32	0.62	23.59	87.22
F	0.72	0.28	0.34	0.08	0.08	1.41	0.91	0.53	0.02	1.94	0.4	0.67	2.51	0.35	0.23	0.7	0.59	0.81
Sig.	0.4	0.6	0.56	0.78	0.78	0.24	0.34	0.47	0.88	0.17	0.53	0.41	0.12	0.55	0.63	0.41	0.45	0.37
Source	Successfulness																	
SS	3.93	9.97	10.6	9.51	8.89	0.66	184.71	2.13	3.95	1.48	5.04	3.66	1.88	4.71	9.15	0.05	242.83	845.08
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	3.93	9.97	10.6	9.51	8.89	0.66	184.71	2.13	3.95	1.48	5.04	3.66	1.88	4.71	9.15	0.05	242.83	845.08
F	2.89	7.35**	9.84**	7.17**	9.31**	0.44	8.11**	1.6	3.67	1.09	5.38*	7.13**	3.82*	5.36*	6.51**	0.06	6.03*	7.84**
Sig.	0.09	0.01	0.00	0.01	0.00	0.51	0.01	0.21	0.06	0.3	0.02	0.01	0.05	0.02	0.01	0.81	0.02	0.01

Contd. ...

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender * Successfulness																	
SS	2.34	4.69	0.54	0.01	2.26	0.02	33.05	4.06	8.62	2.77	8.08	1.3	1.63	0.22	1.27	1.49	190.99	384.63
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	2.34	4.69	0.54	0.01	2.26	0.02	33.05	4.06	8.62	2.77	8.08	1.3	1.63	0.22	1.27	1.49	190.99	384.63
F	1.72	3.46	0.5	0.01	2.36	0.01	1.45	3.06	8.02**	2.05	8.63**	2.53	3.3	0.25	0.91	1.67	4.75*	3.57
Sig.	0.19	0.07	0.48	0.92	0.13	0.91	0.23	0.08	0.01	0.15	0.00	0.11	0.07	0.62	0.34	0.2	0.03	0.06
Source	Error																	
SS	238	237.3	188.4	232	167	265.3	3985.6	232.1	188	236.7	163.8	89.8	86.4	153.5	245.7	155.9	7043.3	18868
df	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
MSS	1.36	1.36	1.08	1.33	0.96	1.52	22.78	1.33	1.08	1.35	0.94	0.51	0.49	0.88	1.41	0.89	40.25	107.82

*significant at 0.05 level of confidence, **significant at 0.01 level of confidence

Further, F- values for 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 0.53, 0.02, 1.94, 0.40, 0.67, 2.51, 0.35, 0.23, 0.70, 0.59 and 0.81 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that male and female students do not differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'. Thus, the Hypothesis (5), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Gender" for MBA 2nd semester is not rejected.

SUCCESSFULNESS

It is clear from the table 4.108 that F- values for 'Intrinsic Goal Orientation' and 'Test Anxiety' came out 2.89 and 0.44 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', and total score of 'Motivation' came out 7.35, 9.84, 7.17, 9.31 and 8.11 respectively, which are found to be significant at 0.01 level of confidence.

Table 4.108 showed that F-value for 'Rehearsal', 'Elaboration', 'Organisation', 'Help-Seeking' dimensions came out 1.60, 3.67, 1.09, 0.06 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 5.38, 7.13, 3.82, 5.36, 6.51, 6.03 and 7.84 respectively, which are found to be significant either at 0.01 or at 0.05 level of confidence. Thus, the Hypothesis (6), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Successfulness" for MBA 2nd semester is rejected

for 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Motivation Total', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'.

The analysis of mean score table 4.107 reveals that successful students (5.24) have scored higher on 'Extrinsic Goal Orientation' dimension than unsuccessful students (4.62). This shows that successful students are more concerned about their performance in relation to the other students in the class. Their main focus is on getting good grades in order to prove their position in the class. They want to seek out rewards or approval from the peers, teachers or parents and possess a higher level of performance-approach orientation as compared to the unsuccessful students. The above finding is in contrast with the finding of Al-Alwan (2008) who reported that unsuccessful students scored higher on 'Extrinsic Goal Orientation' than their successful counterparts.

The analysis of mean score table 4.107 shows that successful students (5.25) have scored higher on the 'Task Value' dimension than unsuccessful students (4.62). This shows that as compared to unsuccessful students, successful students attach a high value to the importance and usefulness of learning the subject. This value makes the successful students dedicated and committed to accomplishing the targets. The present finding is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who reported that successful students scored higher on 'Task Value' than their unsuccessful counterparts.

The analysis of mean score table 4.107 shows that successful students (5.17) have scored higher on 'Control of Learning Beliefs' dimension than unsuccessful students (4.58). This shows that as compared to unsuccessful students, successful students possess a higher level of control of learning beliefs. The successful students possess the firm belief that they have considerable control over their learning outcomes. They work more strategically and effectively and know that their efforts will definitely make a difference.

The finding of the present research is in tune with the findings of Al-Alwan (2008) who reported that successful students scored higher on 'Control of Learning Beliefs' than their unsuccessful counterparts.

The analysis of mean score table 4.107 shows that successful students (5.11) have scored higher on 'Self-Efficacy for Learning and Performance' dimension than unsuccessful students (4.53). This shows that successful students possess a high sense of self-efficacy for learning and performance than unsuccessful students. The successful students appraise their capability and confidence to perform a task, they have a firm belief that they are capable to master the situation and can produce desired outcomes. Due to the high level of self-efficacy for learning, they choose challenging learning tasks and therefore expend more persistence and efforts in order to get higher achievement outcomes. Their self-efficacy beliefs become instrumental to the goals and to the control over their environment. They show more resilience in the phase of adverse situations as compared to their unsuccessful student counterparts. The finding of the present research is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotolan and Adedeji (2009) who reported that successful students scored higher on 'Self-Efficacy for Learning and Performance' than their unsuccessful counterparts.

The analysis of mean score table 4.107 reveals that successful students (29.89) have scored higher on the total score of 'Motivation' than unsuccessful students (27.24). This shows that successful students are more motivated to regulate their learning process than unsuccessful students. They have a high sense of control over learning, self-efficacy and value of the learning task. They are more dynamic and ambitious by virtue motivation. They take the initiative to perform challenging tasks and have a high level of aspiration to succeed. They think critically and plan their learning more strategically as compared to unsuccessful students. The above finding is in tune with the finding of Simsek and Balaban (2010) & De Zoysa et al. (2014) who reported that successful students scored higher on 'Motivation' dimension as compared to unsuccessful students.

The analysis of mean score table 4.107 shows that successful students (4.82) have scored higher on the 'Critical Thinking' dimension than unsuccessful students

(4.36). This shows that successful students often question themselves before getting convinced about the idea taught in the class and try to find good supporting pieces of evidence in order to accept any conclusion and assertion. They always play around with their ideas in order to develop a convincing explanation of the content.

The analysis of mean score table 4.107 shows that successful students (4.69) have scored higher on 'Metacognitive Self-Regulation' dimension than unsuccessful students (4.32). This shows that successful students are capable of thinking about their learning more explicitly than unsuccessful students. They always plan, monitor, regulate and evaluate their learning. They set their goals and choose appropriate learning strategies to attain goals and evaluate their progress. They strive to come up with better ways of learning. They try to change their study style according to the requirement of the course and teaching style of the teacher. The present finding is in tune with the findings of Al-Alwan (2008), Simsek and Balaban (2010), De Zoysa et al. (2014) and Tang (2015) who have found that successful students surpassed unsuccessful students in terms of metacognitive strategy use.

The analysis of mean score table 4.107 shows that successful students (4.42) have scored higher on 'Time and Study Environment' dimension than unsuccessful students (4.14). This shows that successful students are a good manager of their time and are capable to structure their environment for optimal learning more than unsuccessful students. They always schedule, plan and manage their study time and very much particular in following the work schedule made by them. They always keep a particular place for the study, where they can be able to concentrate on reading and studying. The finding of the present research is in tune with the findings of Chen (2002), Al-Alwan (2008) & Ahmed and Khanam (2014) who reported that successful students outperformed unsuccessful students in managing time and structuring their study environment.

The analysis of mean score table 4.107 reveals that successful students (4.45) have scored higher on 'Effort Regulation' dimension than unsuccessful students (4.04). As compared to unsuccessful students, successful students show a higher ability to regulate their efforts in the phase of distraction and monotonous tasks. They are committed to accomplish their set goals and never give up on complexities. They try to manage their efforts and attention in order to overcome the interruptions.

The present finding goes in consonance with the findings of Ahmed and Khanam (2014) who reported that successful students outperformed unsuccessful students in Effort Regulation. But Al-Alwan (2008) found no significant difference between the students with high GPA and low GPA in respect to 'Effort Regulation'.

The analysis of mean score table 4.107 shows that successful students (4.94) have scored higher on 'Peer Learning' dimension than unsuccessful students (4.35). This shows that successful students always collaborate with their peer group, discuss and debate with them order to clarify their doubts and reach insights one cannot be attained on one's own, they often work with their friends in order to complete the tasks or assignment given by the teacher and spare time for doing discussion in peer group in order to complete the tasks well on time as compared to unsuccessful students. The above finding is in tune with the finding of Ahmed and Khanam (2014) who reported that high achievers use 'Peer Learning' strategy more often as compared to low achievers. But Al-Alwan (2008) found no significant difference between the students of the first semester of the first year with a high GPA and low GPA with respect to 'Peer Learning'.

The analysis of mean score table 4.107 reveals that successful students (42.75) have scored higher on the total score of 'Learning Strategies' than unsuccessful students (39.64). This shows that successful students tend to use a wide variety of learning strategies than unsuccessful students. The successful students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate with their peers for effective learning. The present finding enjoys support from the findings of Paris and Myers (1981), Tait & Entwistle (1996), Cho and Ahn (2003), Yip (2007, 2009, 2012), Yip and Chung (2005), Ahmed and Khanam (2014) & De Zoysa et al. (2014) who reported that successful students use more adaptive learning strategies both in variety and frequency.

The analysis of mean score table 4.107 reveals that successful students (72.63) have scored higher on the total score of 'Self Regulated Learning Strategies' than unsuccessful students (66.89). The result shows that self-regulated learning of successful students was markedly higher than unsuccessful students. This shows that successful students have the ability to control their actions and responses, which is very much essential for the progress in varied contexts. The successful students are able to control their behaviour, emotions and cognition for the purpose of pursuing the goals. They set proximal achievable goals which are learning-oriented not performance-oriented. They know that different learning tasks require different learning strategies. They own a "Tool Kit" of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations. They possess a high level of academic self-efficacy and have the ability to control their performance. They observe the intermediate outcomes of their learning process. They precisely attribute the learning outcome to the causes of performance. The present finding is in tune with the finding of Paris and Myers (1981), Pintrich and DeGroot (1990), Tait and Entwistle (1996), Stoynoff (1996), McWhaw and Abrami (2001), Chen (2002), Cho and Ahn (2003), Schunk (2005), Simsek and Balaban (2010) & Son and Simon (2012) who reported that high achieving students use more adaptive self-regulated learning strategies as compared to low achieving students.

DISCUSSION ON RESULTS

From the results, it has been revealed that both successful and unsuccessful students do not differ on 'Intrinsic Goal Orientation' and 'Test Anxiety', this indicates that both successful and unsuccessful students set mastery-oriented goals and do not show stress, tension, worry, fear of failure and somatic symptoms such as nausea, upset feeling, fastening of heartbeat before or during the exam. On the other side, the motivation of successful students is inclined to getting mastery over the content so, female students set mastery-oriented goals, high level of internal goal orientation help them to invest a great deal of time in using deep processing strategies like planning, organising and monitoring, along with internal motivation they are also externally motivated in order to get approval or recognition from others, they show highly competitive behaviour as they want to prove their unique

existence in the classroom and set performance-oriented goals for them. Further, findings have proved that female students give more importance to the task in hand, along with it they hold an optimistic approach of getting success and have a firm belief in their efforts. They judge their capabilities and confidence for performing a task. Consequently, it is confirmed that female students have high motivational beliefs which affect their willingness to approach a task, devote sufficient time and energy to successfully complete that task. A specific goal orientation directs the behaviour of the person while, task value stimulates the strength or intensity of the behaviour (Garcia and Pintrich, 1994; Schunk and Zimmerman, 1998). The high level of motivation is associated with the more frequent and judicious use of learning strategies in order to regulate the learning process. From the results, it has been found that successful students are more self-regulated as compared to unsuccessful students.

They are proactive in their efforts to learn as they are aware of their strengths and limitations and directed by personally set goals and task-related strategies. They monitor their behaviour in terms of their set goals and self-reflect on their achieved effectiveness. If they perceive satisfactory goal progress, they feel competent in improving their skills and goal attainment. The successful students exhibit a high level of self-efficacy, which enables them to set new-fangled stimulating goals. They are motivated to learn through the self-regulated process and use a variety of learning strategies and understand the value of using these strategies in appropriate situations. The better self-regulated learning strategies among successful students help them to be proactive and self-motivating in comparison to their unsuccessful counterparts. Self-regulated learners voluntarily offer answers to questions in the classroom, seek out additional resources when needed to master the content, they are aware of their strengths and weaknesses and manipulate their learning environment in order to meet their needs. Successful students in comparison to unsuccessful students are optimistic about their future and work systematically to achieve the goals. On the other hand, it has been found that male and female students do not differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organisation', 'Help-Seeking', this shows that both successful and unsuccessful students make good use of rehearsal, elaboration and organisation strategies and both seek help

from knowledgeable others in order to clarify doubts. Researches have shown that peer help, peer tutoring, and individual teacher assistance facilitate student achievement.

INTERACTION EFFECT (GENDER × SUCCESSFULNESS)

Table 4.108 shows that F- values for the interaction between gender and successfulness on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' and total score of 'Motivation' came out 1.72, 3.46, 0.50, 0.01, 2.36, 0.01 and 1.45 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that subgroups as a result of interaction between gender and successfulness do not differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation'.

Table 4.108 shows that the F- values for the interaction between gender and successfulness on the scores of 'Rehearsal', 'Organisation', 'Metacognitive Self - Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions and scores of 'Self Regulated Learning Strategies' came out 3.06, 2.05, 2.53, 3.30, 0.25, 0.91, 1.67 and 3.57 respectively, which are not found to be significant even at the 0.05 level of confidence. However, F- values for 'Elaboration', 'Critical Thinking' dimensions and total score of 'Learning Strategies' came out 8.02, 8.63 and 4.75 respectively, which are found to be significant either at 0.01 or at 0.05 level of confidence. Thus, the Hypothesis (10), "There is no significant interaction effect of gender and successfulness on the self-regulated learning strategies of higher education students" for MBA 2nd semester is rejected for 'Elaboration', 'Critical Thinking' dimensions and scores of 'Learning Strategies'.

To further analyse the significant difference between various groups as a result of interaction between gender and successfulness, t-values for the various subgroups were calculated and the subgroups for which the t value is found significant are presented in the table 4.109.

Table 4.109: Summary of ‘t’-values for the Subgroups in respect of ‘Elaboration’, ‘Critical Thinking’ and Scores of ‘Learning Strategies’ Dimensions for MBA 2nd Semester Students

Group 1	Group 2	ELAB	CT	Learning Strategies
Unsuccessful Females	Successful Females	2.76**	3.73**	2.51**
Successful Females	Unsuccessful Males	1.27	2.00*	2.03*
Successful Females	Successful Males	3.18**	4.11**	3.64**

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

It is clear from table 4.109, the t-value of ‘Elaboration’ dimension for the subgroup unsuccessful females-successful females, successful females- successful males came out significant at 0.01 level of confidence. The analysis of mean score table 4.107 shows that successful female students (5.24) have scored higher than unsuccessful female students (4.31) and successful male students (4.72) on ‘Elaboration’ dimension.

It is clear from the table 4.109, the t-value of ‘Critical Thinking’ dimension for the subgroup unsuccessful females-successful females, successful females- unsuccessful males and successful females-successful males came out significant either at 0.05 or 0.01 level of confidence. The analysis of mean score table 4.107 shows that successful female students (5.12), have scored higher on ‘Critical Thinking’ dimension than unsuccessful male students (4.58), unsuccessful female students (4.16) and successful male students (4.46).

It is clear from the table 4.109, the t-value on the total score of ‘Learning Strategies’ for the subgroup unsuccessful females-successful females, successful females- unsuccessful males and successful females- successful males came out significant either at 0.05 or 0.01 level of confidence. The analysis of mean score table 4.107 shows that successful female students (44.36) have scored high than unsuccessful female students (38.82), unsuccessful male students (40.51) and successful male students (40.84) on the total score of ‘Learning Strategies’.

It is clear from the results that successful female students scored higher in 'Elaboration', 'Critical Thinking' and total score of 'Learning Strategies' than successful male, unsuccessful male and female students. This shows that successful female students make good use of elaboration strategies like paraphrasing, summarising, making internal connections between the items to be learned and new knowledge with the previous knowledge. They pull the information together from various sources viz. notes, lecture, readings, tutorials and make connections between them. They often question themselves before getting convinced about the idea taught in the class and try to find good supporting shreds of evidence in order to accept any conclusion and assertion and always play around with their ideas in order to develop a convincing explanation of the content. Successful female students make overall good use of learning strategies in order to achieve their targets. Carreira (2011) & Banarjee and Kumar (2014) advocated that female students outperformed male students in using different self-regulated learning strategies.

4.9.4 Summary of 2×2 Analysis of Variance on Scores of Self-Regulated Learning Strategies of MCA 2nd Semester in relation to Gender and Successfulness

To study the self-regulated learning strategies of MCA 2nd semester with respect to gender and successfulness; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies and presented in the table 4.110. For analyzing the variance of various dimensions and total score of self-regulated learning strategies of MCA 2nd semester with respect to gender and successfulness, two-way ANOVA was used. The results came therein are presented in table 4.111.

MAIN EFFECTS

GENDER

It is clear from the table 4.111 that F- values for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation' came out 0.14, 0.07, 1.32, 0.37, 0.11, 3.37 and 0.80 respectively, which are not found to be significant even at the 0.05 level of confidence.

Table 4.110: Means and SDs of Sub-groups of ANOVA for 2×2 Design of Various Dimensions of Self-Regulated Learning Strategies with respect to Gender and Successfulness of MCA 2nd Semester

Gender	Female			Male			Total			Female			Male			Total		
	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimensions	IGO									EGO								
M	4.29	5.19	5.11	4.2	5.08	4.83	4.22	5.15	4.98	4.06	5.07	4.98	4.27	4.72	4.59	4.21	4.92	4.8
σ	0.76	1.24	1.23	1.15	1	1.11	1.05	1.14	1.18	0.94	1.13	1.14	1.36	1.04	1.15	1.25	1.1	1.16
N	7	72	79	20	51	71	27	123	150	7	72	79	20	51	71	27	123	150
Dimension	TV									CLB								
M	4.23	5.17	5.09	3.8	5.04	4.69	3.91	5.12	4.9	4.5	5	4.95	4.16	5.03	4.78	4.24	5.01	4.87
σ	0.84	1.02	1.04	1.32	0.99	1.22	1.21	1.01	1.14	0.75	1.09	1.07	1.25	1.06	1.18	1.14	1.07	1.12
Dimension	SELP									TA								
M	3.94	5.04	4.95	3.99	4.84	4.6	3.97	4.96	4.78	4.91	4.46	4.5	4.09	4.35	4.27	4.3	4.41	4.39
σ	0.93	1.07	1.09	1.18	0.93	1.07	1.1	1.01	1.09	0.51	1.25	1.21	1	0.85	0.89	0.96	1.1	1.07
Dimension	Motivation									REH								
M	25.65	29.7	29.34	24.28	28.8	27.53	24.64	29.33	28.48	4.23	4.98	4.91	3.89	4.74	4.5	3.98	4.88	4.72
σ	3.16	5.8	5.72	6.02	4.47	5.32	5.4	5.29	5.59	0.62	1.19	1.17	0.77	1.06	1.05	0.74	1.14	1.13

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total	US	S	Total
Dimension	ELAB									ORG								
M	4.11	4.9	4.83	4.03	4.73	4.53	4.05	4.83	4.69	3.79	5.04	4.93	4.08	4.75	4.56	4	4.92	4.75
σ	0.56	0.96	0.95	0.76	0.96	0.96	0.71	0.96	0.97	0.77	1.05	1.08	0.96	1.07	1.08	0.91	1.06	1.09
Dimension	CT									MSR								
M	3.94	4.8	4.72	3.79	4.77	4.49	3.83	4.79	4.61	3.99	4.59	4.53	3.89	4.58	4.38	3.92	4.58	4.46
σ	0.82	1.05	1.05	0.97	0.9	1.02	0.92	0.99	1.04	0.36	0.75	0.74	0.81	0.75	0.82	0.72	0.74	0.78
Dimension	TSE									ER								
M	3.79	4.44	4.38	3.66	4.25	4.09	3.69	4.36	4.24	3.81	4.2	4.17	3.89	4.16	4.08	3.87	4.19	4.13
σ	0.52	0.6	0.62	0.8	0.61	0.72	0.73	0.61	0.68	0.67	0.7	0.7	0.93	0.67	0.76	0.86	0.68	0.73
Dimension	PL									HS								
M	4.29	4.95	4.89	3.81	4.78	4.5	3.93	4.88	4.71	4.14	4.67	4.62	3.85	4.59	4.38	3.93	4.63	4.51
σ	0.73	1.14	1.12	1.37	1.02	1.2	1.24	1.09	1.17	0.69	0.75	0.76	0.75	0.75	0.82	0.73	0.75	0.79
Dimension	Learning Strategies									Self Regulated Learning Strategies								
M	35.97	42.42	41.85	34.73	41.11	39.31	35.05	41.88	40.65	61.71	72.01	71.1	59.05	69.94	66.87	59.74	71.15	69.1
σ	4.45	6.42	6.51	6.51	6.37	6.99	5.99	6.41	6.84	6.75	11.78	11.76	11.91	10.14	11.68	10.75	11.13	11.87

U-Unsuccessful, S- Successful

Table 4.111: Summary of 2×2 ANOVA Design with respect to Various Dimensions of Self-Regulated Learning Strategies in relation to Gender and Successfulness of MCA 2nd Semester Students

DV	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender																	
SS	0.18	0.09	1.45	0.44	0.11	3.86	22.57	1.45	0.3	0	0.15	0.05	0.45	0	1.9	0.61	28.88	99.13
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0.18	0.09	1.45	0.44	0.11	3.86	22.57	1.45	0.3	0	0.15	0.05	0.45	0	1.9	0.61	28.88	99.13
F	0.14	0.07	1.32	0.37	0.11	3.37	0.8	1.25	0.36	0	0.15	0.09	1.12	0.01	1.52	1.09	0.72	0.81
Sig.	0.71	0.79	0.25	0.54	0.75	0.07	0.37	0.27	0.55	0.99	0.7	0.76	0.29	0.93	0.22	0.3	0.4	0.37
Source	Successfulness																	
SS	14.11	9.46	21.1	8.25	16.91	0.18	324.5	11.34	9.78	16.33	14.84	7.29	6.93	1.91	11.84	7.04	727.8	1983.84
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	14.11	9.46	21.1	8.25	16.91	0.18	324.5	11.34	9.78	16.33	14.84	7.29	6.93	1.91	11.84	7.04	727.8	1983.84
F	10.98**	7.49**	19.22**	6.96**	15.93**	0.16	11.45**	9.74**	11.48**	15.29**	15.43**	13.15**	17.29**	3.65	9.47**	12.57**	18.07**	16.13**
Sig.	0.00	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00

Contd. ...

DV	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Gender * Successfulness																	
SS	0	1.39	0.39	0.62	0.26	2.25	0.98	0.05	0.03	1.49	0.07	0.03	0.01	0.06	0.41	0.2	0.03	1.55
df	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MSS	0	1.39	0.39	0.62	0.26	2.25	0.98	0.05	0.03	1.49	0.07	0.03	0.01	0.06	0.41	0.2	0.03	1.55
F	0	1.1	0.35	0.52	0.25	1.97	0.03	0.04	0.04	1.4	0.07	0.06	0.04	0.12	0.33	0.36	0	0.01
Sig.	0.96	0.3	0.56	0.47	0.62	0.16	0.85	0.84	0.85	0.24	0.79	0.81	0.85	0.73	0.57	0.55	0.98	0.91
Source	Error																	
SS	187.5	184.3	160.2	173.1	154.9	167.2	4139.1	170.1	124.4	155.9	140.4	81	58.5	76.3	182.5	81.7	5879.7	17956.1
df	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146
MSS	1.29	1.26	1.1	1.19	1.06	1.15	28.35	1.17	0.85	1.07	0.96	0.56	0.4	0.52	1.25	0.56	40.27	122.99

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

This shows that male and female students do not differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation'.

Table 4.111 shows that the F-values for 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 1.25, 0.36, 0.00, 0.15, 0.09, 1.12, 0.01, 1.52, 1.09, 0.72 and 0.81 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that male and female students do not differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'. Thus, the Hypothesis (5), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Gender" for MCA 2nd semester is not rejected.

SUCCESSFULNESS

It is clear from table 4.111 that F-value for 'Test Anxiety' dimension came out 0.16 which is insignificant even at the 0.05 level of confidence. However, F-values for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation' came out 10.98, 7.49, 19.22, 6.96, 15.93 and 11.45 respectively, which are found to be significant at 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation'.

Table 4.111 shows that F-value for 'Effort Regulation' dimension came out 3.65. which is insignificant even at the 0.05 level of confidence. However, F- values for 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive

Self -Regulation', 'Time and Study Environment', 'Peer Learning', 'Help-Seeking', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 9.74, 11.48, 15.29, 15.43, 13.15, 17.29, 9.47, 12.57, 18.07 and 16.13 respectively, which are found to be significant at 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Peer Learning', 'Help-Seeking', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'. Thus, the Hypothesis (6), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Successfulness" for MCA 2nd semester is rejected for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation', 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self -Regulation', 'Time and Study Environment', 'Peer Learning', 'Help-Seeking', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'.

The analysis of mean score table 4.110 shows that successful students (5.15) have scored higher on 'Intrinsic Goal Orientation' dimension than unsuccessful students (4.22). This shows that successful students are more focused on learning and improvement than unsuccessful students. They strive to master the task and possess a deep level of understanding of the content. They are curious to seek out challenging study tasks and more importantly they view their success or failure as a source of feedback for improving future performance. The successful students have a higher level of learning goal orientation as compared to their unsuccessful student counterparts. The successful students spend a great deal of time in understanding the logic behind the concept and this adds to their pride, self-satisfaction with the success.

The analysis of mean score table 4.110 shows that successful students (4.92) have scored higher on 'Extrinsic Goal Orientation' dimension than unsuccessful students (4.21). This shows that successful students are more concerned about their performance in relation to the other students in the class. Their main focus is on getting good grades in order to prove their position in the class. They want to seek

out rewards or approval from the peers, teachers or parents and possess a higher level of performance-approach orientation as compared to the unsuccessful students. The finding of the present research is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who reported that successful students scored higher on 'Intrinsic Goal Orientation' than their unsuccessful counterparts.

The analysis of mean score table 4.110 shows that successful students (5.12) have scored higher on the 'Task Value' dimension than unsuccessful students (3.91). As compared to unsuccessful students, successful students attach a high value to the importance and usefulness of learning the subject. This value makes the successful students dedicated and committed to accomplishing the targets. The finding of the present research is in tune with the findings of Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotola and Adedeji (2009) who reported that successful students scored higher on 'Task Value' than their unsuccessful counterparts.

The analysis of mean score table 4.110 shows that successful students (5.01) have scored higher on 'Control of Learning Beliefs' dimension than unsuccessful students (4.24). This shows that as compared to unsuccessful students, successful students possess a higher level of control of learning beliefs. The successful students possess the firm belief that they have considerable control over their learning outcomes. They work more strategically and effectively and know that their efforts will definitely make a difference.

The analysis of mean score table 4.110 shows that successful students (4.96) have scored higher on 'Self-Efficacy for Learning and Performance' dimension than unsuccessful students (3.97). This shows that successful students possess a high sense of self-efficacy for learning and performance than unsuccessful students. The successful students appraise their capability and confidence to perform a task, they have a firm belief that they are capable to master the situation and can produce desired outcomes. Due to the high level of self-efficacy for learning, they choose challenging learning tasks and therefore expend more persistence and efforts in order to get higher achievement outcomes. Their self-efficacy beliefs become instrumental to the goals and to the control over their environment. They show more

resilience in the phase of adverse situations as compared to their unsuccessful student counterparts. Al-Alwan (2008), Seo and Taherbhai (2009) & Ayotolan and Adedeji (2009) also reported that successful students scored a higher level of self-efficacy for learning and performance than their unsuccessful counterparts.

The analysis of mean score table 4.110 shows that successful students (29.33) have scored higher on the total score of 'Motivation' than unsuccessful students (24.64). This shows that successful students are more motivated to regulate their learning, have mastery over the content, get good grades in the class. The high level of motivation encourages them to have control over their academic performance, think critically and plan their leaning strategically as compared to unsuccessful students.

The analysis of mean score table 4.110 reveals that successful students (4.88) have scored higher on 'Rehearsal' dimension than unsuccessful students (3.98). This indicates that successful students are more focused on learning the content by practising it again and again than unsuccessful students. They use this strategy in order to memorize the simple tasks and to trigger their working memory. The result goes in tune with the result of Simsek and Balaban (2010) who reported that successful students make frequent use of rehearsal strategies in order to memorise the simple tasks. But Fathi-Ashtiani et al. (2007) reported no significant difference in successful and unsuccessful students with respect to the use of 'Rehearsal Strategy'.

The analysis of mean score table 4.110 reveals that successful students (4.83) have scored higher on 'Elaboration' dimension than unsuccessful students (4.05). This shows that as compared to unsuccessful students, successful students make good use of elaboration strategies like paraphrasing, summarizing, creating analogies, mnemonics, selecting key ideas from the text and making internal connections between what is being learned with the previous knowledge. They pull the information together from various sources viz. notes, lecture, readings, tutorials in order to make connections between them. The present finding is in tune with the finding of Boulton-Lewis et al. (2004) who reported that successful students use 'Elaboration' strategies more frequently than unsuccessful students.

The analysis of mean score table 4.110 shows that successful students (4.92) have scored higher on the 'Organisation' dimension than unsuccessful students (4). This shows that successful students put active, thoughtful and effortful endeavours in order to get involved in the task for better understanding. They strategically plan their learning and make good use of organization strategies like grouping, clustering, outlining and organising the main points from the gathered information, they often make good use of mind mapping technique as compared to unsuccessful students. The present finding is in consonance with the findings of Simsek and Balaban (2010) & Kitsantas (2002) who reported that successful students use 'organisation' strategy more frequently as compared to the unsuccessful students. However, Fathi-Ashtiani et al. (2007) reported no significant difference between successful and unsuccessful students of Mathematics and Humanities in the use of organization strategies but found a significant difference between successful and unsuccessful students of Experimental Sciences with respect to organisation strategies

The analysis of mean score table 4.110 shows that successful students (4.79) have scored higher on the 'Critical Thinking' dimension than unsuccessful students (3.83). This shows that successful students often question themselves before getting convinced about the idea taught in the class and try to find good supporting pieces of evidence in order to accept any conclusion and assertion. They always play around with their ideas in order to develop a convincing explanation of the content.

The analysis of mean score table 4.110 shows that successful students (4.58) have scored higher on 'Metacognitive Self-Regulation' dimension than unsuccessful students (3.92). This shows that successful students are capable of thinking about their learning more explicitly than unsuccessful students. They always plan, monitor, regulate and evaluate their learning. They set their goals and choose appropriate learning strategies to attain goals and evaluate their progress. They strive to come up with better ways of learning. They try to change their study style according to the requirement of the course and teaching style of the teacher. The present finding is in tune with the findings of Al-Alwan (2008), Simsek and Balaban (2010), De Zoysa et al. (2014) and Tang (2015) who have found that successful students surpassed unsuccessful students in terms of metacognitive strategy use.

The analysis of mean score table 4.110 reveals that successful students (4.36) have scored higher on 'Time and Study Environment' dimension than unsuccessful students (3.69). This shows that successful students are a good manager of their time and are capable to structure their environment for optimal learning more than unsuccessful students. They always schedule, plan and manage their study time and very much particular in following the work schedule made by them. They always keep a particular place for the study, where they can be able to concentrate on reading and studying. The present finding is in consonance with the findings of Chen (2002), Al-Alwan (2008) & Ahmed and Khanam (2014) who reported that successful students outperformed unsuccessful students in managing time and study environment.

The analysis of mean score table 4.110 reveals that successful students (4.88) have scored higher on 'Peer Learning' dimension than unsuccessful students (3.93). This shows that successful students are more active in working and learning with peers than unsuccessful students. The successful students generally discuss and debate in the group to clarify their doubts. Peer learning technique helps them to reach insights that they cannot be able to attain on their own. They often work with their friends in order to complete the tasks or assignment given by the teacher well on time. The present finding is consistent with the finding of Ahmed and Khanam (2014) who reported that high achievers believe in peer learning more than low achievers. But Al-Alwan (2008) found no significant difference between the students with high GPA and low GPA with respect to peer learning.

The analysis of mean score table 4.110 reveals that successful students (4.63) have scored higher on 'Help-Seeking' dimension than unsuccessful students (3.93). It has been found that successful students showed a more positive attitude in seeking help from friends and teachers. The successful students often monitor their academic performance therefore, on finding themselves unable to solve the problem they request assistance from other knowledgeable persons. The prior researches have shown that help-seeking behaviour can avert the possibility of failure and hence increase the likelihood of mastery and autonomous learning. The present finding is consistent with the findings of Kitsantas (2002) who reported that high achievers outperformed low achievers in the help-Seeking'. Likewise, Ahmed and Khanam

(2014) found a significant difference between high and low achieving students and confirmed that high achieving students more often seek help from knowledgeable others as compared to low achieving students.

The analysis of mean score table 4.110 reveals that successful students (41.88) have scored higher on the total score of 'Learning Strategies' than unsuccessful students (35.05). This shows that successful students tend to use a wide variety of learning strategies than unsuccessful students. The successful students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate with their peers for effective learning. The present finding enjoys support from the findings of Paris and Myers (1981), Tait and Entwistle (1996), Cho and Ahn (2003), Yip (2007, 2009, 2012), Yip and Chung (2005), Ahmed and Khanam (2014) & De Zoysa et al. (2014) who reported that successful students use more adaptive learning strategies both in variety and frequency.

The analysis of mean score table 4.110 reveals that successful students (71.15) have scored higher on the total score of 'Self Regulated Learning Strategies' than unsuccessful students (59.74). The result shows that self-regulated learning of successful students was markedly higher than unsuccessful students. This shows that successful students have the ability to control their actions and responses, which is very much essential for the progress in varied contexts. The successful students are able to control their behaviour, emotions and cognition for the purpose of pursuing the goals. They set proximal achievable goals which are learning-oriented not performance-oriented. They know that different learning tasks require different learning strategies. They own a "Tool Kit" of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations. They possess a high level of academic self-efficacy and have the ability to control their performance. They observe the

intermediate outcomes of their learning process. They precisely attribute the learning outcome to the causes of performance. The present findings go in line with the findings of Paris and Myers (1981), Pintrich and DeGroot (1990), Tait and Entwistle (1996), Stoyhoff (1996), McWhaw and Abrami (2001), Chen (2002), Cho and Ahn (2003), Schunk (2005), Simsek and Balaban (2010) & Son and Simon (2012) who reported that successful students use more adaptive self-regulated learning strategies as compared to their unsuccessful counterparts.

DISCUSSION ON RESULTS

From the results, it has been revealed that both successful and unsuccessful students do not differ on 'Test Anxiety', this indicates that they do not show stress, tension, worry, fear of failure and somatic symptoms such as nausea, upset feeling, fastening of a heartbeat before or during the exam. On the other side, the motivation of successful students is inclined to getting mastery over the content so, female students set mastery-oriented goals, high level of internal goal orientation help them to invest a great deal of time in using deep processing strategies like planning, organising and monitoring, along with internal motivation they are also externally motivated in order to get approval or recognition from others, they show highly competitive behaviour as they want to prove their unique existence in the classroom and set performance-oriented goals for them. Further, findings have proved that successful students give more importance to the task in hand, along with it they hold an optimistic approach of getting success and have firm belief on their efforts.

They judge their capabilities and confidence for performing a task. Consequently, it is confirmed that successful students have high motivational beliefs which affect their willingness to approach a task, devote sufficient time and energy to successfully complete that task. A specific goal orientation directs the behaviour of the person while, task value stimulates the strength or intensity of the behaviour (Garcia and Pintrich, 1994; Schunk and Zimmerman, 1998). The high level of motivation is associated with the more frequent and judicious use of learning strategies in order to regulate the learning process. From the results, it has been found that successful students are more self-regulated as compared to unsuccessful students. The successful students are proactive in their efforts to learn as they are aware of their strengths and weaknesses. They are directed by personally set goals &

objectives and task-related strategies. They always monitor their behaviour in terms of their set goals and self-reflect on their achieved effectiveness. If they perceive satisfactory goal progress, they feel competent in improving their skills and goal attainment. The successful students exhibit a high level of self-efficacy, which enables them to set new-fangled stimulating goals. They are motivated to learn through the self-regulated process and use a variety of learning strategies and understand the value of using these strategies in appropriate situations. The better self-regulated learning strategies among successful students help them to be proactive and self-motivating in comparison to their unsuccessful counterparts. Self-regulated learners voluntarily offer answers to questions in the classroom, seek out additional resources when needed to master the content, they are aware of their strengths and weaknesses and manipulate their learning environment in order to meet their needs. Successful students in comparison to unsuccessful students are optimistic about their future and work systematically to achieve the goals. On the other side, it has been found that male and female students do not differ significantly on the scores of 'Effort Regulation'. This shows that both successful and unsuccessful students have the ability to control their effort and attention in the phase of distraction and monotonous tasks and show their commitment in accomplishing their tasks, they never give up on complexities rather they manage their efforts and attention in order to overcome the interruptions.

INTERACTION EFFECT (GENDER* SUCCESSFULNESS)

Table 4.111 shows that F- values for the interaction between gender and successfulness on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and total score of 'Motivation' came out 0.00, 1.10, 0.35, 0.52, 0.25, 1.97 and 0.03 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that subgroups as a result of interaction between gender and successfulness do not differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Test Anxiety' dimensions and 'Motivation Total'.

The F- values for the interaction between gender and successfulness on the scores of 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking',

‘Metacognitive Self -Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’, total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’ came out 0.04, 0.04, 1.40, 0.07, 0.06, 0.04, 0.12, 0.33, 0.36, 0.00 and 0.01 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that subgroups as a result of interaction between gender and successfulness do not differ significantly on the scores of ‘Rehearsal’, ‘Elaboration’, ‘Organisation’, ‘Critical Thinking’, ‘Metacognitive Self -Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’ dimensions, total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’. Thus, the Hypothesis (7), “There is no significant interaction effect of gender and successfulness on self-regulated learning strategies of higher education students” for MCA 2nd semester is not rejected.

4.10 SUMMARY OF 2×2 ANALYSIS OF VARIANCE ON SCORES OF SELF EMOTIONAL MANAGEMENT OF UG STUDENTS WITH RESPECT TO GENDER AND SUCCESSFULNESS

To study the self emotional management of UG students with respect to gender and successfulness; mean and standard deviation were calculated and in order to analyse the variance of various dimensions and total score of self emotional management of all UG programs with respect to gender and successfulness, the obtained scores were subjected to two-way ANOVA and the results are reported in the following headings.

4.10.1 Summary of 2×2 Analysis of Variance on Scores of Self Emotional Management of B.Com 2nd Semester Students with respect to Gender and Successfulness

To study the self emotional management of B. Com 2nd semester students with respect to gender and successfulness; mean and standard deviation were calculated and are reported in table 4.112. In order to analyse the variance of various dimensions and total score of self emotional management of B. Com 2nd semester students with respect to gender and successfulness, Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.113.

Table 4.112: Means and SDs of Sub-Groups of 2×2 ANOVA Design with respect to Self Emotional Management of UG Students

Gender	Female			Male			Total			Female			Male			Total		
	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
	B.Com 2nd Semester									B.SC 2nd Semester								
M	43	33.15	33.71	29	33.92	32.97	32.5	33.48	33.36	34.15	36.2	35.13	33.33	37.56	36.15	33.98	36.71	35.43
σ	1.41	7.1	7.27	10.81	6.97	7.89	11.21	6.99	7.52	4.73	5.75	5.3	6.5	5.14	5.86	5.08	5.51	5.46
N	2	33	35	6	25	31	8	58	66	33	30	63	9	18	27	42	48	90
	B.Com 4th Semester									B.SC 4th Semester								
M	29.67	35.1	34.08	31.33	30.8	31	30.62	33.64	32.85	39.17	36.18	37.08	33.42	38.15	35.88	36.29	36.8	36.62
σ	7.24	6.13	6.63	10.26	8.97	9.31	8.92	7.43	7.9	2.58	6.74	5.94	6.54	3.57	5.64	5.68	5.95	5.81
N	9	39	48	12	20	32	21	59	80	12	28	40	12	13	25	24	41	65
	B.Com 6th Semester									B.SC 6th Semester								
M	33.08	32.69	32.78	32.2	37.05	35.53	32.68	34.26	33.84	35.79	36.36	36.15	36.3	34.22	34.66	35.97	35.23	35.44
σ	6.92	8.21	7.86	8.24	4.95	6.45	7.38	7.46	7.43	6.03	5.46	5.62	6.88	4.99	5.43	6.22	5.29	5.56
N	12	39	51	10	22	32	22	61	83	19	33	52	10	37	47	29	70	99

Contd. ...

Gender	Female			Male			Total			Female			Male			Total		
	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
	BBA 2nd Semester									BCA 2nd Semester								
M	37.22	37.36	37.3	29.94	33.22	31.83	32.46	34.78	33.83	31.8	31.59	31.64	30.25	32.75	31.84	30.62	32.31	31.77
σ	9.86	4.27	6.79	7.67	4.81	6.32	9.01	4.99	6.97	4.494	8.201	7.423	5.323	6.575	6.206	5.074	7.163	6.579
N	9	14	23	17	23	40	26	37	63	5	17	22	16	28	44	21	45	66
	BBA 4th Semester									BCA 6th Semester								
M	32.92	34.89	34.1	23.29	31.57	28.81	29.37	33.44	31.92	36	35.43	35.5	36.24	34.43	35.02	36.2	34.8	35.17
σ	10.57	5.14	7.67	4.89	10.88	10.01	9.95	8.18	9.01	6.93	6.76	6.63	7.14	6.09	6.44	6.93	6.31	6.46
N	12	18	30	7	14	21	19	32	51	3	21	24	17	35	52	20	56	76
	BBA 6th Semester									BCA 6th Semester								
M	29.17	31.8	30.63	23	33	27.23	25.74	32.31	28.96	34	33.97	33.97	35	34.78	34.82	34.64	34.33	34.38
σ	8.89	8.82	8.81	8.61	8.95	9.95	9.12	8.75	9.45	7.17	7.83	7.67	5.92	5.71	5.66	6.05	6.93	6.76
N	12	15	27	15	11	26	27	26	53	4	34	38	7	27	34	11	61	72

Table 4.113: Summary of 2×2 ANOVA with respect to Self Emotional Management of UG Students

Dimensions	Gender	Successfulness	Gender * Successfulness	Error	Gender	Successfulness	Gender * Successfulness	Error
	B.Com 2nd Semester				B.Sc 2nd Semester			
SS	237.56	32.96	295.95	3366.08	1.25	170.74	20.52	2461.49
Df	1	1	1	62	1	1	1	86
MSS	237.56	32.96	295.95	54.29	1.25	170.74	20.52	28.62
F	4.38*	0.61	5.45*		0.04	5.97*	0.72	
Sig.	0.04	0.44	0.02		0.84	0.02	0.4	
	B.Com 4th Semester				B.Sc 4th Semester			
SS	25.73	88.99	131.93	4541.46	51.01	10.95	213.67	1926.38
Df	1	1	1	76	1	1	1	61
MSS	25.73	88.99	131.93	59.76	51.01	10.95	213.67	31.58
F	0.43	1.49	2.21		1.62	0.35	6.77**	
Sig.	0.51	0.23	0.14		0.21	0.56	0.01	
	B.Com 6th Semester				B.Sc 6th Semester			
SS	47.32	77.99	107.77	4213.78	12.76	10.85	33.65	2931.17
Df	1	1	1	79	1	1	1	95
MSS	47.32	77.99	107.77	53.34	12.76	10.85	33.65	30.85
F	0.89	1.46	2.02		0.41	0.35	1.09	
Sig.	0.35	0.23	0.16		0.52	0.56	0.3	

Contd. ...

Dimensions	Gender	Successfulness	Gender * Successfulness	Error	Gender	Successfulness	Gender * Successfulness	Error
	BBA 2nd Semester				BCA 2nd Semester			
SS	457.92	40.85	34.64	2465.62	0.42	14.67	20.6	2749.17
Df	1	1	1	59	1	1	1	62
MSS	457.92	40.85	34.64	41.79	0.42	14.67	20.6	44.34
F	10.96**	0.98	0.83		0.01	0.33	0.46	
Sig.	0.00	0.33	0.37		0.92	0.57	0.5	
	BBA 4th Semester				BCA 4th Semester			
SS	474.73	297.94	112.86	3361.55	1.25	12.08	3.26	3086.77
Df	1	1	1	47	1	1	1	72
MSS	474.73	297.94	112.86	71.52	1.25	12.08	3.26	42.87
F	6.64**	4.17*	1.58		0.03	0.28	0.08	
Sig.	0.01	0.05	0.22		0.87	0.6	0.78	
	BBA 6th Semester				BCA 6th Semester			
SS	80.2	518.9	176.44	3816.07	7.11	0.14	0.08	3233.64
Df	1	1	1	49	1	1	1	68
MSS	80.2	518.9	176.44	77.88	7.11	0.14	0.08	47.55
F	1.03	6.66**	2.27		0.15	0	0	
Sig.	0.32	0.01	0.14		0.7	0.96	0.97	

MAIN EFFECTS

GENDER

It is clear from the table 4.113 that in self-emotional management, the F-value for B. Com 2nd semester students came out 4.38, which is found to be significant at 0.05 level of confidence. This shows that male and female students of B.Com 2nd semester differ significantly on the scores of Self-Emotional Management. Thus, the Hypothesis (8), “There is no significant difference in Self Emotional Management of higher education students with respect to Gender” for B.Com 2nd semester is rejected.

On overseeing the mean scores table 4.113, it is clear that female students (33.71) scored higher on self-emotional management as compared to male students (32.97). The present finding is in consonance with the findings of the previous researches conducted by Wing & Love (2001) and Singh (2002), Kafetsios (2004), Raffaelli et al. (2005), McRae et al. (2008), Xu (2011), Woehle et al. (2015) and Wijekoon et al. (2017) who reported that female students are more capable to regulate and manage their emotions as compared to their male counterparts. On the contrary, Xu et al. (2013, 2014) showed no significant gender difference in adult online learners with respect to their self-emotion management. While, Zembylas (2008) reported that females tend to experience more negative emotions because of inability to manage professional, family and social life in an online environment.

SUCCESSFULNESS

It is clear from table 4.113 that in self-emotional management, F- value for B. Com 2nd, semester came out 0.61, which is not found to be significant even at the 0.05 level of confidence. This shows that successful and unsuccessful students do not differ significantly on the scores of self-emotional management. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to Successfulness” for B.Com 2nd semester is not rejected.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

The data of table 4.113 shows that the interaction result for gender and successfulness on the scores of self emotional management with F-value 5.45, is found to be significant at 0.05 level of confidence. Thus, the hypothesis (10), “There is no significant interaction effect of Gender and Successfulness on the Self Emotional Management of higher education students” is rejected.

Further, for analysing the significant differences between various subgroups due to the interaction effect of gender and successfulness, t-values for the various subgroups were calculated. The results of the subgroups with statistically significant t values have been reported in table 4.114.

Table 4.114: Summary of ‘t’-values for the Subgroups of B.Com 2nd Semester in respect of ‘Self Emotional Management’

Group 1	Group 2	t- value
Unsuccessful Females	Successful Females	6.20**
Unsuccessful Females	Unsuccessful Males	3.09**
Unsuccessful Females	Successful Males	5.30**

**Significant at the 0.01 level of confidence

It is clear from table 4.114 that the t value of unsuccessful females-successful female students, unsuccessful females- unsuccessful males and unsuccessful females- successful males came out significant at 0.01 level of confidence. On overseeing mean score table 4.112, it has been found that unsuccessful female students (43) have scored more than successful female students (33.15), unsuccessful male students (29) and successful male students (33.92). This indicates that unsuccessful female students have high self-emotional management as compared to successful females, unsuccessful males and successful males. This shows that unsuccessful female students expect good things to happen, they never give up on the thought of failure. They try to manage their emotions well in order to cope up with the negative feelings due to the unsuccessful achieved score. Their

emotional management enables them to remain focused, boost up their confidence, make them regulate their learning and make them hopeful to get success.

DISCUSSION ON RESULTS

From the results, it is clear that female students have a high ability to manage their emotions well in time as compared to male students. In many previous studies gender differences have been reported in numerous of emotion-related processes, specifically, emotion regulation strategies (Hall, 1978; Feingold, 1994; McClure, 2000; Tamres et al. 2002; Nolen-Hoeksema, 2008 & Nolen-Hoeksema and Aldao, 2011). It has been documented in numerous prior studies that females possess high emotional intelligence than males (Van Rooy et al., 2005; Chandra et al., 2017; Ranasinghe et al., 2017; Joshi and Dutta, 2016). The females give greater attention on their emotions than males (Fernandez-Berrocal et al., 2005; Salovey et al., 1995) and are more emotional and have the ability to manage their emotions whether negative or positive. Different cerebral processing of emotions in male and female gives rise to the differences in managing, understanding, expressing and controlling emotions among males and females (Craig et al., 2009), likewise, Baron-Cohen (2003) reported that, in the female brain, certain zones of emotional processing are larger than the corresponding areas in males, due to which females scored more on emotional intelligence.

This can be interpreted that college-going female students are emotionally mature and able to handle and manage their emotions, this may be due to the age maturity, social and cultural influence as well. The female students tend to have positive optimistic expectations for the efforts they put in. On experiencing positive emotion, they know how to make it last, they seek out those activities which would make them happy. The female students motivate themselves by imagining a good and positive outcome to the task they take on; they use good moods in order to overcome the obstacles in their way. They never give up just because of failure, they manage their emotions well in order to face challenges. Further, no significant differences have been observed in successful and unsuccessful students with respect to managing emotions. It means both groups are able to manage their positive and negative emotions.

4.10.2 Summary of 2×2 Analysis of Variance on Scores of Self Emotional Management of B.Com 4th Semester Students with respect to Gender and Successfulness

To study the self-emotional management of B.Com 4th semester students with respect to gender and successfulness; mean and standard deviation were calculated and are reported in table 4.112. In order to analyze the variance of various dimensions and total score of self-emotional management of B.Com 4th semester students with respect to gender and successfulness, Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.113.

MAIN EFFECTS

GENDER

It is clear from table 4.113 in self-emotional management, F- value for B. Com 4th semester students came out 0.43, which is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (8), “There is no significant difference in Self Emotional Management of higher education students with respect to Gender” for B.Com 4th semester is not rejected. The above finding is in tune with the finding of Xu et al. (2013, 2014) showed no significant gender difference in adult online learners with respect to their self-emotion management.

SUCCESSFULNESS

It is clear from the table 4.113 that in self-emotional management, F-value for B.Com 4th, semester came out 1.49, which is not found to be significant even at the 0.05 level of confidence. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to Successfulness” for B.Com 4th semester is not rejected. This shows that successful and unsuccessful students do not differ significantly on the scores of ‘Self Emotional Management’.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

The data of the table 4.113 shows that the interaction result for gender and successfulness on the scores of 'Self Emotional Management' with F-value 2.21 is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (10), "There is no significant interaction effect of Gender and Successfulness on the Self Emotional Management of higher education students" for B.Com 4th semester is not rejected. This shows that subgroups as a result of interaction between gender and successfulness do not differ significantly on the scores of 'Self-Emotional Management'.

4.10.3 Summary of 2×2 Analysis of Variance on Scores of Self Emotional Management of B.Com 6th Semester Students with respect to Gender and Successfulness

To study the self emotional management of B. Com 6th semester students with respect to gender and successfulness; mean and standard deviation were calculated and are reported in table 4.112. In order to analyse the variance of various dimensions and total score of self emotional management of B. Com 6th semester students with respect to gender and successfulness. Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.113.

MAIN EFFECTS

GENDER

It is clear from table 4.113 that in self-emotional management, F-value for B.Com 6th semester students came out 0.89, which is not found to be significant even at the 0.05 level of confidence. This shows that male and female students of B.Com 6th semester do not differ significantly on the scores of self-emotional management. Thus, the Hypothesis (8), "There is no significant difference in Self Emotional Management of higher education students with respect to Gender" for B.Com 6th semester is not rejected. The above finding is in tune with the finding of Xu et al. (2013, 2014) showed no significant gender difference in adult online learners with respect to their self-emotion management.

SUCCESSFULNESS

It is clear from table 4.113 in self-emotional management, F-value for B.Com 6th, semester came out 1.46, which is not found to be significant even at the 0.05 level of confidence. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to Successfulness” for B.Com 6th semester is not rejected. This shows that successful and unsuccessful students do not differ significantly on the scores of self-emotional management.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

The data of table 4.113 shows that the interaction between gender and successfulness on the scores of self-emotional management with F-value 2.02 is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (10), “There is no significant interaction effect of Gender and Successfulness on the Self Emotional Management of higher education students” for B.Com 6th semester is not rejected. This shows that subgroups as a result of interaction between gender and successfulness do not differ significantly on the scores of self-emotional management.

4.10.4 Summary of 2×2 Analysis of Variance on Scores of Self Emotional Management of B.Sc 2nd Semester Students with respect to Gender and Successfulness

To study the self emotional management of B.Sc. 2nd semester students with respect to gender and successfulness; mean and standard deviation were calculated and are reported in table 4.112. In order to analyse the variance of various dimensions and total score of self emotional management of B.Sc 2nd semester students with respect to gender and successfulness, Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.113.

MAIN EFFECTS

GENDER

It is clear from table 4.113 in self-emotional management, F- value for B.Sc. 2nd semester students came out 0.04, which is not found to be significant even at the 0.05 level of confidence. This shows that male and female students of B.Sc. 2nd semester does not differ significantly on the scores of self-emotional management. Thus, the Hypothesis (8), “There is no significant difference in Self Emotional Management of higher education students with respect to Gender” for B.Sc 2nd semester is not rejected. The above finding is in tune with the finding of Xu et al. (2013, 2014) showed no significant gender difference in adult online learners with respect to their self-emotion management.

SUCCESSFULNESS

It is clear from table 4.113 in self-emotional management, F- value for B.Sc. 2nd, semester came out 5.97, which is found to be significant at the 0.05 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of self-emotional management. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to Successfulness” for B.Sc 2nd semester is rejected. On overseeing the mean score table 4.112, it has been found that successful students (36.71) have scored more than unsuccessful students (33.98). This shows that successful students skilfully regulate their positive or negative emotions. As successful students are goal-oriented so they don't allow negative emotional reactions to hamper their achievement. They know how to remove the obstacles, hold an optimistic approach and never give up in with the thought of failure. They always motivate themselves to keep the focus on the task and are hopeful that they will get success on the task they take on. The present finding enjoys support from the findings of Sharma and Pinku (2017) and Jabeen & Khan (2012) who reported that high achieving students have the ability to recognise different feelings and are in a position to manage their emotions according to the situation.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

It is clear from the table 4.113 that the interaction between gender and successfulness on the scores of self emotional management with F-value 0.72 is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (10), “There is no significant interaction effect of Gender and Successfulness on the Self Emotional Management of higher education students” for B.Sc. 2nd semester is not rejected. This shows that subgroups of B.Sc. 2nd semester as a result of interaction between gender and successfulness do not differ significantly on the scores of ‘Self-Emotional Management’.

4.10.5 Summary of 2×2 Analysis of Variance on Scores of Self Emotional Management of B.Sc 4th Semester Students with respect to Gender and Successfulness

To study the self emotional management of B.Sc. 4th semester students with respect to gender and successfulness; mean and standard deviation were calculated and are reported in table 4.112. In order to analyse the variance of various dimensions and total score of self emotional management of B.Sc. 4th semester students with respect to gender and successfulness, Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.113.

MAIN EFFECTS

GENDER

It is clear from table 4.113 that in self-emotional management, F-value for B.Sc. 4th semester students came out 1.62, which is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (8), “There is no significant difference in Self Emotional Managements of higher education students with respect to Gender” for B.Sc. 4th semester is not rejected. This shows that male and female students of B.Sc. 4th semester does not differ significantly on the scores of ‘Self-Emotional Management’. The above finding is in tune with the finding of Xu et al. (2013, 2014) showed no significant gender difference in adult online learners with respect to their self-emotion management.

SUCCESSFULNESS

It is clear from table 4.113 that in self-emotional management, F-value for B.Sc. 4th semester came out 0.35, which is found to be significant at the 0.05 level of confidence. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to Successfulness” for B.Sc. 4th semester is not rejected. This shows that successful and unsuccessful students do not differ significantly on the scores of ‘Self Emotional Management’.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

It is clear from the table 4.113 that the interaction between gender and successfulness on the scores of self-emotional management with F-value 6.77 is found to be significant at the 0.01 level of confidence. This shows that subgroups of B.Sc. 4th semester as a result of interaction between gender and successfulness differ significantly on the scores of self-emotional management. Thus, the Hypothesis (10), “There is no significant interaction effect of Gender and Successfulness on the Self Emotional Management of higher education students” for B.Sc. 4th semester is rejected for unsuccessful females- successful females & unsuccessful females-unsuccessful males subgroups.

Further, for analysing the significant differences between various subgroups due to the interaction effect of gender and successfulness, t-values for the various subgroups were calculated. The results of the subgroups with statistically significant t values have been reported in table 4.115.

Table 4.115: Summary of ‘t’-values for the Subgroups of B.Sc 4th Semester in respect of ‘Self Emotional Management’

Group 1	Group 2	t-value
Unsuccessful Females	Successful Females	2.03*
Unsuccessful Females	Unsuccessful Males	2.83**

*significant at the 0.05 level of confidence

**significant at the 0.01 level of confidence

It is clear from the table 4.115 that t- value for unsuccessful females-successful females & unsuccessful females- unsuccessful males came out significant either at 0.05 or 0.01 level of confidence. On overseeing the mean scores table 4.112 it has been found that unsuccessful female (39.17) students scored more than successful female (36.18) and unsuccessful male (38.15) students. This indicates that unsuccessful female students have more control over their emotions and they hold an optimistic approach that if they do hard work, they will get success. They do not afraid from challenges and in spite of facing failure they are hopeful to be successful in future.

4.10.6 Summary of 2×2 Analysis of Variance on Scores of Self Emotional Management of B.Sc 6th Semester Students with respect to Gender and Successfulness

To study the self emotional management of B.Sc. 6th semester students with respect to gender and successfulness; mean and standard deviation were calculated and are reported in table 4.112. In order to analyse the variance of various dimensions and total score of self emotional management of B.Sc 6th semester students with respect to gender and successfulness, Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.113.

MAIN EFFECTS

GENDER

It is clear from the table 4.113 that in self-emotional management, F-value for B.Sc. 6th semester students came out 0.41, which is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (8), “There is no significant difference in Self Emotional Managements of higher education students with respect to Gender” for B.Sc. 6th semester is not rejected. This shows that male and female students of B.Sc. 6th semester does not differ significantly on the scores of self-emotional management. The above finding is in tune with the finding of Xu et al. (2013, 2014) showed no significant gender difference in adult online learners with respect to their emotion management.

SUCCESSFULNESS

It is clear from table 4.113 that in self-emotional management, F- value for B.Sc. 6th, semester came out 0.35, which is not found to be significant even at the 0.05 level of confidence. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to Successfulness” for B.Sc. 6th semester is not rejected. This shows that successful and unsuccessful students do not differ significantly on the scores of self-emotional management.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

It is clear from table 4.113 that the interaction between gender and successfulness on the scores of self-emotional management with F-value 1.09 is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (10), “There is no significant interaction effect of Gender and Successfulness on the Self Emotional Management of higher education students” for B.Sc. 6th semester is not rejected. This shows that subgroups of B.Sc. 6th semester as a result of interaction between gender and successfulness do not differ significantly on the scores of self-emotional management.

4.10.7 Summary of 2×2 Analysis of Variance on Scores of Self Emotional Management of BBA 2nd Semester Students with respect to Gender and Successfulness

To study the self emotional management of BBA 2nd semester students with respect to gender and successfulness; mean and standard deviation were calculated and are reported in table 4.112. In order to analyse the variance of various dimensions and total score of self emotional management of BBA 2nd semester students with respect to gender and successfulness, Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.113.

MAIN EFFECTS

GENDER

It is clear from table 4.113 that in self-emotional management, F-values for BBA 2nd semester students came out 10.96, which is found to be significant at the 0.01 level of confidence. This shows that male and female students of BBA 2nd semester differ significantly on the scores of self-emotional management. Thus, the Hypothesis (8), “There is no significant difference in Self Emotional Managements of higher education students with respect to Gender” for BBA 2nd semester is rejected.

On overseeing mean scores table 4.113, it has been found that female students (37.3) have scored more than male students (31.83). The present finding is in consonance with the findings of Wing & Love (2001) and Singh (2002), Kafetsios (2004), Raffaelli et al. (2005), McRae et al. (2008), Xu (2011), Woehle et al. (2015) and Wijekoon et al. (2017) who reported that female students are more capable to regulate and manage their emotions as compared to their male counterparts. The female students generally, express, understand and regulate their emotions by exchanging their emotional feelings with parents and co-workers. The finding of the present study is in contrast with the finding of Xu et al. (2013, 2014) who showed no significant gender difference in adult online learners with respect to their self-emotion management. While Zembylas (2008) reported that females tend to experience more negative emotions and are unable to regulate them because of inability to manage professional, family and social life in an online environment.

SUCCESSFULNESS

It is clear from the table 4.113 that in self-emotional management, F- value for BBA 2nd, semester came out 0.98, which is not found to be significant even at the 0.05 level of confidence. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to Successfulness” for BBA 2nd semester is not rejected. This shows that successful and unsuccessful students do not differ significantly on the scores of self-emotional management.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

It is clear from table 4.113 that the interaction between gender and successfulness on the scores of self-emotional management with F-value 0.83 is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (10), “There is no significant interaction effect of Gender and Successfulness on the Self Emotional Management of higher education students” for BBA 2nd semester is not rejected. This shows that subgroups of BBA 2nd semester as a result of interaction between gender and successfulness do not differ significantly on the scores of self-emotional management.

DISCUSSION ON RESULTS

From the results, it is clear that female students have a high ability to manage their emotions well in time as compared to male students. The previous pieces of research have reported gender difference in numerous of emotion-related processes, specifically, emotion regulation strategies (Hall, 1978; Feingold, 1994; McClure, 2000; Tamres et al. 2002; Nolen-Hoeksema, 2008 & Nolen-Hoeksema and Aldao 2011). It has been documented in many pieces of research that females possess high emotional intelligence than males (Van Rooy et al., 2005; Chandra et al., 2017; Ranasinghe et al., 2017; Joshi and Dutta, 2016). Females give greater attention on their emotions than males (Fernandez-Berrocal et al., 2012; Salovey et al., 1995) and are more emotional and have the ability to manage their emotions whether negative or positive. Different cerebral processing of emotions in male and female gives rise to the differences in managing, understanding, expressing and controlling emotions among males and females (Craig et al., 2009). Based on social explanation, it is proposed that both males and females learn different lessons from parents in controlling their emotional reactions. Males are taught to control specific emotions like sadness, guilt and fear (Sanchez-Nunez et al., 2008), but females are taught to maintain social relationships. In addition, Biological explanation posits that the biochemistry of women is better prepared to understand one’s own and others emotions. In “Extreme Male Brain Theory of Autism” suggested that the brain structure of male and female is functionally distinct. In its support, in brain certain areas which are concerned with the processing of emotions are larger in females as

compared to males (Baron-Cohen, 2002, 2003; Gur et al., 2002), apart from this, cerebral processing of emotions is different in both men and women (Craig et al., 2009; Jausovec and Jausovec, 2005). This can be interpreted that college-going female students are emotionally mature and able to handle and manage their emotions, this may be due to the age maturity, social and cultural influence as well. The female students tend to have positive optimistic expectations for the efforts they put in. On experiencing positive emotion, they know how to make it last, they seek out those activities which would make them happy. The female students motivate themselves by imagining a good and positive outcome to the task they take on; they use good moods in order to overcome the obstacles in their way. They never give up just because of failure, they manage their emotions well in order to face challenges. Further, no significant differences have been observed in successful and unsuccessful students with respect to managing emotions. It means both groups are able to manage their positive and negative emotions.

4.10.8 Summary of 2×2 Analysis of Variance on Scores of Self Emotional Management of BBA 4th Semester Students with respect to Gender and Successfulness

To study the self emotional management of BBA 4th semester students with respect to gender and successfulness; mean and standard deviation were calculated and are reported in table 4.112. In order to analyse the variance of various dimensions and total score of self emotional management of BBA 4th semester students with respect to gender and successfulness. Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.113.

MAIN EFFECTS

GENDER

It is clear from table 4.113 in self-emotional management, F- value for BBA 4th semester students came out 6.64, which is found to be significant at the 0.01 level of confidence. This shows that male and female students of BBA 4th semester differ significantly on the scores of 'Self-Emotional Management'. Thus, the

Hypothesis (10), “There is no significant interaction effect of Gender and Successfulness on the Self Emotional Management of higher education students” for BBA 4th semester is rejected. On overseeing mean scores table 4.123, it has been found that female students (34.1) have scored more than male students (28.81). The present finding is in consonance with the findings of the previous studies conducted by Wing & Love (2001) and Singh (2002), Kafetsios (2004), Raffaelli et al. (2005), McRae et al. (2008), Xu (2011), Woehle et al. (2015) and Wijekoon et al. (2017) who reported that female students are more capable to regulate and manage their emotions as compared to their male counterparts. On the contrary, Xu et al. (2013, 2014) showed that gender difference is not noticeable in adult online learners with respect to their emotion management. While Zembylas (2008) reported that females have a tendency to experience more negative emotions because of inability to manage professional, family and social life in an online environment.

SUCCESSFULNESS

It is clear from table 4.113 that in self-emotional management, F-value for BBA 4th semester came out 4.17, which is found to be significant at the 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of ‘Self Emotional Management’. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to Successfulness” for BBA 4th semester is rejected. On overseeing mean scores table 4.112 it has been found successful students (33.44) have scored more than unsuccessful students (29.37). This shows that successful students skilfully regulate their positive or negative emotions. As successful students are goal-oriented so they don’t allow negative emotional reactions to hamper their achievement. They know how to remove the obstacles, hold an optimistic approach and never give up in with the thought of failure. They always motivate themselves to keep the focus on the task and are hopeful that they will get success on the task they take on. The present finding enjoys support from the findings of Sharma and Pinku (2017) and Jabeen & Khan (2012) who reported that high achieving students have the ability to recognise different feelings and are in a position to manage their emotions according to the situation.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

It is clear from table 4.113 that the interaction between gender and successfulness on the scores of self-emotional management with F-value 1.58, is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (10), “There is no significant interaction effect of Gender and Successfulness on the Self Emotional Management of higher education students” for BBA 4th semester is not rejected. This shows that subgroups of BBA 4th semester as a result of interaction between gender and successfulness do not differ significantly on the scores of self-emotional management.

DISCUSSION ON RESULTS

From the results, it is clear that female students have a high ability to manage their emotions well in time as compared to male students. In many previous pieces of research, gender differences have been reported in numerous of emotion-related processes, specifically, emotion regulation strategies (Hall, 1978; Feingold, 1994; McClure, 2000; Tamres et al. 2002; Nolen-Hoeksema, 2008 & Nolen-Hoeksema and Aldao 2011). It has been documented in many pieces of research that females possess high emotional intelligence than males (Van Rooy et al., 2005; Chandra et al., 2017; Ranasinghe et al., 2017; Joshi and Dutta, 2016). Females give greater attention on their emotions than males (Fernández-Berrocal et al., 2012; Salovey et al., 1995) and are more emotional and have the ability to manage their emotions whether negative or positive. Different cerebral processing of emotions in male and female gives rise to the differences in managing, understanding, expressing and controlling emotions among males and females (Craig et al., 2009).

Based on social explanation, it is proposed that both males and females learn different lessons from parents in controlling their emotional reactions. Males are taught to control specific emotions like sadness, guilt and fear (Sanchez-Nunez et al., 2008), but females are taught to maintain social relationships. In addition, Biological explanation posits that the biochemistry of women is better prepared to understand one’s own and others emotions. In “Extreme Male Brain Theory of Autism” suggested that the brain structure of male and female is functionally

distinct. In its support, in brain certain areas which are concerned with the processing of emotions are larger in females as compared to males (Baron-Cohen, 2002, 2003; Gur et al., 2002), apart from this, cerebral processing of emotions is different in both men and women (Craig et al., 2009; Jausovec and Jausovec, 2005). This can be interpreted that college-going female students are emotionally mature and able to handle and manage their emotions, this may be due to the age maturity, social and cultural influence as well. The female students tend to have positive optimistic expectations for the efforts they put in. On experiencing positive emotion, they know how to make it last, they seek out those activities which would make them happy. The female students motivate themselves by imagining a good and positive outcome to the task they take on; they use good moods in order to overcome the obstacles in their way. They never give up just because of failure, they manage their emotions well in order to face challenges. Further, significant differences have been observed in successful and unsuccessful students with respect to managing emotions. The probable reason behind this may be that successful students do more interaction with the teachers and their peer group and this social interaction gives them chance to express their problems or negative emotional reactions with others, which enables them to understand and manage their emotions (positive & negative). On the other hand, unsuccessful students feel guilt and shame of getting poor grades and have fear of getting a bad reputation among peer group in sharing their negative emotional feelings. This can be the reason that unsuccessful students are not able to understand and manage their emotions well in time.

4.10.9 Summary of 2×2 Analysis of Variance on Scores of Self Emotional Management of BBA 6th Semester Students with respect to Gender and Successfulness

To study the self emotional management of BBA 6th semester students with respect to gender and successfulness; mean and standard deviation were calculated and are reported in table 4.112. In order to analyse the variance of various dimensions and total score of self emotional management of BBA 6th semester students with respect to gender and successfulness. Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.113.

MAIN EFFECTS

GENDER

It is clear from table 4.113 that in self-emotional management, F- value for BBA 6th semester students came out 1.03, which is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (8), “There is no significant difference in Self Emotional Management of higher education students with respect to Gender” for BBA 6th semester is not rejected. This shows that male and female students of BBA 6th semester do not differ significantly on the scores of self-emotional management and both are capable of managing and regulating their emotions. The above finding is in tune with the finding of Xu et al. (2013, 2014) showed no significant gender difference in adult online learners with respect to their self-emotion management.

SUCCESSFULNESS

It is clear from table 4.113 that in self-emotional management, F-value for BBA 6th semester came out 6.66, which is found to be significant at the 0.01 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of ‘Self Emotional Management’. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to Successfulness” for BBA 6th semester is rejected. On overseeing mean scores table 4.112, it has been found successful students (32.31) have scored more than unsuccessful students (25.74). This shows that successful students skilfully regulate their positive or negative emotions. As successful students are goal-oriented so they don’t allow negative emotional reactions to hamper their achievement. They know how to remove the obstacles, hold an optimistic approach and never give up in with the thought of failure. They always motivate themselves to keep the focus on the task and are hopeful that they will get success on the task they take on. The probable reason behind this may be that successful students do more interaction with the teachers and their peer group and this social interaction gives them chance to express their problems or negative emotional reactions with others, which enables them to understand and manage their emotions (positive & negative). On the other hand, unsuccessful students feel guilt

and shame of getting poor grades and have fear of getting a bad reputation among peer group in sharing their negative emotional feelings. This can be the reason that unsuccessful students are not able to understand and manage their emotions well in time. The present finding enjoys support from the findings of Sharma and Pinku (2017) and Jabeen & Khan (2012) who reported that high achieving students have the ability to recognise different feelings and are in a position to manage their emotions according to the situation.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

It is clear from table 4.113 that the interaction between gender and successfulness on the scores of self-emotional management with F-value 2.27 is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (10), “There is no significant interaction effect of Gender and Successfulness on the Self Emotional Management of higher education students” for BBA 6th semester is not rejected. This shows that subgroups of BBA 6th semester as a result of interaction between gender and successfulness do not differ significantly on the scores of self-emotional management.

4.10.10 Summary of 2×2 Analysis of Variance on Scores of Self Emotional Management of BCA 2nd Semester Students with respect to Gender and Successfulness

To study the self-emotional management of BCA 2nd semester students with respect to gender and successfulness; mean and standard deviation were calculated and are reported in table 4.112. In order to analyze the variance of various dimensions and total score of self-emotional management of BCA 2nd semester students with respect to gender and successfulness, Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.113.

MAIN EFFECTS

GENDER

It is clear from table 4.113 that in self-emotional management, F- value for BCA 2nd semester students came out 0.01, which is not found to be significant even

at the 0.05 level of confidence. Thus, the Hypothesis (8), “There is no significant difference in Self Emotional Management of higher education students with respect to Gender” for BCA 2nd semester is not rejected. This shows that male and female students of BCA 2nd semester do not differ significantly on the scores of self-emotional management. The above finding is in tune with the finding of Xu et al. (2013, 2014) showed that gender difference is not noticeable in adult online learners with respect to their emotion management.

SUCCESSFULNESS

It is clear from table 4.113 in self-emotional management, F-value for BCA 2nd, semester came out 0.33, which is not found to be significant even at the 0.05 level of confidence. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to Successfulness” for BCA 2nd semester is not rejected. This shows that successful and unsuccessful students do not differ significantly on the scores of self-emotional management.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

It is clear from table 4.113 that the interaction between gender and successfulness on the scores of self-emotional management with F-value 0.46 is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (10), “There is no significant interaction effect of Gender and Successfulness on the Self Emotional Management of higher education students” for BCA 2nd semester is not rejected. This shows that subgroups of BCA 2nd semester as a result of interaction between gender and successfulness do not differ significantly on the scores of self-emotional management.

4.10.11 Summary of 2×2 Analysis of Variance on Scores of Self Emotional Management of BCA 4th Semester Students with respect to Gender and Successfulness

To study the self emotional management of BCA 4th semester students with respect to gender and successfulness; mean and standard deviation were calculated and are reported in table 4.112. In order to analyse the variance of various

dimensions and total score of self emotional management of BCA 4th semester students with respect to gender and successfulness, Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.113.

MAIN EFFECTS

GENDER

It is clear from table 4.113 that in self-emotional management, F- value for BCA 4th semester students came out 0.03, which is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (8), “There is no significant difference in Self Emotional Management of higher education students with respect to Gender” for BCA 4th semester is not rejected. This shows that male and female students of BCA 4th semester do not differ significantly on the scores of ‘Self-Emotional Management’. The above finding is in tune with the finding of Xu et al. (2013, 2014) showed that gender difference is not noticeable in adult online learners with respect to their emotion management.

SUCCESSFULNESS

It is clear from table 4.113 that in self-emotional management, F-values for BCA 4th, semester came out 0.28, which is not found to be significant even at the 0.05 level of confidence. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to Successfulness” for BCA 4th semester is not rejected. This shows that successful and unsuccessful students do not differ significantly on the scores of self-emotional management.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

It is clear from table 4.113 that the interaction between gender and successfulness on the scores of self-emotional management with F-value 0.08, is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (10), “There is no significant interaction effect of Gender and Successfulness on the self-emotional management of higher education students” for BCA 4th semester is not rejected. This shows that subgroups of BCA 4th semester as a result of

interaction between gender and successfulness do not differ significantly on the scores of self-emotional management.

4.10.12 Summary of 2×2 Analysis of Variance on Scores of Self Emotional Management of BCA 6th Semester Students with respect to Gender and Successfulness

To study the self emotional management of BCA 6th semester students with respect to gender and successfulness; mean and standard deviation were calculated and are reported in table 4.112. In order to analyse the variance of various dimensions and total score of self emotional management of BCA 6th semester students with respect to gender and successfulness, Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.113.

MAIN EFFECTS

GENDER

It is clear from table 4.113 that in self-emotional management, F- value for BCA 6th semester students came out 0.15, which is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (8), “There is no significant difference in Self Emotional Management of higher education students with respect to Gender” for BCA 6th semester is not rejected. This shows that male and female students of BCA 6th semester do not differ significantly on the scores of self-emotional management. The above finding is in tune with the finding of Xu et al. (2013, 2014) showed that gender difference is not noticeable in adult online learners with respect to their emotion management.

SUCCESSFULNESS

It is clear from table 4.113 that in self-emotional management, F-value for BCA 6th semester came out 0.00, which is not found to be significant even at the 0.05 level of confidence. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to Successfulness” for BCA 6th semester is not rejected. This shows that successful and unsuccessful students do not differ significantly on the scores of self-emotional management.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

It is clear from the table 4.113 that the interaction between gender and successfulness on the scores of self-emotional management with F-value 0.00 is not found to be significant which is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (10), “There is no significant interaction effect of Gender and Successfulness on the Self Emotional Management of higher education students” for BCA 6th semester is not rejected. This shows that subgroups of BCA 6th semester as a result of interaction between gender and successfulness do not differ significantly on the scores of self-emotional management.

4.11 SUMMARY OF 2×2 ANALYSIS OF VARIANCE ON SCORES OF SELF EMOTIONAL MANAGEMENT OF STUDENTS OF PG PROGRAMS WITH RESPECT TO GENDER AND SUCCESSFULNESS

To study the self emotional management of the students of PG programs with respect to gender and successfulness; mean and standard deviation were calculated and in order to analyse the variance of various dimensions and total score of self emotional management of students of PG programs with respect to gender and successfulness, the obtained scores were subjected to two-way ANOVA and the results are reported in the following headings.

4.11.1 Summary of 2×2 Analysis of Variance on Scores of Self Emotional Management of M.Com 2nd Semester Students with respect to Gender and Successfulness

To study the self emotional management of M.Com 2nd semester students with respect to gender and successfulness; mean and standard deviation were calculated and are reported in table 4.116. In order to analyse the variance of various dimensions and total score of self emotional management of M.Com 2nd semester students with respect to gender and successfulness, Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.117.

Table 4.116: Means and SDs of Sub-groups of 2×2 ANOVA Design with respect to Self Emotional Management of UG Students

Gender	Female			Male			Total			Female			Male			Total		
	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total	UN	S	Total
	M.COM 2ND SEMESTER									M.SC. 2ND SEMESTER								
M	28	35.18	34.74	20.6	31.78	27.79	23.89	34.74	33.51	34.84	34.9	34.88	37	36.16	36.38	35.18	35.12	35.14
σ	8.24	5.76	6.11	5.89	9.33	9.76	7.62	6.34	7.32	6.77	5.83	6.09	4.76	6.06	5.66	6.5	5.86	6.03
N	4	61	65	5	9	14	9	70	79	37	89	126	7	19	26	44	108	152
	MBA 2ND SEMESTER									MCA 2ND SEMESTER								
M	31	36.92	35.81	32.82	33.15	33.08	31.89	35.19	34.55	24	34.83	33.87	27.5	31.67	30.49	26.59	33.52	32.27
σ	8.93	6.42	7.29	8.77	7.02	7.36	8.77	6.94	7.43	4.24	6.84	7.32	9.27	8.13	8.6	8.33	7.53	8.1
N	18	78	96	17	66	83	35	144	179	7	72	79	20	51	71	27	123	150

Table 4.117: Summary of 2×2 ANOVA with respect to Self Emotional Management of UG Students

Source	Gender	Successfulness	Gender * Successfulness	Error	Gender	Successfulness	Gender * Successfulness	Error
	M.COM 2ND SEMESTER				M.SC. 2ND SEMESTER			
SS	202.07	583.58	27.67	3033.77	50.07	2.61	3.49	5435.64
Df	1	1	1	75	1	1	1	148
MSS	202.07	583.58	27.67	40.45	50.07	2.61	3.49	36.73
F	5.00*	14.43**	0.68		1.36	0.07	0.1	
Sig.	0.03	0	0.41		0.25	0.79	0.76	
	MBA 2ND SEMESTER				MCA 2ND SEMESTER			
SS	26.66	274.5	219.91	8966.49	0.49	994.02	196.35	8360.33
Df	1	1	1	175	1	1	1	146
MSS	26.66	274.5	219.91	51.24	0.49	994.02	196.35	57.26
F	0.52	5.36*	4.29*		0.01	17.36**	3.43	
Sig.	0.47	0.02	0.04		0.93	0	0.07	

MAIN EFFECTS

GENDER

It is clear from table 4.117 that in self-emotional management, F- value for M.Com 2nd semester students came out 5.00, which is found to be significant at the 0.05 level of confidence. Thus, the Hypothesis (8), “There is no significant difference in Self Emotional Management of higher education students with respect to Gender” for M.Com 2nd semester is rejected. This shows that male and female students of M.Com 2nd semester differ significantly on the scores of self-emotional management. On overseeing the mean scores table 4.116, it has been found that female students (34.74) have scored more than male students (27.79). The present finding is in consonance with the findings of the previous studies conducted by Wing & Love (2001) and Singh (2002), Kafetsios (2004), Raffaelli et al. (2005), McRae et al. (2008), Xu (2011), Woehle et al. (2015) and Wijekoon et al. (2017) who reported that female students are more capable to regulate and manage their emotions as compared to their male counterparts. On the contrary, Xu et al. (2013, 2014) showed that gender difference is not noticeable in adult online learners with respect to their emotion management. While Zembylas (2008) reported that females have a tendency to experience more negative emotions because of inability to manage professional, family and social life in an online environment.

SUCCESSFULNESS

It is clear from table 4.117 that in self-emotional management, F- value for M.Com 2nd semester came out 14.43, which is found to be significant at the 0.05 level of confidence. This shows that successful and unsuccessful students differ significantly on the scores of self-emotional management. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to Successfulness” for M.Com 2nd semester is rejected. On overseeing the mean scores table 4.116, it has been found that successful students (34.74) have scored more than unsuccessful students (23.89). This shows that successful students skillfully manage their positive or negative emotions in any of the situations. As successful students are goal-oriented and they know how to remove the obstacles, hold optimistic approach and never give up with

the thought of failure because they do not allow negative emotional reactions to hamper their achievement. The present finding enjoys support from the findings of Sharma and Pinku (2017) and Jabeen & Khan (2012) who reported that high achieving students have the ability to recognise different feelings and are in a position to manage their emotions according to the situation.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

It is clear from table 4.117 that the interaction between gender and successfulness on the scores of self-emotional management with F-value 0.68, is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (10), “There is no significant interaction effect of Gender and Successfulness on the Self Emotional Management of higher education students” for M. Com 2nd semester is not rejected. This shows that subgroups of M. Com 2nd semester as a result of interaction between gender and successfulness do not differ significantly on the scores of self-emotional management.

DISCUSSION ON RESULTS

From the results, it is clear that female students have a high ability to manage their emotions well in time as compared to male students. In many previous pieces of research, gender differences have been reported in numerous of emotion-related processes, specifically, emotion regulation strategies (Hall, 1978; Feingold, 1994; McClure, 2000; Tamres et al. 2002; Nolen-Hoeksema, 2008 & Nolen-Hoeksema and Aldao 2011). It has been documented in many pieces of research that females possess high emotional intelligence than males (Van Rooy et al., 2005; Chandra et al., 2017; Ranasinghe et al., 2017; Joshi and Dutta, 2016). Females give greater attention on their emotions than males (Fernández-Berrocal et al., 2012; Salovey et al., 1995) and are more emotional and have the ability to manage their emotions whether negative or positive. Different cerebral processing of emotions in male and female gives rise to the differences in managing, understanding, expressing and controlling emotions among males and females (Craig et al., 2009). Based on social explanation, it is proposed that both males and females learn different lessons from parents in controlling their emotional reactions. Males are taught to control specific emotions like sadness, guilt and fear (Sanchez-Nunez et al., 2008), but females are

taught to maintain social relationships. In addition, Biological explanation posits that the biochemistry of women is better prepared to understand one's own and others emotions. In "Extreme Male Brain Theory of Autism" suggested that the brain structure of male and female is functionally distinct. In its support, in brain certain areas which are concerned with the processing of emotions are larger in females as compared to males (Baron-Cohen, 2002, 2003; Gur et al., 2002), apart from this, cerebral processing of emotions is different in both men and women (Craig et al., 2009; Jausovec and Jausovec, 2005). This can be interpreted that college-going female students are emotionally mature and able to handle and manage their emotions, this may be due to the age maturity, social and cultural influence as well. The female students tend to have positive optimistic expectations for the efforts they put in. On experiencing positive emotion, they know how to make it last, they seek out those activities which would make them happy.

Female students motivate themselves by imagining a good and positive outcome to the task they take on; they use good moods in order to overcome the obstacles in their way. They never give up just because of failure, they manage their emotions well in order to face challenges. Further, significant differences have been observed in successful and unsuccessful students with respect to managing emotions. The probable reason behind this may be that successful students do more interaction with the teachers and their peer group and this social interaction gives them chance to express their problems or negative emotional reactions with others, which enables them to understand and manage their emotions (positive & negative). On the other hand, unsuccessful students feel guilt and shame of getting poor grades and have fear of getting a bad reputation among peer group in sharing their negative emotional feelings. This can be the reason that unsuccessful students are not able to understand and manage their emotions well in time.

4.11.2 Summary of 2×2 Analysis of Variance on Scores of Self Emotional Management of M.Sc. 2nd Semester Students with respect to Gender and Successfulness

To study the self emotional management of M.Sc. 2nd semester students with respect to gender and successfulness; mean and standard deviation were calculated and are reported in table 4.116. In order to analyse the variance of various

dimensions and total score of self emotional management of M.Sc. 2nd semester students with respect to gender and successfulness, Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.117.

MAIN EFFECTS

GENDER

It is clear from table 4.117 that in self-emotional management, F- values for M.Sc. 2nd semester students came out 1.36, which is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (8), “There is no significant difference in self-emotional management of higher education students with respect to Gender” for M.Sc.2nd semester is not rejected. This shows that male and female students of M.Sc.2nd semester do not differ significantly on the scores of self-emotional management. The present finding is in consonance with the finding of Xu et al. (2013, 2014) showed that gender difference is not noticeable in adult online learners with respect to their emotion management.

SUCCESSFULNESS

It is clear from table 4.117 that in self-emotional management, F- values for M.Sc. 2nd semester came out 0.07, which is not found to be significant even at the 0.05 level of confidence. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to Successfulness” for M.Sc. 2nd semester is not rejected. This shows that successful and unsuccessful students do not differ significantly on the scores of self-emotional management.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

It is clear from table 4.117 that the interaction between gender and successfulness on the scores of self-emotional management with F-value 0.10, is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (10), “There is no significant interaction effect of Gender and Successfulness on the Self Emotional Management of higher education students” for M.Sc. 2nd semester is

not rejected. This shows that subgroups of M.Sc. 2nd semester as a result of interaction between gender and successfulness do not differ significantly on the scores of self-emotional management.

4.11.3 Summary of 2×2 Analysis of Variance on Scores of Self Emotional Management of MBA 2nd Semester Students with respect to Gender and Successfulness

To study the self emotional management of MBA 2nd semester students with respect to gender and successfulness; mean and standard deviation were calculated and are reported in table 4.116. In order to analyse the variance of various dimensions and total score of self emotional management of MBA 2nd semester students with respect to gender and successfulness, Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.117.

MAIN EFFECTS

GENDER

It is clear from table 4.117 that in self-emotional management, F-value for MBA 2nd semester students came out 0.52, which is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (8), “There is no significant difference in self-emotional management of higher education students with respect to Gender” for MBA 2nd semester is not rejected. This shows that male and female students of MBA 2nd semester do not differ significantly on the scores of self-emotional management. The results are in line with the results of Xu et al. (2013, 2014 showed no significant gender difference in adult online learners with respect to their emotion management.

SUCCESSFULNESS

It is clear from table 4.117 that in self-emotional management, F- values for MBA 2nd semester came out 5.36, which is found to be significant at the 0.05 level of confidence. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to

Successfulness” for MBA 2nd semester is rejected. This shows that successful and unsuccessful students differ significantly on the scores of self-emotional management. On overseeing the mean scores table 4.116, it has been found that successful students (35.19) scored more than unsuccessful students (31.89). As successful students are goal-oriented and they know how to remove the obstacles, hold optimistic approach and never give up with the thought of failure because they do not allow negative emotional reactions to hamper their achievement. The present finding enjoys support from the findings of Sharma and Pinku (2017) and Jabeen & Khan (2012) who reported that high achieving students have the ability to recognise different feelings and are in a position to manage their emotions according to the situation.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

It is clear from table 4.117 that the interaction between gender and successfulness on the scores of self-emotional management with F-value 0.10, is found to be significant at the 0.05 level of confidence. This shows that subgroups of MBA 2nd semester as a result of interaction between gender and successfulness do not differ significantly on the scores of self-emotional management To further analyse the significant difference between various groups as a result of interaction between gender and successfulness, t-values for the various subgroups were calculated and the subgroups for which the t value is found significant are presented in the table 4.118.

Table 4.118: Summary of ‘t’-values for the Subgroups of MBA 2nd Semester in respect of ‘Self Emotional Management’

Group 1	Group 2	t-value
Unsuccessful Females	Successful Females	2.65**
Successful Females	Successful Males	3.34**

**significant at the 0.01 level of confidence

It is clear from table 4.118 that the t- values for unsuccessful females- successful females and successful females- successful males came out to be

significant at the 0.01 level of confidence. This shows that these subgroups differ significantly with respect to self-emotional management. On overseeing the mean scores table 4.116, it has been observed that successful females (36.92) scored more than unsuccessful females (31) and successful males (33.15). This indicates that successful female students are more skilful in managing their emotions as compared to unsuccessful females and successful males. The probable reason behind this may be that the successful female students more indulge in interaction with the teachers and their peer group and this social interaction gives them chance to express their problems or negative emotional reactions with others, which enables them to understand and manage their emotions (positive & negative). On the other hand, unsuccessful female students feel guilt and shame of getting poor grades and have fear of getting a bad reputation among peer group in sharing their negative emotional feelings. This can be the reason that unsuccessful female students are not able to understand and manage their emotions well in time. On the other hand, successful female students scored more than successful males on self-emotional management scale. The previous studies reported gender differences in numerous of emotion-related processes, specifically, emotion regulation strategies (Hall, 1978; Feingold, 1994; McClure, 2000; Tamres et al., 2002; Nolen-Hoeksema et al. 2008 & Nolen-Hoeksema and Aldao, 2011). It has been documented in many pieces of research that females possess high emotional intelligence than males (Van Rooy et al., 2005; Chandra et al., 2017; Ranasinghe et al., 2017; Joshi and Dutta, 2016). The females give greater attention on their emotions than males (Fernandez-Berrocal et al., 2005; Salovey et al., 1995) and are more emotional and have the ability to manage their emotions whether negative or positive. Different cerebral processing of emotions in male and female gives rise to the differences in managing, understanding, expressing and controlling emotions among males and females (Craig et al., 2009). Based on social explanation, it is proposed that both males and females learn different lessons from parents in controlling their emotional reactions. Males are taught to control specific emotions like sadness, guilt and fear (Sanchez-Nunez et al., 2008), but females are taught to maintain social relationships. In addition, Biological explanation posits that the biochemistry of women is better prepared to understand one's own and others emotions. In "Extreme Male Brain Theory of Autism" suggested that the brain structure of male and female is functionally distinct. In its support, in the brain, certain areas which are concerned

with the processing of emotions are larger in females as compared to males (Baron-Cohen, 2002, 2003; Gur et al., 2002), and cerebral processing of emotions is different in both men and women (Craig et al., 2009; Jausovec and Jausovec, 2005). This can be interpreted that college-going female students are emotionally mature and able to handle and manage their emotions, this may be due to the age maturity, social and cultural influence as well. The female students tend to have positive optimistic expectations for the efforts they put in. On experiencing positive emotion, they know how to make it last, they seek out those activities which would make them happy. Female students motivate themselves by imagining a good and positive outcome to the task they take on; they use good moods in order to overcome the obstacles in their way. They never give up just because of failure, they manage their emotions well in order to face challenges.

4.11.4 Summary of 2×2 Analysis of Variance on Scores of Self Emotional Management of MCA 2nd Semester Students with respect to Gender and Successfulness

To study the self emotional management of MCA 2nd semester students with respect to gender and successfulness; mean and standard deviation were calculated and are reported in table 4.116. In order to analyse the variance of various dimensions and total score of self emotional management of MCA 2nd semester students with respect to gender and successfulness, Thus, two-way ANOVA was computed on the obtained scores and results came therein are reported in table 4.117.

MAIN EFFECTS

GENDER

It is clear from table 4.117 that in self-emotional management, F-value for MCA 2nd semester students came out 0.01, which is not found to be significant even at the 0.05 level of confidence. Thus, the Hypothesis (8), “There is no significant difference in Self Emotional Management of higher education students with respect to Gender” for MCA 2nd semester is not rejected. This shows that male and female students of MCA 2nd semester do not differ significantly on the scores of ‘Self-Emotional Management’. The above finding is in tune with the finding of Xu et al.

(2013, 2014) showed no significant gender difference in adult online learners with respect to their self-emotion management.

SUCCESSFULNESS

It is clear from table 4.117 that in self-emotional management, F-values for MCA 2nd semester came out 17.36, which is found to be significant at the 0.01 level of confidence. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to Successfulness” for MCA 2nd semester is rejected. This shows that successful and unsuccessful students differ significantly on the scores of ‘Self Emotional Management’. This shows that successful students (33.52) scored more than unsuccessful students (26.59). This shows that successful students skilfully regulate their positive or negative emotions.

As successful students are goal-oriented so they don't allow negative emotional reactions to hamper their achievement. They know how to remove the obstacles, hold an optimistic approach and never give up in with the thought of failure. They always motivate themselves to keep the focus on the task and are hopeful that they will get success on the task they take on. The probable reason behind this may be that successful students do more interaction with the teachers and their peer group and this social interaction gives them chance to express their problems or negative emotional reactions with others, which enables them to understand and manage their emotions (positive and negative). On the other hand, unsuccessful students feel guilt and shame of getting poor grades and have fear of getting a bad reputation among peer group in sharing their negative emotional feelings. This can be the reason that unsuccessful students are not able to understand and manage their emotions well in time. The present finding enjoys support from the findings of Sharma and Pinku (2017) and Jabeen & Khan (2012) who reported that high achieving students have the ability to recognise different feelings and are in a position to manage their emotions according to the situation.

INTERACTION EFFECT (GENDER * SUCCESSFULNESS)

It is clear from table 4.117 that the interaction between gender and successfulness on the scores of self-emotional management with F-value 3.43, is not

found to be significant even at the 0.05 level of confidence. Thus, the hypothesis (9), “There is no significant difference in Self Emotional Management of higher education students with respect to Successfulness” for MCA 2nd semester is not rejected. This shows that subgroups of MCA 2nd semester as a result of interaction between gender and successfulness do not differ significantly on the scores of self-emotional management.

4.12 SUMMARY OF 2×2 ANALYSIS OF VARIANCE ON SCORES OF SELF-REGULATED LEARNING STRATEGIES IN RELATION TO PROGRAM AND SEMESTER AT UG LEVEL

To study the significant differences in self-regulated learning strategies of higher education students at UG level with respect to the program of study and semester; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies. Results are reported in table 4.119. Further, in order to analyze the variance of various dimensions and total score of self-regulated learning strategies of different UG Programs viz. B.Com, B.Sc., BBA and BCA and different semesters viz. 2nd, 4th and 6th semesters, the obtained scores were subjected to two-way ANOVA and the results are reported in table 4.120.

MAIN EFFECTS

PROGRAM

The data reported in table 4.120 shows that F-value for ‘Test Anxiety’ came out 1.37 which has not been found significant even at the 0.05 level of confidence. However, F-values for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’ dimensions of Motivation and total score of ‘Motivation’ came out 4.34, 6.15, 4.94, 6.55, 4.44 and 5.15 respectively, which are found to be significant at 0.01 level of confidence. This indicates that different programs viz. B.Com, B.Sc., BBA and BCA differ significantly on their scores of ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’ dimensions and total score of ‘Motivation’.

Table 4.119: Means and SDs of Sub-groups of 2×2 ANOVA with respect to Various Dimensions and Total Scores of Self Regulated Learning Strategies in relation to Program and Semester of UG Level

Program	B.Com				B.Sc				BBA				BCA				Total			
Semester	2nd sem	4th sem	6th sem	Total	2nd sem	4th sem	6th sem	Total	2nd sem	4th sem	6th sem	Total	2nd sem	4th sem	6th sem	Total	2nd sem	4th sem	6th sem	Total
Dimension	IGO																			
N	66	80	83	229	90	65	99	254	63	51	53	167	66	76	72	214	285	272	307	864
M	5.47	5.08	5.22	5.24	5.14	5.37	5	5.15	5.05	5.14	4.62	4.94	5.48	5.21	5.39	5.36	5.28	5.19	5.08	5.18
σ	1.19	1.17	1.11	1.16	1.06	1.04	1.19	1.11	1.31	1.34	1.39	1.36	1.24	1.06	1.1	1.13	1.2	1.14	1.2	1.19
Dimensions	EGO																			
M	5.51	5.17	5.3	5.31	5.51	5.62	5.34	5.47	5	5.14	4.79	4.97	5.29	5.16	5.28	5.24	5.34	5.27	5.22	5.28
σ	1.08	1.23	1.39	1.25	1.17	0.82	1.18	1.1	1.22	1.11	1.52	1.29	1.39	1.19	1.14	1.23	1.23	1.12	1.3	1.22
Dimensions	TV																			
M	5.22	5.09	5.09	5.13	5.01	5.42	4.89	5.07	5.05	4.79	4.75	4.88	5.37	5.25	5.34	5.32	5.15	5.16	5.02	5.11
σ	1.1	1.1	1.12	1.1	1.06	0.86	1.03	1.02	1.13	1.47	1.45	1.35	1.28	1.18	1	1.15	1.14	1.17	1.14	1.15
Dimensions	CLB																			
M	5.08	4.99	5.11	5.06	5.23	5.56	5.34	5.36	4.92	5.02	4.76	4.9	5.35	4.98	5.18	5.16	5.15	5.13	5.14	5.14
σ	1.01	1.05	1.13	1.07	1.1	1.05	1.07	1.08	1.17	1.11	1.36	1.21	1.18	1.23	1.14	1.19	1.12	1.14	1.17	1.14

Contd. ...

Program	B.Com				B.Sc				BBA				BCA				Total			
Semester	2nd sem	4th sem	6th sem	Total	2nd sem	4th sem	6th sem	Total	2nd sem	4th sem	6th sem	Total	2nd sem	4th sem	6th sem	Total	2nd sem	4th sem	6th sem	Total
Dimensions	SELP																			
M	5.33	4.99	5.03	5.1	5.07	5.25	4.97	5.08	4.98	4.84	4.62	4.83	5.14	5.16	5.25	5.18	5.13	5.07	4.99	5.06
σ	0.97	1.01	1.01	1	0.98	0.87	0.92	0.93	1.04	1.14	1.38	1.19	1.2	0.97	0.94	1.03	1.05	1	1.05	1.03
Dimensions	TA																			
M	4.53	4.35	4.15	4.33	4.43	4.4	4.57	4.48	4.59	4.25	4.5	4.46	4.86	4.36	4.51	4.56	4.59	4.35	4.43	4.46
σ	1.1	1.13	1.26	1.18	1.11	1.24	1.13	1.15	1.12	1.25	1.48	1.28	1.32	1.17	1.26	1.26	1.17	1.19	1.26	1.21
Dimensions	Motivation																			
M	30.89	29.49	29.75	29.99	30.19	31.48	29.91	30.41	29.4	29	27.9	28.82	31.3	29.94	30.75	30.63	30.44	30	29.72	30.05
σ	5.15	4.79	4.81	4.92	4.51	3.78	4.93	4.54	4.95	5.48	6.71	5.72	6.4	5.11	4.59	5.39	5.25	4.86	5.23	5.13
Dimensions	REH																			
M	5.12	4.86	4.76	4.9	5.05	5.25	4.85	5.02	5.02	4.61	4.72	4.8	5.01	5.05	5.03	5.03	5.05	4.96	4.85	4.95
σ	1.12	1.07	1.11	1.1	1.03	1.01	1.16	1.09	1.16	1.36	1.34	1.29	1.24	1.16	1.05	1.15	1.13	1.16	1.16	1.15
Dimensions	ELAB																			
M	5.18	5.04	4.93	5.04	4.94	5.17	4.91	4.99	4.97	4.74	4.71	4.81	5.16	4.96	5.11	5.07	5.05	4.99	4.93	4.99
σ	1.16	1.01	1.17	1.11	0.99	0.87	0.91	0.93	1.29	1.33	1.41	1.34	1.14	1.14	1.1	1.13	1.13	1.09	1.12	1.12

Contd. ...

Program	B.Com				B.Sc				BBA				BCA				Total			
Semester	2nd sem	4th sem	6th sem	Total	2nd sem	4th sem	6th sem	Total	2nd sem	4th sem	6th sem	Total	2nd sem	4th sem	6th sem	Total	2nd sem	4th sem	6th sem	Total
Dimensions	ORG																			
M	5.16	5.03	5.01	5.06	5.03	5.18	4.88	5.01	5.08	4.96	4.92	4.99	5.17	5.13	5.19	5.16	5.1	5.08	4.99	5.06
σ	1.24	1.15	1.28	1.22	1.04	1.19	1.05	1.09	1.25	1.34	1.32	1.29	1.3	1.25	0.99	1.18	1.19	1.22	1.15	1.19
Dimensions	CT																			
M	5.19	4.8	4.75	4.89	4.87	5.07	4.75	4.87	4.9	4.58	4.52	4.68	4.95	4.91	4.97	4.94	4.97	4.85	4.76	4.86
σ	0.99	0.93	1.01	0.99	0.97	0.98	1.02	1	1.27	1.34	1.55	1.39	1.14	1.08	1.12	1.11	1.09	1.08	1.15	1.11
Dimensions	MSR																			
M	4.89	4.66	4.67	4.73	4.75	4.81	4.67	4.73	4.61	4.48	4.44	4.52	4.83	4.79	4.89	4.84	4.77	4.7	4.68	4.72
σ	0.85	0.75	0.84	0.82	0.72	0.85	0.76	0.77	0.83	0.89	0.91	0.87	0.79	0.86	0.76	0.8	0.8	0.84	0.82	0.82
Dimensions	TSE																			
M	4.46	4.36	4.37	4.39	4.46	4.41	4.39	4.42	4.38	4.14	4.23	4.26	4.39	4.49	4.57	4.49	4.42	4.37	4.4	4.4
σ	0.65	0.87	0.81	0.79	0.71	0.63	0.62	0.66	0.78	0.83	0.82	0.81	0.63	0.88	0.68	0.74	0.7	0.82	0.73	0.75
Dimensions	ER																			
M	4.47	4.4	4.08	4.3	4.07	4.19	4.19	4.15	4.16	4.2	4.1	4.16	4.29	4.39	4.44	4.38	4.23	4.31	4.2	4.25
σ	0.97	0.83	1.03	0.96	0.87	1.05	1	0.97	0.84	0.81	0.9	0.85	0.82	1.17	0.91	0.98	0.88	0.99	0.98	0.95

Contd. ...

Program	B.Com				B.Sc				BBA				BCA				Total			
Semester	2nd sem	4th sem	6th sem	Total	2nd sem	4th sem	6th sem	Total	2nd sem	4th sem	6th sem	Total	2nd sem	4th sem	6th sem	Total	2nd sem	4th sem	6th sem	Total
Dimensions	PL																			
M	5.02	5.12	4.71	4.94	4.93	4.93	4.66	4.82	4.88	4.33	4.44	4.57	5.08	4.6	5.19	4.94	4.97	4.78	4.76	4.84
σ	1.19	1.22	1.25	1.23	1.23	1.2	1.18	1.21	1.37	1.45	1.56	1.47	1.32	1.31	1.22	1.3	1.27	1.31	1.3	1.3
Dimensions	HS																			
M	4.82	4.66	4.66	4.71	4.94	5	4.49	4.78	4.65	4.67	4.34	4.56	4.82	4.57	4.69	4.69	4.82	4.72	4.56	4.7
σ	0.86	1.02	1.15	1.03	1.07	0.83	0.96	1	0.92	1.05	1.14	1.04	0.89	1.1	0.76	0.94	0.95	1.02	1.01	1
Dimensions	Learning Strategies																			
M	44.13	42.73	41.66	42.74	42.79	43.65	41.6	42.55	42.4	40.5	40.2	41.13	43.4	42.64	43.9	43.3	43.15	42.51	41.91	42.51
σ	7.4	6.38	7.11	6.99	5.95	5.74	5.92	5.92	7.2	7.94	8.49	7.87	7.26	7.72	6.46	7.16	6.89	6.99	6.94	6.95
Dimensions	Self Regulated Learning Strategies																			
M	75.03	72.21	71.45	72.75	72.98	75.09	71.55	72.96	71.8	69.5	68.2	69.96	74.67	72.54	74.56	73.87	73.59	72.49	71.64	72.55
σ	11.92	10.32	10.63	10.96	9.66	8.58	10	9.6	11.2	12.8	14.6	12.86	13.15	11.85	10.44	11.81	11.42	10.99	11.31	11.26

Table 4.120: Summary of 2×2 ANOVA with respect to Various Dimensions and Total Scores of Self Regulated Learning Strategies in relation to Program and Semester of UG Level

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Program																	
SS	17.95	27.13	19.3	25.07	14.06	5.9	399.21	8.83	8.2	3.38	8.43	10.18	5.28	7.9	19.5	6.8	520.79	1746.99
Df	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
MSS	5.99	9.04	6.44	8.36	4.69	1.9	133.07	2.94	2.73	1.13	2.81	3.39	1.76	2.65	6.5	2.3	173.6	582.3
F	4.34**	6.15**	4.94**	6.55**	4.44**	1.37	5.1**	2.25	2.2	0.79*	2.31	5.15**	3.17*	2.96*	3.9**	2.3	3.65**	4.6**
Sig.	0.01	0.00	0.00	0.00	0.00	0.25	0.00	0.08	0.09	0.5	0.08	0.00	0.02	0.03	0.01	0.1	0.01	0.00
Source	Semester																	
SS	7.66	3.09	3.55	0.35	3.79	9.6	107.53	6.12	3.24	1.8	7.58	1.75	0.65	1.17	9.7	10	259.23	698
Df	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
MSS	3.83	1.54	1.77	0.18	1.89	4.84	53.76	3.06	1.62	0.9	3.79	0.87	0.32	0.59	4.8	5	129.62	349
F	2.78	1.05	1.36	0.14	1.79	3.33	2.08	2.34	1.3	0.64	3.11*	1.33	0.58	0.65	2.9*	5.1**	2.72	2.8
Sig.	0.06	0.35	0.26	0.87	0.17	0.04	0.13	0.1	0.27	0.53	0.05	0.27	0.56	0.52	0.05	0.01	0.07	0.06

Contd. ...

Dependent Variable	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Program * Semester																	
SS	15.55	8.36	12.73	11.38	8.71	11.07	223.98	9.86	6.49	3.57	10.46	2.89	2.81	7.37	26.22	9.8	363.97	963.38
Df	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
MSS	2.59	1.39	2.12	1.9	1.45	1.85	37.33	1.64	1.08	0.6	1.74	0.48	0.47	1.23	4.37	1.6	60.66	160.56
F	1.88	0.95	1.63	1.49	1.38	1.27	1.45	1.26	0.87	0.42	1.43	0.73	0.84	1.37	2.67**	1.7	1.27	1.29
Sig.	0.08	0.46	0.14	0.18	0.22	0.27	0.2	0.28	0.52	0.87	0.2	0.62	0.54	0.22	0.01	0.1	0.27	0.26
Source	Error																	
SS	1173.9	1253	1110	1087	899.4	1240	22012	1114	1059	1209	1038	561.53	473.6	764.2	1397	835	40582.71	106245
Df	852	852	852	852	852	852	852	852	852	852	852	852	852	852	852	852	852	852
MSS	1.38	1.47	1.3	1.28	1.06	1.46	25.84	1.31	1.24	1.42	1.22	0.66	0.56	0.9	1.64	1	47.63	124.7

*significant at 0.05 level of confidence **significant at 0.01 level of confidence

The F-values for the 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking' and 'Help-Seeking' came out 2.25, 2.20, 0.79, 2.31 and 2.31 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that different programs viz. B.Com, B.Sc, BBA and BCA do not differ significantly on their scores of 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Help-Seeking'. However, F-value for the 'Metacognitive Self-Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out 5.15, 3.17, 2.96, 3.96, 3.65, 4.67 respectively, which are found to be significant at either 0.05 or 0.01 level of confidence. Thus, the Hypothesis (10), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Program of study" is rejected for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Motivation Total', 'Metacognitive Self-Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' dimensions. This indicates that different programs viz. B.Com, B.Sc, BBA and BCA differ significantly on their scores of 'Metacognitive Self-Regulation', 'Time and Study Environment', 'Effort Regulation', 'Peer Learning' dimensions, scores of 'Learning Strategies' and 'Self-Regulated Learning Strategies Total'.

To further analyse the significant difference between various subgroups due to different programs, Post Hoc Scheffe test was applied on various dimensions of 'Self-Regulated Learning Strategies' and the results are reported in the table 4.121.

Table 4.121 shows that on 'Intrinsic Goal Orientation', the mean difference of the pair of BBA-BCA came out significant at 0.01 level of confidence. On overseeing the corresponding mean score table 4.119, it is clear that the mean score of BCA (5.36) is higher than BBA (4.94).

Table 4.121: Summary of Scheffe Post Hoc Test with respect to Various Dimensions of Self-Regulated Learning Strategies of Different UG Programs

DV	IGO						EGO					
(I) Program	B.Com			B.Sc.		BBA	B.Com			B.Sc.		BBA
(J) Program	B.Sc.	BBA	BCA	BBA	BCA	BCA	B.Sc.	BBA	BCA	BBA	BCA	BCA
MD (I-J)	0.09	0.3	0.11	0.21	0.21	0.42**	0.16	0.34	0.07	0.49**	0.24	0.26
SE	0.11	0.12	0.11	0.12	0.11	0.12	0.11	0.12	0.12	0.12	0.11	0.13
Sig.	0.85	0.1	0.79	0.38	0.3	0.01	0.54	0.06	0.94	0.00	0.23	0.22
DV	TV						CLB					
(I) Program	B.Com			B.Sc.		BBA	B.Com			B.Sc.		BBA
(J) Program	B.Sc.	BBA	BCA	BBA	BCA	BCA	B.Sc.	BBA	BCA	BBA	BCA	BCA
MD (I-J)	0.06	0.25	0.19	0.19	0.25	0.44**	0.3*	0.16	0.1	0.46**	0.2	0.26
SE	0.1	0.12	0.11	0.11	0.11	0.12	0.1	0.11	0.11	0.11	0.1	0.12
Sig.	0.94	0.19	0.4	0.43	0.14	0.00	0.04	0.59	0.83	0.00	0.31	0.18

Contd. ...

DV	SELP						Motivation					
(I) Program	B.Com			B.Sc.		BBA	B.Com			B.Sc.		BBA
(J) Program	B.Sc.	BBA	BCA	BBA	BCA	BCA	B.Sc.	BBA	BCA	BBA	BCA	BCA
MD (I-J)	0.03	0.28	0.08	0.25	0.1	0.36**	0.43	1.17	0.64	1.59*	0.22	1.81**
SE	0.09	0.1	0.1	0.1	0.1	0.11	0.46	0.52	0.48	0.51	0.47	0.52
Sig.	1	0.07	0.89	0.11	0.76	0.01	0.84	0.17	0.62	0.02	0.98	0.01
DV	MSR						TSE					
(I) Program	B.Com			B.Sc.		BBA	B.Com			B.Sc.		BBA
(J) Program	B.Sc.	BBA	BCA	BBA	BCA	BCA	B.Sc.	BBA	BCA	BBA	BCA	BCA
MD (I-J)	0	0.21	0.1	0.21	0.1	0.31**	0.03	0.13	0.09	0.16	0.07	0.22*
SE	0.07	0.08	0.08	0.08	0.08	0.08	0.07	0.08	0.07	0.07	0.07	0.08
Sig.	1	0.09	0.62	0.07	0.6	0.00	0.98	0.38	0.62	0.2	0.82	0.03

DV	ER						PL					
(I) Program	B.Com			B.Sc.		BBA	B.Com			B.Sc.		BBA
(J) Program	B.Sc.	BBA	BCA	BBA	BCA	BCA	B.Sc.	BBA	BCA	BBA	BCA	BCA
MD (I-J)	0.15	0.15	0.07	0.01	0.23	0.22	0.12	0.37*	0	0.25	0.12	0.37*
SE	0.09	0.1	0.09	0.09	0.09	0.1	0.12	0.13	0.12	0.13	0.12	0.13
Sig.	0.38	0.51	0.88	1	0.09	0.17	0.8	0.05	1	0.27	0.8	0.05
DV	Learning Strategies						Self Regulated Learning Strategies					
(I) Program	B.Com			B.Sc.		BBA	B.Com			B.Sc.		BBA
(J) Program	B.Sc.	BBA	BCA	BBA	BCA	BCA	B.Sc.	BBA	BCA	BBA	BCA	BCA
MD (I-J)	0.19	1.61	0.56	1.41	0.75	2.16*	0.21	2.79	1.13	3	0.91	3.92**
SE	0.63	0.7	0.66	0.69	0.64	0.71	1.02	1.14	1.06	1.11	1.04	1.15
Sig.	0.99	0.16	0.87	0.24	0.71	0.03	1	0.11	0.77	0.06	0.86	0.01

Contd. ...

The result indicates that BCA students are more focused on learning and improvement than BBA students. They strive to master the task and possess a deep level of understanding of the content. They are curious to seek out challenging study tasks and more importantly they view their success or failure as a source of feedback for improving future performance. The BCA students have a higher level of learning goal orientation as compared to their BBA student counterparts. Due to the practical nature of BCA students, they need to make new programs, websites with unique features and algorithms which prompt the curiosity and creativity of the students to take challenging tasks. On the other hand, the BBA program is theoretical in nature, where students just need to learn and understand the theoretical concepts in business administration. So, a high level of 'Intrinsic Goal Orientation' of BCA students is mainly due to the basic nature of the program of study.

Table 4.121 shows that on 'Extrinsic Goal Orientation', the mean difference of the pair of B.Sc.-BBA came out significant at 0.01 level of confidence. On comparing the mean table 4.119, it is clear that B.Sc. students are leaned on the higher side of the mean (5.47) as compared to the BBA students whose mean score was 4.97. Meaning thereby that B.Sc. students are more concerned about their performance in relation to the other students in the class than BBA students. Their main focus is on getting good grades in order to prove their position in the class. They want to seek out rewards or approval from the peers, teachers or parents and possess a higher level of performance-approach orientation as compared to the BBA students.

Table 4.121 shows that on 'Task Value' the mean difference of the pair of BBA-BCA came out significant at 0.01 level of confidence. On comparing the corresponding mean table 4.119, it is clear that the mean score of BCA (5.32) is higher than the mean score of BBA (4.88). Hence, it is confirmed that 'Task Value' of BCA students is higher than BBA students. This shows that BCA students attach a high value to the importance and usefulness of learning the subject. This value makes the female students dedicated and committed to accomplishing the targets. As BCA is a practically oriented field where the students need to make programs and algorithms to be used in daily life, which prompts the curiosity and creativity of the

students to take challenging tasks and enables the students to understand the importance of studying that course.

Table 4.121 shows that on 'Control of Learning Beliefs' the mean difference of the pairs of B.Sc.-B. Com B.Sc.-BBA came out significant at 0.05 and 0.01 level of confidence respectively. On comparing the mean scores from the table 4.119, it is clear that mean score of B. Sc (5.36) came out higher than B. Com (5.06) and BBA (4.90), this indicates that B.Sc. students have a higher level of 'Control of Learning Beliefs' than B.Com and BBA students. This shows that B.Sc. students have firm belief on their efforts and they appraise their capabilities and confidence to perform a task, they hold optimistic approach that their hard work will definitely lead towards positive as compared to B.Com and BBA students. The probable reason behind this may be that science students are more hardworking right from the school time therefore, they devote more time in study and are more hold optimistic approach about their success.

Further on 'Self-Efficacy for Learning and Performance' the mean difference of the pair of BBA-BCA came out significant at 0.05 level of confidence. On comparing mean table 4.129, it has been found that BCA students have a higher mean score (5.18) as compared to BBA students (4.83). This shows that BCA students have high 'Self-Efficacy for Learning and Performance' as compared to BBA students. This shows that BCA students possess a higher sense of self-efficacy for learning and performance than BBA students. The BCA students appraise their capability and confidence to perform a task, they have a firm belief that they are capable to master the situation and can produce desired outcomes. Due to the high level of self-efficacy for learning, they choose challenging learning tasks and therefore expend more persistence and efforts in order to get higher achievement outcomes. Their self-efficacy beliefs become instrumental to the goals and to the control over their environment. They show more resilience in the phase of adverse situations as compared to their BBA student counterparts. To add to this, on the total score of 'Motivation' the mean difference of the pairs of B.Sc.-BBA and BCA-BBA came out significant either at the 0.05 or 0.01 levels of confidence respectively. On comparing corresponding mean table 4.119, it is clear that the mean score of B.Sc. (30.41) is higher than the mean score of BBA (28.82), it is indicating that the

motivation level of B.Sc. students is higher than BBA students. Moreover, the mean score of BCA students (30.63) is higher than the mean score of BBA students (28.82). Indicating that BCA students are more motivated to regulate their learning process. They have a high sense of control over learning, self-efficacy and value of the learning task. They are more dynamic and ambitious by virtue motivation. They take the initiative to perform challenging tasks and have a higher level of aspiration compared to BBA students.

Table 4.121 shows that on 'Metacognitive Self- Regulation' the mean difference of the pair of BBA- BCA came out significant at 0.01 level of confidence. On overseeing corresponding mean table 4.119, it is clear that the mean score of BCA (4.84) is higher than the mean score of BBA (4.52). Hence, it is clear that BCA students possess a higher level of 'Metacognitive Self- Regulation' as compared to BBA students. In 'Time and study Environment' the mean difference of the pair of BBA-BCA came out significant at 0.01 level of confidence. On comparing their mean table 4.119, it is visible that mean score of BCA (4.49) came out higher than BBA (4.26), meaning thereby that BCA students are good at managing their time and structuring study environment for optimal learning as compared to BBA students. In 'Peer Learning', the mean difference of the pairs of B.Com-BBA and BBA-BCA came out significant at 0.05 level of confidence. On comparing mean table 4.129, it is clear that mean score of B.Com (4.94) came out to be higher than the mean score of BBA (4.57) and mean score of BCA (4.94) came out higher than mean score of BBA (4.57). It means that B.Com and BCA students use better Peer learning techniques than BBA students.

Table 4.121 shows that on the total score of 'Learning Strategies', the mean difference of the pair of BBA- BCA came out significant at 0.05 level of confidence. On comparing mean table 4.119, the mean score of BCA (43.30) came out higher than BBA (41.13). It can be concluded that BCA students tend to use a wide variety of learning strategies than male students. The female students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and

structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate with their peers for effective learning.

Table 4.121 shows that on the total score of 'Self-Regulated Learning Strategies', the mean difference of the pair of BBA-BCA came out significant at 0.01 level of confidence. On comparing mean table 4.119, mean score of BCA (73.87) came out higher than BBA (69.96). Hence, it can be concluded that self-regulated learning of BCA students was markedly higher than BBA students. This shows that BCA students have the ability to control their actions and responses, which is very much essential for the progress in varied contexts. The BCA students are able to control their behaviour, emotions and cognition for the purpose of pursuing the goals. They set proximal achievable goals which are learning-oriented not performance-oriented. They know that different learning tasks require different learning strategies. They own a "Tool Kit" of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations. They possess a high level of academic self-efficacy and have the ability to control their performance. They observe the intermediate outcomes of their learning process. They precisely attribute the learning outcome to the causes of performance.

SEMESTER

The data presented in table 4.120 shows that F-values for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self-Efficacy for Learning and Performance', 'Motivation Total' came out 2.78, 1.05, 1.36, 0.14, 1.79 and 2.08 respectively have been found to be insignificant even at the 0.05 level of confidence. Furthermore, F-value of 'Test Anxiety' has been found 3.33, which is found to be significant at 0.05 level of confidence. This shows that that different semesters viz. 2nd semester, 4th semester and 6th semester differ significantly on their scores of 'Test Anxiety'

The F-values in 'Rehearsal', 'Elaboration', 'Organisation', 'Metacognitive Self- Regulation', 'Time and Study Environment', 'Effort Regulation' total score of

‘Learning Strategies’ and ‘Self Regulated Learning Strategies’ came out 2.34, 1.30, 0.64, 1.33, 0.58, 0.65, 2.72 and 2.80 respectively, which are not found to be significant even at the 0.05 level of confidence. Meaning thereby that different semester viz. 2nd semester, 4th semester and 6th semester do not differ significantly on their scores of ‘Rehearsal’, ‘Elaboration’, ‘Organisation’, ‘Metacognitive Self-Regulation’ dimensions of ‘Cognitive and Metacognitive Strategies’, ‘Time and Study Environment’, ‘Effort Regulation’ dimension of ‘Resource Management Strategies’ dimensions, total score of ‘Learning Strategies’ and ‘Self Regulated Learning Strategies’. However, F-value for ‘Critical Thinking’, ‘Peer Learning’ and ‘Help-Seeking’ dimensions came out significant either at 0.05 or 0.01 level of confidence. which shows that different semesters viz. 2nd semester, 4th semester and 6th semester differ significantly on their scores of ‘Critical Thinking’, ‘Peer Learning’ and ‘Help-Seeking’. Thus, the Hypothesis (11), “There is no significant difference in self-regulated learning strategies of higher education students with respect to Semester of study” is rejected for ‘Test Anxiety’, ‘Critical Thinking’, ‘Peer Learning’ and ‘Help-Seeking’ dimensions. Meaning thereby that students of different semesters differ significantly on the scores of ‘Test Anxiety’, ‘Critical Thinking’, ‘Peer Learning’ and ‘Help-Seeking’ dimensions.

To further analyse the significant difference between various subgroups, Post hoc Scheffe test has been applied using on various dimensions viz. ‘Test Anxiety’, ‘Critical Thinking’, ‘Peer Learning’ and ‘Help-Seeking’ and the results of subgroups with significant mean differences are reported in the following table 4.122.

Table 4.122: Summary of Scheffe Post Hoc Test for Help-Seeking with respect to Semester of Different Semesters of UG Level

Dimensions	(I) Semester of the program	(J) Semester of the program	MD (I-J)	SE	Sig.
Help Seeking	2nd semester	6th semester	0.26**	0.08	0.01

**significant at 0.01 level of confidence

Table 4.122 shows that the mean difference between the subgroup of 2nd semester and 6th semester at UG level in ‘Help-Seeking’ dimension is found to be

significant at 0.01 level of confidence. On overseeing the mean table 4.119, it is clear that the mean score of 2nd semester students (4.82) is higher than the mean score of 6th semester students (4.56) on 'Help-Seeking' dimension. This indicates that 2nd semester students are making good use of peer and teacher assistance in order to facilitate their learning as compared to 6th semester students. The difference between 2nd semester and 6th semester students is quite obvious as first-year students come to college or university directly from the schools and apparently, freshmen need to adjust in the entirely new and different learning environment from the school level. Hence, they do not hesitate in seeking assistance from their friends and teachers in order to clarify their doubts. Zembylas (2008) investigated that freshmen adult learners got encouragement and support from the instructors and peers in order to cope with their feelings of loneliness, stress, and anxiety.

INTERACTION EFFECT (PROGRAM * SEMESTER)

The data presented in table 4.120 reveals that F- values for the interaction between Program and semester of UG students in 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self Efficacy for Learning and Performance', 'Test anxiety' dimensions and total score of 'Motivation' came out 1.88, 0.95, 1.63, 1.49, 1.38, 1.27 and 1.45 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that there is no interaction effect of program and semester on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Control of Learning Beliefs', 'Self Efficacy for Learning and Performance', 'Test anxiety' dimensions and total score of 'Motivation'.

The data in table 4.120 shows that, F-values for 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking' 'Metacognitive Self-Regulation', 'Time and Study Environment', 'Effort Regulation', 'Help-Seeking' dimensions, total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' came out to be 1.26, 0.87, 0.42, 1.43, 0.73, 0.84, 1.37, 1.66, 1.27 and 1.29 respectively, which are not found to be significant even at the 0.05 level of confidence. This indicates that there is no interaction effect of program and semester on the scores of 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking' 'Metacognitive Self- Regulation', 'Time and Study Environment', 'Effort Regulation', 'Help-Seeking' dimensions,

total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' except 'Peer Learning' dimension. As F-value for 'Peer Learning' came out to be 2.67, which is found to be significant at the 0.01 level of confidence. Thus, the Hypothesis (12), "There is no significant interaction effect of program and semester of study on the self-regulated learning strategies of higher education students" is rejected for 'Peer Learning' dimension.

To further analyse the significant difference between various groups, t-test was applied to 'Peer Learning' dimension and the subgroups with significant t values have been reported in table 4.123.

Table 4.123: Summary of 't- values' of Different Subgroups of Different UG Programs and Semesters in 'Peer Learning' Dimension

Subgroups		t-value
B.Com 2 nd	BBA 4 th	2.76**
	BBA 6 th	2.23*
	BCA 4 th	2.00*
B.Com 4 th	B.Com 6 th	2.12*
	B.Sc 6 th	2.54**
	BBA 4 th	3.23**
	BBA 6 th	2.68**
	BCA 4 th	2.56**
B.Com 6 th	BCA 6 th	2.42**
B.Sc 2 nd	BBA 4 th	2.49*
	BBA 6 th	1.96*
B.Sc 4 th	BBA 4 th	2.38**
B.Sc 6 th	BCA 2 nd	2.09*
	BCA 6 th	2.84**
BBA 4 th	BCA 2 nd	2.88**
BBA 6 th	BCA 2 nd	2.38**
	BCA 6 th	2.91**
BCA 2 nd	BCA 4 th	2.17*
BCA 4 th	BCA 6 th	2.84**

*significant at 0.05 level of confidence, **significant at 0.01 level of confidence

It is clear from the table 4.123 that the t value of the pairs, B.Com 2nd-BBA 4th, B.Com 2nd- BBA 6th and B.Com 2nd- BCA 4th semesters came out significant either at 0.05 or 0.01 level of confidence. This shows that these subgroups differ significantly on 'Peer Learning' dimension. On analysing mean score table 4.119, it is clear that mean score of B.Com 2nd (5.02) semester is greater than mean score of BBA 4th (4.33), BBA 6th (4.44) and BCA 4th (4.6). This indicates that B.Com 2nd semester students give more priority to peer group learning, they like to discuss and debate in the group as compared to other the students of BBA 4th, BBA 6th and BCA 4th.

Further, t-value of the subgroups, B.Com 4th-B. Com 6th, B.Com 4th-B.Sc 6th, B.Com 4th-BBA 4th, B.Com 4th-BBA 6th, B.Com 4th-BCA 4th came out significant either at 0.05 or 0.01 level of confidence. This shows that these subgroups differ significantly on 'Peer Learning' dimension. On analysing mean score table 4.119, it is clear that B.Com 4th semester (5.12) scored more than B. Com 6th (4.71), B.Sc. 6th (4.66), BBA 4th (4.33), BBA 6th (4.44), BCA 4th (4.6). This shows that B.Com 4th semester students are socially active and show more involvement in peer-group learning as compared to the students of other subgroups.

From table 4.123, it is clear that the t value of the subgroups, B.Com 6th-BCA 6th is found to be significant at 0.01 level of confidence. This shows that the students of B.Com 6th and BCA 6th differ significantly on the scores of 'Peer Learning'. On comparing the mean scores from table 4.119, it has been observed that the mean score of BCA 6th semester (5.19) is found to be higher than B.Com 6th semester (4.71). This indicates that BCA 6th semester students always collaborate with their peer group, discuss and debate with them order to clarify their doubts and reach insights they cannot be attained on their own, they often work with their friends in order to complete the tasks or assignment given by the teacher and spare time for doing discussion in peer group.

Analysis indicates that B.Com 2nd and B.Com 4th semester scored higher in 'Peer Learning', the probable reason behind this may be that the teachers teaching to commerce groups adopt group/peer learning pedagogical techniques in the

classroom and give more chance to students for group discussion. While BCA 6th semester scored higher than B.Com 6th semester students, The probable reason behind this may be that BCA 6th semester students had read 'Java programming' in their 5th semester, which is a practical and difficult subject too, therefore, teachers teach this subject in group and make the students learn in peer group.

It is clear from the table 4.123, that the t-value of B.Sc. 2nd- BBA 4th, B.Sc. 2nd-BBA 6th, B.Sc. 4th-BBA 4th, B.Sc. 6th-BCA 2nd, B.Sc. 6th-BCA 6th semester came out significant at 0.01 level of confidence. This indicates that both groups differ significantly on the scores of 'Peer Learning' dimension. Further, mean analysis shows that the B.Sc. 2nd semester students (4.93) scored higher than BBA 4th (4.33) and BBA 6th (4.44) semester students. This shows that B.Sc. 2nd semester students always collaborate with their peer group, discuss and debate with them order to clarify their doubts and reach insights that they cannot be attained on their own, they often work with their friends in order to complete the tasks or assignment given by the teacher and spare time for doing discussion in peer group. The difference between 2nd semester and 6th semester students is quite obvious as first-year students come to college or university directly from the schools and apparently, freshmen need to adjust in the entirely new and different environment from the school level, secondly, Science is always considered as a tough field among all and science students often work in groups for clarifying their doubts.

Further, B.Sc. 4th semester (4.94) scored higher than BBA 4th semester (4.44). This shows that science students give more priority to group-based learning as compared to business administration students. To add to this, BCA 2nd semester (5.08) and BCA 6th semester (5.19) scored more than B.Sc. 6th semester students. This shows that BCA 2nd and BCA 6th semester students involve in peer learning more as compared to B.Sc 6th semester students.

It is clear from the table 4.123 that the t-value of the groups BBA 4th – BCA 2nd, BBA 6th -BCA 2nd and BBA 6th – BCA 6th semester came out significant at 0.01 level of confidence. This shows that these subgroups differ significantly on the scores of 'Peer Learning' dimension. Mean analysis shows that the mean score of

BCA 2nd semester (5.08) is higher than the BBA 4th semester (4.33) and BBA 6th semester (4.44). Further, BCA 6th semester students (5.08) scored more than BBA 6th semester students (4.44). This shows that the computer application (BCA) group involve in group learning more as compared to business administration (BBA) group. The possible reason behind this may be that computer application field is the practically oriented field in which students need to make new programs and algorithm, all such kind of concepts are generally being taught in groups. Moreover, on facing any error in running a program, students discuss the problems in groups and find out the solution.

Further, t value of the pairs, BCA 2nd-BCA 4th and BCA 4th-BCA 6th came out significant either at 0.05 or 0.01 level of confidence. This shows that these subgroups differ significantly on the scores of 'Peer learning'. On comparing the mean scores from table 4.119, it has been observed that the BCA 2nd semester (5.08) scored more than BCA 4th semester (4.6). The probable reason behind this may be that first-year students come to college or university directly from the schools, moreover, BCA is a field where the students from any stream viz. Arts or Science can take admission, so they need to learn new courses which are entirely different from their educational background, hence they take help from each other and learn in groups in order to have better clarity of the subject matter. A second reason may be that the freshmen students directly come from schools and they need to make the adjustment with the new courses and new learning environment, due to which they show more involvement in the group learning. Further, BCA 6th semester (5.19) have scored more than BCA 4th semester (4.6). This indicates that third-year students give more priority to learn in groups as compared to 2nd year students. This may be due to the reason that third year of the degree is also called placement year, where students are being hired by the companies, and group discussion could be one component of the selection process. Due to which the students show more involvement in group learning technique, where they discuss and debate their problems. Secondly, third-year students are more mature and understand the importance of group learning and at this stage, teachers also give more opportunities to the students to learn and discuss in group, which enables the learner to reach insights that one cannot able to attain on one's own.

4.13 SUMMARY OF ANALYSIS OF VARIANCE ON SCORES OF SELF-REGULATED LEARNING STRATEGIES IN RELATION TO PROGRAM AND SEMESTER AT PG LEVEL

To study the significant differences in self-regulated learning strategies of higher education students at PG level with respect to the program of study; mean and standard deviation were calculated for different dimensions of Self-regulated learning strategies and the results are reported in table 4.124. Further, in order to analyze the variance of various dimensions and total score of self-regulated learning strategies of different PG programs viz. M.Com, M.Sc. (Chemistry), MBA and MCA of 2nd semester, the obtained scores were subjected to one way ANOVA and the results are reported in the table 4.125.

It has been found from the table 4.125 that the F-values for 'Task Value', 'Control of Learning Beliefs', 'Test Anxiety' came out to be 2.49, 2.14 and 1.08 respectively, which have been found to be insignificant even at the 0.05 level of confidence. However, F- values for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Self-Efficacy for Learning and Performance' 'Motivation Total' came out 3.16, 7.58, 6.25 and 4.63 respectively, which are found to be significant either at 0.05 or 0.01 level of confidence. This shows that subgroups differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Self-Efficacy for Learning and Performance' and total score of 'Motivation'.

Table 4.125 clearly reveals that the F-values for 'Time and Study Environment', 'Peer Learning' and 'Help-Seeking' are 1.37, 1.88 and 1.44 respectively, which are not found to be significant even at the 0.05 level of confidence. However, the F- values for 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self- Regulation', 'Effort Regulation', scores of 'Learning Strategies', scores of 'Self Regulated Learning Strategies' came out to be 2.89, 5.69, 6.39, 4.43, 4.51, 2.89, 4.07 and 5.00 respectively, which are found to be significant either at 0.05 or 0.01 level of confidence.

Table 4.124: Means and SDs of Sub-groups of One Way ANOVA with respect to Various Dimensions and Total Scores of Self-Regulated Learning Strategies in relation to Different PG Programs

Dimensions	IGO					EGO					TV					CLB				
Program	M.Com	M.Sc.	MBA	MCA	Total	M.Com	M.Sc.	MBA	MCA	Total	M.Com	M.Sc.	MBA	MCA	Total	M.Com	M.Sc.	MBA	MCA	Total
M	5.2	5.4	5.1	5.0	5.2	5.4	5.4	5.1	4.8	5.1	5.2	5.2	5.1	4.9	5.1	5.1	5.2	5.1	4.9	5.1
σ	1.4	1.2	1.2	1.2	1.2	1.3	1.1	1.2	1.2	1.2	1.4	1.0	1.1	1.1	1.1	1.4	1.1	1.2	1.1	1.2
N	79	152	179	150	560	79	152	179	150	560	79	152	179	150	560	79	152	179	150	560
Dimensions	SELP					TA					Motivation					REH				
Program	M.Com	M.Sc.	MBA	MCA	Total	M.Com	M.Sc.	MBA	MCA	Total	M.Com	M.Sc.	MBA	MCA	Total	M.Com	M.Sc.	MBA	MCA	Total
M	5.0	5.3	5.0	4.8	5.0	4.3	4.4	4.2	4.4	4.3	30.0	30.7	29.4	28.5	29.6	5.0	5.1	4.8	4.7	4.9
σ	1.1	1.0	1.0	1.1	1.1	1.4	1.2	1.2	1.1	1.2	6.3	4.5	4.9	5.6	5.3	1.3	1.0	1.2	1.1	1.1
N	79	152	179	150	560	79	152	179	150	560	79	152	179	150	560	79	152	179	150	560
Dimensions	ELAB					ORG					CT					MSR				
Program	M.Com	M.Sc.	MBA	MCA	Total	M.Com	M.Sc.	MBA	MCA	Total	M.Com	M.Sc.	MBA	MCA	Total	M.Com	M.Sc.	MBA	MCA	Total
M	5.0	5.2	4.9	4.7	4.9	5.3	5.3	5.1	4.8	5.1	4.9	5.0	4.7	4.6	4.8	4.7	4.8	4.6	4.5	4.6
σ	1.2	1.0	1.1	1.0	1.1	1.3	1.0	1.2	1.1	1.2	1.2	1.0	1.0	1.0	1.1	1.0	0.7	0.7	0.8	0.8
N	79	152	179	150	560	79	152	179	150	560	79	152	179	150	560	79	152	179	150	560

Contd. ...

Dimensions	TSE					ER					PL					HS				
Program	M.Com	M.Sc.	MBA	MCA	Total	M.Com	M.Sc.	MBA	MCA	Total	M.Com	M.Sc.	MBA	MCA	Total	M.Com	M.Sc.	MBA	MCA	Total
M	4.3	4.4	4.4	4.2	4.3	4.2	4.1	4.4	4.1	4.2	4.8	5.0	4.8	4.7	4.8	4.6	4.7	4.7	4.5	4.6
σ	0.9	0.7	0.7	0.7	0.7	1.0	0.9	0.9	0.7	0.9	1.5	1.1	1.2	1.2	1.2	1.2	1.0	0.9	0.8	1.0
N	79	152	179	150	560	79	152	179	150	560	79	152	179	150	560	79	152	179	150	560
Dimensions	Learning Strategies					Mot. & Learning Strategies														
Program	M.Com	M.Sc.	MBA	MCA	Total	M.Com	M.Sc.	MBA	MCA	Total										
M	42.5	43.3	42.1	40.7	42.1	72.5	74.0	71.5	69.1	71.7										
σ	8.3	5.9	6.6	6.8	6.8	13.7	9.2	10.8	11.9	11.3										
N	79	152	179	150	560	79	152	179	150	560										

Table 4.125: Summary of One Way ANOVA with respect to Various Dimensions and Total Scores of Self-Regulated Learning Strategies in relation to Different PG Programs

DV	IGO	EGO	TV	CLB	SELP	TA	Motivation	REH	ELAB	ORG	CT	MSR	TSE	ER	PL	HS	Learning Strategies	Self Regulated Learning Strategies
Source	Program																	
SS	14.1	31.88	9.5	8.7	20.24	4.62	378.08	11.23	18.44	24.84	14.72	8.4	2.14	6.91	8.34	3.94	558.34	1866.8
Df	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
MSS	4.7	10.63	3.17	2.9	6.75	1.54	126.03	3.74	6.15	8.28	4.91	2.8	0.72	2.3	2.78	1.31	186.11	622.2
F	3.16*	7.58**	2.49	2.14	6.25**	1.08	4.63**	2.89	5.69**	6.39**	4.43**	4.51**	1.37	2.89*	1.88	1.44	4.07**	5**
Sig.	0.02	0.00	0.06	0.09	0.00	0.36	0.00	0.04	0.00	0.00	0.00	0.00	0.25	0.04	0.13	0.23	0.01	0.00
Source	Error																	
SS	826	779.4	708.7	752.7	599.9	794.6	15139.4	719.5	600.9	720.9	615.6	345.3	290.4	443.1	823.2	508	25437	69202
Df	556	556	556	556	556	556	556	556	556	556	556	556	556	556	556	556	556	556
MSS	1.49	1.4	1.28	1.35	1.08	1.43	27.23	1.29	1.08	1.3	1.11	0.62	0.52	0.8	1.48	0.91	45.75	124.46

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

Meaning thereby that different programs viz. M.Com, M.Sc., MBA and MCA differ significantly on their scores on 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self- Regulation', 'Effort Regulation', scores of 'Learning Strategies', scores of 'Self Regulated Learning Strategies'. Thus, the Hypothesis (10), "There is no significant difference in self-regulated learning strategies of higher education students with respect to Program of study" is rejected for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Self-Efficacy for Learning and Performance', 'Motivation Total', 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self-Regulation', 'Effort Regulation', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies'.

To further analyse the significant difference between various subgroups, Post Hoc Scheffe test was applied on various dimensions viz. 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Self-Efficacy for Learning and Performance', 'Motivation Total', 'Rehearsal', 'Elaboration', 'Organisation', 'Critical Thinking', 'Metacognitive Self- Regulation', 'Effort Regulation', total score of 'Learning Strategies' and 'Self Regulated Learning Strategies' and the results are reported in table 4.126.

It is clear from table 4.126 that on 'Intrinsic Goal Orientation' the mean difference of the pair, M.Sc.-MCA has been found to be significant at 0.05 level of confidence. Meaning thereby that M.Sc. and MCA students differ significantly with respect to their 'Intrinsic Goal Orientation'. On comparing their mean scores from the mean table 4.124, it is clear that the mean score of M.Sc. (5.39) is higher than MCA (4.98) students. The probable reason behind this may be the basic nature of the science field, as science is a systematic and organized body of knowledge and is based on the logic and exactness of the concept. Hence, M.Sc. students imbibed this value from their subject that is why their motivation is mainly due to the intrinsic reasons such that their curiosity, urge of taking challenging study tasks and getting mastery over the content, they use deep information processing strategies like developing manifold examples of a single concept. Such type of students is considered as mastery-oriented students, they spend a great deal of time in understanding the logic behind the concept and this adds to their pride, self-satisfaction with the success as compared to MCA students.

Table 4.126: Summary of Scheffe Post Hoc Test with respect to Various Dimensions of Self-Regulated Learning Strategies in relation to Different PG Programs

Dependent Variable	IGO						EGO						SELP								
(I) PROGRAM	M.Com			M.Sc.			MBA	M.Com			M.Sc.			MBA	M.Com			M.Sc.			MBA
(J) PROGRAM	M.Sc.	MBA	MCA	MBA	MCA	MCA	M.Sc.	MBA	MCA	MBA	MCA	MCA	M.Sc.	MBA	MCA	MBA	MCA	MCA			
MD (I-J)	0.24	0.06	0.17	0.31	0.41*	0.11	0.07	0.31	0.63**	0.24	0.56**	0.33	0.28	0.02	0.24	0.3	0.51**	0.22			
SE	0.17	0.17	0.17	0.13	0.14	0.14	0.16	0.16	0.16	0.13	0.14	0.13	0.14	0.14	0.14	0.11	0.12	0.12			
Sig.	0.56	0.99	0.79	0.16	0.03	0.88	0.98	0.29	0.00	0.34	0.00	0.11	0.3	1	0.43	0.08	0.00	0.31			
Dependent Variable	Motivation						REH						ELAB								
(I) PROGRAM	M.Com			M.Sc.			MBA	M.Com			M.Sc.	MBA	M.Com			M.Sc.			MBA		
(J) PROGRAM	M.Sc.	MBA	MCA	MBA	MCA	MCA	M.Sc.	MBA	MCA	MBA	MCA	MCA	M.Sc.	MBA	MCA	MBA	MCA	MCA			
MD (I-J)	0.63	0.66	1.54	1.28	2.16**	0.89	0.1	0.16	0.26	0.26	0.36	0.1	0.21	0.05	0.28	0.26	.492**	0.23			
SE	0.72	0.7	0.73	0.58	0.6	0.58	0.16	0.15	0.16	0.13	0.13	0.13	0.14	0.14	0.14	0.11	0.12	0.12			
Sig.	0.86	0.83	0.21	0.18	0.01	0.5	0.94	0.79	0.45	0.23	0.06	0.9	0.55	0.99	0.28	0.16	0.00	0.26			

Contd. ...

Dependent Variable	ORG						CT						MSR								
(I) PROGRAM	M.Com			M.Sc.			MBA	M.Com			M.Sc.			MBA	M.Com			M.Sc.			MBA
(J) PROGRAM	M.Sc.	MBA	MCA	MBA	MCA	MCA	M.Sc.	MBA	MCA	MBA	MCA	MCA	M.Sc.	MBA	MCA	MBA	MCA	MCA			
MD (I-J)	0.05	0.26	0.551	0.21	0.50**	0.29	0.16	0.14	0.26	0.3	0.41**	0.11	0.09	0.07	0.23	0.17	0.32**	0.16			
SE	0.16	0.15	0.16	0.13	0.13	0.13	0.15	0.14	0.15	0.12	0.12	0.12	0.11	0.11	0.11	0.09	0.09	0.09			
Sig.	0.99	0.43	0.01	0.42	0.00	0.14	0.75	0.8	0.38	0.08	0.01	0.81	0.86	0.92	0.21	0.29	0.01	0.35			
Dependent Variable	ER						Learning Strategies						Self Regulated Learning Strategies								
(I) PROGRAM	M.Com			M.Sc.			MBA	M.Com			M.Sc.			MBA	M.Com			M.Sc.			MBA
(J) PROGRAM	M.Sc.	MBA	MCA	MBA	MCA	MCA	M.Sc.	MBA	MCA	MBA	MCA	MCA	M.Sc.	MBA	MCA	MBA	MCA	MCA			
MD (I-J)	0.09	0.17	0.07	0.26	0.02	0.24	0.89	0.31	1.8	1.2	2.68**	1.49	1.48	1	3.41	2.48	4.89**	2.4			
SE	0.12	0.12	0.12	0.1	0.1	0.1	0.94	0.91	0.94	0.75	0.78	0.75	1.55	1.51	1.55	1.23	1.28	1.24			
Sig.	0.92	0.59	0.95	0.08	1	0.12	0.83	0.99	0.3	0.46	0.01	0.27	0.82	0.93	0.19	0.26	0.00	0.29			

*significant at 0.05 level, **significant at 0.01 level

Data of table 4.126 shows that on 'Extrinsic Goal Orientation', the mean difference of the pairs, M.Com-MCA and M.Sc.-MCA came out significant at 0.01 level of confidence. On comparing their mean scores from the mean score table 4.124, it is clear that mean score of M. Com (5.43) is higher than mean score of MCA (4.80) and mean score of M.Sc. (5.36) is higher than MCA (4.80). This shows that M.Com students are triggered by some external reasons as well, such as getting good scores, competition, getting rewards from the teachers and parents for good performance. M.Com students tend to set performance-oriented goals while M.Sc. and MCA students tend to set mastery-oriented goals.

Data of table 4.126 shows that on 'Self-Efficacy for Learning and Performance' the mean difference of the pair, M.Sc.-MCA came out significant at 0.01 level of confidence. On comparing their mean scores from the mean score table 4.124, it is clear that the mean score of M.Sc. (5.30) is higher than the mean score of MCA (4.78). This shows that M.Sc. students possess a higher level of 'Self Efficacy for Learning and Performance' as compared to MCA students. Meaning thereby that M.Sc. students appraise their capability and confidence to perform a task, they have a firm belief that they are capable to master the situation and can produce desired outcomes. Due to the high level of self-efficacy for learning, they choose challenging learning tasks and therefore expend more persistence and efforts in order to get higher achievement outcomes. Their self-efficacy beliefs become instrumental to the goals and to the control over their environment. They show more resilience in the phase of adverse situations as compared to their MCA student counterparts.

Data of table 4.126 shows that on the total score of 'Motivation', the mean difference of the pair, M.Sc.-MCA came out significant at 0.01 level of confidence. It shows that there exists a significant difference between M.Sc. and MCA students in the total score of 'Motivation'. On comparing mean score table 4.124, it has been found that the mean score of M.Sc. (30.65) came out higher than MCA (28.48). It shows that the motivation level of M.Sc. students is higher than MCA students. It can be interpreted that M.Sc. students are more motivated to regulate their learning process than MCA students. They have a high sense of control over learning, self-efficacy and value of the learning task. They are more dynamic and ambitious by

virtue motivation. They take the initiative to perform challenging tasks and have a high level of aspiration to succeed.

Data of table 4.126 shows that on 'Elaboration', the mean difference of the pair M.Sc.-MCA came out significant at 0.01 level of confidence. It shows that there exists a significant difference between M.Sc. and MCA students in 'Elaboration'. On comparing mean table 4.124, the mean score of M.Sc. (5.18) came out higher than MCA (4.69). This shows that as compared to MCA students, M.Sc. students make good use of elaboration strategies like paraphrasing, summarising, making internal connections between the items to be learned and new knowledge with the previous knowledge. They pull the information together from various sources viz. notes, lecture, readings, tutorials and make connections between them.

Data of table 4.126 shows that on 'Organisation', the mean difference of the pairs, M.Com-MCA and M.Sc.-MCA came out significant at 0.01 level of confidence. On comparing mean table 4.124, the mean score of M.Com (5.31) came out higher than MCA (4.75) and mean score of M.Sc. (5.26) is higher than MCA (4.75). This shows that M.Com and M.Sc. students put active, thoughtful and effortful endeavours in order to get involved in the task for better understanding. They plan their learning more strategically and make good use of organisation strategies like grouping, clustering, outlining and organising the main points from the gathered information, they often make good use of mind mapping technique as compared to MCA students.

Data of table 4.126 shows that on 'Critical Thinking' the mean difference of the pair, M.Sc.-MCA came out significant at 0.01 level of confidence. On comparing mean table 4.124, the mean score of M.Sc. (5.03) came out higher than MCA (4.61). This shows that M.Sc. students often question themselves before getting convinced about the idea taught in the class and try to find good supporting shreds of evidence in order to accept any conclusion and assertion. They always play around with their ideas in order to develop a convincing explanation of the content as compared to MCA students.

Data of table 4.126 shows that on 'Metacognitive Self-Regulation', the mean difference of the pair, M.Sc.-MCA came out significant at 0.01 level of confidence.

On comparing mean table 4.134, the mean score of M.Sc. (4.79) came out higher than MCA (4.46). This shows that M.Sc. students are capable of thinking about their learning more explicitly than MCA students. They always plan, monitor, regulate and evaluate their learning. They set their goals and choose appropriate learning strategies to attain goals and evaluate one's progress. They strive to come up with better ways of learning. They try to change their study style according to the requirement of the course and teaching style of the teacher.

Data of table 4.126 shows that on the total score of 'Learning Strategies', the mean difference of the pair, M.Sc.-MCA came out significant at 0.01 level of confidence. It shows that there exists a significant difference between M.Sc. and MCA students in the degree of use of different learning strategies. On comparing mean table 4.124, mean score of M.Sc. (43.34) came out higher than MCA (40.65). This shows that M.Sc. students tend to use a wide variety of learning strategies than MCA students. The M.Sc. students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned with the previous knowledge in order to activate their long-term memory. They strategically plan their learning, think critically, manage their time, and structure their environment for optimal learning. They tend to regulate their efforts and attention in order to overcome the distractions or interruptions. They plan, monitor, review and self-reflect their learning, seek help from others and collaborate with their peers for effective learning.

Data of table 4.126 shows that on the total score of 'Self-regulated learning strategies', the mean difference of the pair, M.Sc.-MCA came out significant at 0.01 level of confidence. It shows that there exists a significant difference between M.Sc. and MCA students in the degree of use of self-regulated learning strategies. On comparing mean table 4.124, the mean score of M.Sc. (73.99) came out higher than MCA (69.10). This indicates that the self-regulated learning of M.Sc. students was markedly higher than male students. This shows that M.Sc. students have the ability to control their actions and responses, which is very much essential for the progress in varied contexts. The M.Sc. students are able to control their behaviour, emotions

and cognition for the purpose of pursuing the goals. They set proximal achievable goals which are learning-oriented not performance-oriented. They know that different learning tasks require different learning strategies. They own a “Tool Kit” of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations. They possess a high level of academic self-efficacy and have the ability to control their performance. They observe the intermediate outcomes of their learning process. They precisely attribute the learning outcome to the causes of performance.

4.14 SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE ON SCORES OF SELF- EMOTIONAL MANAGEMENT IN RELATION TO PROGRAM AND SEMESTER AT UG LEVEL

To study the self emotional management of UG level students with respect to program and semester, mean and standard deviation were calculated and in order to analyse the variance of the total score of self emotional management with respect to program and semester, the obtained scores were subjected to two-way ANOVA and the results are reported as follows.

MAIN EFFECTS

PROGRAM

It is clear from table 4.128 that program wise, F-value for the difference in self emotional management came out 12.77, which is found to be significant at 0.01 level of confidence. This indicates that different UG programs viz. B.Com, B.SC, BBA and BCA differ significantly on the scores of self emotional management. Thus, the Hypothesis (14), “There is no significant difference in self emotional management of higher education students with respect to Program of study” is rejected.

To further analyse the significant difference between various subgroups, Post hoc Scheffe test was applied to the scores of self emotional management and the results are reported in table 4.129.

Table 4.127: Means and SDs of Sub-Groups of Two Way ANOVA with respect to Self Emotional Management in relation to Program and Semester of UG Level

Program	B. Com				B.Sc				BBA				BCA				Total			
Semester	2nd Sem	4th Sem	6th Sem	Total	2nd Sem	4th Sem	6th Sem	Total	2nd Sem	4th Sem	6th Sem	Total	2nd Sem	4th Sem	6th Sem	Total	2nd Sem	4th Sem	6th Sem	Total
M	33.36	32.85	33.84	33.36	35.43	36.62	35.44	35.74	33.83	31.92	28.96	31.7	31.77	35.17	34.38	33.86	33.75	34.22	33.64	33.86
σ	7.51	7.9	7.42	7.6	5.46	5.81	5.55	5.59	6.96	9	9.45	8.64	6.57	6.45	6.76	6.72	6.68	7.47	7.44	7.2
N	66	80	83	229	90	65	99	254	63	51	53	167	66	76	72	214	285	272	307	864

Table 4.128: Summary of 2×2 ANOVA with respect to Self Emotional Management in relation to Program and Semester of UG Level

Source	Program	Semester	Program* Semester	Error
SS	1883.14	133.97	1134.48	41888.3
Df	3	2	6	852
MSS	627.71	66.98	189.08	49.17
F	12.77**	1.36	1.85	
Sig.	0.00	0.26	0.34	

** significant at 0.01 level

Table 4.129: Summary of Scheffe Post Hoc Test with respect to Self-Emotional Management on different UG Programs

(I) Program	B. Com			B.Sc		BBA
(J) Program	B.Sc	BBA	BCA	BBA	BCA	BCA
MD (I-J)	2.38*	1.66	0.5	4.04*	1.89*	2.15*
SE	0.64	0.71	0.67	0.7	0.65	0.72
Sig.	0.00	0.15	0.91	0.00	0.04	0.03

*Significant at 0.05 level of confidence

Table 4.129 presents the comparison among different UG Programs viz. B.Com, B.Sc., BBA and BCA. The mean difference for the groups B.SC-B.Com, B.Sc.-BBA, B.Sc.-BCA and BBA-BCA came out significant either at 0.05 or 0.01 level of confidence. This shows that these subgroups differ significantly with respect to self-emotional management. On overseeing the mean scores table 4.127, it has been found that B.Sc. students (35.44) have scored more than B.Com students (33.36), BBA students (31.7) and BCA students (33.86). This shows that B.Sc. students skilfully regulate their positive or negative emotions. They are goal-oriented students so they don't allow negative emotional reactions to hamper their achievement. They know how to remove the obstacles, hold an optimistic approach and never give up in with the thought of failure. They always motivate themselves to keep the focus on the task and are hopeful that they will get success on the task they take on as compared to their B.Com, BBA and BCA student counterparts. The finding of the present study is in tune with the finding of Aggarwal and Saxena (2012) and Ramana and Devi (2018) who reported that science students scored higher on managing own emotions dimension of emotional intelligence as compared to commerce students.

On comparing BBA and BCA students with respect to their self-emotional management, it has been found that BCA students (33.86) have scored more than BBA (31.7). This shows that BCA students have the ability to manage their emotions (positive or negative) well on time as compared to their BBA counterparts.

SEMESTER

It is clear from table 4.128 that semester wise, the F-value for the difference in self emotional management came out 1.36, which is found to be significant at 0.05 level of confidence. Thus, the Hypothesis (15), “There is no significant difference in self emotional management of higher education students with respect to the semester of study” is not rejected. This indicates that different semesters viz. 2nd semester, 4th semester and 6th semester do not differ significantly on the scores of self emotional management.

INTERACTION EFFECT (PROGRAM × SEMESTER)

Table 4.128 showed that F-value for the interaction between Program and Semester on the scores of self emotional management came out to be 1.85, which is not found to be significant at 0.05 level of confidence. Thus, the Hypothesis (16), “There is no significant interaction effect of program and semester of study on the self emotional management of higher education students” is not rejected.

4.15 SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE ON SCORES OF SELF EMOTIONAL MANAGEMENT IN RELATION TO PROGRAM AT PG LEVEL

To study the self emotional management of PG level students with respect to Program; mean and standard deviation were calculated and in order to analyse the variance of the total score of self emotional management with respect to program and semester. The obtained scores are presented in table 4.130 and 4.131.

Table 4.130: Means and SDs of Sub-groups of One-Way ANOVA with respect to Self Emotional Management in relation to Different Programs at PG Level

Program	Mean	Std. Deviation	N
M.Com	33.51	7.33	79
M.Sc.	35.14	6.03	152
MBA	34.55	7.43	179
MCA	32.27	8.1	150
Total	33.95	7.32	560

Table 4.131: Summary of One-Way ANOVA with respect to Self Emotional Management in relation to different Programs at PG Level

Source	SS	Df	MSS	F	Sig.
Program	715.71	3.00	238.57	4.53**	0.00
Error	29271.99	556.00	52.65		

** Significant at 0.01 level of confidence

It is clear from table 4.131 that F-value for the difference in self emotional management of different programs viz. M.Com, M.Sc., MBA and MCA came out 4.53 which was significant at 0.01 level of confidence. Thus, the Hypothesis (14), “There is no significant difference in self emotional management of higher education students with respect to Program of study” is rejected.

This indicates the fact that different PG programs viz. M.Com, M.Sc., MBA and MCA differ significantly on the scores of self emotional management. To further analyse the significant difference between various subgroups, Post hoc Scheffe test was applied to the scores of self emotional management and the results are reported in table 4.132.

Table 4.132: Summary of Scheffe Post Hoc Test with respect to Self Emotional Management on different PG Programs

(I) Program	(J) Program	Mean Difference (I-J)	Std. Error	Sig.
M.Com	M.Sc.	-1.63	1.01	0.45
	MBA	-1.04	0.98	0.77
	MCA	1.23	1.01	0.68
M.Sc.	MBA	0.59	0.8	0.91
	MCA	2.86**	0.84	0.01
MBA	MCA	2.27*	0.8	0.05

*significant at 0.05 level of confidence, ** significant at 0.01 level of confidence

Table 4.132 presents a comparison among different PG Programs viz. M.Com, M.Sc., MBA and MCA. The results indicated that the mean difference for the groups M.Com- M.SC., M.Com-MBA, M.Com-MCA and M.Sc.-MBA came out -1.63,-1.04, 1.23 and 0.59 respectively, which are not found to be significant even at the 0.05 level of confidence. However, the mean difference for M.SC.-MCA and MBA-MCA came out 2.86 and 2.27, which are found to be significant either at 0.01 or 0.05 level of confidence. On overseeing the mean score table 4.130, it has been found that the mean score of M.Sc. students (35.14) found to be higher than MCA students (32.27). This shows that M.Sc. students have a high level of self-emotional management as compared to MCA students. On comparing MBA-MCA pair, it has been found from the mean scores table 4.130 that mean score of MBA students (34.55) is higher than that of MCA students (32.27). This shows that MBA students possess high self-emotional management as compared to MCA students. Meaning thereby that M.Sc. (Chemistry) and MBA students skilfully regulate their positive or negative emotions. As successful students are goal-oriented so they don't allow negative emotional reactions to hamper their achievement. As successful students are goal-oriented and they know how to remove the obstacles, hold an optimistic approach and never give up with the thought of failure because they do not allow negative emotional reactions to hamper their achievement. The present study is in tune with the findings of the finding of the present study is in tune with the finding of Aggarwal and Saxena (2012) and Ramana and Devi (2018) who reported that science students have high ability to manage their emotions. Poorani and Arulsamy (2015) documented that female students of MBA surpassed MCA female students in managing emotions and showed a high level of emotional intelligence.

4.16 SUMMARY OF INFLUENCE OF CAUSAL ATTRIBUTION ON SELF REGULATED LEARNING STRATEGIES AMONG HIGHER STUDENTS

To study the influence of causal attribution on self-regulated learning strategies among UG and PG students; mean and standard deviation were calculated for different dimensions of motivation and learning strategies with respect to eight causal dimensions of causal attribution viz. Internal-Stable-Uncontrollable (I-S-UnC) (Ability), Internal-Unstable-Controllable (I-UnS-C) (Efforts), Internal-Stable-

Controllable (I-S-C) (Study Habits), Internal-Unstable-Uncontrollable (I-UnS-UnC) (Mood), External-Unstable-Uncontrollable (E-UnS-UnC) (Luck), External-Stable-Uncontrollable (E-S-UnC) (Task Difficulty), External-Stable-Controllable (E-S-C) (Instructor's Bias/Favouritism), External-Unstable-Controllable (E-UnS-C) (Teacher's Help). Further, for analysing the variance of different dimensions of self-regulated learning strategies of UG and PG students eight causal dimensions of causal attribution, the obtained scores were subjected to one-way ANOVA and Further, on getting significant F-ratios, Scheffe Post Hoc test has been applied in order to see which group differ significantly. The results have been presented in the following headings.

4.16.1 Summary of Influence of Causal Attribution on Self-regulated Learning Strategies among UG Students

To study the influence of causal attribution on self-regulated learning strategies among UG students; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies with respect to eight causal dimensions of causal attribution. The results came therein are presented in table 4.133. For analyzing the variance of various dimensions and total score of self-regulated learning strategies of UG students with respect to eight causal dimensions of causal attribution, one-way ANOVA was used. The results came therein are presented in table 4.134.

Table 4.134 shows that, for UG students, the F-ratios for 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Control of Learning Beliefs' and 'Test Anxiety' dimensions came out 1.94, 1.18, 1.83 and 1.60 respectively, which are not found to be significant even at the 0.05 level of confidence. This shows that UG students who perceived one of the causes viz. Ability, Efforts, Study Habits, Mood, Luck, Task Difficulty, Instructor's Bias/ Favouritism and Teacher's Help for their obtained score do not differ significantly on the scores of 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Control of Learning Beliefs' and Test Anxiety' dimensions. Further, the F-ratios for 'Task Value', 'Self Efficacy for Learning and Performance' dimensions and total score of 'Motivation' came out 5.19, 4.45 and 2.28 respectively, which are found to be significant either at the 0.05 or 0.01 level of confidence.

Table 4.133: Means and SDs of Sub-Groups of Various Dimensions of Self regulated Learning Strategies with respect to Causal Attribution of UG Students

Dimensions	Ability	Efforts	Study Habits	Mood	Luck	Task Difficulty	Instructor's Bias/ Favoritism	Teacher's Help	Total	Ability	Efforts	Study Habits	Mood	Luck	Task Difficulty	Instructor's Bias/ Favoritism	Teacher's Help	Total
IGO									EGO									
N	119	171	257	33	103	62	9	110	864	119	171	257	33	103	62	9	110	864
M	5.24	5.16	5.28	4.91	4.84	5.23	5.11	5.30	5.18	5.39	5.24	5.35	5.07	5.06	5.17	4.93	5.38	5.28
σ	1.23	1.23	1.19	1.26	1.12	1.06	1.54	1.11	1.19	1.26	1.28	1.19	1.21	1.24	1.11	1.63	1.16	1.22
TV									CLB									
M	5.02	5.09	5.28	5.10	4.59	5.16	4.47	5.35	5.11	5.06	5.32	5.17	5.17	5.09	4.87	4.39	5.13	5.14
σ	1.19	1.22	1.09	1.17	1.17	0.87	1.33	1.08	1.15	1.26	1.14	1.10	1.25	1.15	0.98	1.01	1.11	1.14
SELP									TA									
M	5.08	4.97	5.24	5.03	4.68	4.92	4.56	5.26	5.06	4.36	4.42	4.45	4.73	4.65	4.31	3.58	4.50	4.46
σ	1.05	1.07	1.00	1.24	1.07	0.85	1.45	0.88	1.03	1.36	1.27	1.16	1.24	1.09	1.11	1.53	1.17	1.21
Motivation									REH									
M	29.96	30.01	30.57	29.90	28.76	29.48	26.88	30.79	30.05	4.96	4.81	5.15	4.83	4.54	4.97	4.72	5.11	4.95
σ	5.07	5.29	5.14	5.95	5.06	4.21	6.29	4.85	5.13	1.27	1.25	1.11	1.30	1.07	0.91	1.63	0.93	1.15

Contd. ...

Dimensions	Ability	Efforts	Study Habits	Mood	Luck	Task Difficulty	Instructor's Bias/ Favoritism	Teacher's Help	Total	Ability	Efforts	Study Habits	Mood	Luck	Task Difficulty	Instructor's Bias/ Favoritism	Teacher's Help	Total
ELAB									ORG									
M	4.91	4.85	5.15	5.12	4.68	5.09	4.52	5.15	4.99	4.84	4.97	5.18	5.16	4.79	5.08	5.14	5.33	5.06
σ	1.03	1.24	1.07	1.18	1.01	0.97	1.85	1.13	1.12	1.28	1.33	1.10	1.19	1.16	1.02	1.46	1.06	1.19
CT									MSR									
M	4.92	4.77	4.93	5.09	4.59	4.84	4.67	4.98	4.86	4.78	4.57	4.84	4.69	4.45	4.67	4.49	4.90	4.72
σ	1.20	1.22	1.07	1.10	1.07	0.89	1.73	0.96	1.11	0.82	0.91	0.71	0.77	0.84	0.73	0.82	0.85	0.82
TSE									ER									
M	4.35	4.27	4.55	4.39	4.11	4.45	4.64	4.51	4.40	4.01	4.14	4.41	4.34	4.13	4.25	4.28	4.35	4.25
σ	0.77	0.85	0.71	0.82	0.63	0.64	0.62	0.69	0.75	1.11	0.95	0.85	1.03	0.91	0.77	1.03	1.03	0.95
PL									HS									
M	4.69	4.68	4.99	5.08	4.74	4.59	4.60	5.06	4.84	4.67	4.58	4.76	4.94	4.45	4.81	4.89	4.82	4.70
σ	1.30	1.45	1.22	1.46	1.13	1.23	1.44	1.29	1.30	1.07	1.04	0.92	1.06	1.05	0.97	1.36	0.91	1.00
Learning Strategies									Self Regulated Learning Strategies									
M	41.87	41.42	43.73	43.39	40.28	42.54	41.66	43.93	42.51	71.83	71.41	74.28	73.33	69.03	72.00	68.56	74.75	72.55
σ	6.73	7.70	6.47	7.75	6.70	5.64	9.18	6.79	6.95	10.64	12.22	10.83	12.80	11.01	9.17	14.71	10.97	11.26

Table 4.134: Summary of One Way ANOVA of Various Dimensions of Self Regulated Learning Strategies with respect to Causal Attribution of UG Students

Source	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total
Dimensions	IGO			EGO			TV			CLB			SELP		
SS	18.95	1194.16	1213.11	12.35	1277.49	1289.84	46.63	1098.00	1144.63	16.52	1105.25	1121.77	32.46	891.81	924.27
DF	7	856	863	7	856	863	7	856	863	7	856	863	7	856	863
MSS	2.71	1.40		1.77	1.49		6.66	1.28		2.36	1.29		4.64	1.04	
F	1.94			1.18			5.19**			1.83			4.45**		
Sig.	0.06			0.31			0.00			0.08			0.00		
Dimensions	TA			Motivation			REH			ELAB			ORG		
SS	16.31	1249.58	1265.89	414.33	22271.97	22686.30	34.05	1103.35	1137.40	26.62	1048.75	1075.37	26.24	1191.52	1217.75
MSS	2.33	1.46		59.19	26.02		4.86	1.29		3.80	1.23		3.75	1.39	
F	1.60			2.28*			3.77**			3.10**			2.69**		
Sig.	0.13			0.03			0.00			0.00			0.01		

Contd. ...

Source	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total
Dimensions	CT			MSR			TSE			ER			PL		
SS	14.54	1047.48	1062.02	19.32	556.44	575.75	19.47	462.53	482.00	18.67	762.16	780.83	25.14	1424.60	1449.74
MSS	2.08	1.22		2.76	0.65		2.78	0.54		2.67	0.89		3.59	1.66	
F	1.70			4.25**			5.15**			3.00**			2.16*		
Sig.	0.11			0.00			0.00			0.00			0.04		
Dimensions	HS			Learning Strategies			Self Regulated Learning Strategies								
SS	14.42	846.53	860.94	1396.69	40270.66	41667.35	3047.21	106364.65	109411.86						
MSS	2.06	0.99		199.53	47.05		435.32	124.26							
F	2.08*			4.24**			3.50**								
Sig.	0.04			0.00			0.00								

*Significant at 0.05 level, ** Significant at 0.01 level of confidence

Table 4.134 shows that, for UG students, the F-ratios for ‘Critical Thinking’ came out 1.70, which is not found to be significant even at the 0.05 level of confidence. This indicates that the students who perceived one of the causes like Ability, Efforts, Study Habits, Mood, Luck, Task Difficulty, Instructor’s Bias/Favouritism for their obtained score do not differ significantly on the scores of ‘Critical Thinking’. Further, the F-ratios for ‘Rehearsal’, ‘Elaboration’, ‘Organisation’, ‘Metacognitive Self-Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’ and ‘Help-Seeking’ dimensions and total scores of ‘Learning strategies’ and ‘Self Regulated Learning Strategies’ came out 3.77, 3.10, 2.69, 4.25, 5.15, 3.00, 2.16, 2.08, 4.24 and 3.50 respectively, which are found to be significant either at the 0.05 or 0.01 level of confidence. Thus, the Hypothesis (17), “There is no significant influence of causal attribution on self-regulated learning strategies among higher education students” is rejected for ‘Task Value’, ‘Self Efficacy for Learning and Performance’ dimensions and total score of ‘Motivation’, ‘Rehearsal’, ‘Elaboration’, ‘Organisation’, ‘Metacognitive Self-Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’ and ‘Help-Seeking’ dimensions and total scores of ‘Learning strategies’ and ‘Self Regulated Learning Strategies’

To further analyse the significant difference between the groups, Scheffe Post Hoc test was applied on the scores of different dimensions of ‘Self Regulated Learning Strategies’ and the results are presented in the table 4.135.

It is clear from the table 4.135 that in ‘Task value’, ‘Self Efficacy for Learning and Performance’, ‘Rehearsal’, ‘Time and Study Environment’ dimensions and total scores of ‘Learning Strategies’ and ‘Self-Regulated Learning Strategies, the mean difference of the pair, Study Habits-Luck is found to be significant either at the 0.05 or 0.01 level of confidence. The mean score table 4.133 shows that in all of the aforementioned dimensions, the mean score of the subgroup that attributed ‘Study Habits’ is found to be higher than that attributed ‘Luck’ as the main cause for their achieved score.

Table 4.135: Summary of Scheffe Post Hoc Test of Various Dimensions of ‘Self Regulated Learning Strategies’ with respect to Causal Dimensions of Causal Attribution UG Students

Dimensions	(I) Causal dimension	(J) Causal dimension	MD (I-J)	SE	Sig.
Value component- Task value	Study Habits	Luck	0.69**	0.13	0.00
	Luck	Teacher’s Help	0.76**	0.16	0.00
Expectancy component- Self efficacy for learning and performance	Study Habits	Luck	0.56**	0.12	0.00
	Luck	Teacher’s Help	0.58*	0.14	0.02
Cognitive and metacognitive strategies- Rehearsal	Study Habits	Luck	0.60**	0.13	0.01
Cognitive and metacognitive strategies-Metacognitive self-regulation	Luck	Teacher’s Help	0.45*	0.11	0.02
Resource management strategies-Time and study environment	Efforts	Study Habits	0.28*	0.07	0.04
	Study Habits	Luck	0.44**	0.09	0.00
	Luck	Teacher’s Help	0.39*	0.10	0.03
Resource management strategies- Effort regulation	Ability	Study Habits	0.40*	0.10	0.04
Learning Strategies	Study Habits	Luck	3.44**	0.80	0.01
	Luck	Teacher’s Help	3.65*	0.94	0.04
Self Regulated Learning Strategies	Study Habits	Luck	5.25*	1.30	0.02

* significant at 0.05 level of confidence ** significant at 0.01 level of confidence

This shows that the students who attributed their study habits as the main reason for their achieved score attach a high value to the importance and usefulness of learning the subject. This value makes them dedicated and committed to accomplishing the targets. They possess a high sense of self-efficacy for learning and performance. They appraise their capability and confidence to perform a task and have a firm belief that they can master the situation and produce desirous outcomes. They are more focused on learning the content by practising it again and again. They are a good manager of their time and structure their environment for optimal learning. They tend to use a wide variety of learning strategies. The students who possess good study habits are more self-efficacious than the students who just believe that luck plays an important role in deciding the achievement.

Table 4.135 shows that in 'Task value', 'Self Efficacy for Learning and Performance', 'Metacognitive Self-Regulation', 'Time and Study Environment' dimensions and total scores of 'Learning Strategies', the mean difference of pair, Luck-Teacher's Help is found to be significant either at the 0.05 or 0.01 level of confidence. The mean score table 4.133 shows that in all of the aforementioned dimensions, the mean score of the subgroup that attributed 'Teacher's Help' is found to be higher than that attributed 'Luck' for their achieved score. This shows that the subgroup of UG students that attributed 'Teacher's Help' as the main cause behind their achieved score attaches a high value to the importance and usefulness of learning the subject. This value makes them dedicated and committed to accomplishing the targets. They possess a high sense of self-efficacy for learning and performance and appraise their capability and confidence to perform a task. They have a firm belief that they are capable of mastering the situation and producing the desired outcomes. They always plan, monitor, regulate and evaluate their learning. They are a good manager of time and structure their environment for optimal learning.

Table 4.135 shows that in 'Time and Study Environment' dimension, the mean difference of the pair, Efforts-Study Habits is found to be significant at the 0.05 level of confidence. The mean score table 4.133 clearly shows that in 'Time and Study Environment' dimension, the mean score of the subgroup that attributed

‘Study Habits’ for their achieved score is higher than that attributed ‘Efforts’ for their achieved score. The mean score table 4.133 reveals that in ‘Time and Study Environment’ dimension, the mean score of the subgroup that attributed ‘Study Habits’ for their achieved score is found to be higher than the that attributed ‘Efforts’ for their achieved score. This shows that the students who possess good study habits manage their time judiciously and are capable to structure their environment for optimal learning more than the students who attributed ‘Efforts’ as a cause for their achieved score.

Table 4.135 shows that in ‘Effort Regulation’ dimension, the mean difference of the pair, Ability-Study Habits is found to be significant at the 0.05 level of confidence. On analysing the mean scores from the table 4.133, it has been found that in ‘Effort Regulation’ dimension, the mean score of the students who have attributed ‘Study Habits’ for their achieved score is found to be higher than the mean score of the students who have attributed ‘Ability’ for their achieved score. This shows that the students who do hard work throughout the year and possess good study habits have the ability to control their effort and attention in the phase of distraction and monotonous tasks. They show their commitment in accomplishing their tasks and they never give up on complexities rather they manage their efforts and attention in order to overcome the interruptions as compared to the students who have attributed ‘Ability’ for their achieved score.

From the above results, it is clear that internal, stable and controllable attribution (i.e. study habits) & external, unstable and controllable factor (i.e. teacher’s help) showed its influence on the academic self-regulation of the learners more than the external, unstable and uncontrollable attribution (i.e. luck). Further, internal, stable and controllable attribution (i.e. study habits) influence self-regulated learning strategies of the students more than internal, unstable and controllable (i.e. efforts) and internal, stable and uncontrollable (i.e. ability). This shows that in the UG programs, the study habits of the students influence the self-regulated learning process more than ability, effort and luck. This shows that the students who possess overall good study habits and regularly study throughout the year with full dedication are more self- efficacious as compared to the other subgroups.

4.16.2 Summary of Influence of Causal Attribution on Self Regulated Learning Strategies among PG Students

To study the influence of causal attribution on self-regulated learning strategies among PG students; mean and standard deviation were calculated for different dimensions of self-regulated learning strategies with respect to eight causal dimensions of causal attribution. The results came therein are presented in table 4.136. For analyzing the variance of various dimensions and total score of self-regulated learning strategies of PG students with respect to eight causal dimensions of causal attribution, one-way ANOVA was used. The results came therein are presented in the table 4.137.

Table 4.137 shows that, for PG students, the F-ratios for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’ dimensions and total score of ‘Motivation’, ‘Rehearsal’, ‘Elaboration’, ‘Organization’, ‘Critical Thinking’, ‘Metacognitive Self-Regulation’, ‘Time and Study Environment’, ‘Peer Learning’, ‘Help-Seeking’ dimensions and total scores of ‘Learning Strategies’ and ‘Self-Regulated Learning Strategies’ came out 4.68, 4.19, 5.64, 2.37, 6.54, 4.60, 4.82, 5.98, 6.70, 5.73, 6.04, 5.77, 4.08, 2.71, 7.63 and 6.91 respectively, which are found to be significant either at the 0.05 or 0.01 level of confidence. This shows that the PG students who perceived one of the causes viz. Ability, Efforts, Study Habits, Mood, Luck, Task Difficulty, Instructor’s Bias/ Favoritism and Teacher’s Help for their achieved score differ significantly on the scores of various dimensions and total score of ‘Motivation’, ‘Learning Strategies’ and ‘Self-Regulated Learning Strategies’. Thus, the Hypothesis (17), “There is no significant influence of causal attribute on self-regulated learning strategies among higher education students” is rejected for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’ dimensions and total score of ‘Motivation’, ‘Rehearsal’, ‘Elaboration’, ‘Organization’, ‘Critical Thinking’, ‘Metacognitive Self-Regulation’, ‘Time and Study Environment’, ‘Peer Learning’, ‘Help-Seeking’ dimensions and total scores of ‘Learning Strategies’ and ‘Self-Regulated Learning Strategies’

Table 4.136: Means and SDs of Sub-Groups of Various Dimensions of Self Regulated Learning Strategies with respect to Causal Attribution of PG Atudents

Dimensions	Ability	Efforts	Study Habits	Mood	Luck	Task Difficulty	Instructor's Bias/ Favoritism	Teacher's Help	Total	Ability	Efforts	Study Habits	Mood	Luck	Task Difficulty	Instructor's Bias/ Favoritism	Teacher's Help	Total
IGO										EGO								
N	66	105	222	21	48	43	6	49	560	66	105	222	21	48	43	6	49	560
M	5.36	4.86	5.36	5.52	4.54	4.93	5.83	5.12	5.15	5.40	4.87	5.32	5.38	4.48	5.11	5.13	5.15	5.14
σ	1.02	1.40	1.18	1.25	1.03	1.22	1.33	1.13	1.23	1.05	1.36	1.16	1.21	1.00	1.26	0.79	1.14	1.20
TV										CLB								
M	5.19	4.75	5.33	5.47	4.53	4.92	5.68	5.23	5.10	5.17	4.97	5.16	5.22	4.55	4.92	4.33	5.25	5.06
σ	1.03	1.38	1.01	1.21	0.90	1.19	0.67	1.03	1.13	1.16	1.29	1.10	1.20	1.07	1.26	0.52	1.13	1.17
SELP										TA								
M	5.22	4.77	5.22	5.40	4.35	4.84	5.73	4.99	5.03	4.12	4.37	4.35	4.04	4.44	4.37	3.43	4.19	4.30
σ	0.87	1.24	0.94	1.16	0.94	1.09	1.11	0.97	1.05	1.18	1.26	1.19	1.53	0.92	1.34	1.25	1.02	1.20
Motivation										REH								
M	30.26	28.42	30.54	30.81	26.62	28.78	29.83	29.74	29.57	5.07	4.60	5.14	4.81	4.35	4.64	4.57	4.87	4.88
σ	4.37	6.34	4.80	5.64	4.26	5.96	3.55	4.78	5.27	0.96	1.21	1.07	1.34	1.02	1.39	0.72	1.08	1.14

Contd. ...

Dimensions	Ability	Efforts	Study Habits	Mood	Luck	Task Difficulty	Instructor's Bias/ Favoritism	Teacher's Help	Total	Ability	Efforts	Study Habits	Mood	Luck	Task Difficulty	Instructor's Bias/ Favoritism	Teacher's Help	Total
ELAB										ORG								
M	5.20	4.65	5.09	5.04	4.31	4.75	5.57	5.15	4.94	5.18	4.71	5.30	5.41	4.40	4.87	6.10	5.12	5.06
σ	0.89	1.17	1.00	1.23	0.82	1.02	1.44	0.95	1.05	1.09	1.20	1.11	1.23	0.88	1.22	0.92	1.07	1.16
CT										MSR								
M	5.02	4.42	4.97	5.03	4.32	4.77	5.77	4.82	4.80	4.70	4.37	4.80	4.72	4.27	4.45	5.22	4.78	4.63
σ	0.88	1.13	0.99	1.31	0.90	1.20	1.10	1.01	1.06	0.66	0.92	0.71	0.79	0.65	0.96	0.84	0.72	0.80
TSE										ER								
M	4.30	4.14	4.49	4.47	3.98	4.15	4.95	4.42	4.33	4.38	4.06	4.30	4.31	4.08	3.95	4.40	4.20	4.21
σ	0.71	0.74	0.70	0.71	0.68	0.72	0.74	0.60	0.72	0.80	0.95	0.91	1.20	0.79	0.85	0.81	0.76	0.90
PL										HS								
M	4.91	4.45	5.08	4.72	4.43	4.79	5.62	4.88	4.84	4.76	4.48	4.72	4.38	4.19	4.74	4.67	4.73	4.62
σ	1.11	1.38	1.13	1.38	1.03	1.33	0.92	1.16	1.22	0.90	1.09	0.88	0.92	0.76	1.09	0.52	1.04	0.96
Learning Strategies										Self-Regulated Learning Strategies								
M	43.29	39.64	43.69	42.73	38.06	40.95	46.76	42.78	42.11	73.52	68.12	74.20	73.57	64.67	69.77	76.50	72.49	71.68
σ	5.60	7.90	6.21	6.68	5.52	7.69	6.13	5.85	6.82	9.00	13.56	10.20	11.40	8.88	12.74	9.09	9.62	11.28

Table 4.137: Summary of One Way ANOVA of Various Dimensions of Self Regulated Learning Strategies with respect to Causal Attribution of PG Students

Source	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total
Dimensions	IGO			EGO			TV			CLB			SELP		
SS	47.04	793.06	840.10	40.97	770.39	811.36	47.96	670.29	718.24	22.20	739.21	761.41	47.49	572.72	620.21
DF	7	552	559	7	552	559	7	552	559	7	552	559	7	552	559
MSS	6.72	1.44		5.85	1.40		6.85	1.21		3.17	1.34		6.78	1.04	
F	4.68**			4.19**			5.64**			2.37*			6.54**		
Sig.	0.00			0.00			0.00			0.02			0.00		
Dimensions	TA			Motivation			REH			ELAB			ORG		
SS	10.82	788.46	799.28	856.05	14661.37	15517.42	42.09	688.65	730.74	43.66	575.75	619.41	58.36	687.39	745.75
MSS	1.55	1.43		122.29	26.56		6.01	1.25		6.24	1.04		8.34	1.25	
F	1.08			4.60**			4.82**			5.98**			6.70**		
Sig.	0.37			0.00			0.00			0.00			0.00		

Contd. ...

Source	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total
Dimensions	CT			MSR			TSE			ER			PL		
SS	42.69	587.67	630.36	25.15	328.58	353.73	19.95	272.62	292.56	10.25	439.80	450.05	40.91	790.60	831.52
MSS	6.10	1.07		3.59	0.60		2.85	0.49		1.46	0.80		5.85	1.43	
F	5.73**			6.04**			5.77**			1.84			4.08**		
Sig.	0.00			0.00			0.00			0.08			0.00		
Dimensions	HS			Learning Strategies			Self-Regulated Learning Strategies								
SS	16.97	494.77	511.74	2291.84	23703.10	25994.94	5727.87	65340.98	71068.85						
MSS	2.43	0.90		327.41	42.94		818.27	118.37							
F	2.71**			7.63**			6.91**								
Sig.	0.01			0.00			0.00								

*Significant at 0.05 level of confidence

** Significant at 0.01 level of confidence

To further analyze the significant differences between the groups, Scheffe Post Hoc test was applied on the scores of different dimensions of ‘Self-Regulated Learning Strategies’ and the results are presented in the table 4.138.

Table 4.138: Summary of Scheffe Post Hoc Test of various Dimensions of ‘Self Regulated Learning Strategies with respect to Causal Dimensions of Causal Attribution PG Students

Dependent Variable	(I) Causal dimension	(J) Causal dimension	MD (I-J)	SE	Sig.
Value component- intrinsic goal orientation	Study Habits	Luck	0.81**	0.19	0.01
Value component- extrinsic goal orientation	Ability	Luck	0.92*	0.22	0.02
	Study Habits	Luck	0.84**	0.19	0.01
Value component- Task value	Efforts	Luck	-0.58**	0.13	0.01
	Study Habits	Luck	0.79**	0.18	0.01
Expectancy component- self efficacy for learning and performance	Ability	Luck	0.88**	0.19	0.01
	Study Habits	Luck	0.88**	0.16	0.00
	Mood	Luck	1.04*	0.27	0.03
Motivation	Study Habits	Luck	3.91**	0.82	0.00
Cognitive and metacognitive strategies- Rehearsal	Mood	Study Habits	0.54*	0.13	0.02
	Study Habits	Luck	0.78**	0.18	0.01
Cognitive and metacognitive strategies- Elaboration	Ability	Luck	0.89**	0.19	0.00
	Luck	Study Habits	0.78**	0.16	0.00
		Teacher’s Help	0.84*	0.21	0.02
Cognitive and metacognitive strategies-Organization	Efforts	Study Habits	0.59**	0.13	0.01
	Study Habits	Luck	0.90**	0.18	0.00
Cognitive and metacognitive strategies- Critical thinking	Efforts	Study Habits	0.55**	0.12	0.01
	Study Habits	Luck	0.65*	0.16	0.03
Cognitive and metacognitive strategies-Metacognitive self-regulation	Efforts	Study Habits	0.43**	0.09	0.00
	Study Habits	Luck	0.53**	0.12	0.01
Resource management strategies- Time and study environment	Efforts	Study Habits	0.35**	0.08	0.01
	Study Habits	Luck	0.52**	0.11	0.00
Resource management strategies- Peer learning	Efforts	Study Habits	0.62**	0.14	0.01
Learning Strategies	Ability	Luck	5.23**	1.24	0.01
	Study Habits	Efforts	4.04**	0.78	0.00
		Luck	5.63**	1.04	0.00
Self-Regulated Learning Strategies	Ability	Luck	8.84**	2.06	0.01
	Efforts	Study Habits	6.07**	1.29	0.00
	Study Habits	Luck	9.53**	1.73	0.00

It is clear from table 4.138 in 'Intrinsic Goal Orientation', 'Extrinsic Goal Orientation', 'Task Value', 'Self-Efficacy for Learning and Performance' dimensions and total score of 'Motivation', 'Rehearsal', 'Elaboration', 'Organization', 'Critical Thinking', 'Metacognitive Self-Regulation', 'Time and Study Environment', 'Peer Learning' dimensions and total scores 'Learning Strategies' & 'Self-Regulated Learning Strategies', the mean difference of the pair, Study Habits- Luck is found to be significant either at the 0.05 or 0.01 level of confidence. On analyzing the mean scores from the table 4.136, it has been found that in all of the above-mentioned dimensions, the mean score of the group of students who have attributed 'Study Habits' is found to be higher than the mean score of the students who have attributed 'Luck' as a major reason behind their achieved score. This is indicative of the fact that the PG students who have good study habits and study regularly throughout the year are more focused on learning and improvement and strive to master the task and possess deep level of understanding of the content, are more concerned about their performance in relation to the other students in the class, give more importance to the task in hand, possess high sense of self efficacy for learning and performance, are more focused on learning the content by practicing it again and again, make good use of elaboration and organization strategies, think critically, manage their time judiciously, plan, monitor, regulate and evaluate their learning, more active in working and learning with peers and use a wide variety of learning strategies than the students who believe that luck is responsible for their achieved score.

Table 4.138 shows that in 'Organization', 'Critical Thinking', 'Metacognitive Self-Regulation', 'Time and Study Environment', 'Peer Learning' dimensions and total score of 'Learning Strategies' and 'Self-Regulated Learning Strategies', the mean difference of pair, Study Habits- Efforts is found to be significant at the 0.01 level of confidence. On analyzing the mean scores table 4.136, it has been found that in all of the aforementioned dimensions, the mean score of the subgroup who has attributed their 'study habits' is found to be higher than the mean score of the subgroup who has attributed their immediate efforts for the achieved scores. This shows that the students who study throughout the year and possess good study habits put active, thoughtful and effortful endeavors in order to

get involved in the task for better understanding. They strategically plan their learning and make good use of organization strategies like grouping, clustering, outlining and organizing the main points from the gathered information and make good use of mind mapping technique. They often question themselves before getting convinced about the idea taught in the class and try to find good supporting shreds of evidence in order to accept any conclusion and assertion. are capable of thinking about their own learning more explicitly. They always plan, monitor, regulate and evaluate their learning. They set their goals and choose appropriate learning strategies to attain goals and evaluate one's progress. They strive to come up with better ways of learning. They manage their time sagaciously and are capable to structure their environment for optimal learning. Most importantly such students always collaborate with their peer group, discuss and debate with them order to clarify their doubts and reach insights one cannot attain on one's own, they often keep some time aside for doing discussion in the peer group in order to complete the tasks well on time. These students are more motivated to learn in a self-regulated process, they are able to choose and utilize a variety of learning strategies and know, when, why, and how to use these approaches in an apt circumstance as compared to the students who perceived efforts put in just before the examination for their achieved score.

Table 4.138 shows that in 'Extrinsic Goal Orientation', 'Self-Efficacy for Learning and Performance', 'Elaboration' dimensions and total scores of 'Learning Strategies' and 'Self-Regulated Learning Strategies'. the mean difference of the pair, Ability-Luck is found to be significant either at the 0.05 or 0.01 level of confidence. On analyzing the mean scores from the table 4.136, it has been found that in all of the aforesaid dimensions, the mean score of the subgroup who has attributed their ability is found to be higher than the subgroup who has thought that luck is responsible for their achieved score. This shows that the students who have perceived that their ability in the subject is responsible for their achieved score are more concerned about their performance in relation to the other students in the class, high sense of self efficacy for learning and performance, make good use of elaboration strategies like paraphrasing, summarizing, making internal connections between the items to be learned and the previous knowledge. They are more self-regulated and

own a “Tool Kit” of different learning strategies in order to deal with the different type of academic challenges. They use appropriate learning strategies in appropriate situations.

Table 4.138 shows that in ‘Task Value’ dimension, the mean difference of the pair, Efforts-Luck is found to be significant at the 0.01 level of confidence. On analyzing the mean scores from the table 4.136, it has been found that mean score of the subgroup who has attributed their efforts for their achieved score is higher than the mean score of the subgroup who has attributed their luck as the main cause for their achieved score. This shows that the students who put efforts for achieving their targets attach a high value to the importance and usefulness of learning the subject. This value makes the female students dedicated and committed to accomplishing the targets.

Table 4.138 shows that in ‘Self Efficacy for Learning and Performance’ the mean difference of the pairs, Ability-Luck, Study Habits-Luck, and Mood-Luck is found to be significant either at the 0.05 or 0.01 level of confidence. On analyzing the mean scores from the table 4.136, it has been found that mean score of the subgroup who has attributed ‘Ability’, ‘Study habits and ‘Mood’ is higher than the mean score of the subgroup attributed ‘Luck’ for their achieved score. This shows that the students who have perceived that their high ability and good study habits and good mood was responsible for their achieved score appraise their capability and confidence to perform that task, they are confident enough to learn the difficult material of the course, master the skills and receive excellent grades in the classroom as compared to the students who have attributed luck for their achieved score.

Table 4.138 shows that in ‘Rehearsal’ dimension, the mean difference of the pair, Mood- Study Habits is found to be significant at the 0.05 level of confidence. On analyzing the mean scores from the table 4.136, it has been found that mean score of the subgroup who has attributed ‘Study Habits’ is higher than the mean score of the subgroup who has attributed ‘Mood’ as the main cause for their achieved score. This shows that the students who have good study habits are more focused on learning the content by practising it again and again. They use this

strategy in order to memorize the simple tasks and trigger their working memory as compared to the students who attributed mood for their achieved score.

Table 4.138 shows that in 'Elaboration' dimension, the mean difference of the pair, Luck-Teacher's Help is found to be significant at the 0.05 level of confidence. On analyzing the mean scores from the table 4.136, it has been found that mean score of the subgroup who have attributed 'Teacher's Help' is higher than the mean score of the subgroup who has attributed 'Luck' as a major cause for their achieved score. This shows that the students who attributed teacher's help for their achieved score make good use of elaboration strategies than the students who just rely on luck for the performance.

From the above results it can be summarized that that internal, stable and controllable (i.e. study habits), internal, unstable and controllable (i.e. efforts) and internal, stable and uncontrollable (i.e. ability) influence the process of academic self-regulation of PG students more than external, unstable and uncontrollable attributions (i.e. luck), internal unstable and uncontrollable (mood). Among all, internal, stable and controllable (i.e. study habits) has been found the most powerful attribution influencing the overall academic self-regulation process of PG student.

DISCUSSION ON RESULTS

From the results, it has been found that internal, stable and controllable (i.e. study habits), internal, unstable and controllable (i.e. efforts) and internal, stable and uncontrollable (i.e. ability) showed significant influence on various dimensions of 'Self-Regulated Learning Strategies'. It means academic self-regulation of both UG and PG students is influenced by the pattern of causal reasoning. At both UG and PG level, the students who attributed study habits (i.e. internal, stable and controllable) for their achieved score are found to be more self-efficacious than the students attributed to luck (i.e. external, unstable and uncontrollable) cause. Meaning thereby, attributing the outcomes to the internal, stable and controllable cause enables the student to regulate his or her learning process. In contrast, the students who attribute external, unstable and uncontrollable cause like luck, would possibly think that exertion of efforts will become ineffective because they are

unable to have any control over the cause. The students attributing internal and controllable causes put active, thoughtful and effortful endeavours in order to get involved in the task for better understanding. They strategically plan their learning and make good use of organization strategies like grouping, clustering, outlining and organizing the main points from the gathered information, they often make good use of mind mapping technique. They often question themselves before getting convinced about the idea taught in the class and try to find good supporting pieces of evidence in order to accept any conclusion and assertion. They always plan, monitor and regulate their learning. If the course material is complex then they often change their learning strategy and if they get confused then instead of cramming, they go back and try to figure out the confusion and make good use of study and environment. Most importantly such students always collaborate with their peer group, discuss and debate with them order to clarify their doubts and reach insights one cannot attain on one's own, they often keep some time aside for doing discussion in the peer group in order to complete the tasks well on time. These students are more motivated to learn in a self-regulated process, they are able to choose and utilize a variety of learning strategies and know when, why, and how to use these approaches in an apt circumstance. Their positive motivation and good learning strategies not only help the self-regulated learner to succeed academically but enable them to view their futures optimistically.

The results of the present study enjoy support from the previous researches conducted by Malpass et al. (1999) and Perels et al. (2005, 2009) who reported that causal attributions of the students affect their self-regulated learning strategies. Further, Schunk, 1996, Shell and Husman, 2008, Dunn et al. (2012) reported the relationship between causal attribution and academic self-regulation. Schunk (1996) found that for effective self-regulation positive attributions are required and Shell and Husman (2008) reported significant correlations between self-regulated learning strategy use and attributions to effort, to ability, and to obtaining help from friends or teachers of undergraduate students. Likewise, Dunn et al. (2012) reported that collective causal attributions like effort, luck and ability of Pathophysiology students of nursing significantly affect their self-regulated learning. Where ability alone had a commanding influence on the self -regulated learning of the students.

4.17 SUMMARY OF INFLUENCE OF SELF EMOTIONAL MANAGEMENT ON SELF REGULATED LEARNING STRATEGIES AMONG HIGHER EDUCATION STUDENTS

To study the influence of ‘Self Emotional Management’ on ‘Self-Regulated Learning Strategies’ among UG and PG students; mean and standard deviation were calculated for different dimensions of ‘Self-Regulated Learning Strategies’ with respect to ‘Self Emotional Management’. For analyzing the variance of various dimensions of self-regulated learning strategies of UG and PG students with respect to ‘Self Emotional Management’, one-way ANOVA was used. The results came therein are presented below in following headings.

4.17.1 Summary of Influence of Self Emotional Management on Self Regulated Learning Strategies among UG Students

To study the influence of ‘Self Emotional Management’ on ‘Self-Regulated Learning Strategies’ among UG students; mean and standard deviation were calculated for different dimensions of ‘Self-Regulated Learning Strategies’ with respect to ‘Self Emotional Management’. The results came therein are presented in table 4.139. For analyzing the variance of various dimensions of self-regulated learning strategies of UG students with respect to ‘Self Emotional Management’, one-way ANOVA was used. The results came therein are presented in table 4.140.

Table 4.140 shows that the F-ratios for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’, ‘Test Anxiety’ dimensions, total score of ‘Motivation’, ‘Rehearsal’, ‘Elaboration’, ‘Organization’, ‘Critical Thinking’, ‘Metacognitive Self-Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’ dimensions and total score of ‘Learning Strategies’ and ‘Self-Regulated Learning Strategies’ are found to be 72.74, 91.99, 118.79, 45.44, 116.00, 3.05, 116.44, 82.29, 96.55, 98.92, 84.09, 94.99, 56.79, 13.22, 47.72, 45.18, 130.40 and 149.53 respectively, which are found to be significant either at 0.05 or 0.01 level of confidence.

Table 4.139: Means and SDs of Sub-Groups of Various Dimensions of Self Regulated Learning Strategies with respect to Self Emotional Management of UG Students

Dimension	IGO				EGO				TV				CLB			
SEM	High SEM	Avg. SEM	Low SEM	Total	High SEM	Avg. SEM	Low SEM	Total	High SEM	Avg. SEM	Low SEM	Total	High SEM	Avg. SEM	Low SEM	Total
N	316	282	266	864	316	282	266	864	316	282	266	864	316	282	266	864
M	5.67	5.22	4.57	5.18	5.75	5.45	4.53	5.28	5.64	5.22	4.35	5.11	5.47	5.25	4.63	5.14
σ	1.04	1.07	1.19	1.19	1.05	1.05	1.23	1.22	0.96	1.00	1.12	1.15	1.10	1.01	1.14	1.14
Dimension	SLEP				TA				Motivation				REH			
M	5.54	5.17	4.39	5.06	4.41	4.60	4.36	4.46	32.31	30.72	26.64	30.05	5.35	5.14	4.27	4.95
σ	0.88	0.89	0.99	1.03	1.33	1.14	1.13	1.21	4.19	4.50	5.00	5.13	1.05	1.02	1.09	1.15
Dimension	ELAB				ORG				CT				MSR			
M	5.46	5.10	4.31	4.99	5.61	5.10	4.35	5.06	5.33	4.91	4.24	14.48	5.09	4.75	4.24	4.72
σ	0.99	0.97	1.07	1.12	1.04	1.09	1.09	1.19	0.97	1.01	1.07	3.05	0.78	0.69	0.75	0.82
Dimension	TSE				ER				PL				HS			
M	4.66	4.44	4.04	4.40	4.44	4.24	4.04	4.25	5.26	4.91	4.26	4.84	5.00	4.76	4.26	4.70
σ	0.81	0.60	0.67	0.75	1.09	0.84	0.84	0.95	1.26	1.22	1.20	1.30	1.03	0.95	0.85	1.00
Dimension	Learning Strategies				Self-Regulated Learning Strategies											
M	45.93	43.12	37.80	42.51	78.23	73.84	64.43	72.55								
σ	6.27	5.80	6.19	6.95	9.42	9.38	10.38	11.26								

Table 4.140: Summary of One Way ANOVA of Various Dimensions of Self Regulated Learning Strategies with respect to Self Emotional Management of PG Students

Source	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total
Dimensions	IGO			EGO			TV			CLB			SELP		
SS	175.35	1037.76	1213.11	227.08	1062.76	1289.84	247.54	897.08	1144.63	107.11	1014.67	1121.77	196.19	728.09	924.27
DF	2	861	863	2	861	863	2	861	863	2	861	863	2	861	863
MSS	87.67	1.21		113.54	1.23		123.77	1.04		53.55	1.18		98.09	0.85	
F	72.74**			91.99**			118.79**			45.44**			116.00**		
Sig.	0.00			0.00			0.00			0.00			0.00		
Source	TA			Motivation			REH			ELAB			ORG		
SS	8.90	1257.00	1265.89	4829.70	17856.60	22686.30	182.53	954.87	1137.40	196.99	878.37	1075.37	227.54	990.21	1217.75
MSS	4.45	1.46		2414.85	20.74		91.26	1.11		98.50	1.02		113.77	1.15	
F	3.05*			116.44**			82.29**			96.55**			98.92**		
Sig.	0.05			0.00			0.00			0.00			0.00		

Contd. ...

Source	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total
Source	CT			MSR			TSE			ER			PL		
SS	173.54	888.48	1062.02	104.07	471.68	575.75	56.17	425.83	482.00	23.26	757.57	780.83	144.67	1305.07	1449.74
MSS	86.77	1.03		52.04	0.55		28.09	0.50		11.63	0.88		72.34	1.52	
F	84.09**			94.99**			56.79**			13.22**			47.72**		
Sig.	0.00			0.00			0.00			0.00			0.00		
	HS			Learning Strategies			Self-Regulated Learning Strategies								
SS	81.76	779.18	860.94	9686.75	31980.60	41667.35	28205.41	81206.45	109411.86						
MSS	40.88	0.91		4843.38	37.14		14102.71	94.32							
F	45.18**			130.40**			149.53**								
Sig.	0.00			0.00			0.00								

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

This shows that UG students with different level of self-emotional management differ significantly on different dimensions of 'Self-Regulated Learning Strategies'. Thus, the Hypothesis (18), "There is no significant influence of self-emotional management on self-regulated learning strategies among higher education students" is rejected for UG students. The result confirms that there is an influence of self-emotional management on the self-regulated learning strategies of higher education students.

To further analyze the significant differences between the groups, the Scheffe Post Hoc test was applied to different dimensions of 'Self-Regulated Learning Strategies'. The obtained results have been presented in the following table 4.141.

It is clear from the table 4.141 that for all dimensions of 'Self-Regulated Learning Strategies' except 'Test Anxiety', the mean difference of the pairs; High SEM- Low SEM and High SEM-Average SEM is found to be significant at the 0.01 level of confidence. On analyzing the mean score table 4.139, it has been found that in all of the dimensions of 'Self-Regulated Learning Strategies', the mean score of the subgroup with high self-emotional management is found to be higher than the subgroup with average and low self-emotional management. This indicates that students with high self-emotional management are self-efficacious as compared to students with average and low self-emotional management. The students who have high ability to manage their emotions are mainly motivated due to the intrinsic reasons such that their curiosity, urge of taking challenging study tasks and getting mastery over the content, they use deep information processing strategies like developing manifold examples of a single concept, along with intrinsic motivation, they are triggered by some external reasons as well, such as getting good scores, competition, getting rewards from the teachers and parents for the good performance.

Table 4.141: Summary of the Scheffe Post Hoc Test of Various Dimensions of ‘Self Regulated Learning Strategies with respect to Self Emotional Management of UG Students

Dimensions	(I) SEM Category	(J) SEM	Mean Difference (I-J)	Std. Error	Sig.	Dimensions	(I) SEM	(J) SEM	Mean Difference (I-J)	Std. Error	Sig.
Value component- intrinsic goal orientation	High SEM	Low SEM	1.10*	0.09	0.00	Cognitive and metacognitive strategies- Elaboration	High SEM	Low SEM	1.15*	0.08	0.00
		Average SEM	.45*	0.09	0.00			Average SEM	.36*	0.08	0.00
	Low SEM	Average SEM	-.65*	0.09	0.00		Low SEM	Average SEM	-.78*	0.09	0.00
Value component- extrinsic goal orientation	High SEM	Low SEM	1.21*	0.09	0.00	Cognitive and metacognitive strategies-Organization	High SEM	Low SEM	1.25*	0.09	0.00
		Average SEM	.29*	0.09	0.01			Average SEM	.50*	0.09	0.00
	Low SEM	Average SEM	-.92*	0.10	0.00		Low SEM	Average SEM	-.75*	0.09	0.00
Value component- Task value	High SEM	Low SEM	1.29*	0.08	0.00	Cognitive and metacognitive strategies- Critical thinking	High SEM	Low SEM	1.09*	0.08	0.00
		Average SEM	.42*	0.08	0.00			Average SEM	.41*	0.08	0.00
	Low SEM	Average SEM	-.87*	0.09	0.00		Low SEM	Average SEM	-.67*	0.09	0.00
Expectancy component- control of learning beliefs	High SEM	Low SEM	.84*	0.09	0.00	Cognitive and metacognitive strategies- Metacognitive self-regulation	High SEM	Low SEM	.84*	0.06	0.00
		Average SEM	.22*	0.09	0.04			Average SEM	.33*	0.06	0.00
	Low SEM	Average SEM	-.61*	0.09	0.00	Resource management strategies-Time and study environment	High SEM	Low SEM	.61*	0.06	0.00
Expectancy component- self efficacy for learning and performance	High SEM	Low SEM	1.15*	0.08	0.00	Resource management strategies- Effort regulation	High SEM	Low SEM	.40*	0.08	0.00
		Average SEM	.37*	0.08	0.00			Average SEM	.20*	0.08	0.03
	Low SEM	Average SEM	-.78*	0.08	0.00		Low SEM	Average SEM	-.20*	0.08	0.05

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Dimensions	(I) SEM Category	(J) SEM	Mean Difference (I-J)	Std. Error	Sig.	Dimensions	(I) SEM Category	(J) SEM	Mean Difference (I-J)	Std. Error	Sig.
Affective component-Test anxiety	High SEM	Low SEM	0.05	0.1	0.84	Resource management strategies-Peer learning	High SEM	Low SEM	.99**	0.1	0.00
		Average SEM	-0.18	0.1	0.18			Average SEM	.35**	0.1	0.00
	Low SEM	Average SEM	-0.24	0.1	0.06		Low SEM	Average SEM	-.64**	0.11	0.00
Motivation scales Total	High SEM	Low SEM	5.66**	0.38	0.00	Resource management strategies- Help seeking	High SEM	Low SEM	.74**	0.08	0.00
		Average SEM	1.59**	0.37	0.00			Average SEM	.24**	0.08	0.01
	Low SEM	Average SEM	-4.07**	0.39	0.00		Low SEM	Average SEM	-.50**	0.08	0.00
Cognitive and metacognitive strategies-Rehearsal	High SEM	Low SEM	1.07**	0.09	0.00	Learning Strategies	High SEM	Low SEM	8.12**	0.51	0.00
		Average SEM	0.2	0.09	0.06			Average SEM	2.80**	0.5	0.00
	Low SEM	Average SEM	-.86**	0.09	0.00	Self-Regulated Learning Strategies	High SEM	Low SEM	13.80**	0.81	0.00
					Average SEM			4.39**	0.8	0.00	
						Low SEM	Average SEM	-9.40**	0.83	0.00	

** Significant at 0.01 level of confidence

* Significant at 0.05 level of confidence

Apart from this, they value to the importance and usefulness of the task, have a firm belief in their efforts, appraise their capability to perform a task and hold optimistic approach that their hard work will definitely lead towards positive and successful outcomes. Such students are more focused on learning the content by practising it again and again, make good use of elaboration strategies like paraphrasing, summarizing, making internal connections between the items to be learned and new knowledge with the previous knowledge. They put active, thoughtful and effortful endeavours in order to get involved in the task for better understanding and always play around with their ideas in order to develop a convincing explanation of the content. Their emotional management skills enable them to control their effort and attention in the phase of distraction and monotonous tasks and show their commitment in accomplishing their tasks, they never give up on complexities rather they manage their efforts and attention in order to overcome the interruptions. Along with it, they always collaborate with their peer group, discuss and debate with them in order to clarify their doubts and reach insights. Their proactive qualities and self-motivating abilities distinguish them from their peers. The high self-emotional management skills not only help the self-regulated learner to succeed academically but enable them to view their futures optimistically.

Table 4.141 shows that the for all dimensions of ‘Self-Regulated Learning Strategies’ except ‘Test Anxiety’, the mean difference of the pair, Low SEM-Average SEM is found to be significant at the 0.01 level of confidence. On analyzing the mean scores from the table 4.139, it has been found that in all of the dimensions of ‘Self-Regulated Learning Strategies’, the mean score of the subgroup with average self-emotional management is found to be higher than the subgroup with low self-emotional management. This shows that students with average self-emotional management possess overall good learning strategies as compared to students with low self-emotional management. Such students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned and new knowledge with the previous knowledge in order to activate their long-term memory, plan their learning strategically, think critically, manage their time, efforts and attention in order to overcome the interruptions, collaborate with

their peer group in order to seek help. They are motivated to learn in a self-regulated process, able to choose and utilize a variety of learning strategies and know when, why, and how to use these approaches in an apt circumstance. Their proactive qualities and self-motivating abilities distinguish them from their peers. Such students voluntarily offer answers to questions in the classroom, seek out additional resources when needed to master the content, they are aware of their strengths and limitations and manipulate their learning environment in order to meet their needs.

4.17.2 Summary of Influence of Self Emotional Management on Self Regulated Learning Strategies among PG Students

To study the influence of ‘Self Emotional Management’ on ‘Self-Regulated Learning Strategies’ among PG students; mean and standard deviation were calculated for different dimensions of ‘Self-Regulated Learning Strategies’ with respect to ‘Self Emotional Management’. The results came therein are presented in table 4.142. For analyzing the variance of various dimensions self-regulated learning strategies of PG students with respect to ‘Self Emotional Management’, one-way ANOVA was used. The results came therein are presented in the table 4.143.

Table 4.143 shows that the F-ratio for ‘Test Anxiety’ came out to be 0.44, which is not found to be significant even at the 0.05 level of confidence. This shows that self-emotional management has no influence on the test anxiety of the students. Further, F-ratios for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’ dimensions, total score of ‘Motivation’, ‘Rehearsal’, ‘Elaboration’, ‘Organization’, ‘Critical Thinking’, ‘Metacognitive Self-Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’ dimensions and total score of ‘Learning Strategies’ and ‘Self-Regulated Learning Strategies’ are found to be 72.74, 91.99, 118.79, 45.44, 116.00, 3.05, 116.44, 82.29, 96.55, 98.92, 84.09, 94.99, 56.79, 13.22, 47.72, 45.18, 130.40 and 149.53 respectively, which are found to be significant either at 0.05 or 0.01 level of confidence. This shows that PG students with different level of self-emotional management differ significantly on different dimensions of ‘Self-Regulated Learning Strategies’.

Table 4.142: Means and SDs of Sub-Groups of various Dimensions of Self Regulated Learning Strategies with respect to Self Emotional Management of PG Students

SEM	High SEM	Avg. SEM	Low SEM	Total	High SEM	Avg. SEM	Low SEM	Total	High SEM	Avg. SEM	Low SEM	Total	High SEM	Avg. SEM	Low SEM	Total
Dimension	IGO				EGO				TV				CLB			
N	214	168	178	560	214	168	178	560	214	168	178	560	214	168	178	560
M	5.75	5.12	4.47	5.15	5.64	5.23	4.47	5.14	5.67	5.16	4.37	5.10	5.46	5.09	4.54	5.06
σ	0.99	1.17	1.17	1.23	1.11	1.04	1.15	1.20	0.88	0.96	1.14	1.13	1.07	1.06	1.18	1.17
Dimension	SLEP				TA				Motivation				REH			
M	5.58	5.06	4.33	5.03	4.36	4.29	4.24	4.30	32.24	29.75	26.19	29.57	5.44	4.88	4.22	4.88
σ	0.86	0.90	1.01	1.05	1.38	1.13	1.01	1.20	4.42	4.43	5.05	5.27	1.07	1.02	0.97	1.14
Dimension	ELAB				ORG				CT				MSR			
M	5.51	5.00	4.18	4.94	5.62	5.17	4.30	5.06	5.35	4.76	4.17	4.80	5.03	4.67	4.12	4.63
σ	0.89	0.89	0.89	1.05	0.99	1.06	1.00	1.16	0.93	0.96	0.93	1.06	0.67	0.71	0.72	0.80
Dimension	TSE				ER				PL				HS			
M	4.63	4.35	3.95	4.33	4.39	4.23	3.98	4.21	5.35	4.86	4.20	4.84	4.92	4.69	4.20	4.62
σ	0.68	0.68	0.64	0.72	0.94	0.89	0.81	0.90	1.12	1.07	1.18	1.22	0.86	0.99	0.89	0.96
Dimension	Learning Strategies				Self-Regulated Learning Strategies											
M	46.04	42.37	37.14	42.11	78.25	72.11	63.35	71.68								
σ	5.70	5.38	6.07	6.82	9.12	8.80	10.30	11.28								

Table 4.143: Summary of One Way ANOVA of Various Dimensions of Self Regulated Learning Strategies with respect to Self Emotional Management of PG Students

Source	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total
Dimensions	IGO			EGO			TV			CLB			SELP		
SS	159.81	680.29	840.10	134.92	676.44	811.36	166.58	551.66	718.24	81.67	679.74	761.41	150.97	469.23	620.21
DF	2	557	559	2	557	559	2	557	559	2	557	559	2	557	559
MSS	79.90	1.22		67.46	1.21		83.29	0.99		40.83	1.22		75.49	0.84	
F	65.42**			55.55**			84.10**			33.46**			89.61**		
Sig.	0.00			0.00			0.00			0.00			0.00		
Dimensions	TA			Motivation			REH			ELAB			ORG		
SS	1.26	798.02	799.28	3560.85	11956.57	15517.42	145.41	585.33	730.74	174.70	444.70	619.41	171.65	574.10	745.75
MSS	0.63	1.43		1780.43	21.47		72.71	1.05		87.35	0.80		85.82	1.03	
F	0.44			82.94**			69.19**			109.41**			83.27**		
Sig.	0.64			0.00			0.00			0.00			0.00		

Contd. ...

Source	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total	Between Groups	Within Groups	Total
Dimensions	CT			MSR			TSE			ER			PL		
SS	136.00	494.36	630.36	80.66	273.07	353.73	45.05	247.51	292.56	16.09	433.96	450.05	128.67	702.84	831.52
MSS	68.00	0.89		40.33	0.49		22.53	0.44		8.05	0.78		64.34	1.26	
F	76.62**			82.26**			50.69**			10.33**			50.99**		
Sig.	0.00			0.00			0.00			0.00			0.00		
	HS			Learning Strategies			Self-Regulated Learning Strategies								
SS	50.63	461.11	511.74	7713.65	18281.29	25994.94	21614.92	49453.93	71068.85						
MSS	25.32	0.83		3856.82	32.82		10807.46	88.79							
F	30.58**			117.51**			121.73**								
Sig.	0.00			0.00			0.00								

**significant at 0.01 level of confidence

Thus, the Hypothesis (18), “There is no significant influence of self-emotional management on self-regulated learning strategies among higher education students” is rejected for ‘Intrinsic Goal Orientation’, ‘Extrinsic Goal Orientation’, ‘Task Value’, ‘Control of Learning Beliefs’, ‘Self-Efficacy for Learning and Performance’ dimensions, total score of ‘Motivation’, ‘Rehearsal’, ‘Elaboration’, ‘Organization’, ‘Critical Thinking’, ‘Metacognitive Self-Regulation’, ‘Time and Study Environment’, ‘Effort Regulation’, ‘Peer Learning’, ‘Help-Seeking’ dimensions and total score of ‘Learning Strategies’ and ‘Self-Regulated Learning Strategies’.

To further analyze the significant differences between the groups, the Scheffe Post Hoc test was applied to different dimensions of ‘Self-Regulated Learning Strategies’. The obtained results have been presented in the following table 4.144.

It is clear from the table 4.144 for all dimensions of ‘Self-Regulated Learning Strategies’, the mean difference of the pairs, High Sem-Low SEM and High SEM-Average SEM is found to be significant at the 0.01 level of confidence. On analyzing the mean scores from the table 4.142, it has been found that in all of the dimensions of ‘Self-Regulated Learning Strategies’, the mean score of the subgroup with high self-emotional management is found to be higher than the subgroup with average and low self-emotional management. This indicates that students with high self-emotional management are self-efficacious as compared to students with average and low self-emotional management. The students who have high ability to manage their emotions are mainly motivated due to the intrinsic reasons such that their curiosity, urge of taking challenging study tasks and getting mastery over the content, they use deep information processing strategies like developing manifold examples of a single concept, along with intrinsic motivation, they are triggered by some external reasons as well, such as getting good scores, competition, getting rewards from the teachers and parents for the good performance.

Table 4.144: Summary of the Scheffe Post Hoc Test of Various Dimensions of ‘Self Regulated Learning Strategies with respect to Self Emotional Management of PG Students

Dependent Variable	(I) SEM Category	(J) SEM Category	Mean Difference (I-J)	SE	Sig.	Dependent Variable	(I) SEM Category	(J) SEM Category	Mean Difference (I-J)	SE	Sig.
Value component- intrinsic goal orientation	High SEM	Low SEM	1.28**	0.11	0.00	Cognitive and metacognitive strategies- Organization	High SEM	Low SEM	1.31**	0.10	0.00
		Average SEM	.62**	0.11	0.00			Average SEM	.45**	0.10	0.00
	Low SEM	Average SEM	-.65**	0.12	0.00		Low SEM	Average SEM	-.86**	0.11	0.00
Value component- extrinsic goal orientation	High SEM	Low SEM	1.17**	0.11	0.00	Cognitive and metacognitive strategies- Critical thinking	High SEM	Low SEM	1.18**	0.10	0.00
		Average SEM	.40**	0.11	0.00			Average SEM	.59**	0.10	0.00
	Low SEM	Average SEM	-.76**	0.12	0.00		Low SEM	Average SEM	-.58**	0.10	0.00
Value component- Task value	High SEM	Low SEM	1.30**	0.10	0.00	Cognitive and metacognitive strategies- Metacognitive self-regulation	High SEM	Low SEM	.90**	0.07	0.00
		Average SEM	.51**	0.10	0.00			Average SEM	.36**	0.07	0.00
	Low SEM	Average SEM	-.79**	0.11	0.00		Low SEM	Average SEM	-.54**	0.08	0.00
Expectancy component- control of learning beliefs	High SEM	Low SEM	.91**	0.11	0.00	Resource management strategies-Time and study environment	High SEM	Low SEM	.68**	0.07	0.00
		Average SEM	.37**	0.11	0.01			Average SEM	.28**	0.07	0.00
	Low SEM	Average SEM	-.54**	0.12	0.00		Low SEM	Average SEM	-.39**	0.07	0.00
Expectancy component- self efficacy for learning and performance	High SEM	Low SEM	1.24**	0.09	0.00	Resource management strategies- Effort regulation	High SEM	Low SEM	.40**	0.09	0.00
		Average SEM	.51**	0.09	0.00			Average SEM	0.155	0.09	0.24
	Low SEM	Average SEM	-.72**	0.10	0.00		Low SEM	Average SEM	-.25**	0.09	0.03

Contd. ...

Dependent Variable	(I) Emotional Mgt Category	(J) Emotional Mgt Category	Mean Difference (I-J)	SE	Sig.	Dependent Variable	(I) Emotional Mgt Category	(J) Emotional Mgt Category	Mean Difference (I-J)	SE	Sig.
Affective component-Test anxiety	High SEM	Low SEM	0.11	0.12	0.65	Resource management strategies-Peer learning	High SEM	Low SEM	1.15**	0.11	0.00
		Average SEM	0.06	0.12	0.86			Average SEM	.48**	0.12	0.00
	Low SEM	Average SEM	-0.04	0.13	0.95		Low SEM	Average SEM	-.66**	0.12	0.00
Motivation scales Total	High SEM	Low SEM	6.04**	0.47	0.00	Resource management strategies- Help seeking	High SEM	Low SEM	.71**	0.09	0.00
		Average SEM	2.48**	0.48	0.00			Average SEM	0.22	0.09	0.06
	Low SEM	Average SEM	-3.55**	0.50	0.00		Low SEM	Average SEM	-.48**	0.10	0.00
Cognitive and metacognitive strategies- Rehearsal	High SEM	Low SEM	1.22**	0.10	0.00	Learning Strategies	High SEM	Low SEM	8.90* ⁸	0.58	0.00
		Average SEM	.56**	0.11	0.00			Average SEM	3.67**	0.59	0.00
	Low SEM	Average SEM	-.66**	0.11	0.00		Low SEM	Average SEM	-5.22**	0.62	0.00
Cognitive and metacognitive strategies- Elaboration	High SEM	Low SEM	1.33**	0.09	0.00	Self-Regulated Learning Strategies	High SEM	Low SEM	14.89**	0.96	0.00
		Average SEM	.51**	0.09	0.00			Average SEM	6.13**	0.97	0.00
	Low SEM	Average SEM	-.82**	0.10	0.00		Low SEM	Average SEM	-8.75**	1.01	0.00

**significant at 0.01 level of confidence

Apart from this, the value to the importance and usefulness of the task, have a firm belief in their efforts, appraise their capability to perform a task and hold optimistic approach that their hard work will definitely lead towards positive and successful outcomes. Such students are more focused on learning the content by practising it again and again, make good use of elaboration strategies like paraphrasing, summarizing, making internal connections between the items to be learned and new knowledge with the previous knowledge. They put active, thoughtful and effortful endeavours in order to get involved in the task for better understanding and always play around with their ideas in order to develop a convincing explanation of the content. Their emotional management skills enable them to control their effort and attention in the phase of distraction and monotonous tasks and show their commitment in accomplishing their tasks, they never give up on complexities rather they manage their efforts and attention in order to overcome the interruptions. Along with it, they always collaborate with their peer group, discuss and debate with them in order to clarify their doubts and reach insights. Their proactive qualities and self-motivating abilities distinguish them from their peers. The high self-emotional management skills not only help the self-regulated learner to succeed academically but enable them to view their futures optimistically.

Table 4.144 shows that the for all dimensions of ‘Self-Regulated Learning Strategies’ except ‘Test Anxiety’, the mean difference of the pair, Low SEM-Average SEM is found to be significant at the 0.01 level of confidence. On analyzing the mean scores from the table 4.142, it has been found that in all of the dimensions of ‘Self-Regulated Learning Strategies’, the mean score of the subgroup with average self-emotional management scored higher than the subgroup with low self-emotional management. This shows that students with average self-emotional management possess overall good learning strategies as compared to students with low self-emotional management. Such students use rehearsal as a strategy in order to activate their working memory, elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned and new knowledge with the previous knowledge in order to activate their long-term memory, plan their learning strategically, think critically, manage their time, efforts and attention in order to overcome the interruptions, collaborate with their peer

group in order to seek help. They are motivated to learn in a self-regulated process, able to choose and utilize a variety of learning strategies and know when, why, and how to use these approaches in an apt circumstance. Their proactive qualities and self-motivating abilities distinguish them from their peers. Such students voluntarily offer answers to questions in the classroom, seek out additional resources when needed to master the content, they are aware of their strengths and limitations and manipulate their learning environment in order to meet their needs.

DISCUSSION ON RESULTS

It has been found from the results the self-emotional management has an influence on the motivation and learning strategies of both UG and PG level students. However, no influence of self-emotional management has been seen on 'Test Anxiety'. That in both UG and PG levels the students with high self-emotional management are found to possess overall good self-regulated learning strategies as compared to the students with average and low self-emotional management. On the other hand, students with average self-emotional management are self-regulated learners as compared to students with low self-emotional management. Hence, it is interpreted that the students with high self-emotional management of both UG and PG level are motivated to regulate their learning, have mastery over the content and get good grades in the class.

The high level of self-emotional management encourages them to have control over their academic performance, think critically and plan their leaning strategically and to reduce the test anxiety on or before the examination. Such students make good use rehearsal as a strategy in order to activate their working memory and elaboration strategies viz. paraphrasing, summarizing, making internal connections between the items to be learned and new knowledge with the previous knowledge in order to activate their long-term memory. Their emotional management skills enable them to control their effort and attention in the phase of distraction and monotonous tasks and show their commitment in accomplishing their tasks, they never give up on complexities rather they manage their efforts and attention in order to overcome the interruptions. Along with it, they always collaborate with their peer group, discuss and debate with them in order to clarify

their doubts and reach insights. Their proactive qualities and self-motivating abilities distinguish them from their peers. The high self-emotional management skills not only help the self-regulated learner to succeed academically but enable them to view their futures optimistically.

4.18 SUMMARY OF CORRELATION BETWEEN SELF REGULATED LEARNING STRATEGIES AND SELF-EMOTIONAL MANAGEMENT OF HIGHER EDUCATION STUDENTS

In order to find the correlation between self-regulated learning strategies and self-emotional management of higher education students, the Pearson product-moment coefficient of correlation between self-regulated learning strategies and self-emotional management of higher education students has been calculated and the results are presented in the table 4.145.

Table 4.145: Summary of Correlation between Self Regulated Learning Strategies and Self Emotional Management among UG Students

(N=1424)

Dimensions of Self-Regulated Learning Strategies	SEM
Motivation	0.485**
Learning Strategies	0.550**
Self-Regulated Learning Strategies	0.559**

**Significant at the 0.01 level of confidence

It is clear from the table 4.145 that the correlation between ‘Self Emotional Management’ and ‘Motivation’ (0.485**) came out positive and significant, which indicates that more an individual is able to manage their emotions, the more he will be motivated to regulate his learning. The result goes in line with the theoretical framework of previous researches done by Kuhl (1985) & Corno (2004) and Xu et al. (2013) who found that emotion management is positively related to monitoring motivation in the online learning environment.

In the same way, positive and significant correlation has been found between ‘Self Emotional Management’ and ‘Learning Strategies’ (0.550**), ‘Self-Regulated

Learning Strategies' (0.559**), which means that more an individual is able to manage their emotions, the more he will be able to use good learning strategies in order to regulate his learning and will be a self-regulated learner. Xu et al. (2013b) found that emotion management is positively related to help-seeking, in an online learning environment at both group level and individual level. Wosnitza and Volet (2005) documented that emotions played an important role in collaborative learning and help-seeking assist the learners in managing emotions. Likewise, in the study of Zembylas (2008) new adult learners reported that instructor and peer help was helpful in managing their emotions. On the other hand, Xu et al. (2014) found no relationship between help-seeking and emotion management in the Chinese sample. Thus, the Hypothesis (19), "There is no significant inter-relationship among Self-Regulated Learning Strategies and self-emotional management of higher education students" is rejected.

4.19 SUMMARY OF CORRELATION BETWEEN SELF-REGULATED LEARNING STRATEGIES AND CAUSAL ATTRIBUTION OF DIFFERENT UG PROGRAM AND SEMESTER

The correlation between self-regulated learning strategies and causal attribution of different programs and semesters of UG level has been calculated by using Pearson product-moment correlation for large sample and Spearman Rank Order correlation for the small sample and the results have been presented in the following headings.

4.19.1 Summary of Correlation between Self-Regulated Learning Strategies and Causal Attribution of Unsuccessful Students of different UG Programs

The correlation between self-regulated learning strategies and locus of causality dimension of causal attribution of unsuccessful students of different programs and semesters of UG level has been calculated by using Pearson product-moment correlation for large sample and Spearman Rank Order correlation for the small sample and the results have been presented in the table 4.146.

Table 4.146: Summary of Correlation between Self-Regulated Learning Strategies and Causal Attribution of Unsuccessful Students of Different UG Programs

	B. Com 2nd Sem (N=8)	B. Com 4th Sem (N=21)	B. Com 6th Sem (N=22)	B.Sc. 2nd Sem (N=42)	B.Sc. 4th Sem (N=24)	B.Sc. 6th Sem (N=29)	BBA 2nd Sem (N=26)	BBA 4th Sem (N=19)	BBA 6th Sem (N=27)	BCA 2nd Sem (N=26)	BCA 4th Sem (N=19)	BCA 6th Sem (N=27)
Correlation between 'Self Regulated Learning Strategies' and 'Locus of Causality'												
Motivation	0.022	0.211	-0.157	0.144	0.257	0.023	0.171	0.161	0.337	0.185	0.173	-0.178
Learning Strategies	-0.071	-.526*	-.423*	0.303	-0.128	-0.323	-0.234	0.3	0.375	-0.164	-0.022	0.048
Self-Regulated Learning Strategies	-0.042	-0.206	-0.389	0.251	-0.012	-0.188	-0.084	0.255	0.373	-0.011	0.067	-0.052
Correlation between 'Self Regulated Learning Strategies' and 'Stability'												
Motivation	-0.099	0.36	0.267	-0.167	-0.236	-0.325	-0.169	0.364	-0.376	-.611**	-0.07	-.671*
Learning Strategies	-0.32	-0.197	0.133	0.127	-0.254	-.613**	-0.143	0.38	-0.369	-0.352	0.062	-0.47
Self-Regulated Learning Strategies	-0.231	0.068	0.194	0.004	-0.272	-.520**	-0.159	0.383	-.383*	-.498*	0.018	-0.598

Contd. ...

	B. Com 2nd Sem (N=8)	B. Com 4th Sem (N=21)	B. Com 6th Sem (N=22)	B.Sc. 2nd Sem (N=42)	B.Sc. 4th Sem (N=24)	B.Sc. 6th Sem (N=29)	BBA 2nd Sem (N=26)	BBA 4th Sem (N=19)	BBA 6th Sem (N=27)	BCA 2nd Sem (N=26)	BCA 4th Sem (N=19)	BCA 6th Sem (N=27)
Correlation between 'Self Regulated Learning Strategies' and 'External Controllability'												
Motivation	0.085	0.033	-0.008	-0.141	-0.113	0.287	-0.02	0.382	-0.086	-.681**	-0.078	-0.344
Learning Strategies	-0.072	.521*	0.225	-0.155	-0.208	0.055	-0.245	0.218	-0.161	-.501*	-0.12	-0.216
Self-Regulated Learning Strategies	0.003	0.338	0.158	-0.16	-0.194	0.177	-0.175	0.289	-0.136	-.621**	-0.099	-0.293
Correlation between 'Self Regulated Learning Strategies' and 'Personal Controllability'												
Motivation	0.291	0.022	-0.183	.365*	0.21	-0.07	-0.079	0.308	0.373	0.099	0.177	0.06
Learning Strategies	0.313	-0.424	-0.035	0.182	0.195	-.379*	-0.16	.470*	0.369	-0.079	0.172	0.461
Self-Regulated Learning Strategies	0.31	-0.239	-0.111	0.287	0.215	-0.255	-0.136	0.418	.382*	0.004	0.198	0.311

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

It has been found from the table 4.146 that the correlation between ‘Locus of Causality’ and ‘Motivation’ and ‘Self-Regulated Learning Strategies’ has not been found significant even at the 0.05 level of confidence for unsuccessful students studying in different programs and semesters at UG level. Further, the correlation between ‘Locus of Causality’ and ‘Learning Strategies’ is not found to be significant among different subgroups of different programs and semesters, except for the groups of B.Com 4th semester (-.526*) and B.Com 6th semester (-.423*). Hence, it can be concluded that there exists no significant correlation between ‘Locus of Causality’ and ‘Learning Strategies’ but significant negative correlation exists between ‘Locus of Causality’ and ‘Learning Strategies’ for B.Com 4th and B.Com 6th semesters students. Thus, the Hypothesis (20 a), “There is no significant inter-relationship among self-regulated learning strategies and ‘Locus of Causality’ dimension causal attribution of unsuccessful higher education students” is rejected for ‘Learning Strategies’ for B. Com 4th and B. Com 6th semesters.

Further, the correlation between ‘Stability’ and ‘Motivation’ is not found to be significant among different subgroups of unsuccessful students of different programs and semesters, except for the groups of BCA 2nd semester (-611**) and BCA 6th semester (-671*). Likewise, the correlation between ‘Stability’ and ‘Learning Strategies’ is not found to be significant among different subgroups of different programs and semesters, except for the groups of B.Sc. 6th semester (-.613**). This indicates that the unsuccessful students who perceive stable causes for their failure are poor in using appropriate learning strategies for getting success. Additionally, the correlation between ‘Stability’ and ‘Self-Regulated Learning Strategies’ is not found to be significant among different subgroups of different programs and semesters, except for the groups of B.Sc. 6th semester (-.520**), BBA 6th semester (-.383*) and BCA 2nd semester (-498*). Thus, the Hypothesis (21.a), “There is no significant inter-relationship among self-regulated learning strategies and stability dimension of causal attribution of unsuccessful higher education students” is rejected for ‘Motivation’ (BCA 2nd and BCA 6th semesters), ‘Learning Strategies’ (B.Sc. 6th semester) and ‘Self-Regulated Learning Strategies’ (B.Sc. 6th, BBA 6th and BCA 6th semesters).

Table 4.146 shows that the correlation between ‘External Controllability’ and ‘Motivation’ is not found to be significant among different subgroups of different programs and semesters, except for the groups of BCA 2nd semester (-.681**). It shows that the more an individual perceives external control for their failure, the less he will be motivated to control and regulate his learning process and vice-versa. Further, the correlation between ‘External Controllability’ and ‘Learning Strategies’ has not been found significant among different subgroups of different programs and semesters studying in different programs and semesters except for the group of B. Com 4th semester (.521*) and BCA 2nd semester (-.501*). In the same way, the correlation between ‘External Controllability’ and ‘Self-Regulated Learning Strategies’ has not been found significant among different subgroups of different programs and semesters studying in different programs and semesters except for the group of BCA 2nd semester (-.621**). Thus, the Hypothesis (22.a), “There is no significant inter-relationship among self-regulated learning strategies and external controllability dimension of causal attribution of unsuccessful higher education students” is rejected for Motivation (BCA 2nd semester), Learning Strategies (B.Com 4th and BCA 2nd semester) and ‘Self-Regulated Learning Strategies’ (BCA 2nd semester).

Further, the table 4.146 shows that the correlation between ‘Personal Controllability’ and ‘Motivation’ is not found to be significant among different subgroups of different programs and semesters, except for the group of B.Sc. 2nd semester (.365*). Apart from this, the correlation between ‘Personal Controllability’ and ‘Learning Strategies’ is not found to be significant among different subgroups of different programs and semesters, except for the group of B. Sc 6th semester (-.379*) and BBA 4th semester (.470*). Likewise, the correlation between ‘Personal Controllability’ and ‘Self-Regulated Learning Strategies’ is not found to be significant among different subgroups of different programs and semesters, except for the group of BBA 6th semester (.382*). Thus, the Hypothesis (23.a), “There is no significant inter-relationship among self-regulated learning strategies and personal controllability dimension of causal attribution of unsuccessful higher education students” is rejected for Motivation (B.Sc. 2nd semester), Learning Strategies (B.Sc. 6th and BBA 4th semester), Self-Regulated Learning Strategies (BBA 6th semester).

4.19.2 Summary of Correlation between Self-Regulated Learning Strategies and Causal Attribution of Successful Students of different UG Programs

The correlation between self-regulated learning strategies and locus of causality dimension of causal attribution of successful students of different programs and semesters of UG level has been calculated by using Pearson product-moment correlation for large sample and Spearman Rank Order correlation for the small sample and the results have been presented in the table 4.147.

It has been found from the table 4.259 that the correlation between ‘Locus of Causality’ and ‘Motivation’ is not found to be significant among different subgroups of different programs and semesters, except for the groups of B.Com 2nd semester (.289*), B.Sc. 2nd semester (.407**), BBA 2nd semester (.637**), BCA 2nd semester (.532**), BCA 4th semester (.301*) and BCA 6th Semester (.309*).

The correlation between ‘Locus of Causality’ and ‘Learning Strategies’ is not found to be significant among different subgroups of different programs and semesters, except for the groups of B.Com 2nd semester (.353**), B.Com 6th semester (.436**), BBA 2nd semester (.438**), BCA 2nd semester (.605**) and BCA 6th semester (.275*). The correlation between ‘Locus of Causality’ and ‘Self-Regulated Learning Strategies’ is not found to be significant among different subgroups of different programs and semesters, except for the groups of B.Com 2nd semester (.347**), B.Com 6th semester (.369**), B.Sc. 2nd semester (.361*), BBA 2nd semester (.558**), BCA 2nd semester (.588**), BCA 4th semester (.280*) and BCA 6th semester (.301*). Thus, the Hypothesis (20.b), “There is no significant inter-relationship among self-regulated learning strategies and locus of causality dimension of causal attribution of successful higher education students” is rejected for Motivation (B.Com 2nd, B.Sc. 2nd, BBA 2nd, BCA 2nd, BCA 4th and BCA 6th semester), ‘Learning Strategies’ (B.Com 2nd, B.Com 6th, BBA 2nd, BCA 2nd and BCA 6th semester) and ‘Self-Regulated Learning Strategies’ (B.Com 2nd, B.Com 6th, B.Sc. 2nd, BBA 2nd, BCA 2nd, BCA 4th and BCA 6th semester).

Table 4.147: Summary of Correlation between Self-Regulated Learning Strategies and Causal Attribution of Successful Students of Different UG Programs

	B. Com 2nd Sem (N=58)	B. Com 4th Sem (N=59)	B. Com 6th Sem (N=61)	B.Sc. 2nd Sem (N=48)	B.Sc. 4th Sem (N=41)	B.Sc. 6th Sem (N=70)	BBA 2nd Sem (N=37)	BBA 4th Sem (N=32)	BBA 6th Sem (N=26)	BCA 2nd Sem (N=45)	BCA 4th Sem (N=56)	BCA 6th Sem (N=61)
Correlation between 'Self Regulated Learning Strategies' and 'Locus of Causality'												
Motivation	.289*	0.021	0.173	.407**	0.146	0.202	.637**	-0.024	0.176	.532**	.301*	.309*
Learning Strategies	.353**	0.129	.436**	0.274	0.151	0.119	.438**	0.168	0.307	.605**	0.231	.275*
Self-Regulated Learning Strategies	.347**	0.09	.369**	.361*	0.154	0.164	.558**	0.089	0.259	.588**	.280*	.301*
Correlation between 'Self Regulated Learning Strategies' and 'Stability'												
Motivation	.380**	.337**	0.219	.405**	.381*	0.134	.590**	0.091	.470*	.517**	.414**	.260*
Learning Strategies	.464**	.309*	.353**	.429**	.448**	0.062	.373*	0.014	0.338	.470**	.432**	.387**
Self-Regulated Learning Strategies	.449**	.352**	.332**	.450**	.454**	0.1	.499**	0.05	.430*	.509**	.454**	.344**

Contd. ...

	B. Com 2nd Sem (N=58)	B. Com 4th Sem (N=59)	B. Com 6th Sem (N=61)	B.Sc. 2nd Sem (N=48)	B.Sc. 4th Sem (N=41)	B.Sc. 6th Sem (N=70)	BBA 2nd Sem (N=37)	BBA 4th Sem (N=32)	BBA 6th Sem (N=26)	BCA 2nd Sem (N=45)	BCA 4th Sem (N=56)	BCA 6th Sem (N=61)
Correlation between 'Self Regulated Learning Strategies' and 'External Controllability'												
Motivation	0.099	.319*	0.076	-0.239	0.006	0.023	.365*	-0.027	0.37	0.248	0.255	-0.038
Learning Strategies	-0.067	0.185	-0.074	-0.131	-0.105	0.136	0.195	0.146	0.306	.370*	0.176	-0.108
Self-Regulated Learning Strategies	-0.006	.267*	-0.016	-0.189	-0.054	0.088	0.279	0.08	0.361	.317*	0.227	-0.083
Correlation between 'Self Regulated Learning Strategies' and 'Personal Controllability'												
Motivation	.381**	0.225	0.139	.414**	0.121	.257*	.510**	-0.075	0.177	.628**	.606**	.297*
Learning Strategies	.408**	0.219	.433**	0.235	0.214	0.173	.370*	0.145	0.259	.562**	.562**	.319*
Self-Regulated Learning Strategies	.417**	0.24	.351**	.338*	0.177	0.227	.461**	0.055	0.233	.614**	.625**	.320*

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

It is from the table 4.147 that the correlation between ‘Stability’ and ‘Motivation’ is not found to be significant among different subgroups of different programs and semesters, except for the groups of B.Com 2nd semester (.380**), B.Com 4th semester (.337*), B.Sc. 2nd semester (.405**), B.Sc. 4th semester (.381**), BBA 2nd semester (.590**), BBA 6th semester (.470*), BCA 2nd semester (.517**), BCA 4th semester (.414**) and BCA 6th semester (.260**). This shows that the students who attribute stable causes for their success are highly motivated to regulate their learning process. the correlation between ‘Stability’ and ‘Learning Strategies’ has not been found significant among different subgroups of different programs and semesters studying in different programs and semesters except for the groups of B.Com 2nd semester (.464**), B.Com 4th semester (.309*), B.Com 6th semester (.353**), B.Sc. 2nd semester (.429**), B.Sc. 4th semester (.448**), BBA 2nd semester (.373**), BCA 2nd semester (.470**), BCA 4th semester (.432**) and BCA 6th semester (.387**).

The correlation between ‘Stability’ and ‘Self-Regulated Learning Strategies’ has not been found to be significant among different subgroups of different programs and semesters except for the groups of B.Com 2nd semester (.449**), B.Com 4th semester (.352*), B.Com 6th semester (.332**), B.Sc. 2nd semester (.450**), B.Sc. 4th semester (.454**), BBA 2nd semester (.499**), BBA 6th semester (.430*), BCA 2nd semester (.509**), BCA 4th semester (.454**) and BCA 6th semester (.344**). This shows that successful students who attribute stable causes for their success are self-efficacious and are able to motivate themselves for controlling and regulating their learning process. Thus, the Hypothesis (21.b), “There is no significant inter-relationship among self-regulated learning strategies and stability dimension of causal attribution of successful higher education students” is rejected for Motivation (B.Com 2nd, B.Com 4th, B.Sc. 2nd, B.Sc. 4th, BBA 2nd, BBA 6th, BCA 2nd, BCA 4th & BCA 6th semester), Learning Strategies (B.Com 2nd, B.Com 4th, B.Com 6th, B.Sc. 2nd, B.Sc. 4th, BBA 2nd, BCA 2nd, BCA 4th & BCA 6th semester) and Self-Regulated Learning Strategies (B.Com 2nd, B.Com 4th, B.Com 6th, B.Sc. 2nd, B.Sc. 4th, BBA 2nd, BBA 6th, BCA 2nd, BCA 4th & BCA 6th semester).

Further, the correlation between ‘External Controllability’ and ‘Motivation’ is not found to be significant among different subgroups of different programs and semesters, except for the group of B. Com 4th semester (.319*). There exists a positive but weak correlation between ‘External Controllability’ and ‘Motivation’. Similarly, the correlation between ‘External Controllability’ and ‘Learning Strategies’ has not been found significant among the subgroups studying in different programs and semesters, except for the groups of BCA 2nd semester (.370*). Likewise, the correlation between ‘External Controllability’ and ‘Self-Regulated Learning Strategies’ has not been found significant among the subgroups studying in different programs and semesters, except for the groups of BCA 2nd semester (.317*). Thus, the Hypothesis (22.b), “There is no significant inter-relationship among self-regulated learning strategies and external controllability dimension of causal attribution of successful higher education students” is rejected for Motivation (B.Com 4th and BBA 2nd semester), Learning Strategies (BCA 2nd semester) and Self-Regulated Learning Strategies (B.Com 4th and BCA 2nd semester).

Table 4.147 shows that the correlation between ‘Personal Controllability’ and ‘Motivation’ is not found to be significant among different subgroups of different programs and semesters, except for the groups of B.Com 2nd semester (.381**), B.Sc. 2nd semester (.414**), B.Sc. 6th semester (.257*), BBA 2nd semester (.510**), BCA 2nd semester (.628**), BCA 4th semester (.606**) and BCA 6th semester (.297**). The positive correlation shows that more the successful students perceive personal control over their success, the more they will be motivated to regulate their learning. Further, the correlation between ‘Personal Controllability’ and ‘Learning Strategies’ is not found to be significant among different subgroups of different programs and semesters, except for the groups of B.Com 2nd semester (.408**), B.Com 6th semester (.433**), BBA 2nd semester (.370*), BCA 2nd semester (.562**), BCA 4th semester (.562**) and BCA 6th semester (.319*). Likewise, the correlation between ‘Personal Controllability’ and ‘Self-Regulated Learning Strategies’ is not found to be significant among different subgroups of different programs and semesters, except for the groups of B.Com 2nd semester (.417**), B.Com 6th semester (.351**), B.Sc. 2nd semester (.338*), BBA 2nd

semester (.461**), BCA 2nd semester (.614**), BCA 4th semester (.625**) and BCA 6th semester (.320*). The positive correlation is indicative of the fact that more the successful students perceive personal control over their success, the more they are motivated to regulate their learning and make good use of learning strategies. Thus, the Hypothesis (23.b), “There is no significant inter-relationship among self-regulated learning strategies and personal controllability dimension of causal attribution of successful higher education students” is rejected for Motivation (B.Com 2nd, B.Sc. 2nd, B.Sc. 6th, BBA 2nd, BCA 2nd, BCA 4th and BCA 6th semester), Learning Strategies (B.Com 2nd, B.Com 6th, BBA 2nd, BCA 2nd, BCA 4th and BCA 6th semester) and Self-Regulated Learning Strategies (B.Com 2nd, B.Com 6th, B.Sc. 2nd, BBA 2nd, BCA 2nd, BCA 4th and BCA 6th semester).

DISCUSSION ON RESULTS

The results of the present study found no relationship between self-regulated learning strategies and locus of causality of unsuccessful students of all the programs except B. Com 4th and B. Com 6th semesters. In these particular subgroups, negative and significant correlation came out. As a result, it can be interpreted that more the unsuccessful students perceive external locus of control (i.e. luck, task difficulty and teacher bias) for their failure, less they are motivated to regulate their learning process. These students heavily rely on external attributions. External attributions hinder the effective use of learning strategies in order to activate their working and long-term memory and make them unable to plan their learning strategically, think critically, manage their time, efforts and attention in order to overcome the interruptions. The external attributions corrode the sense of controllability and increase academic anxiety and make it difficult to study. This result confirms the need to design interventions for B. Com 4th and B. Com 6th semester student’s population in order to retrain them to change their external attribution to internal attribution, mainly effort attributions, which will enable them to use effective self-regulated learning strategies in order to get success.

Further, the results of the present research confirm the negative and significant relationship between stability, a dimension of causal attribution and

motivation of unsuccessful students of BCA 2nd and BCA 6th semester. Similarly, a negative correlation has been found between stability and learning strategies of B.Sc. 6th semester and again negative relationship between stability and Self-Regulated Learning Strategies of unsuccessful students of B.Sc. 6th, BBA 6th and BCA 6th semester. The negative correlation specifies that if the unsuccessful students attribute stable causes (low ability) for their failure then they are less motivated to use effective learning strategies and regulate their learning process. They have the belief that good performance in a task is highly determined by the inherent ability to perform that task. This ability attributions are destructive for the cognition and the behaviour and often lead to low self- esteem and lack of motivation as they have the notion that they do not have the ability to perform a task or get good marks in their particular subject. This belief makes them unable to choose and utilize a variety of learning strategies and knows. They never volunteer to give answers to questions in the classroom, hardly seek out additional resources for master the content, they are unaware of their strengths & limitations and unable to manage their time, efforts and attention in order to overcome the interruptions.

To add to this, the present results found a negative and significant correlation between external controllability, the dimension of causal attribution and motivation and total score of 'Self-Regulated Learning Strategies' of unsuccessful students of BCA 2nd semester. The negative correlation is indicating the fact that more the unsuccessful students of BCA 2nd semester perceive the external control (i.e. luck and other people) over their failure, less they are motivated to use effective learning strategies and show poor performance in exams.

Apart from this, the present research found a weak but positive and significant correlation between personal controllability, the dimension of causal attribution and motivation and total score of 'Self-Regulated Learning Strategies'. The positive correlation indicates that if unsuccessful students attribute personally controllable factors (i.e. efforts and mood) factors for their failure, they are more likely hoping that if they put more efforts and change their study habits then they can get success. However, the weak negative and significant relationship found between personal controllability and learning strategies of unsuccessful students.

Further, it has been revealed from the results that there is a positive correlation between locus of causality, stability, personal controllability, dimensions of causal attribution and self-regulated learning strategies of successful students of most of the UG programs and semesters and weak correlation has been found between external controllability and self-regulated learning strategies of students. The positive correlation indicates that more the successful students perceive internal, stable and personal controllable factors for their success, more they are able to regulate the process of learning. They have a firm belief in their innate abilities and efforts to get success in the exam. The successful students are more likely to view their academic success based on the innate ability, efforts and their good study habits for their success. They show strong endorsement on the effort attribution and are highly motivated to learn in a self-regulated process. They are motivated to learn through the self-regulated process and use a variety of learning strategies and understand the value of using these strategies in appropriate situations. They are aware of their strengths and weaknesses and manipulate their learning environment in order to meet their needs.

One of the phases of self-regulation is self-evaluation, in this particular phase the student attributes his or her success or failure. Causal attribution helps the learner to learn from his mistakes during the learning process and along with it enable him to reorganize the learning process in order to rectify his mistakes by making adjustments to his adopted learning strategies. Previous researches advocated positive correlation between internal locus of control and self-regulated learning strategies (Hansford, 1994; Hamid, 1994; Soleymannezhad and Shahrarai, 2002; Schunk, 1996; Shell and Husman, 2008). Ziegler et al. (2012) emphasized that the learner could be able to make the right kind of adjustment to his learning strategies if the first can make appropriate causal attributions. Leana-Tascilar (2016) found no correlation between causal attribution relating to failure and self-regulated learning strategies and found a positive and significant correlation between locus of causality, stability and personal controllability and Motivation & self-regulated learning skills. Soric (2009) reported that the students who are intrinsically motivated and feel autonomy rather than control of others attributed success to internal and controllable factors and found no relationship between regulatory styles

of learning and causal attribution, especially in a failure situation. Schunk (1996) reported that for effective use of self-regulated learning needs positive attributions. Dunn et al. (2012) found the partial correlation between effort attribution and self-regulated learning strategies and if one controls the effect of ability and luck then there was a negative correlation between effort attribution and academic self-regulation, apart from this luck showed no relationship with the use of self-regulated learning strategies. Apart from this, their study revealed that ability attributions have a positive and significant correlation with self-regulated learning strategies. Haynes et al. (2008) viewed that effort attribution is more closely associated with personal controllability. Likewise, Cokley et al. (2003) reported that efforts and the achieved scores were positively correlated with each other. However, Reardon (2011) documented that effort attributions (personally controllable) revealed a partial explanation for low scores and retention. Peterson and Buchanan (1995), Van Laar (2000) and Peterson et al. (2014) documented that ability attribution and low scores hampers the motivation of the learner and results in poor performance, guilt, depression and learned helplessness.

4.20 SUMMARY OF CORRELATION BETWEEN SELF REGULATED LEARNING STRATEGIES AND CAUSAL ATTRIBUTION OF DIFFERENT PG PROGRAMS

The correlation between self-regulated learning strategies and causal attribution of unsuccessful and successful higher education students of different PG programs has been calculated by using Pearson product-moment coefficient of correlation and the results have been presented in the following headings.

4.20.1 Summary of Correlation between Self Regulated Learning Strategies and Causal Attribution of Unsuccessful Students of different PG Programs

The correlation between self-regulated learning strategies and different dimensions of causal attribution of unsuccessful students of different PG programs has been calculated by using Pearson product-moment coefficient of correlation and the results have been presented in the table 4.148.

Table 4.148: Summary of Correlation between ‘Self Regulated Learning Strategies’ and ‘Causal Attribution’ of Successful and Unsuccessful of Different PG Programs

	M.Com 2nd Sem	M.Sc. 2nd Sem	MBA 2nd Sem	MCA 2nd Sem	M.Com 2nd Sem	M.Sc. 2nd Sem	MBA 2nd Sem	MCA 2nd Sem
Correlation between ‘Self Regulated Learning Strategies’ and 'Locus of Causality'								
	Unsuccessful Students				Successful Students			
Motivation	0.352	0.294	.371*	0.228	0.047	.363**	.392**	.568**
Learning Strategies	0.191	-0.063	0.083	0.146	0.142	.387**	.330**	.549**
Self-Regulated Learning Strategies	0.331	0.102	0.215	0.186	0.109	.436**	.375**	.587**
Correlation between ‘Self Regulated Learning Strategies’ and 'Stability'								
	Unsuccessful Students				Successful Students			
Motivation	0.495	-0.133	0.16	0.223	0.1	.222*	.257**	.702**
Learning Strategies	0.307	0.061	0.327	0.292	.243*	.294**	.275**	.677**
Self-Regulated Learning Strategies	0.488	-0.029	0.282	0.266	0.195	.306**	.282**	.725**

Contd. ...

	M.Com 2nd Sem	M.Sc. 2nd Sem	MBA 2nd Sem	MCA 2nd Sem	M.Com 2nd Sem	M.Sc. 2nd Sem	MBA 2nd Sem	MCA 2nd Sem
Correlation between 'Self Regulated Learning Strategies' and 'External Controllability'								
	Unsuccessful Students				Successful Students			
Motivation	0.296	0.04	0.166	0.082	-0.032	0.018	-0.041	0.057
Learning Strategies	0.116	0.222	-.408*	0.378	-0.022	0.06	-.193*	0.058
Self-Regulated Learning Strategies	0.25	0.158	-.340*	0.252	-0.024	0.051	-0.134	0.065
Correlation between 'Self Regulated Learning Strategies' and 'Personal Controllability'								
	Unsuccessful Students				Successful Students			
Motivation	0.337	.406**	.615**	.488**	-0.058	.328**	.381**	.639**
Learning Strategies	0.227	0.115	.402*	.511**	0.025	.301**	.325**	.593**
Self-Regulated Learning Strategies	0.346	0.269	.527**	.521**	-0.016	.357**	.366**	.646**

*significant at 0.05 level of confidence

**significant at 0.01 level of confidence

It has been found from the table 4.148 that the correlation between 'Locus of Causality' and 'Motivation' is not found to be significant among different subgroups of unsuccessful students of different PG programs except for the subgroup of MBA 2nd semester (.371*). Further, the correlation between 'Locus of Causality' and 'Learning Strategies' and 'Self-Regulated Learning Strategies' has not been found significant even at the 0.05 level of confidence for unsuccessful students studying in different programs. Thus, the Hypothesis (20.a), "There is no significant inter-relationship among self-regulated learning strategies and locus of causality dimension of causal attribution of unsuccessful higher education students" is rejected for Motivation (MBA 2nd semester) only.

It has been found from the table 4.148 that the correlation between 'Stability' and 'Motivation', 'Learning Strategies' and 'Self-Regulated Learning Strategies' has not been found significant even at the 0.05 level of confidence for unsuccessful students studying in different programs and semesters. Thus, the Hypothesis (21.a), "There is no significant inter-relationship among self-regulated learning strategies and stability dimension of causal attribution of unsuccessful higher education students" is not rejected.

It has been found from the table 4.148 that the correlation between 'External Controllability' and 'Motivation' has not been found significant even at the 0.05 level of confidence for unsuccessful students studying in different programs and semesters. However, the and 'Learning Strategies' is not found to be significant among different subgroups of different programs and semesters, except for the group of MBA 2nd semester (-.408*). This shows that the unsuccessful students who perceive external control over their failure are not able to make good use of learning strategies. It has been found from the table 4.148 that the correlation between 'External Controllability' and 'Self-Regulated Learning Strategies' is not found to be significant among different subgroups of different programs and semesters, except for the group of MBA 2nd semester (-.408*). The negative correlation indicates that more the unsuccessful students perceive external control, the less motivated they are for regulating their learning process. Thus, the Hypothesis (22.a), "There is no significant inter-relationship among self-regulated learning strategies and external controllability dimension of causal attribution of unsuccessful higher

education students” is rejected for Learning Strategies (MBA 2nd semester), Self-Regulated Learning Strategies (MBA 2nd semester).

It has been found from the table 4.148 that the correlation between ‘Personal Controllability’ and ‘Motivation’ is not found to be significant among different subgroups of different programs, except for the group of M.Sc. 2nd semester (.406**) and MBA 2nd semester (.615**) and MCA 2nd semester (.488**). Further, the correlation between ‘Personal Controllability’ and ‘Learning Strategies’ is not found to be significant among different subgroups of different programs, except for the groups of MBA 2nd semester (.402*) and MCA 2nd semester (.511**). Likewise, the correlation between ‘Personal Controllability’ and ‘Self-Regulated Learning Strategies’ is not found to be significant among different subgroups of different programs, except for the groups of MBA 2nd semester (.527*) and MCA 2nd semester (.521**). Thus, the Hypothesis (23.a), “There is no significant inter-relationship among self-regulated learning strategies and personal controllability dimension of causal attribution of unsuccessful higher education students” is rejected for Motivation (M.Sc. 2nd, MBA 2nd and MCA 2nd semester), Learning Strategies (MBA 2nd and MCA 2nd semester), Self-Regulated Learning Strategies (MBA 2nd and MCA 2nd semester).

4.20.2 Summary of Correlation between Self Regulated Learning Strategies and Causal Attribution of Successful Students of different PG Programs

The correlation between self-regulated learning strategies and different dimensions of causal attribution of successful students of different PG programs has been calculated by using Pearson product-moment coefficient of correlation and the results have been presented in the table 4.148.

It has been found from the table 4.148 that the correlation between ‘Locus of Causality’ and ‘Motivation’ is not found to be significant for successful students studying in different programs and semesters, except for the groups of M.Sc. 2nd semester (.363**), MBA 2nd semester (.392**) and MCA 2nd semester (.568**). The positive correlation shows that more the successful students perceive internal locus of control, the more they are motivated to regulate their learning. The correlation

between ‘Locus of Causality’ and ‘Learning Strategies’ is not found to be significant for successful students studying in different programs and semesters, except for the groups of M.Sc. 2nd semester (.387**), MBA 2nd semester (.330*) and MCA 2nd semester (.249**). The correlation between ‘Motivation & Locus of Causality’ and ‘Learning Strategies’ is not found to be significant for successful students studying in different programs and semesters, except for the groups of M.Sc. 2nd semester (.436**), MBA 2nd semester (.375*) and MCA 2nd semester (.587**). This indicates that more the successful students perceive internal locus of control, the more they are self-efficacious and motivated to learn in a self-regulated process, they utilize a variety of learning strategies and know, when, why, and how to use these approaches in an apt circumstance. Their proactive qualities and self-motivating abilities distinguish them from their peers. Thus, the Hypothesis (20.b), “There is no significant inter-relationship among self-regulated learning strategies and locus of causality dimension of causal attribution of successful higher education students” is rejected for ‘Motivation’ (M.Sc. 2nd, MBA 2nd and MCA 2nd semester), Learning Strategies (M.Sc. 2nd, MBA 2nd, MCA 2nd semester) and Self-Regulated Learning Strategies (M.Sc. 2nd, MBA 2nd, MCA 2nd semester).

It has been found from the table 4.148 that the correlation between ‘Stability’ and ‘Motivation’ is not found to be significant for successful students studying in different programs and semesters, except for the groups of M.Sc. 2nd semester (.222**), MBA 2nd semester (.257**) and MCA 2nd semester (.702**). Further, and ‘Learning Strategies’ is found to be significant for successful students studying M. Com 2nd semester (.243*), M.Sc. 2nd semester (.294*), MBA 2nd semester (.275*) and MCA 2nd semester (.677**). The correlation between ‘Locus of Causality’ and ‘Self-Regulated Learning Strategies’ is not found to be significant for successful students studying in different programs and semesters, except for the groups of M.Sc. 2nd semester (.306**), MBA 2nd semester (.282*) and MCA 2nd semester (.725**). This shows that more the successful students perceive stable causes for their success, more they self-efficacious and motivated to learn in a self-regulated process, they are able to choose and utilize a variety of learning strategies and know why, when and how to use these approaches in an apt circumstance. Thus, the Hypothesis (21.b), “There is no significant inter-relationship among self-regulated

learning strategies and stability dimension of causal attribution of successful higher education students” is rejected for Motivation (M.Sc. 2nd, MBA 2nd, MCA 2nd semester), Learning Strategies (M.Com 2nd, M.Sc. 2nd, MBA 2nd, MCA 2nd semester) and Self-Regulated Learning Strategies (M.Sc. 2nd, MBA 2nd, MCA 2nd semester).

It has been found from the table 4.148 that the correlation between ‘External Controllability’ and ‘Motivation’ and ‘Self-Regulated Learning Strategies’ has not been found significant even at the 0.05 level of confidence for successful students studying in different programs and semesters. Further, the correlation between ‘External Controllability’ and ‘Learning Strategies’ is not found to be significant among different subgroups of different programs and semesters, except for the group of MBA 2nd semester (-.193*). The negative correlation indicates that more the successful students perceive external control, the less they are able to use adaptive learning strategies. Thus, the Hypothesis (22.b), “There is no significant inter-relationship among self-regulated learning strategies and external controllability dimension of causal attribution of successful higher education students” is rejected for Learning Strategies (MBA 2nd semester).

It has been found from the table 4.148 that the correlation between ‘Personal Controllability’ and ‘Motivation’ is not found to be significant among different subgroups of different programs, except for the group of M.Sc. 2nd semester (.328*), MBA 2nd semester (.381**) and MCA 2nd semester (.639**). The positive correlation indicates that more successful students perceive personal control over their success, the more they are motivated to regulate their learning process. Further, the correlation between ‘Personal Controllability’ and ‘Learning Strategies’ is not found to be significant among different subgroups of different programs, except for the groups of M.Sc. 2nd semester (.301**), MBA 2nd semester (.325**) and MCA 2nd semester (.593**). The positive correlation indicates that more successful students perceive personal control over their success, the more they use adaptive learning strategies. The correlation between ‘Personal Controllability’ and ‘Self-Regulated Learning Strategies’ is not found to be significant among different subgroups of different programs, except for the groups of M.Sc. 2nd semester (.357**), MBA 2nd semester (.366**) and MCA 2nd semester (.646**). Thus, the Hypothesis (23.b), “There is no significant inter-relationship among self-regulated learning strategies

and personal controllability dimension of causal attribution of successful higher education students” is rejected for Motivation (M.Sc. 2nd, MBA 2nd and MCA 2nd semester), Learning Strategies (M.Sc. 2nd, MBA 2nd and MCA 2nd semester), Self-Regulated Learning Strategies (M.Sc. 2nd, MBA 2nd and MCA 2nd semester). The positive correlation indicates that more the successful students perceive personal control over their success, the more they are self-efficacious and motivated to learn in a self-regulated process, they are able to choose a variety of learning strategies and know when, why, and how to use these approaches in an apt circumstance.

DISCUSSION ON RESULTS

The significant and positive correlation has been seen between locus of causality & motivation of unsuccessful students of MBA 2nd semester and motivation & personal controllability of unsuccessful students of M.Sc., MBA and MCA 2nd semester came out significant. This shows that more the unsuccessful students perceive the internal and personal control for their failure more they are motivated to improve their score and hopeful to get success. If the unsuccessful students blame themselves for getting a failure (e.g. lack of efforts) then they are more motivated to do more hard work in order to get succeed in the task. Apart from this, a negative correlation has been seen between learning strategies and external controllability, Self-Regulated Learning Strategies and external controllability of unsuccessful students of MBA 2nd semester. This indicates that more the unsuccessful students of MBA 2nd semester perceive the external control (e.g. blaming to luck, difficult task and teacher) for their failure, less they are motivated to learn in a self-regulated process, unable to choose and utilize a variety of learning strategies and they are not aware of their learning strengths and weaknesses.

It has been revealed from the results that ‘self-regulated learning strategies’ and ‘locus of causality’ ‘stability’ and ‘personal controllability’ dimensions of causal attribution bear a significant and positive relationship with each other for successful students of M.Sc. 2nd, MBA 2nd and MCA 2nd semester. However, a negative correlation has been found between ‘self-regulated learning strategies’ and ‘external controllability’ dimension of causal attribution. This is clearly indicating the fact that more the successful students perceive internal, stable and personal

controllable factors over their success, more they are able to regulate their learning process. They are motivated to learn through the self-regulated process and use a variety of learning strategies and understand the value of using these strategies in appropriate situations. They voluntarily offer answers to questions in the classroom, seek out additional resources when needed to master the content, they are aware of their strengths and weaknesses and manipulate their learning environment in order to meet their needs. Positive motivation and good learning strategies not only help the self-regulated learner to succeed academically and they give more weight age to their efforts, ability, hard work and study habits for their success. Previous researches advocated positive relationship between internal locus of control and self-regulated learning strategies (Hansford, 1994; Hamid, 1994; Soleymannezhad and Shaharrai, 2002; Schunk, 1996; Shell and Husman, 2008). Ziegler et al. (2012) emphasized that the learner could be able to make the right kind of adjustments to his learning strategies if he first can make appropriate causal attributions.

Leana-Tascilar (2016), who found no correlation between causal attribution relating to failure and self-regulated learning strategies and found a positive and significant correlation between locus of causality, stability and personal controllability and Motivation & self-regulated learning skills. Soric (2009) reported that the students who are intrinsically motivated and feel autonomy rather than control of others attributed success to internal and controllable factors and found no relationship between regulatory styles of learning and causal attribution, especially in a failure situation. Schunk (1996) reported that for effective use of self-regulated learning needs positive attributions. Dunn et al. (2012) found a partial correlation between effort attribution and self-regulated learning strategies and if one controls the effect of ability and luck then there is a negative correlation between effort attribution and academic self-regulation and luck has no relationship with the use of self-regulated learning strategies. Apart from this, their study revealed that ability attributions have a positive and significant correlation with self-regulated learning strategies. Haynes et al. (2008) viewed that effort attribution is more closely associated with personal controllability. Likewise, Cokley et al. (2003) reported that efforts and the achieved scores were positively correlated with each other.

CHAPTER – 5

CONCLUSIONS, LIMITATIONS, RECOMMENDATIONS, SUGGESTIONS FOR FUTURE RESEARCH AND EDUCATIONAL IMPLICATIONS

5.1 CONCLUSIONS

The conclusions of the present study have been presented as objective wise as follows:

Objective 1: To identify the causal attribution of higher education students of different program w.r.t successfulness.

At UG Level

- a) It has been found that majority of the students who perceived themselves as unsuccessful attributed their failure to efforts followed by luck, ability, task difficulty, mood, study habits, help from teacher and instructor bias.
- b) The students who perceived themselves as successful attributed their success to study habits followed by help from the teacher, efforts, ability, luck, task difficulty and mood.

At PG Level

- c) It has been found that majority of the students who perceived themselves as unsuccessful attributed their failure to efforts followed by ability, the difficulty of the task, mood, luck, study habits, instructor bias and help from the teacher.
- d) The students who perceived themselves as successful attributed their success to their study habits followed by efforts, help from teachers, luck, ability, the difficulty of the task, mood and instructor bias.

Objective 2: To identify the level of self-emotional management of higher education students w.r.t program and semester

- a) It has been found that the percentage of students with high self-emotional management is higher at PG level as compared to UG level.
- b) In B.Com program, the maximum number of students of the 6th semester was found to possess a high level of self-emotional management as compared to the students of 2nd and 4th semesters.
- c) In B.Sc., BBA, BCA programs, 4th semester students were found to possess high self-emotional management as compared to the students of 2nd and 6th semesters.
- d) In the case of UG programs, B.Sc. program was found to have the maximum number of students with high self-emotional management followed by B.Com, BCA and BBA programs.
- e) In the case of PG programs, the MBA program was found to have the maximum number of students with high self-emotional management followed by M.Sc., M. Com and MCA programs.

Objective 3: To study the relationship of successful and unsuccessful student's causal attributions to exam scores studying in different semesters of different programs.

At UG Level

- a) The results revealed a significant relationship between of successful and unsuccessful student's causal attributions to exam score studying in different semesters of different UG programs.
- b) In case of successful students, it has been found that majority of the successful students studying in different UG programs and semesters attributed their success to their study habits (internal-stable-controllable), with exception of BBA 4th semester students who reported favouritism by the teacher (external-stable-controllable) as a cause for their success.
- c) In case of unsuccessful students, it has been found that majority of the unsuccessful students of B. Com 2nd, B.Sc. 2nd, B.Sc.4th, BBA 2nd, BBA 4th, BBA 6th and BCA 4th semesters reported 'Effort' attribution (internal-unstable-controllable). While in case of B.Sc. 2nd, BBA 2nd, BCA 2nd and BCA 6th semester unsuccessful students reported 'Ability' attribution

(internal-stable-uncontrollable). Further, in the case of B.Com 6th and B.Sc. 6th semester, unsuccessful students reported 'Luck' attribution (external-unstable-uncontrollable).

At PG Level

- d) The results revealed a significant relationship between successful and unsuccessful student's causal attributions to exam score studying in different PG programs.
- e) On comparing the responses of different PG programs viz. M. Com, M.Sc. (Chemistry), MBA and MCA, it has been found that majority of the successful students attributed 'Study Habits' (internal-stable-controllable) as a major cause for their success.
- f) The majority of unsuccessful students cited 'Effort' attribution (internal-unstable-controllable) for their failure.

Objective 4: To study the significant differences in causal attribution, self-regulated learning strategies & self-emotional management of higher education students w.r.t Gender and Successfulness.

The objective has been analysed variable wise for the students studying at UG and PG level separately.

Causal Attribution

At UG Level

Gender

- a) **Stability:** The male students of B.Com 2nd and BCA 2nd semester attributed stable causes for their achieved score more than their female student counterparts.
- b) **External controllability:** The male students of BCA 2nd semester has been found to attribute their achieved score to externally controllable causes more than their female student counterparts.

Successfulness

- a) Locus of Causality: The students who perceived their achieved score as successful attributed internal causes more than the students who perceived their achieved score as unsuccessful (B. Com 4th, B. Com 6th, B. Sc. 2nd, B. Sc. 4th semester). Whereas, in the case of BBA 2nd and BBA 4th semester, the successful students attributed internal and unsuccessful students attributed external factors for their achieved score.
- b) Stability: The students who perceived their achieved score as successful attributed stable causes whereas, the students who perceived their score as unsuccessful attributed unstable causes among all of the programs and semesters except BBA 4th semester.
- c) External Controllability: The students of B.Com 2nd, B.Sc. 2nd, BBA 2nd, BCA 2nd and B.Sc. 6th semester, who perceived their achieved score as successful attributed externally controllable causes for their achieved score more than the students who perceived their score as unsuccessful.
- d) Personal Controllability: The students of B.Com 4th, B.Com 6th, B.Sc. 2nd, BBA 2nd, BBA 4th and BBA 6th semester, who perceived their achieved score as successful attributed personally controllable causes more than the students who perceived their score unsuccessful.

Interaction effect (Gender * Successfulness)

- a) Locus of Causality: The subgroup of successful females of BBA 2nd semester, attributed internal causes for their achieved score more than the subgroup of successful males, unsuccessful males and unsuccessful females. Further, the subgroup of successful males and unsuccessful males has been found to attribute internal causes whereas, the subgroup of unsuccessful females attributed external causes for their achieved score.
- b) Stability: The subgroup of successful females of BBA 2nd semester attributed stable causes more than successful and unsuccessful students whereas, the unsuccessful female students attributed unstable causes for their achieved score. Further, both successful and unsuccessful male students attributed stable causes whereas, the unsuccessful female students attributed unstable

causes for their achieved scores. In the case of B.Com 2nd semester, the successful female, successful male and unsuccessful male students perceived stable causes for their achieved score whereas, the unsuccessful female students attributed unstable causes for their achieved score.

- c) External Controllability: The subgroup of successful female, successful and unsuccessful male students of BBA 2nd semester attributed externally controllable causes while unsuccessful female students attributed externally uncontrollable causes for their achieved score.
- d) Personal Controllability: In case of B.Com 2nd semester, the successful female students were more inclined towards attributing personally controllable factors than unsuccessful male students for their achieved score. In the case of BBA 2nd semester, the successful female students attributed personally controllable factors more than unsuccessful and successful male students while unsuccessful female students attributed personally uncontrollable causes for their achieved score.

At PG Level

Gender

- a) Locus of Causality: The female students of M.Sc. 2nd semester attributed internal causes for their achieved score more than their male student counterparts.
- b) External Controllability: The male students of MBA 2nd semester attributed externally uncontrollable causes for their achieved score more than their female student counterparts.

Successfulness

- a) Locus of Causality: The students of M.Sc. (Chemistry), MBA and MCA 2nd semester, who perceived their score as successful attributed internal causes for their achieved score more than the students who perceived their achieved score as unsuccessful.
- b) Stability: The students of M.Sc. (Chemistry), MBA and MCA 2nd semester, who perceived their score as successful attributed stable causes for their

achieved score whereas, the students who perceived their achieved score as unsuccessful attributed unstable factors for their achieved score.

- c) External Controllability: The students of MCA 2nd semester, who perceived their score as successful attributed externally uncontrollable causes more than the students who perceived their achieved score as unsuccessful.
- d) Personal Controllability: The students of M.Sc. (Chemistry), MBA and MCA 2nd semester, who perceived their score as successful attributed personally controllable factors for their achieved score more than the students who perceived their achieved score as unsuccessful.

Self-Regulated Learning Strategies

At UG Level

Gender

- a) The female students of B. Com 2nd, B.Sc. 4th and B.Sc. 6th, BBA 2nd, BBA 4th and BBA 6th semesters are found to be more self-regulated as compared to male students.
- b) In B.Sc. 2nd and B. Com 4th semester, the female students are found to be more inclined to seek help from others as compared to their male counterparts.
- c) In BCA 2nd and B. Com 6th semester, the female students were found to have a high level of extrinsic goal orientation as compared to their male counterparts.
- d) In BCA 2nd semester, the female students were found to possess a high level of control of learning beliefs and motivation as compared to male students.
- e) In the case of BCA 6th semester, the female students were found to possess high self-efficacy for learning and performance and showed more involvement in peer learning as compared to male students.

Successfulness

- a) In B.Com 4th, B. Com 6th, B. Sc. 2nd, BBA 4th and BBA 6th semester, the successful students are found to be highly motivated to regulate their learning process and make good use of learning strategies as compared to unsuccessful students.

- b) In B.Com 2nd semester, unsuccessful students scored higher on effort regulation as compared to successful students.
- c) In B.Sc. 4th semester, successful students outperformed unsuccessful students in managing time and study environment.
- d) In B.Sc. 6th semester, successful students have been found to possess high task value and they make good use of learning strategies as compared to unsuccessful students

Interaction Effect (Gender * Successfulness)

- a) **In the case of B.Com 2nd semester**
 - i) The subgroup of successful females found to have high motivation level and they make good use of learning strategies as compared to the subgroup of unsuccessful males.
 - ii) The subgroup of unsuccessful females is found to score higher on ‘Motivation’ and ‘Learning Strategies’ than the subgroup of successful females, successful males and unsuccessful males.
- b) **In the case of B.Sc. 2nd semester**
 - i) The subgroup of successful females scored higher on ‘Rehearsal’, ‘Peer Learning’ and ‘Help-Seeking’ dimensions as compared to the subgroup of unsuccessful males.
 - ii) The subgroup of successful males is found to score higher on ‘Rehearsal’ and ‘Peer Learning’ dimensions as compared to the subgroup of unsuccessful males.
 - iii) The subgroup of unsuccessful females is found score higher on ‘Rehearsal’ and ‘Peer Learning’ dimensions as compared to the subgroup of unsuccessful males.
- c) **In the case of BCA 2nd semester**
 - i) The subgroup of unsuccessful females found to possess a high level of ‘Intrinsic Goal Orientation’ and ‘Control of Learning Beliefs’ as compared to the subgroup of successful males and unsuccessful males.

d) **In the case of B.Com 4th semester**

- i) The subgroup of successful females scored higher on 'Rehearsal', 'Peer Learning' and 'Help-Seeking' dimensions as compared to the subgroup of unsuccessful females and unsuccessful males
- ii) The subgroup of successful males and unsuccessful males scored higher on 'Rehearsal' and 'Help-Seeking' dimensions as compared to the subgroup of unsuccessful females.
- iii) The subgroup of successful females scored higher on 'Rehearsal' and 'Peer Learning' dimensions as compared to the subgroup of unsuccessful males.
- iv) The subgroup of successful females scored higher on 'Peer Learning' dimension as compared to the subgroup of successful males.

e) **In the case of BBA 4th Semester**

- i) The subgroup of unsuccessful females, successful females and successful males scored higher on 'Extrinsic Goal Orientation', 'Task value', 'Control of Learning Beliefs', 'Rehearsal', 'Time and Study Environment', 'Help-Seeking' and 'Learning Strategies' than the subgroup of unsuccessful males.
- ii) The subgroup of successful females and unsuccessful females scored higher on 'Self-efficacy for Learning and Performance' as compared to the subgroup of unsuccessful females.
- iii) The subgroup of successful females and successful males are found to be more self-regulated as compared to the subgroup of unsuccessful males.

f) **In the case of B.Sc. 6th Semester**

- i) The subgroup of unsuccessful females scored higher on 'Effort Regulation' dimension as compared to the subgroup of unsuccessful males.

g) In the case of BCA 6th Semester

- i) The subgroup of unsuccessful females scored higher on 'Extrinsic Goal Orientation' and 'Self-efficacy for Learning and Performance' dimensions as compared to the subgroup of successful females and successful males.
- ii) The subgroup of unsuccessful females scored higher on 'Self-efficacy for Learning and Performance' dimension as compared to the subgroup of unsuccessful males.

At PG Level

Gender

- a) In M. Com 2nd semester, the female students are found to be more self-regulated than male students.
- b) In M. Sc. 2nd semester, female students showed a high level of test anxiety as compared to male students

Successfulness

- a) In M.Com 2nd, MBA 2nd and MCA 2nd semester, the successful students are found to be highly motivated to regulate their learning process and make good use of learning strategies as compared to unsuccessful students.
- b) In M.Sc. 2nd semester, the successful students are found to have a high level of control of learning beliefs as compared to their unsuccessful counterparts.

Interaction Effect (Gender* Successfulness)

a) In the case of M.Sc. 2nd Semester

- i) The subgroup of unsuccessful females showed a high level of test anxiety as compared to the subgroup of successful females and unsuccessful males
- ii) The subgroup of successful females and successful males showed a high level of test anxiety as compared to the subgroup of unsuccessful males.

iii) The subgroup of successful females is found to possess a high level of metacognitive self-regulation as compared to the subgroup of unsuccessful females.

b) In case of MBA 2nd Semester

i) The subgroup of successful females scored higher on ‘Elaboration’, ‘Critical Thinking’ and the use of ‘Learning Strategies’ as compared to the subgroup of unsuccessful females and successful males.

ii) The subgroup of successful females scored higher on ‘Critical Thinking’ and the use of ‘Learning Strategies’ as compared to the subgroup of unsuccessful males.

Self-Emotional Management

AT UG Level

Gender

a) The female students of B.Com 2nd, BBA 2nd and BBA 4th semester were found to possess a high level of self-emotional management as compared to their male student counterparts.

Successfulness

a) The successful students of B.Sc. 2nd, BBA 4th and BBA 6th semester were found to possess a high level of self-emotional management as compared to their unsuccessful student counterparts.

Interaction Effect (Gender * Successfulness)

a) In the case of B.Com 2nd semester

i) The subgroup of unsuccessful females is found to possess a high level of self-emotional management as compared to the subgroup of successful females, successful males and unsuccessful males.

b) In the case of B. Sc. 4th Semester

i) The subgroup of unsuccessful females is found to possess a high level of self-emotional management as compared to the subgroup of successful females and unsuccessful males.

At PG Level

Gender

- a) The female students of M.Com 2nd semester are found to possess a high level of self-emotional management as compared to their male student counterparts.

Successfulness

- a) The successful students of M.Com 2nd, MBA 2nd and MCA 2nd are found to possess a high level of self-emotional management as compared to the unsuccessful students.

Interaction Effect (Gender * Successfulness)

- a) In MBA 2nd semester, the subgroup of successful females is found to possess a high level of self-emotional management as compared to the subgroup of unsuccessful females and successful males.

Objective 5: To study the significant differences in self-regulated learning strategies & self-emotional management of higher education students w.r.t Program and Semester.

Self-Regulated Learning Strategies

UG Level

Program

- a) The results showed that BCA students were found to be more self-regulated as compared to BBA students.
- b) B.Sc. students have been found to possess a high level of extrinsic goal orientation, control of learning beliefs, and motivation than BBA students.
- c) BCA and B. Com students have been found to learn in peer groups more than BBA students.

Semester

- a) The result showed that 2nd semester students of UG programs do not hesitate to seek help from other persons (e.g. teacher or friends) in order to clarify their doubts as compared to 6th semester students.

Interaction Effect (Program * Semester)

Peer Learning:

- a) B.Com 2nd semester students are found to learn in peer groups more than BBA 4th, BBA 6th and BCA 4th semester.
- b) B. Com 4th semester students are found to learn in peer groups more than B. Com 6th, B.Sc. 6th, BBA 4th, BBA 6th and BCA 4th semester.
- c) BCA 2nd semester students are found to learn in peer groups more than BBA 4th, BCA 4th, B.Sc.6th and BBA 6th semester.
- d) BCA 6th semester students are found to learn in peer groups more than B. Com 6th, BBA 6th, B.Sc.6th and BCA 4th semester students.

PG Level

Program

- a) The results showed that M.Sc. (Chemistry) students were found to be highly motivated to regulate their learning process and make good use of self-regulated learning strategies as compared to MCA students.
- b) M. Com students were found to have a high level of extrinsic goal orientation as compared to MCA students.

Self- Emotional Management

UG Level

Program

- a) The B.Sc. students were found to possess a higher level of self-emotional management as compared to than B. Com, BBA and BCA students
- b) The BCA students were found to possess a higher level of self-emotional management as compared to BBA students.

PG Level

Program

- a) The M.Sc. (Chemistry) and MBA students were found to possess a high level of self-emotional management as compared to MCA students.

Objective 6: To study the influence of causal attribution on self-regulated learning strategies among higher education students

At UG Level

- a) The subgroup of students who attributed 'Study habits' (internal-stable-controllable) for their achieved score is found to be more self-regulated as compared to the subgroup who attributed 'Luck' (external-unstable-uncontrollable) as a cause for their achieved score.
- b) The subgroup of students who attributed 'Study Habits'(internal-stable-controllable) for their achieved score is found to possess a higher level of 'Effort Regulation' than the subgroup who attributed 'Ability' (internal-stable-uncontrollable) as a cause for their achieved score.
- c) The subgroup of students who attributed 'Study habits' (internal-stable-controllable) for their achieved score is found to be good at managing time and study environment as compared to the students who attributed 'Effort' (internal-unstable-controllable) for their achieved score.
- d) The subgroup of students who attributed 'Teacher's help' (external-unstable-controllable) as the main cause for their achieved score is found to make good use of learning strategies than the subgroup who attributed 'Luck'(external-unstable-uncontrollable) as the main cause for their achieved score.

At PG Level

- a) The subgroup of students who attributed 'Study habits' (internal-stable-controllable) for their achieved score is found to be more self-regulated as compared to the subgroup who attributed 'Luck' (external-unstable-uncontrollable) as a cause for their achieved score.

- b) The subgroup of students who attributed ‘Study habits’ (internal-stable-controllable) for their achieved score is found to be more self-regulated as compared to the subgroup who attributed ‘Effort’(internal-unstable-controllable) for their achieved score.
- c) The subgroup of students who attributed ‘Study habits’ (internal-stable-controllable) for their achieved score scored higher on ‘Rehearsal’ dimension as compared to the subgroup who attributed ‘Mood’ (internal-unstable-uncontrollable) as the main cause for their achieved score.
- d) The subgroup of students who attributed ‘Ability’ (internal-stable-uncontrollable) for their achieved score is found to be more self-regulated as compared to the subgroup who attributed ‘Luck’ (external-unstable-uncontrollable) as a cause for their achieved score.
- e) The subgroup of students who attributed ‘Ability’ (internal-stable-uncontrollable) and ‘Mood’ (internal-unstable-uncontrollable) for their achieved score is found to possess a high level of ‘Self Efficacy for Learning and Performance’ as compared to the subgroup who attributed ‘Luck’ (external-unstable-uncontrollable) as a cause for their achieved score.
- f) The subgroup of students who attributed ‘Efforts’(internal-unstable-controllable) for their achieved score is found to possess high ‘Task value’ as compared to the subgroup who attributed ‘Luck’ (external-unstable-uncontrollable) as a cause for their achieved score.
- g) The subgroup of students who attributed ‘Teacher’s Help’ (external-unstable-controllable) for their achieved score is better on using various elaboration strategies as compared to the subgroup who attributed ‘Luck’ (external-unstable-uncontrollable) as a cause for their achieved score.

Objective 7: To study the influence of self-emotional management on self-regulated learning strategies among higher education students

- a) Both UG and PG students with high self-emotional management were found to be more self-regulated as compared to the students with average or low self-emotional management.

- b) Both UG and PG students with average self-emotional management were found to be more self-regulated as compared to the students with low self-emotional management.

Objective 8: To study the interrelationship among self-regulated learning strategies, causal attribution and self-emotional management of higher education students studying in different semesters of different programs

Correlation between Self-Regulated Learning Strategies and Self-Emotional Management

- a) A positive and significant correlation has been found between motivation and self-emotional management.
- b) A positive and significant correlation has been found between learning strategies and self-emotional management.
- c) A positive and significant correlation has been found between self-regulated learning strategies and self-emotional management.

Correlation between Self-Regulated Learning Strategies and Causal Dimensions

At UG Level

In Case of unsuccessful students

- a) 'Locus of Causality' is found to bear significant and negative correlation with 'Learning Strategies' in case of B. Com 4th and B. Com 6th semester.
- b) 'Stability' is found to bear significant and negative correlation with 'Motivation' in case of BCA 2nd and BCA 6th semester, with 'Learning Strategies' in case of B.Sc. 6th semester and with 'Self-Regulated Learning Strategies' in case of B.Sc. 6th, BBA 6th and BCA 2nd semester.
- c) 'External Controllability' is found to bear significant and negative correlation with 'Motivation', 'Learning Strategies' and 'Self-Regulated Learning Strategies' in case of BCA 2nd semester and with 'Learning Strategies' in case of B. Com 4th semester.

- d) 'Personal Controllability' is found to bear positive and significant correlation with 'Motivation' in case of B. Com 4th semester, with 'Learning Strategies' in case of BBA 4th semester and with 'Self-Regulated Learning Strategies' in case of BBA 6th semester.

In case of successful students

- a) 'Locus of Causality' is found to bear positive and significant correlation with 'Motivation' in case of B. Com 2nd, B.Sc. 2nd, BBA 2nd, BCA 2nd, BCA 4th and BCA 6th semester students, with 'Learning Strategies' in case of B. Com 2nd, B. Com 6th, BBA 2nd, BCA 2nd and BCA 6th semester students and with 'Self-Regulated Learning Strategies' in case of B. Com 2nd, B. Com 6th, B. Sc 2nd, BBA 2nd, BCA 2nd, BCA 4th and BCA 6th semester students.
- b) 'Stability' is found to bear positive and significant correlation with 'Motivation' among all programs and semesters except B.Com 6th, B.Sc. 6th and BBA 4th semester, with 'Learning Strategies' except B.Sc. 6th, BBA 4th and BBA 6th semester and with 'Self-Regulated Learning Strategies' except B. Sc 6th and BBA 4th semester.
- c) 'External Controllability' is found to bear positive and significant correlation with 'Motivation' in B. Com 4th and BCA 2nd semester, with 'Learning Strategies' in BCA 2nd semester and with 'Self-Regulated Learning Strategies' in B. Com 4th and BCA 2nd semester.
- d) 'Personal Controllability' is found to bear positive and significant correlation with 'Motivation' in B. Com 2nd, B. Sc 2nd, B. Sc 6th, BBA 2nd, BCA 2nd, BCA 4th and BCA 6th semester, with 'Learning Strategies' in B. Com 2nd, B. Com 6th, BBA 2nd, BCA 2nd, BCA 4th and BCA 6th semester and with 'Self-Regulated Learning Strategies' in B. Com 2nd, B. Com 6th, B. Sc 2nd, BBA 2nd, BCA 2nd, BCA 4th and BCA 6th semester.

At PG Level

In case of unsuccessful students

- a) 'Locus of Causality' is found to bear positive and significant correlation with 'Motivation' in case of MBA 2nd semester.

- b) 'External Controllability' is found to bear negative and significant correlation with 'Learning Strategies' and 'Self-Regulated Learning Strategies' in case of MBA 2nd semester.
- c) 'Personal Controllability' is found to bear negative and significant correlation with 'Motivation' in case of M.Sc. 2nd, MBA 2nd and MCA 2nd semester, with 'Learning Strategies' and 'Self-Regulated Learning Strategies' in case of MBA 2nd and MCA 2nd semester.

In case of successful students

- a) 'Locus of Causality' is found to bear positive and significant correlation with 'Motivation', 'Learning Strategies' and 'Self-Regulated Learning Strategies' in M.Sc. 2nd, MBA 2nd and MCA 2nd semester.
- b) 'Stability' is found to bear positive and significant correlation with 'Motivation' in M.Com 2nd, M.Sc. 2nd, MBA 2nd and MCA 2nd semester and with 'Learning Strategies' and 'Self-Regulated Learning Strategies' in case of M.Sc. 2nd, MBA 2nd and MCA 2nd semester.
- c) 'External Controllability' is found to bear negative and significant correlation with 'Learning Strategies' in case of MBA 2nd semester.
- d) 'Personal Controllability' is found to bear a positive and significant correlation with 'Learning Strategies' and 'Self-Regulated Learning Strategies' Strategies' in M.Sc. 2nd, MBA 2nd and MCA 2nd semester.

5.2 LIMITATIONS

- a) The previous studies on causal attribution and self-regulated learning strategies have been conducted by taking a sample of a single course and from only one program. But, in the present study, the sample of different program students studying different courses have been taken together. As a result, the sample specific to a single course of different programs was collected less in number. This resulted in the serious limitation of generalisation of the results to the total population of different programs.
- b) The sample was collected from three regions of Punjab namely Majha, Malwa and Doaba and respectively from different universities and colleges in the state. Though the courses are taken from different universities were the

same but the curriculum and the grading system was not uniform across the universities. Also, the admission process and criteria for different programs was also different in these universities. This factor may have an effect on the logical conclusions of different constructs taken in the study.

- c) Only eight causal attributions given by Weiner (1985) were considered to take the attributions for success or failure of the students. This resulted in the reduction of the actual sample analysed because many students were not clearly identified into any of the causal attributions. There are new scales available for considering multiple attributions. Therefore, the future researcher can consider the future study on these lines.
- d) Another limitation of the study was the over-representation of students who perceived themselves as successful. This reflects the flaw in the judgement of the students about their academic performance and subsequent causal attributions, which may have biased the results.

5.3 RECOMMENDATIONS

On the basis of the results of the current study the key recommendations are:

- a) As causal attribution has shown its influence on the use of self-regulated learning strategies. Therefore, if we encourage our students to use effective learning strategies to regulate their learning and consciously reflect on the influences that causal attribution can make will help in making the learners more conscious in the use of learning strategies. So, training programs are required in this direction specifically for the students who perceived themselves as unsuccessful.
- b) The study had reported that female students are more self-regulated as compared to male students. Therefore, there is a need to improve the self-regulated learning strategies of male students of higher education. Hence, it is recommended that training programs shall be developed in order to develop the self-regulated learning skills of male students and the mechanism shall be created to carry out these programs in universities and colleges.

- c) As the results reported a significant difference between self-regulated learning strategies of successful and unsuccessful students. Therefore, unsuccessful students should be encouraged to follow the learning strategies used by successful students.
- d) The study also recommends for development of training programs on attribution retraining for the higher education students. As many students after completing 1-2 semesters in the program are attributing 'Lack of ability' for the failure in the course, which reflects the wrong attribution. For these students, the attribution training programs will help to choose correct causal attributions for their performance. Also, such students should be assisted to improve their learning strategies, which will make them hopeful for possible success.
- e) It has been found that in some UG and PG level programs, the majority of unsuccessful students reported 'Lack of Ability' in the subject as a major cause behind their failure.

As ability attribution for the failure is considered as an inhibiting cause that impedes the future performance and may lower down the perceived self-efficacy. Therefore, it is recommended to the government and the universities to discontinue the practices of open admission policy in different programs and replace it with a mandatory entrance test at the entry-level of the program and counselling may be provided to the prospective candidates for the identification of ability requirements for admission to these programs

- f) The results indicated that students with high self-emotional management are self-regulated learners as compared to students with low self-emotional management. Hence, there is a need to train such students to manage their emotions effectively in order to succeed academically.
- g) Also, the trend reflects that there are fewer male higher education students in comparison to female higher education students, which needs to be looked into by the government which is focussing only on schemes for girl education.

5.4 SUGGESTIONS FOR FUTURE RESEARCH

Based on this research the following suggestions have been made for future research:

- a) As the present study was confined to Punjab state only and still very few studies have been conducted on self-regulated learning strategies in India. Hence, the generalisability of the results is restricted. It is suggested that replica studies can be taken up choosing the sample from other states of India too.
- b) Since validation of the scales was done on the sample of Punjab state only. Hence, it is suggested that validation of the scales should be done by taking the sample from other states of India too.
- c) As the present research was confined to only eight causal dimensions. Hence, it is recommended that future research can be done by allowing the students to attribute their success or failure to multiple causes on an open-ended format of questionnaire, which may be a better reflection of the student's thinking.
- d) One of the limitations of the present study was the ambiguity of the causal dimension related to locus of causality, because one person may perceive 'Luck' as an 'Internal Cause' (e.g. "I have bad luck"), while another person may perceive it as 'External Cause' (e.g. It was an unlucky day). Hence, it is recommended that future researcher should work on investigating the most likely causal dimensions for the most common causal attributions.
- e) Future research may examine if the use of learning strategies mediates the relationship between motivational beliefs and academic achievement. In the same vein, the investigator may examine if causal attributions play a mediating role between motivational beliefs and academic achievement.
- f) Future research may focus on designing some intervention programs to improve the self-regulated learning strategies of the students who perceived themselves as unsuccessful and also validate the effectiveness of these intervention programs.

- g) The future research can be done on developing particular training techniques for improving the causal attributions of unsuccessful students and further investigate the effect of such training on attributions and self-regulation and finally the effect of attribution training on the academic performance of the students.
- h) The future research can be done on studying the causal attributions and self-regulated learning strategies of the students specifically from STEM (Science, Technology, Engineering and Mathematics) courses.
- i) There is a need to verify the interrelationship among causal attribution, self-regulated learning strategies and self-emotional management by using different modern research techniques i.e. structural equation modelling. Also, experimental designs can be planned to ascertain the relationships.

5.5 EDUCATIONAL IMPLICATIONS

- a) There is a serious need for the attribution retraining of higher education students. Since these students are to work in different walks of life after completion of their programs and their lack of correct attributions will continue in their work life, which will hamper their performance and productivity. This all will have an effect on the overall effectiveness of organisations.
- b) Self-regulation is an important determinant of an individual's success as a learner. Self-regulated learners are lifelong learners. The present research had highlighted the lack of self-regulation among higher education students who perceived themselves as unsuccessful. Therefore, it is implied that training programs shall be developed and executed in colleges and universities to make students aware of the importance of self-regulated learning strategies.
- c) Also, teachers teaching at higher education shall be trained in constructive teaching methodologies to develop self-regulated learning strategies. The old behavioural teaching methodologies are not found to be facilitating the process of self-regulation.

- d) In order to promote education for all, there was mushrooming of institutions offering different programs in the state of Punjab. The demand and supply ratio for admission to different programs was not looked into while granting recognition and seats to new programs. This has led to a relaxation in eligibility parameters for admission to different programs, which is reflected in poor self-regulation and lack of ability as a cause for failure among students who perceived their score as unsuccessful. This needs to be rectified since ability parameters reflected through eligibility conditions. Thus, it is suggested that eligibility conditions should be raised in order to get the quality intake and churning out placeable students and also limited seats should be offered in a certain program keeping in view the market scenario of jobs.

REFERENCES

- Abadikhah, S., Aliyan, Z., & Talebi, S. H. (2018). EFL students' attitudes towards self-regulated learning strategies in academic writing. *Issues in Educational Research, 28*(1), 1-17.
- Abar, B., & Loken, E. (2010). Self-regulated learning and self-directed study in a pre-college sample. *Learning and Individual Differences, 20*(1), 25-29. <https://doi.org/10.1016/j.lindif.2009.09.002>
- Ablard, K. E., & Lipschultz, R. E. (1998). Self-Regulated learning in high-achieving students: Relations to advanced reasoning, achievement goals, and gender. *Journal of Educational Psychology, 90*(1), 94-101.
- Adiba, F. (2004). Study of attributions of low achievers and high achievers about the perceived causes of their success and failure (Unpublished doctoral dissertation in education), University of Arid Agriculture, Rawalpindi, Pakistan.
- Aggarwal, S., & Saxena, M. K. (2012). A comparative study of the emotional intelligence of undergraduate students. *Scholarly Research Journal for Interdisciplinary Studies, 1*(2), 218-225.
- Ahmed, O., & Khanam, M. (2014). Learning resources management strategies and academic achievement of secondary school students. *The International Journal of Indian Psychology, 2*(1), 108-115. <https://doi.org/10.25215/0201.014>
- Ahmed, W. (2018). Motivation and self -regulated learning: a multivariate multilevel analysis, *International Journal of Psychology and Educational Studies, 4* (3), 1-11. <https://doi.org/10.17220/ijpes.2017.03.001>
- Ahn H., Picard R.W. (2005) Affective-Cognitive Learning and Decision Making: A Motivational Reward Framework for Affective Agents. In: Tao J., Tan T., Picard R.W. (eds) *Affective Computing and Intelligent Interaction* (pp. 866-873). Berlin, Heidelberg: Springer. https://doi.org/10.1007/11573548_111

- Al Khatib, S. A. (2010). Meta-cognitive self-regulated learning and motivational beliefs as predictors of college students' performance. *International Journal for Research in Education*, 27(8), 57-71.
- Al-Alwan, A. F. (2008). Self-regulated learning in high and low achieving students at Al-Hussein Bin Talal university (AHU) in Jordan. *International Journal of Applied Educational Studies*, 1(1), 1-13.
- Aleven, V., Roll, I., McLaren, B. M., & Koedinger, K. R. (2010). Automated, unobtrusive, action-by-action assessment of self-regulation during learning with an intelligent tutoring system. *Educational Psychologist*, 45(4), 224-233. <https://doi.org/10.1080/00461520.2010.517740>
- Al-Harthy, I. S., Was, C. A., & Isaacson, R. M. (2010). Goals, efficacy and metacognitive self-regulation a path analysis. *International Journal of Education*, 2(1), 1-20.
- Al-Harthy, I., & Aldhafri, S. (2014). The relationship among task-value, self-efficacy and academic achievement in Omani students at Sultan Qaboos University. *International Review of Social Sciences and Humanities*, 7(2), 15-22.
- Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology*, 80(3), 260-267.
- Anderman, E. M., & Young, A. J. (1994). Motivation and strategy use in science: Individual differences and classroom effects. *Journal of Research In Science Teaching*, 31(8), 811-831.
- Anderman, L. H., & Anderman, E. M. (1999). Social predictors of changes in students' achievement goal orientations. *Contemporary Educational Psychology*, 24(1), 21-37. <https://doi.org/10.1006/ceps.1998.0978>
- Anthony, G. (2000). Factors influencing first-year students' success in mathematics. *International Journal of Mathematical Education in Science and Technology*, 31(1), 3-14. <https://doi.org/10.1080/002073900287336>

- Arkavazi, S., & Nosratinia, M. (2018). Self-regulation and locus of control predicting EFL learners' willingness to communicate. *Theory and Practice in Language Studies*, 8(8), 1094-1104. <http://dx.doi.org/10.17507/tpls.0808.26>
- Artlet, C., Baumert, J., Julius-McElvany, N., & Peschar, J. (2003). *Learners for life. student approaches to learning. Results from PISA 2000*. Retrieved from <http://www.oecd.org>.
- Astleitner, H. (2000). Designing emotionally sound instruction: The FEASP-approach. *Instructional Science*, 28(3), 169-198. <https://doi:10.1023/A:1003893915778>
- Ayotola, A., & Adedeji, T. (2009). The relationship between mathematics self-efficacy and achievement in mathematics. *Procedia-Social and Behavioral Sciences*, 1(1), 953-957. <https://doi:10.1016/j.sbspro.2009.01.169>
- Azevedo, R., Moos, D. C., Johnson, A. M., & Chauncey, A. D. (2010). Measuring cognitive and metacognitive regulatory processes during hypermedia learning: Issues and challenges. *Educational Psychologist*, 45(4), 210-223. <https://doi.org/10.1080/00461520.2010.515934>
- Balam, E. M. (2015). Learning strategies and motivation of graduate students: is gender a factor. *Institute for Learning Style Journal*, 1, 1-9.
- Balzarotti, S., John, O. P., & Gross, J. J. (2010). An Italian adaptation of the emotion regulation questionnaire. *European Journal of Psychological Assessment*, 26(1), 61-67. <https://doi 10.1027/1015-5759/a00000>
- Banarjee, P., & Kumar, K. (2014). A Study on self-regulated learning and academic achievement among the science graduate students. *International Journal of Multidisciplinary Approach & Studies*, 1(6), 329-342.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122-147.
- Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ, US: Prentice-Hall, Inc.

- Bandura, A., & Schunk, D. H. (1981). Cultivating competence, self-efficacy, and intrinsic interest through proximal self-motivation. *Journal of Personality and Social Psychology*, 41(3), 586-598.
- Bandura, A., & Wessels, S. (1997). *Self-efficacy*. New York, NY: W.H. Freeman and Company.
- Baron-Cohen, S. (2002). The extreme male brain theory of autism. *Trends in Cognitive Sciences*, 6(6), 248-254.
- Baron-Cohen, S. (2003). *The Essential Difference: Male and Female Brain*. New York: Basic Books.
- Barron, K. E., & Harackiewicz, J. M. (2001). Achievement goals and optimal motivation: Testing multiple goal models. *Journal of Personality and Social Psychology*, 80(5), 706-722.
- Bartels, J. M., & Magun-Jackson, S. (2009). Approach–avoidance motivation and metacognitive self-regulation: The role of need for achievement and fear of failure. *Learning and Individual Differences*, 19(4), 459-463. <https://doi.org/10.1016/j.lindif.2009.03.008>
- Bartels, J. M., Magun-Jackson, S., & Kemp, A. D. (2009). Volitional regulation and self-regulated learning: An examination of individual differences in approach-avoidance achievement motivation. *Electronic Journal of Research in Educational Psychology*, 7(2), 605-626.
- Basol, G., & Balgalmis, E. (2016). A multivariate investigation of gender differences in the number of online tests received-checking for perceived self-regulation. *Computers in Human Behavior*, 58, 388-397. <https://doi.org/10.1016/j.chb.2016.01.010>
- Basturk, S., & Yavuz, I. (2010). Investigating causal attributions of success and failure on mathematics instructions of students in Turkish high schools. *Procedia-Social and Behavioral Sciences*, 2(2), 1940-1943. <https://doi:10.1016/j.sbspro.2010.03.260>

- Bembenutty, H. (2007). Self-regulation of learning and academic delay of gratification: Gender and ethnic differences among college students. *Journal of Advanced Academics*, 18(4), 586-616.
- Bembenutty, H. (2009). Academic delay of gratification, self-regulation of learning, gender differences, and expectancy-value. *Personality and Individual Differences*, 46(3), 347-352. <https://doi.org/10.1016/j.paid.2008.10.028>
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), 238-246.
- Beyer, S. (1998). Gender differences in causal attributions by college students of performance on course examinations. *Current Psychology*, 17(4), 346-358.
- Bidjerano, T. (2005, Oct. 19-21). *Gender differences in self-regulated learning*. Paper presented at the annual meeting of the Northeastern Educational Research Association, Kerhonkson, NY, USA. Retrieved from <https://eric.ed.gov/?id=ED490777>
- Blair, C. (2002). School readiness: Integrating cognition and emotion in a neurobiological conceptualization of children's functioning at school entry. *American Psychologist*, 57(2), 111-127. <https://doi.org/10.1037//0003-066X.57.2.111>
- Boekaerts, M. (2007). Understanding students' affective processes in the classroom. In Schutz, P.A. and Pekrun, R. (Eds.), *Emotion in Education*. (pp.37-56). <https://doi.org/10.1016/B978-012372545-5/50004-6>
- Bollen, K. A. (1989). A new incremental fit index for general structural equation models. *Sociological Methods & Research*, 17(3), 303-316. <https://doi.org/10.1177/0049124189017003004>
- Bond, M. H., Leung, K., & Wan, K. C. (1982). The social impact of self-effacing attributions: The Chinese case. *The Journal of Social Psychology*, 118(2), 157-166. <https://doi.org/10.1080/00224545.1982.9922794>

- Bornholt, L., & Moller, J. (2003). Attributions about achievement and intentions about further study in social context. *Social Psychology of Education*, 6(3), 217-231. <https://doi.org/10.1023/A:1024715609124>
- Boruchovitch, E. (2004). A study of causal attributions for success and failure in mathematics among Brazilian students. *Interamerican Journal of Psychology*, 38 (1), 53-60.
- Boulton-Lewis, G., Marton, F., Lewis, D. C., & Wilss, L. A. (2004). A longitudinal study of learning for a group of indigenous Australian university students: Dissonant conceptions and strategies. *Higher Education*, 47(1), 91-112. <https://doi.org/10.1023/B:HIGH.0000009807.00392.33>
- Britner, S. L. (2008). Motivation in high school science students: A comparison of gender differences in life, physical, and earth science classes. *Journal of Research in Science Teaching*, 45(8), 955-970. <https://doi.org/10.1002/tea.20249>
- Brown, J. D., & Kobayashi, C. (2002). Self-enhancement in Japan and America. *Asian Journal of Social Psychology*, 5(3), 145-167. <https://doi.org/10.1111/1467-839X.00101>
- Browne, M. W., & Cudeck, R. (1993). Alternative Ways of Assessing Model Fit. In K. A. Bollen, & J. S. Long (Eds.), *Testing Structural Equation Models* (pp. 136-162). Newbury Park, CA: Sage Publications, Inc.
- Buric, I., & Soric, I. (2012). The role of test hope and hopelessness in self-regulated learning: Relations between volitional strategies, cognitive appraisals and academic achievement. *Learning and Individual Differences*, 22(4), 523-529. <https://doi.org/10.1016/j.lindif.2012.03.011>
- Buric, I., Soric, I., & Penezic, Z. (2011). Strategije emocionalne regulacije u ispitnim situacijama: Doprinosi osobina ličnosti, kognitivnih procjena i ispitnih emocija. [Emotion Regulation Strategies in Test Taking Situations: The Contributions of Personality Traits, Cognitive Appraisals and Test Emotions] *Psihologijske Teme*, 20, 277-298.

- Cantor, N. (1990). From thought to behavior: "Having" and "doing" in the study of personality and cognition. *American Psychologist*, 45(6), 735-750. <http://dx.doi.org/10.1037/0003-066X.45.6.735>
- Cao, L., & Nietfeld, J. L. (2007). College Students' Metacognitive Awareness of Difficulties in Learning the Class Content Does Not Automatically Lead to Adjustment of Study Strategies. *Australian Journal of Educational & Developmental Psychology*, 7, 31-46.
- Cao, L., & Nietfeld, J. L. (2007). Examining Relationships between Achievement Goals, Study Strategies, and Class Performance in Educational Psychology. *Teaching Educational Psychology*, 2(1), 1-20.
- Carreira, J. M. (2011). Relationship between motivation for learning EFL and intrinsic motivation for learning in general among Japanese elementary school students. *System*, 39(1), 90-102. <https://doi.org/10.1016/j.system.2011.01.009>
- Carver, C. S., & Scheier, M. F. (1990). Origins and functions of positive and negative affect: A control-process view. *Psychological Review*, 97(1), 19-35.
- Cerezo Rusillo, M. T., & Casanova Arias, P. F. (2004). Gender differences in academic motivation of secondary school students. *Electronic Journal of Research in Educational Psychology*, 2(1), 97-112.
- Chandra, A., Gayatri, A., & Devi, D. U. (2017). Assessment of emotional intelligence in first year medical graduates-A Questionnaire based study. *International Journal of Physiology*, 5(1), 124-126. <https://dx.doi.org/10.5958/2320-608X.2017.00027.0>
- Chang, M., Singh, K., & Mo, Y. (2007). Science engagement and science achievement: Longitudinal models using NELS data. *Educational Research and Evaluation*, 13(4), 349-371. <https://doi.org/10.1080/13803610701702787>

- Chen, C. S. (2002). Self-regulated learning strategies and regulated learning strategies and achievement in an introduction to information systems course. *Information Technology, Learning, and Performance Journal*, 20(1), 11-25.
- Chiu, L. H. (1988). Locus of control differences between American and Chinese adolescents. *The Journal of Social Psychology*, 128(3), 411-413. <https://doi.org/10.1080/00224545.1988.9713759>
- Cho, S., & Ahn, D. (2003). Strategy acquisition and maintenance of gifted and nongifted young children. *Exceptional Children*, 69(4), 497-505. <https://doi.org/10.1177/001440290306900407>
- Chuy, M., & Nitulescu, R. (2013). *Explaining the gender gap in reading through reading engagement and approaches to learning*. Retrieved from http://www.cmec.ca/Publications/Lists/Publications/Attachments/302/PISA2009_Research_CMEC_HRSDC_EN.pdf
- Chyung, S. Y. Y. (2007). Age and gender differences in online behavior, self-efficacy, and academic performance. *Quarterly Review of Distance Education*, 8(3), 213-222.
- Clarebout, G., Horz, H., Schnotz, W., & Elen, J. (2010). The relation between self-regulation and the embedding of support in learning environments. *Educational Technology Research and Development*, 58(5), 573-587. <https://doi.org/10.1007/s11423-009-9147-4>
- Cleary, T. J., & Zimmerman, B. J. (2001). Self-regulation differences during athletic practice by experts, non-experts, and novices. *Journal of Applied Sport Psychology*, 13(2), 185-206. <https://doi.org/10.1080/104132001753149883>
- Cochran, J. L., McCallum, R. S., & Bell, S. M. (2010). Three A's: How do attributions, attitudes, and aptitude contribute to foreign language learning? *Foreign Language Annals*, 43(4), 566-582. <https://doi.org/10.1111/j.1944-9720.2010.01102.x>

- Cokley, K. (2003). What do we know about the motivation of African American students? Challenging the "anti-intellectual" myth. *Harvard Educational Review*, 73(4), 524-558. <https://doi.org/10.17763/haer.73.4.3618644850123376>
- Coleman, G., & Ingram, H. (2004). A new approach to benchmarking learning and development strategy. *International Journal of Contemporary Hospitality Management*, 16(1), 52-58. <https://doi.org/10.1108/09596110410516561>
- Coover, G. E., & Murphy, S. T. (2000). The communicated self: Exploring the interaction between self and social context. *Human Communication Research*, 26(1), 125-147. <https://doi.org/10.1111/j.1468-2958.2000.tb00753.x>
- Corno, L. (1989). Self-regulated learning: A volitional analysis. In B. J. Zimmerman & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement* (pp. 111-141). New York, NY: Springer.
- Corno, L. (2013). Volitional aspects of self-regulated learning. In Berry. J. Zimmerman & Dale. H. Schunk (Eds.), *Self-regulated learning and academic achievement* (pp. 188-221). New York, NY: Routledge. <https://doi.org/10.4324/9781410601032>
- Cortes-Suarez, G., & Sandiford, J. R. (2008). Causal attributions for success or failure of students in college algebra. *Community College Journal of Research and Practice*, 32(4-6), 325-346. <https://doi.org/10.1080/10668920701884414>
- Covington, M.V. (2007). A motivational analysis of academic life in college. In R. P. Perry and J.C. Smart (Eds.), *The scholarship of teaching and learning in higher education: An evidence-based perspective* (pp. 661-729). The Netherlands: Springer.
- Craig, A., Tran, Y., Hermens, G., Williams, L. M., Kemp, A., Morris, C., & Gordon, E. (2009). Psychological and neural correlates of emotional intelligence in a large sample of adult males and females. *Personality and Individual Differences*, 46(2), 111-115.

- Craig, A., Tran, Y., Hermens, G., Williams, L. M., Kemp, A., Morris, C., & Gordon, E. (2009). Psychological and neural correlates of emotional intelligence in a large sample of adult males and females. *Personality and Individual Differences, 46*(2), 111-115.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*(3), 297-334.
- Damon, W., Lerner, R. M., & Eisenberg, N. (2006). *Handbook of child psychology, social, emotional, and personality development*. Hoboken, New Jersey: John Wiley & Sons.
- Dasinger, J. (2011). *Causal attributions of nontraditional students in a developmental mathematics course at a two-year college* (Order No. 3491839). Available from ProQuest Central. (915643882). Retrieved from <https://search.proquest.com/docview/915643882?accountid=80692>
- Dasinger, J. A. (2013). Causal Attributions and Student Success in Developmental Mathematics. *Journal of Developmental Education, 36*(3), 2-12.
- Davidowitz, B., & Rollnick, M. (2003). Enabling metacognition in the laboratory: A case study of four second year university chemistry students. *Research in Science Education, 33*(1), 43-69. <https://doi.org/10.1023/A:1023673122220>
- De Zoysa, A., Chandrakumara, P. M. K., & Rudkin, K. (2014). *Learning and study strategies affecting the performance of undergraduate management accounting students in an Australian university*. Paper presented in AFAANZ Conference, Australia. Retrieved from <https://ro.uow.edu.au/cgi/viewcontent.cgi?article=1485&context=buspapers>
- DiBenedetto, M. K., & Bembenuddy, H. (2011). *Within the Pipeline: Self-Regulated Learning and Academic Achievement among College Students in Science Courses*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, Louisiana. Retrieved from <https://files.eric.ed.gov/fulltext/ED518505.pdf>

- Diener, C. I., & Dweck, C. S. (1978). An analysis of learned helplessness: Continuous changes in performance, strategy, and achievement cognitions following failure. *Journal of Personality and Social Psychology*, 36(5), 451-462. <http://dx.doi.org/10.1037/0022-3514.36.5.451>
- DiFrancesca, D., Nietfeld, J. L., & Cao, L. (2016). A comparison of high and low achieving students on self-regulated learning variables. *Learning and Individual Differences*, 45, 228-236. <http://dx.doi: 10.1088/1742-6596/983/1/012156>
- Dong, Y., Stupnisky, R. H., & Berry, J. C. (2013). Multiple causal attributions: An investigation of college students learning a foreign language. *European Journal of Psychology of Education*, 28(4), 1587-1602. <https://doi.org/10.1007/s10212-013-0183-4>
- Downing, K. J. (2009). Self-efficacy and Metacognitive Development. *International Journal of Learning*, 16(4), 185-199
- Dreyer, C. and Oxford, R. L. (1996). Learning Strategies and other predictors of ESL proficiency among Afrikaans speakers in South Africa. In R. L. Oxford (ed.), *Language learning strategies around the world: Cross-cultural perspectives* (pp. 61-74). Honolulu, HI: University of Hawaii Press.
- Dubey, C., & Bakhshi, P. (2018). A study on emotional intelligence amongst management students. *Journal of Management Research*, 10(1), 31-41. Retrieved from <https://search.proquest.com/docview/2038188488?accountid=80692>
- Dunn, K. E., Osborne, C., & Link, H. J. (2012). Exploring the influence of students' attributions for success on their self-regulation in pathophysiology. *Journal of Nursing Education*, 51(6), 353-357. <https://doi.org/10.3928/01484834-20120420-01>
- Duval, T. S., & Lalwani, N. (1999). Objective self-awareness and causal attributions for self-standard discrepancies: Changing self or changing standards of correctness. *Personality and Social Psychology Bulletin*, 25(10), 1220-1229. <https://doi.org/10.1177/0146167299258004>

- Duval, T. S., Duval, V. H., & Mulilis, J. P. (1992). Effects of self-focus, discrepancy between self and standard, and outcome expectancy favorability on the tendency to match self to standard or to withdraw. *Journal of Personality and Social Psychology*, 62(2), 340-348. <http://dx.doi.org/10.1037/0022-3514.62.2.340>
- Edwin, M., & Talif, R. (1990). A comparative study of the achievement and the proficiency levels in English as a second language among learners in selected rural and urban schools in Peninsular Malaysia. *The English Teacher*, 19, 1-10. Retrieved from <http://www.melta.org.my/journals/index.php/tet/article/view/475/295>
- Eisenberg, N., Spinrad, T. L., & Eggum, N. D. (2010). Emotion-related self-regulation and its relation to children's maladjustment. *Annual Review of Clinical Psychology*, 6, 495-525. <http://dx.doi.org/10.1146/annurev.clinpsy.121208.131208>
- Elias, M. J., Zins, J. E., & Weissberg, R. P. (2000). Promoting social and emotional learning: Guidelines for educators. *Adolescence*, 35(137), 221.
- Elliott, J. C. (1990). Affect and mathematics achievement of nontraditional college students. *Journal for Research in Mathematics Education*, 21(2), 160-165. <http://dx.doi.org/10.2307/749143>
- Elstad, E., & Turmo, A. (2010). Students' self-regulation and teachers' influences in science: interplay between ethnicity and gender. *Research in Science & Technological Education*, 28(3), 249-260. <https://doi.org/10.1080/02635143.2010.501751>
- Ericsson, K. A., & Charness, N. (1994). Expert performance: Its structure and acquisition. *American Psychologist*, 49(8), 725-747. <http://dx.doi.org/10.1037/0003-066X.49.8.725>
- Eronen, S., Nurmi, J. E., & Salmela-Aro, K. (1998). Optimistic, defensive-pessimistic, impulsive and self-handicapping strategies in university environments. *Learning and Instruction*, 8(2), 159-177. [https://doi.org/10.1016/S0959-4752\(97\)00015-7](https://doi.org/10.1016/S0959-4752(97)00015-7)

- Erten, İ. H., & Burden, R. L. (2014). The relationship between academic self-concept, attributions, and L2 achievement. *System*, 42, 391-401. <https://doi.org/10.1016/j.system.2014.01.006>
- Fathi-Ashtiani, A., Hasani, M., Nabipoor-Ashrafi, S. M., Ejei, J., & Azadfallah, P. (2007). Comparison of learning strategies in successful and unsuccessful students. *Archives of Medical Science*, 3(2), 164-169.
- Feingold, A. (1994). Gender differences in personality: A meta-analysis. *Psychological Bulletin*, 116(3), 429-456. <http://dx.doi.org/10.1037/0033-2909.116.3.429>
- Fencl, H., & Scheel, K. (2005). Engaging students. *Journal of College Science Teaching*, 35(1), 20.
- Fernandez-Berrocal, P., Cabello, R., Castillo, R., & Extremera, N. (2012). Gender differences in emotional intelligence: The mediating effect of age. *Behavioral Psychology*, 20(1), 77-89.
- Fernandez-Berrocal, P., Salovey, P., Vera, A., Extremera, N., & Ramos, N. (2005). Cultural influences on the relation between perceived emotional intelligence and depression. *International Review of Social Psychology*, 18(1), 91-107.
- Field, A. (2009). *Discovering statistics using SPSS*. London, England: Sage publications Ltd.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.1177/002224378101800104>
- Frenzel, A. C., Goetz, T., Ludtke, O., Pekrun, R., & Sutton, R. E. (2009). Emotional transmission in the classroom: exploring the relationship between teacher and student enjoyment. *Journal of Educational Psychology*, 101(3), 705. <http://dx.doi.org/10.1037/a0014695>
- Frieze, I., & Weiner, B. (1971). Cue utilization and attributional judgments for success and failure. *Journal of Personality*, 39(4), 591-605. <https://doi.org/10.1111/j.1467-6494.1971.tb00065.x>

- Froiland, J. M., Oros, E., Smith, L., & Hirchert, T. (2012). Intrinsic motivation to learn: The nexus between psychological health and academic success. *Contemporary School Psychology*, 16(1), 91-100. <https://doi.org/10.1007/BF03340978>
- Ganda, D. R., & Boruchovitch, E. (2018). Promoting Self-regulated Learning of Brazilian Preservice Student Teachers: Results of an Intervention Program. *Frontiers in Education*, 3 (5), 1-12. <https://doi.org/10.3389/educ.2018.00005>
- Garavalia, L. S., & Gredler, M. E. (2002). An Exploratory Study of Academic Goal Setting, Achievement Calibration and Self-Regulated Learning. *Journal of Instructional Psychology*, 29(4), 221-231.
- Garcia, T. (1993). *Women and Minorities in Science: Motivational and Cognitive Correlates of Achievement*. Retrieved from <https://eric.ed.gov/?id=ED359235>
- Garcia, T., & Pintrich, P. R. (1994). Regulating motivation and cognition in the classroom: The role of self-schemas and self-regulatory strategies. In D.H. Schunk and B.J. Zimmerman (Eds.), *Self-regulation of Learning and Performance: Issues and Educational Applications* (pp. 127-153). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Garcia, T., & Pintrich, P. R. (2012). Self-regulated learning in college students: Knowledge, strategies, and motivation. In P. R. Pintrich, D. R. Brown & C. E. Weinstein (Eds.), *Student motivation, cognition, and learning* (pp. 129-150). New York, NY: Routledge.
- Gardner, R. C. (2006). The socio-educational model of second language acquisition: A research paradigm. *Eurosla Yearbook*, 6(1), 237-260. <https://doi.org/10.1075/eurosla.6.14gar>
- Gargari, R. B., Sabouri, H., & Norzad, F. (2011). Academic procrastination: The relationship between causal attribution styles and behavioral postponement. *Iranian Journal of Psychiatry and Behavioral Sciences*, 5(2), 72-76.

- Garson, G. D. (2009). *Structural equation modelling*. Asheboro USA: Statistical Associates Publishing.
- Genc, G. (2016). Attributions to success and failure in English language learning: the effects of gender, age and perceived success, *European Journal of Education Studies*, 2(12), 25-42.
- Ghazvini, S. D., & Khajehpour, M. (2011). Gender differences in factors affecting academic performance of high school students. *Procedia-Social and Behavioral Sciences*, 15, 1040-1045. <https://doi.org/10.1016/j.sbspro.2011.03.236>
- Ghiasvand, M. Y. (2010). Relationship between learning strategies and academic achievement; based on information processing approach. *Procedia-Social and Behavioral Sciences*, 5, 1033-1036. <https://doi.org/10.1016/j.sbspro.2010.07.231>
- Gibb, B. E., Zhu, L., Alloy, L. B., & Abramson, L. Y. (2002). Attributional styles and academic achievement in university students: A longitudinal investigation. *Cognitive Therapy and Research*, 26(3), 309-315. <https://doi.org/10.1023/A:1016072810255>
- Gill, H. K., & Kansal, A. K. (2016). Motivational Beliefs in Relation to Achievement and Gender among Secondary School Students. *International Journal of Engineering Science*, 6 (5), 5154-5162.
- Glynn, S. M., Taasoobshirazi, G., & Brickman, P. (2007). Nonscience majors learning science: A theoretical model of motivation. *Journal of Research in Science Teaching*, 44(8), 1088-1107. <https://doi.org/10.1002/tea.20181>
- Glynn, S. M., Taasoobshirazi, G., & Brickman, P. (2009). Science motivation questionnaire: Construct validation with nonscience majors. *Journal of Research in Science Teaching*, 46(2), 127-146. <https://doi.org/10.1002/tea.20267>

- Gobel, P., & Mori, S. (2007). Success and failure in the EFL classroom: Exploring students' attributional beliefs in language learning. *EUROSLA Yearbook*, 7(1), 149-169. <https://doi.org/10.1075/eurosla.7.09gob>
- Gobel, P., Mori, S., Thang, S. M., Kan, N. H., & Lee, K. W. (2011). The impact of culture on student attributions for performance: A comparative study of three groups of EFL/ESL learners. *Journal of Institutional Research South East Asia*, 9(1), 27-43.
- Gobel, P., Thang, S. M., Sidhu, G. K., Oon, S. I., & Chan, Y. F. (2013). Attributions to success and failure in English language learning: A comparative study of urban and rural undergraduates in Malaysia. *Asian Social Science*, 9(2), 53-62. <http://dx.doi.org/10.5539/ass.v9n2p53>
- Goetz, T., Pekrun, R., Hall, N., & Haag, L. (2006). Academic emotions from a social-cognitive perspective: Antecedents and domain specificity of students' affect in the context of Latin instruction. *British Journal of Educational Psychology*, 76(2), 289-308. <https://doi.org/10.1348/000709905X42860>
- Goetz, T., Preckel, F., Pekrun, R., & Hall, N. C. (2007). Emotional experiences during test taking: Does cognitive ability make a difference? *Learning and Individual Differences*, 17(1), 3-16. <https://doi.org/10.1016/j.lindif.2006.12.002>
- Goffman, E. (1959). *The presentation of self in everyday life*. Garden City, NY: Doubleday/Anchor Books.
- Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. New York, NY: Bantam
- Gordeeva T.O., Osin E.N. (2011) Optimistic attributional style as a predictor of well-being and performance in different academic settings. In I. Brdar (Ed.), *The human pursuit of well-being* (pp. 159-174). Dordrecht, Germany: Springer.

- Gosiewska-Turek, B. (2017). The interdependence between attributions and second language attainments in secondary school students. *Journal of Education, Culture and Society*, 7(1), 109-124.
- Graham, S. (1991). A review of attribution theory in achievement contexts. *Educational Psychology Review*, 3(1), 5-39. <https://doi.org/10.1007/BF01323661>
- Graham, S. J. (2004). Giving up on modern foreign languages? Students' perceptions of learning French. *The Modern Language Journal*, 88(2), 171-191. <https://doi.org/10.1111/j.0026-7902.2004.00224.x>
- Graham, S., & Weiner, B. (1996). Theories and principles of motivation. In D. C. Berliner & R. C. Calfee (Eds.), *Handbook of Educational Psychology* (pp. 63-84). New York, NY: Routledge.
- Green, J. M., & Oxford, R. (1995). A closer look at learning strategies, L2 proficiency, and gender. *TESOL Quarterly*, 29(2), 261-297. <https://doi.org/10.2307/3587625>
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 2(3), 271-299. <https://doi.org/10.1037/1089-2680.2.3.271>
- Gross, J. J. (2001). Emotion regulation in adulthood: Timing is everything. *Current Directions in Psychological Science*, 10(6), 214-219. <https://doi.org/10.1111/1467-8721.00152>
- Gross, J. J. (2002). Emotion regulation: Affective, cognitive, and social consequences. *Psychophysiology*, 39(3), 281-291. <https://doi.org/10.1017/S0048577201393198>
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85(2), 348-362. <http://dx.doi.org/10.1037/0022-3514.85.2.348>

- Gross, J. J., & Thompson, R. A. (2007). Emotion Regulation: Conceptual Foundations. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 3-24). New York, NY: Guilford Press.
- Gur, R. C., Gunning-Dixon, F., Bilker, W. B., & Gur, R. E. (2002). Sex differences in temporo-limbic and frontal brain volumes of healthy adults. *Cerebral Cortex*, 12(9), 998-1003. <https://doi.org/10.1093/cercor/12.9.998>
- Hacker, D. J., Bol, L., Horgan, D. D., & Rakow, E. A. (2000). Test prediction and performance in a classroom context. *Journal of Educational Psychology*, 92(1), 160-170. <http://dx.doi.org/10.1037/0022-0663.92.1.160>
- Haig, M. (2015). *Reasons to stay alive*. Britain, UK: Canongate Books.
- Hall, J. A. (1978). Gender effects in decoding nonverbal cues. *Psychological Bulletin*, 85(4), 845. <http://dx.doi.org/10.1037/0033-2909.85.4.845>
- Hamid, P. N. (1994). Self-monitoring, locus of control, and social encounters of Chinese and New Zealand students. *Journal of Cross-Cultural Psychology*, 25(3), 353-368. <https://doi.org/10.1177/0022022194253004>
- Hamm, J. M., Perry, R. P., Chipperfield, J. G., Murayama, K., & Weiner, B. (2017). Attribution-based motivation treatment efficacy in an online learning environment for students who differ in cognitive elaboration. *Motivation and Emotion*, 41(5), 600-616. <https://doi.org/10.1007/s11031-017-9632-8>
- Hansford, C. (1994). *The relationships between self-concept, perceived locus of control, self-regulated learning, and academic achievement in college students* (Doctoral dissertation). Retrieved from <http://hdl.handle.net/2346/61209>.
- Hassaskhah, J., & Vahabi, M. (2010). An in-depth analysis of the relationship between age and attribution in EFL contexts. *Procedia-Social and Behavioral Sciences*, 5, 2126-2132. <https://doi.org/10.1016/j.sbspro.2010.07.425>

- Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1993). Emotional contagion. *Current Directions in Psychological Science*, 2(3), 96-100. <https://doi.org/10.1111/1467-8721.ep10770953>
- Hayduk, L. A. (1987). *Structural equations modeling with LISREL: Essentials and advances*. Baltimore: Johns Hopkins Press.
- Haynes, T. L., Daniels, L. M., Stupnisky, R. H., Perry, R. P., & Hladkyj, S. (2008). The effect of attributional retraining on mastery and performance motivation among first-year college students. *Basic and Applied Social Psychology*, 30(3), 198-207. <https://doi.org/10.1080/01973530802374972>
- Heider, F. (1958). *The psychology of interpersonal relations*. New York, NY: John Wiley & Sons.
- Heikkila, A., Lonka, K., Nieminen, J., & Niemivirta, M. (2012). Relations between teacher students' approaches to learning, cognitive and attributional strategies, well-being, and study success. *Higher Education*, 64(4), 455-471. <https://doi.org/10.1007/s10734-012-9504-9>
- Heikkila, A., Niemivirta, M., Nieminen, J., & Lonka, K. (2011). Interrelations among university students' approaches to learning, regulation of learning, and cognitive and attributional strategies: a person oriented approach. *Higher Education*, 61(5), 513-529. <https://doi.org/10.1007/s10734-010-9346-2>
- Heine, S. J., Kitayama, S., Lehman, D. R., Takata, T., Ide, E., Leung, C., & Matsumoto, H. (2001). Divergent consequences of success and failure in Japan and North America: an investigation of self-improving motivations and malleable selves. *Journal of Personality and Social Psychology*, 81(4), 599-615. <http://dx.doi.org/10.1037/0022-3514.81.4.599>
- Hochschild, A. (1989). *The second shift: Working parents and the revolution at home*. New York, NY: Viking.
- Hochschild, A. R. (1979). Emotion work, feeling rules, and social structure. *American Journal of Sociology*, 85(3), 551-575.

- Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*.
Barkley, CA; University of California Press.
- Hochschild, A. R. (1990). Ideology and emotion management: A perspective and path for future research. In T. D. Kemper (Ed.), *Research Agenda in the Sociology of Emotions*, (pp. 117-142), Albany, NY: State University of New York Press.
- Hofer, B. K., & Yu, S. L. (2003). Teaching self-regulated learning through a "Learning to Learn" course. *Teaching of Psychology*, 30(1), 30-33. https://doi.org/10.1207/S15328023TOP3001_05
- Hong, E., Sas, M., & Sas, J. C. (2006). Test-taking strategies of high and low mathematics achievers. *The Journal of Educational Research*, 99(3), 144-155. <https://doi.org/10.3200/JOER.99.3.144-155>
- Hood, N., Littlejohn, A., & Milligan, C. (2015). Context counts: How learners' contexts influence learning in a MOOC. *Computers & Education*, 91, 83-91. <https://doi.org/10.1016/j.compedu.2015.10.019>
- Hoyert, M. S., & D O'Dell, C. (2009). Goal Orientation and Academic Failure in Traditional and Nontraditional Aged College Students. *College Student Journal*, 43(4), 1052-1061.
- Hsieh, P. H. (2004). *How college students explain their grades in a foreign language course: The interrelationship of attributions, self-efficacy, language learning beliefs, and achievement* (Doctoral dissertation). University of Texas, Austin, USA. Retrieved from <http://hdl.handle.net/2152/1332>
- Hsieh, P. H. P., & Schallert, D. L. (2008). Implications from self-efficacy and attribution theories for an understanding of undergraduates' motivation in a foreign language course. *Contemporary Educational Psychology*, 33(4), 513-532. <https://doi.org/10.1016/j.cedpsych.2008.01.003>

- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55. <https://doi.org/10.1080/10705519909540118>
- Hyde, J. S. (2005). The gender similarities hypothesis. *American Psychologist*, 60(6), 581-592.
- Isen, A. M. (2001). An influence of positive affect on decision making in complex situations: Theoretical issues with practical implications. *Journal of Consumer Psychology*, 11(2), 75-85. https://doi.org/10.1207/S15327663JCP1102_01
- Jabeen, S. and Khan, M. A. (2012) A study on emotional intelligence of high and low achievers. *Journal of Applied Research in Education*, 17 (1), 11-24.
- Jacobson, R. R., & Harris, S. M. (2008). Does the type of campus influence self-regulated learning as measured by the motivated strategies for learning questionnaire (MSLQ)? *Education*, 128(3), 412-432.
- Jasso, S. L. (2016). *Authentic Leadership and Emotional Intelligence: Predicting Student Success*. Retrieved from ProQuest Dissertations and Theses database. (MI No. 48106)
- Jausovec, N., & Jausovec, K. (2005). Differences in induced gamma and upper alpha oscillations in the human brain related to verbal/performance and emotional intelligence. *International Journal of Psychophysiology*, 56(3), 223-235. <https://doi.org/10.1016/j.ijpsycho.2004.12.005>
- Javid, C. Z., Al-Asmari, A. R., & Farooq, U. (2012). Saudi undergraduates' motivational orientations towards English language learning along gender and university major lines: A comparative study. *European Journal of Social Sciences*, 27(2), 283-300.
- Johnson, M. L., Taasobshirazi, G., Clark, L., Howell, L., & Breen, M. (2016). Motivations of traditional and nontraditional college students: From self-determination and attributions, to expectancy and values. *The Journal of Continuing Higher Education*, 64(1), 3-15. <https://doi.org/10.1080/07377363.2016.1132880>

- Jones, E. E., & Berglas, S. (1978). Control of attributions about the self through self-handicapping strategies: The appeal of alcohol and the role of underachievement. *Personality and Social Psychology Bulletin*, 4(2), 200-206. <https://doi.org/10.1177/014616727800400205>
- Joshi, D., & Dutta, I. (2016). Emotional intelligence among secondary students: Role of gender and type of school. *Journal of Educational Studies, Trends and Practices*, 4(2), 167-182.
- Kadhiravan, S. (2012). Self-regulated learning of adolescents in relation to their achievement motivation. *Journal of Psychosocial Research*, 7(2), 211-218.
- Kafetsios, K. (2004). Attachment and emotional intelligence abilities across the life course. *Personality and Individual Differences*, 37(1), 129-145. <https://doi.org/10.1016/j.paid.2003.08.006>
- Kelley, H. H. (1967). Attribution theory in social psychology. In D. Levine (ed.), *Nebraska Symposium on Motivation* (pp. 192-238). Lincoln, USA: University of Nebraska Press.
- Kelley, M. J., & Salisbury-Glennon, J. D. (2016). The role of self-regulation in doctoral students' status of all but dissertation (ABD). *Innovative Higher Education*, 41(1), 87-100. <https://doi.org/10.1007/s10755-015-9336-5>
- Kirschenbaum, D. S. (1984). Self-regulation and sport psychology: Nurturing an emerging symbiosis. *Journal of Sport Psychology*, 6(2), 159-183.
- Kirschenbaum, D. S. (1987). Self-regulation of sport performance. *Medicine & Science in Sports & Exercise*, 19 (5), 106-113. <http://dx.doi.org/10.1249/00005768-198710001-00003>
- Kitsantas, A. (2002). Test preparation and performance: A self-regulatory analysis. *The Journal of Experimental Education*, 70(2), 101-113. <https://doi.org/10.1080/00220970209599501>
- Kitsantas, A., & Zimmerman, B. J. (1998). Self-regulation of motoric learning: A strategic cycle view. *Journal of Applied Sport Psychology*, 10(2), 220-239. <https://doi.org/10.1080/10413209808406390>

- Kitsantas, A., & Zimmerman, B. J. (2002). Comparing self-regulatory processes among novice, non-expert, and expert volleyball players: A microanalytic study. *Journal of Applied Sport Psychology*, 14(2), 91-105. <https://doi.org/10.1080/10413200252907761>
- Kitsantas, A., Robert, A. R., & Doster, J. (2004). Developing self-regulated learners: Goal setting, self-evaluation, and organizational signals during acquisition of procedural skills. *The Journal of Experimental Education*, 72(4), 269-287.
- Kitsantas, A., Zimmerman, B. J., & Cleary, T. (2000). The role of observation and emulation in the development of athletic self-regulation. *Journal of Educational Psychology*, 92(4), 811-817. <http://dx.doi.org/10.1037/0022-0663.92.4.811>
- Kizgin, Y., & Dalgin, T. (2012). Atfetme teorisi: öğrencilerin başarı ve başarısızlıklarını değerlendirmedeki atfetme farklılıkları. *Journal of Social Sciences*, 8(15), 61-77.
- Kizilcec, R. F., Perez-Sanagustin, M., & Maldonado, J. J. (2017). Self-regulated learning strategies predict learner behavior and goal attainment in massive open online courses. *Computers & Education*, 104, 18-33. <https://doi.org/10.1016/j.compedu.2016.10.001>
- Kolovelonis, A., Goudas, M., & Dermizaki, I. (2011). The effect of different goals and self-recording on self-regulation of learning a motor skill in a physical education setting. *Learning and Instruction*, 21(3), 355-364. <https://doi.org/10.1016/j.learninstruc.2010.04.001>
- Kormos, J., & Csizer, K. (2014). The interaction of motivation, self-regulatory strategies, and autonomous learning behavior in different learner groups. *TESOL Quarterly*, 48(2), 275-299. <https://doi.org/10.1002/tesq.129>
- Kreicic, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610. <https://doi.org/10.1177/001316447003000308>

- Kuhl, J. (1985). Volitional mediators of cognition-behavior consistency: Self-regulatory processes and action versus state orientation. In J. Kuhl & J. Beckmann (Eds.), *Action control: From cognition to behavior* (pp. 101–128). Berlin, Germany: Springer.
- Kurman, J. (2003). Why is self-enhancement low in certain collectivist cultures? An investigation of two competing explanations. *Journal of Cross-Cultural Psychology*, 34(5), 496-510. <https://doi.org/10.1177/0022022103256474>
- Labuhn, A. S., Zimmerman, B. J., & Hasselhorn, M. (2010). Enhancing students' self-regulation and mathematics performance: The influence of feedback and self-evaluative standards. *Metacognition and Learning*, 5(2), 173-194. <https://doi.org/10.1007/s11409-010-9056-2>
- Laelasari (2018). Self regulated learning trough project base learning on the prospective math teacher. *Journal of Physics: Conference Series*, 983, 1-5. <http://dx.doi:10.1088/1742-6596/983/1/012156>.
- Lan, R., & Oxford, R. L. (2003). Language learning strategy profiles of elementary school students in Taiwan. *International Review of Applied Linguistics in Language Teaching*, 41(4), 339-380. <https://doi.org/10.1515/iral.2003.016>
- Leana-Taşçılar, M. Z. (2016). The relationships between self-regulated learning skills, causal attributions and academic success of trainee teachers preparing to teach gifted students. *Educational Research and Reviews*, 11(13), 1217-1227.
- Lee, K. R., & Oxford, R. (2008). Understanding EFL learners' strategy use and strategy awareness. *Asian EFL Journal Quarterly*, 10(1), 7-32.
- Lehmann, C. H. (1987, April). The adult mathematics learner: Attitudes, expectations, attributions. Paper presented at the Annual Meeting of the American Educational Research Association, Washington, DC. Retrieved from <https://files.eric.ed.gov/fulltext/ED283680.pdf>

- Lei, C. (2009). On the causal attribution of academic achievement in college students. *Asian Social Science*, 5(8), 87-96. <https://doi.org/10.5539/ass.v5n8p87>
- Liao, H. A., Ferdenzi, A. C., & Edlin, M. (2012). Motivation, self-regulated learning efficacy, and academic achievement among international and domestic students at an urban community college: A comparison. *The Community College Enterprise*, 18(2), 9-38.
- Liljedahl, P. G. (2005). Mathematical discovery and affect: The effect of AHA! experiences on undergraduate mathematics students. *International Journal of Mathematical Education in Science and Technology*, 36(2-3), 219-234. <https://doi.org/10.1080/00207390412331316997>
- Linehan, M. M., Goodstein, J. L., Nielsen, S. L., & Chiles, J. A. (1983). Reasons for staying alive when you are thinking of killing yourself: The Reasons for Living Inventory. *Journal of Consulting and Clinical Psychology*, 51(2), 276-286. <http://dx.doi.org/10.1037/0022-006X.51.2.276>
- Linnenbrink, E. A. (2006). Emotion research in education: Theoretical and methodological perspectives on the integration of affect, motivation, and cognition. *Educational Psychology Review*, 18(4), 307-314. <https://doi.org/10.1007/s10648-006-9028-x>
- Liou, P. Y., & Kuo, P. J. (2014). Validation of an instrument to measure students' motivation and self-regulation towards technology learning. *Research in Science & Technological Education*, 32(2), 79-96. <https://doi.org/10.1080/02635143.2014.893235>
- Littlejohn, A., Hood, N., Milligan, C., & Mustain, P. (2016). Learning in MOOCs: Motivations and self-regulated learning in MOOCs. *The Internet and Higher Education*, 29, 40-48. <https://doi.org/10.1016/j.iheduc.2015.12.003>
- Lohbeck, A., Grube, D., & Moschner, B. (2017). Academic self-concept and causal attributions for success and failure amongst elementary school children. *International Journal of Early Years Education*, 25(2), 190-203. <https://doi.org/10.1080/09669760.2017.1301806>

- Lou, Y., Abrami, P. C., Spence, J. C., Poulsen, C., Chambers, B., & d'Apollonia, S. (1996). Within-class grouping: A meta-analysis. *Review of Educational Research*, 66(4), 423-458. <https://doi.org/10.3102/00346543066004423>
- Luo, Y. P. (1998). English language learning strategies of junior college students in Taiwan. *Studies in English Language and Literature*, 3, 43-60.
- Lynch, D. J. (2006). Motivational Factors, Learning Strategies and Resource Management as Predictors of Course Grades. *College Student Journal*, 40(2), 423-428.
- Lynch, D.J. & Trujillo, H. (2011). Motivational beliefs and learning strategies in organic chemistry. *International Journal of Science and Mathematics Education*, 9 (6), 1351-1365. <https://doi.org/10.1007/s10763-010-9264-x>.
- Mahasneh, D. A. M., Al-Zoubi, D. Z. H., & Batayeneh, D. O. T. (2013). The Relationship between Attribution Styles and Personality Traits, Gender and Academic Specialization among the Hashemite University Students. *International Journal of Business and Social Science*, 4(9), 286-295
- Malpass, J. R., O'Neil, H. F., & Hocevar Jr, D. (1999). Self-regulation, goal orientation, self-efficacy, worry, and high-stakes math achievement for mathematically gifted high school students. *Roeper Review*, 21(4), 281-288. <https://doi.org/10.1080/02783199909553976>
- Marcou, A., & Philippou, G. (2005). Motivational beliefs, self-regulated learning and mathematical problem solving. In H. L. Chick & J. L. Vincent (Eds.), *Proceedings of the 29th conference of the International Group for the Psychology of Mathematics Education* (pp. 297-304). Melbourne: PME.
- Maria, T. C. R. & Pedro, F. C. A. (2004). Gender differences in academic motivation of secondary school students, *Electronic Journal of Research in Educational Psychology*, 2(1), 97-112.
- Marrs, H., & Sigler, E. A. (2012). Male academic performance in college: The possible role of study strategies. *Psychology of Men & Masculinity*, 13(2), 227-241. <http://dx.doi.org/10.1037/a0022247>

- Mauss, I. B., Bunge, S. A., & Gross, J. J. (2007). Automatic emotion regulation. *Social and Personality Psychology Compass*, 1(1), 146-167. <https://doi.org/10.1111/j.1751-9004.2007.00005.x>
- Mayer, J. D., & Salovey, P. (1995). Emotional intelligence and the construction and regulation of feelings. *Applied and Preventive Psychology*, 4(3), 197-208. [https://doi.org/10.1016/S0962-1849\(05\)80058-7](https://doi.org/10.1016/S0962-1849(05)80058-7)
- Maymon, R., Hall, N. C., Goetz, T., Chiarella, A., & Rahimi, S. (2018). Technology, attributions, and emotions in post-secondary education: An application of Weiner's attribution theory to academic computing problems. *Plos one*, 13(3). <https://doi.org/10.1371/journal.pone.0193443>
- McAuley, E., Duncan, T. E., & Russell, D. W. (1992). Measuring causal attributions: The revised causal dimension scale (CDSII). *Personality and Social Psychology Bulletin*, 18(5), 566-573. <https://doi.org/10.1177/0146167292185006>
- McClain, E. K. (2009). *The relationship of emotional intelligence to academic performance and perceived stress in first year medical students* (Order No. 3387959). Available from ProQuest Central. (304911743). Retrieved from <https://search.proquest.com/docview/304911743?accountid=80692>
- McClure, E. B. (2000). A meta-analytic review of sex differences in facial expression processing and their development in infants, children, and adolescents. *Psychological Bulletin*, 126(3), 424-453. <http://dx.doi.org/10.1037/0033-2909.126.3.424>
- McCollum, D. L., & Kajs, L. T. (2007). Applying goal orientation theory in an exploration of student motivations in the domain of educational leadership. *Educational Research Quarterly*, 31(1), 45-59.
- McCraty, R., Atkinson, M., Tomasino, D., Goelitz, J., & Mayrovitz, H. N. (1999). The impact of an emotional self-management skills course on psychosocial functioning and autonomic recovery to stress in middle school children. *Integrative Physiological and Behavioral Science*, 34(4), 246-268.

- McDonald, R. P. (1989). An index of goodness-of-fit based on noncentrality. *Journal of Classification*, 6(1), 97-103. <https://doi.org/10.1007/BF01908590>
- McDonald, R. P., & Marsh, H. W. (1990). Choosing a multivariate model: Noncentrality and goodness of fit. *Psychological Bulletin*, 107(2), 247-255. <http://dx.doi.org/10.1037/0033-2909.107.2.247>
- McRae, K., Ochsner, K. N., Mauss, I. B., Gabrieli, J. J., & Gross, J. J. (2008). Gender differences in emotion regulation: An fMRI study of cognitive reappraisal. *Group Processes & Intergroup Relations*, 11(2), 143-162. <https://doi.org/10.1177/1368430207088035>
- McWhaw, K., & Abrami, P. C. (2001). Student goal orientation and interest: Effects on students' use of self-regulated learning strategies. *Contemporary Educational Psychology*, 26(3), 311-329. <https://doi.org/10.1006/ceps.2000.1054>
- Meece, J. L., & Holt, K. (1993). A pattern analysis of students' achievement goals. *Journal of Educational Psychology*, 85(4), 582-590.
- Meece, J. L., Anderman, E. M., & Anderman, L. H. (2006). Classroom goal structure, student motivation, and academic achievement. *Annual Review of Psychology*, 57, 487-503.
- Meece, J. L., Glienke, B. B., & Burg, S. (2006). Gender and motivation. *Journal of School Psychology*, 44(5), 351-373. <https://doi.org/10.1016/j.jsp.2006.04.004>
- Mertler, C. A., & Reinhart, R. V. (2016). Advanced and multivariate statistical methods: *Practical Application and Interpretation*. New York, NY: Routledge.
- Meyer, D. K., & Turner, J. C. (2007). Scaffolding emotions in classrooms. In P. A. Schutz & R. Pekrun (Eds.), *Emotion in Education* (pp. 243-258). Massachusetts, USA: Academic Press. <https://doi.org/10.1016/B978-012372545-5/50015-0>

- Meyers, L. S., Gamst, G., & Guarino, A. J. (2016). *Applied multivariate research: Design and interpretation*. London, United Kingdom: Sage publications.
- Miller, C. D., Finley, J., & McKinley, D. L. (1990). Learning approaches and motives: Male and female differences and implications for learning assistance programs. *Journal of College Student Development*, 31(2), 147-154.
- Mills, N., Pajares, F., & Herron, C. (2007). Self-efficacy of college intermediate French students: Relation to achievement and motivation. *Language Learning*, 57(3), 417-442. <https://doi.org/10.1111/j.1467-9922.2007.00421.x>
- Mohammadi, A., & Sharififar, M. (2016). Attributions for success and failure: Gender and language proficiency differences among Iranian EFL learners. *Theory and Practice in Language Studies*, 6(3), 518-524. <http://dx.doi.org/10.17507/tpls.0603.09>
- Molly, G., & Lakshminaryanan, I. R. (1988). A study on academic achievement in relation to anxiety. *Indian Journal of Behavior*, 12, 30-33.
- Mori, S., Thang, S. M., Mohd Nor, N. F., Suppiah, V. L., & Imm, O. S. (2011). Attribution tendency and its relationship with actual and perceived proficiency. *Journal of Language Studies*, 11(3), 199-218.
- Mynatt, C. R., & Doherty, M. E. (2002). *Understanding human behavior*. London, United Kingdom: Pearson Education.
- Naumann, W. C., Bandalos, D., & Gutkin, T. B. (2003). Identifying variables that predict college success for First-generation college students. *Journal of College Admission*, 181, 4-9.
- Naveh-Benjamin, M., McKeachie, W. J., & Lin, Y. G. (1987). Two types of test-anxious students: Support for an information processing model. *Journal of Educational Psychology*, 79(2), 131-136. <https://doi.org/10.1037/0022-0663.79.2.131>

- Nick, J. B. (2015). Attributions of academic performance among third year and fourth year biology major students. *Asia Pacific Journal of Multidisciplinary Research*, 3(3), 31-38. <https://doi.org/10.4172/2161-0487.1000210>
- Niels, A. & Janneck, M., (2017). The influence of causal attributions on users' problem-solving motivation. In: Burghardt, M., Wimmer, R., Wolff, C. & Womser-Hacker, C. (Eds.), *Attributionen in der Mensch-Computer-Interaktion* (pp.127-136). Wiesbaden, Germany: Springer Vieweg.
- Niemivirta, M. (1997). *Gender Differences in Motivational-Cognitive Patterns of Self-Regulated Learning*. Retrieved from <https://eric.ed.gov/?id=ED410478>
- Nikos, M. & George, P. (2005). Students' motivational beliefs, self-regulation strategies and mathematics achievement. In Helen L. Chick & Vincet, J. L. (Eds.), *Proceedings of the 29th Conference of the International Group for the Psychology of Mathematics Education* (pp. 321-328). Melbourne, Australia: University of Melbourne.
- Nolen-Hoeksema, S. (2008). It is not what you have; it is what you do with it: Support for Addis's gendered responding framework. *Clinical Psychology: Science and Practice*, 15(3), 178-181. <https://doi.org/10.1111/j.1468-2850.2008.00128.x>
- Nolen-Hoeksema, S., & Aldao, A. (2011). Gender and age differences in emotion regulation strategies and their relationship to depressive symptoms. *Personality and Individual Differences*, 51(6), 704-708. <https://doi.org/10.1016/j.paid.2011.06.012>
- Obrentz, S. B. (2012). *Predictors of science success: The impact of motivation and learning strategies on college chemistry performance* (Doctoral Dissertation). Georgia State University, Atlanta. USA.
- Olagundoye, E. O. (2016). *The relationship between emotional intelligence and leadership styles among information technology professionals* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database (UMI No. 10306891)

- Ongowo, R. O., & Hungi, S. K. (2014). Motivational beliefs and self-regulation in biology learning: Influence of ethnicity, gender and grade level in Kenya. *Creative Education*, 5(4), 218-227. <https://doi.org/10.4236/ce.2014.54031>
- Op't Eynde, P., & Turner, J. E. (2006). Focusing on the complexity of emotion issues in academic learning: A dynamical component systems approach. *Educational Psychology Review*, 18(4), 361-376. <https://doi.org/10.1007/s10648-006-9031-2>
- Pajares, F. (2002). Gender and perceived self-efficacy in self-regulated learning. *Theory into Practice*, 41(2), 116-125. https://doi.org/10.1207/s15430421tip4102_8
- Pajares, F., & Schunk, D. (2005). Self-efficacy and self-concept beliefs. In H. Marsh, R. G. Craven & D. M. McInerney (Eds.), *New Frontiers for Self-Research* (pp. 95-122), Greenwich, NY: Information Age Publishing.
- Pajares, F., & Valiante, G. (2001). Gender differences in writing motivation and achievement of middle school students: A function of gender orientation?. *Contemporary Educational Psychology*, 26(3), 366-381. <https://doi.org/10.1006/ceps.2000.1069>
- Pajares, F., Miller, M. D., & Johnson, M. J. (1999). Gender differences in writing self-beliefs of elementary school students. *Journal of Educational Psychology*, 91(1), 50-61. <http://dx.doi.org/10.1037/0022-0663.91.1.50>
- Paris, S. G., & Myers, M. (1981). Comprehension monitoring, memory, and study strategies of good and poor readers. *Journal of Reading Behavior*, 13(1), 5-22. <https://doi.org/10.1080/10862968109547390>
- Patrick, H., Ryan, A. M., & Pintrich, P. R. (1999). The differential impact of extrinsic and mastery goal orientations on males' and females' self-regulated learning. *Learning and Individual Differences*, 11(2), 153-171. [https://doi.org/10.1016/S1041-6080\(00\)80003-5](https://doi.org/10.1016/S1041-6080(00)80003-5)
- Peacock, M. (2009). Attribution and learning English as a foreign language. *ELT Journal*, 64(2), 184-193. <https://doi.org/10.1093/elt/ccp031>

- Peklaj, C., & Pečjak, S. (2002). Differences in students' self-regulated learning. *Studia Psychologica*, 44(1), 29-43.
- Pekmn, R., Goetz, T., & Titz, W. (2002). Academic emotions in students' self regulated learning and achievement: A program of quantitative and qualitative research. *Educational Psychologist*, 37, 91-106. https://doi.org/10.1207/S15326985EP3702_4
- Pekrun, R. (2006). The control-value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practice. *Educational Psychology Review*, 18(4), 315-341. <https://doi.org/10.1007/s10648-006-9029-9>
- Pekrun, R., & Schutz, P. A. (2007). Where do we go from here? Implications and future directions for inquiry on emotions in education. In P. A. Schutz & R. Pekrun (Eds.), *Emotion in Education* (pp.313-331). Massachusetts, USA: Academic Press. <https://doi.org/10.1016/B978-012372545-5/50015-0>
- Pekrun, R., Elliot, A. J., & Maier, M. A. (2006). Achievement goals and discrete achievement emotions: A theoretical model and prospective test. *Journal of Educational Psychology*, 98(3), 583-597. <http://dx.doi.org/10.1037/0022-0663.98.3.583>
- Pekrun, R., Frenzel, A. C., Goetz, T., & Perry, R. P. (2007). The control-value theory of achievement emotions: An integrative approach to emotions in education. In P. A. Schutz & R. Pekrun (Eds.), *Emotion in Education* (pp.13-36). Massachusetts, USA: Academic Press. <https://doi.org/10.1016/B978-012372545-5/50015-0>
- Pekrun, R., Goetz, T., Frenzel, A. C., Barchfeld, P., & Perry, R. P. (2011). Measuring emotions in students' learning and performance: The Achievement Emotions Questionnaire (AEQ). *Contemporary Educational Psychology*, 36(1), 36-48. <https://doi.org/10.1016/j.cedpsych.2010.10.002>
- Pekrun, R., Goetz, T., Perry, R. P., Kramer, K., Hochstadt, M., & Molfenter, S. (2004). Beyond test anxiety: Development and validation of the Test Emotions Questionnaire (TEQ). *Anxiety, Stress & Coping*, 17(3), 287-316. <https://doi.org/10.1080/10615800412331303847>

- Pekrun, R., Goetz, T., Titz, W., & Perry, R. P. (2002). Positive emotions in education. In E. Frydenberg (Ed.), *Beyond coping: Meeting goals, visions, and challenges* (pp. 149-173). New York, NY, US: Oxford University Press.
- Peng, I. N. (2002). *EFL motivation and strategy use among Taiwanese senior high school learners* (Unpublished master dissertation), National Taiwan Normal University, Taipei, Taiwan.
- Perels, F., Dignath, C., & Schmitz, B. (2009). Is it possible to improve mathematical achievement by means of self-regulation strategies? Evaluation of an intervention in regular math classes. *European Journal of Psychology of Education*, 24(1), 17. <https://doi.org/10.1007/BF03173472>
- Perels, F., Gurtler, T., & Schmitz, B. (2005). Training of self-regulatory and problem-solving competence. *Learning and Instruction*, 15(2), 123-139. <https://doi.org/10.1016/j.learninstruc.2005.04.010>
- Perry, R. P., Hechter, F. J., Menec, V. H., & Weinberg, L. E. (1993). Enhancing achievement motivation and performance in college students: An attributional retraining perspective. *Research in Higher Education*, 34(6), 687-723. <https://doi.org/10.1007/BF00992156>
- Perry, R. P., Hladkyj, S., Pekrun, R. H., & Pelletier, S. T. (2001). Academic control and action control in the achievement of college students: A longitudinal field study. *Journal of Educational Psychology*, 93(4), 776-789.
- Perry, R. P., Hladkyj, S., Pekrun, R. H., Clifton, R. A., & Chipperfield, J. G. (2005). Perceived academic control and failure in college students: A three-year study of scholastic attainment. *Research in Higher Education*, 46(5), 535-569. <https://doi.org/10.1007/s11162-005-3364-4>
- Perry, R. P., Stupnisky, R. H., Daniels, L. M., & Haynes, T. L. (2008). Attributional (explanatory) thinking about failure in new achievement settings. *European Journal of Psychology of Education*, 23(4), 459. <https://doi.org/10.1007/BF03172753>

- Peterson, C, Buchanan, G. M. & Seligman, M. E. (2014). Explanatory Style: History and Evolution of the Field. In G. M. Buchanan & M. E.P. Seligman (Eds.), *Explanatory Style* (pp. 11-30). New York, NY: Routledge.
- Peterson, C., & Buchanan, G. M. (1995). Explanatory style: History and evolution of the field. In G. M. Buchanan & M. E. P. Seligman (Eds.), *Explanatory style* (pp. 1-20). New York, NJ: Lawrence Erlbaum Associates, Inc.
- Petresevic, D., & Soric, I. (2012). Students' emotions and their predictors in the process of self-regulated learning. *Drustvena Istrazivanja*, 20(1), 211-232.
- Phye, G. D., Schutz, P., & Pekrun, R. (2011). *Emotion in Education*. Retrieved from <https://www.elsevier.com/books/emotion-in-education/schutz/978-0-12-372545-5>
- Pintrich, P. R. (1989). The dynamic interplay of student motivation and cognition in the college classroom. *Advances in Motivation and Achievement*, 6, 117-160.
- Pintrich, P. R. (1995). Understanding self-regulated learning. *New Directions for Teaching and Learning*, 63, 3-12. <https://doi.org/10.1002/tl.37219956304>
- Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. R. Pintrich & M. Zeidner, *Handbook of self-regulation* (pp. 451-502). Michigan, USA: Academic Press.
- Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review*, 16(4), 385-407. <https://doi.org/10.1007/s10648-004-0006-x>
- Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, 82(1), 33-40.
- Pintrich, P. R., & Garcia, T. (1991). Student goal orientation and self-regulation in the college classroom. In M. L. Maehr and P. R. Pintrich (Eds.), *Advances in Motivation and Achievement* (pp. 371-402). Greenwich, CT: JAI Press.

- Pintrich, P. R., & Schrauben, B. (1992). Students' motivational beliefs and their cognitive engagement in classroom academic tasks. In D. H. Schunk & J. L. Meece (Eds.), *Student perceptions in the classroom* (pp. 149-183). New York, NY: Routledge.
- Pintrich, P. R., & Zusho, A. (2002). The development of academic self-regulation: The role of cognitive and motivational factors. In A. Wigfield, & J. S. Eccles (Eds.), *Development of achievement motivation* (pp. 249-284). San Diego, CA: Academic Press.
- Pintrich, P. R., Roeser, R. W., & De Groot, E. A. (1994). Classroom and individual differences in early adolescents' motivation and self-regulated learning. *The Journal of Early Adolescence*, 14(2), 139-161. <https://doi.org/10.1177/027243169401400204>
- Pintrich, P. R., Smith, D. A., García, T., & McKeachie, W. J. (1991). *A manual for the use of the motivational strategies for learning questionnaire (MSLQ)*. Ann Arbor, MI: University of Michigan, National Center for Research to Improve Postsecondary Teaching and Learning.
- Pishghadam, R., & Motakef, R. (2011). Attributional patterns with respect to major and attendance in private language schools: A case of EFL context. *Theory and Practice in Language Studies*, 1(7), 888-894.
- Pishghadam, R., & Zabihi, R. (2011). Foreign language attributions and achievement in foreign language classes. *International Journal of Linguistics*, 3(1), 1-11.
- Pokay, P., & Blumenfeld, P. C. (1990). Predicting achievement early and late in the semester: The role of motivation and use of learning strategies. *Journal of Educational Psychology*, 82(1), 41-50. <http://dx.doi.org/10.1037/0022-0663.82.1.41>
- Pollak, L. H., & Thoits, P. A. (1989). Processes in emotional socialization. *Social Psychology Quarterly*, 52 (1), 22-34. <http://dx.doi.org/10.2307/2786901>

- Poorani and Arulsamy, S. (2015) Intra-gender differences in emotional intelligence among postgraduate students. *International Journal of Education*, 3 (4), 41-49.
- Proctor, B. E., Prevatt, F. F., Adams, K. S., Reaser, A., & Petscher, Y. (2006). Study skills profiles of normal-achieving and academically-struggling college students. *Journal of College Student Development*, 47(1), 37-51. <http://dx.doi.org/10.1353/csd.2006.0011>
- Raffaelli, M., Crockett, L. J., & Shen, Y. L. (2005). Developmental stability and change in self-regulation from childhood to adolescence. *The Journal of Genetic Psychology*, 166(1), 54-76. <https://doi.org/10.3200/GNTP.166.1.54-76>
- Ramana, K and Devi, A. (2018). The relationship between emotional intelligence and academic achievement among intermediate students. *Journal of Business and Management*, 20 (4), 30-35.
- Ranasinghe, P., Wathurapatha, W. S., Mathangasinghe, Y., & Ponnampereuma, G. (2017). Emotional intelligence, perceived stress and academic performance of Sri Lankan medical undergraduates. *BMC Medical Education*, 17(1), 41. <https://doi.org/10.1186/s12909-017-0884-5>
- Reardon, S. F. (2011). The widening academic achievement gap between the rich and the poor: New evidence and possible explanations. *Whither opportunity*, 91-116. <https://doi.org/10.1093/med:psych/9780198508144.003.0008>
- Richardson, M., Abraham, C., & Bond, R. (2012). Psychological correlates of university students' academic performance: A systematic review and meta-analysis. *Psychological Bulletin*, 138(2), 353-387. <http://dx.doi.org/10.1037/a0026838>
- Roeser, R. W., Midgley, C., & Urdan, T. C. (1996). Perceptions of the school psychological environment and early adolescents' psychological and behavioral functioning in school: The mediating role of goals and belonging. *Journal of Educational Psychology*, 88(3), 408-422. <http://dx.doi.org/10.1037/0022-0663.88.3.408>

- Ryan, A. M., & Pintrich, P. R. (1997). "Should I ask for help?" The role of motivation and attitudes in adolescents' help-seeking in math class. *Journal of Educational Psychology*, 89(2), 329-341. <http://dx.doi.org/10.1037/0022-0663.89.2.329>
- Saez, F. M., Bustos, C. E., Perez, M. V., Mella, J. A., Lobos, K. A., & Diaz, A. E. (2018). Willingness to Study, Self-Efficacy and Causal Attributions in Chilean University Students. *Propósitos y Representaciones*, 6(1), 199-245. [http:// dx.doi.org/10.20511/pyr2018.v6n1.179](http://dx.doi.org/10.20511/pyr2018.v6n1.179)
- Salovey, P., Mayer, J. D., Goldman, S. L., Turvey, C., & Palfai, T. P. (1995). Emotional attention, clarity, and repair: Exploring emotional intelligence using the Trait Meta-Mood Scale. In J. W. Pennebaker (Ed.), *Emotion, disclosure, & health* (pp. 125-154). Washington, DC, US: American Psychological Association.
- Samadi, M. (2004). Role of self-regulation strategies in mathematic problem solving of students. *Quarterly of Educational Innovations*, 7, 73-97.
- Sanchez-Nunez, M., Fernandez-Berrocal, P., Montanes, J., & Latorre, J. M. (2008). Does emotional intelligence depend on gender? The socialization of emotional competencies in men and women and its implications. *Electronic Journal of Research in Educational Psychology*, 6 (2), 455-474.
- Scheier, M. F., & Carver, C. S. (1983). Self-directed attention and the comparison of self with standards. *Journal of Experimental Social Psychology*, 19(3), 205-222. [https://doi.org/10.1016/0022-1031\(83\)90038-0](https://doi.org/10.1016/0022-1031(83)90038-0)
- Schunk, D. H. (1989). Social cognitive theory and self-regulated learning. In B. J. Zimmerman & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement* (pp. 83-110). New York, NY: Springer.
- Schunk, D. H. (1990). Goal setting and self-efficacy during self-regulated learning. *Educational Psychologist*, 25(1), 71-86. https://doi.org/10.1207/s15326985ep2501_6

- Schunk, D. H. (1991). Self-efficacy and academic motivation. *Educational Psychologist*, 26(3-4), 207-231. <https://doi.org/10.1080/00461520.1991.9653133>
- Schunk, D. H. (1996). Goal and self-evaluative influences during children's cognitive skill learning. *American Educational Research Journal*, 33(2), 359-382. <https://doi.org/10.3102/00028312033002359>
- Schunk, D. H. (2005). Self-regulated learning: The educational legacy of Paul R. Pintrich. *Educational Psychologist*, 40(2), 85-94. https://doi.org/10.1207/s15326985ep4002_3
- Schunk, D. H., & Cox, P. D. (1986). Strategy training and attributional feedback with learning disabled students. *Journal of Educational Psychology*, 78(3), 201-209. <http://dx.doi.org/10.1037/0022-0663.78.3.201>
- Schunk, D. H., & Ertmer, P. A. (2000). Self-regulation and academic learning: Self-efficacy enhancing interventions. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 631-649). San Diego, CA, US: Academic Press.
- Schunk, D. H., & Meece, J. L. (2006). Self-efficacy development in adolescence. In T. Urdan, & F. Pajares (Eds.), *Self-efficacy beliefs of adolescents* (pp.71-96). North Carolina, USA: Information Age Publishing.
- Schunk, D. H., & Zimmerman, B. J. (1994). *Self-regulation of learning and performance: Issues and educational applications*. New York, NY: Lawrence Erlbaum Associates, Inc.
- Schunk, D. H., & Zimmerman, B. J. (1998). *Self-regulated learning: From teaching to self-reflective practice*. New York, NY: Guilford Press.
- Schunk, D. H., & Zimmerman, B. J. (2012). Motivation an essential dimension of self-regulated learning. In D. H. Schunk & B. J. Zimmerman (Eds.), *Motivation and self-regulated learning* (pp. 13-42). New York, NY: Lawrence Erlbaum Associates, Inc.

- Schunk, D. H., Pintrich, P. R., & Meece, J. L. (2008). *Motivation in education: Theory, research, and applications*. Upper Saddle River, NJ: Pearson
- Schunk, D. H. (2001). Social cognitive theory and self-regulated learning. In B.J. Zimmerman & D.H Schunk (Eds.), *Self-regulated learning and academic achievement: Theoretical perspectives* (pp. 125-152). Mahwah, NJ: Erlbaum.
- Schutte, N. S., Malouff, J. M., & Bhullar, N. (2009). The Assessing Emotions Scale. C. Stough, D. Saklofske & J. Parker (Eds.), *The assessment of emotional intelligence* (pp.119-135). New York, NY: Springer Publishing.
- Schutz, P. A., & Davis, H. A. (2000). Emotions and self-regulation during test taking. *Educational Psychologist*, 35(4), 243-256. https://doi.org/10.1207/S15326985EP3504_03
- Schwinger, M., & Stiensmeier-Pelster, J. (2012). Effects of motivational regulation on effort and achievement: A mediation model. *International Journal of Educational Research*, 56, 35-47. <https://doi.org/10.1016/j.ijer.2012.07.005>
- Sebesta, A. J., & Bray Speth, E. (2017). How Should I Study for the Exam? Self-Regulated Learning Strategies and Achievement in Introductory Biology. *Life Sciences Education*, 16(2), 30. <https://doi.org/10.1187/cbe.16-09-0269>
- Sedikides, C., Gaertner, L., & Toguchi, Y. (2003). Pancultural self-enhancement. *Journal of Personality and Social Psychology*, 84(1), 60-79. <http://dx.doi.org/10.1037/0022-3514.84.1.60>
- Seo, D., & Taherbhai, H. (2009). Motivational beliefs and cognitive processes in mathematics achievement, analyzed in the context of cultural differences: A Korean elementary school example. *Asia Pacific Education Review*, 10(2), 193-203. <https://doi.org/10.1007/s12564-009-9017-0>
- Shannon, S. V. (2008). Using metacognitive strategies and learning styles to create self-directed learners. *Institute for Learning Styles Journal*, 1(1), 14-28.
- Sharma, A. & Pinku (2017). A study of emotional intelligence in relation to academic achievement, gender and locality. *International Journal of Engineering Technology Science and Research*, 4(7), 446-454.

- Shaukat, S., Abiodullah, M., & Rashid, K. (2010). Student's causal attribution towards their success and failure in examination at post graduate level. *Pakistan Journal of Psychology*, 41(1), 81-98.
- Shell, D. F., & Husman, J. (2008). Control, motivation, affect, and strategic self-regulation in the college classroom: A multidimensional phenomenon. *Journal of Educational Psychology*, 100(2), 443-459. <http://dx.doi.org/10.1037/0022-0663.100.2.443>
- Siegle, D., Rubenstein, L. D. V., Pollard, E., & Romey, E. (2010). Exploring the relationship of college freshmen honors students' effort and ability attribution, interest, and implicit theory of intelligence with perceived ability. *Gifted Child Quarterly*, 54(2), 92-101. <https://doi.org/10.1177/0016986209355975>
- Silvia, P. J. (2002). Self-awareness and the regulation of emotional intensity. *Self and Identity*, 1(1), 3-10. <https://doi.org/10.1080/152988602317232768>
- Simsek, A., & Balaban, J. (2010). Learning Strategies of Successful and Unsuccessful University Students. *Contemporary Educational Technology*, 1(1), 36-45.
- Singh, D. (2002). *Emotional intelligence at work: a professional guide*. New Delhi: Sage Publications.
- Sinha, D. (1966). A psychological analysis of some factors associated with success and failure in university education: Intelligence, anxiety and adjustment of academic achievers and nonachievers. *Psychological Studies*, 11(2), 69-88.
- Sizoo, S., Malhotra, N. K., & Bearson, J. M. (2003). Preparing students for a distance learning environment: A comparison of learning strategies of in-class and distance learners. *Journal of Educational Technology Systems*, 31(3), 261-273. <https://doi.org/10.2190/01WU-9DMF-2XVN-7WYU>
- Solar, N. J. B. (2015). Attributions of Academic Performance among Third Year and Fourth Year Biology Major Students. *Journal of Psychology and Psychotherapy*, 5(5), 2-6. <https://doi.org/10.4172/2161-0487.1000210>

- Soleymannezhad, A., & Shahrarai, M. (2002). The relationships between locus of control and self regulated learning with academic achievement, *Journal of Psychology and Education*, 31(3), 175-198.
- Son, L. K., & Simon, D. A. (2012). Distributed learning: Data, metacognition, and educational implications. *Educational Psychology Review*, 24(3), 379-399. <https://doi.org/10.1007/s10648-012-9206-y>
- Soric, I. (2009). Regulatory styles, causal attributions and academic achievement. *School Psychology International*, 30(4), 403-420. <https://doi.org/10.1177/0143034309106946>
- Soric, I., & Palekcic, M. (2009). The role of students' interests in self-regulated learning: The relationship between students' interests, learning strategies and causal attributions. *European Journal of Psychology of Education*, 24(4), 545-565. <https://doi.org/10.1007/BF03178767>
- Soric, I., Penezic, Z., & Buric, I. (2013). Big Five personality traits, cognitive appraisals and emotion regulation strategies as predictors of achievement emotions. *Psihologijske Teme*, 22(2), 325-349. Retrieved from <https://hrcak.srce.hr/108516>
- Steiger, J. H. (1980, May). *Statistically based tests for the number of common factors*. Paper Presented in the annual meeting of the Psychometric Society, Iowa City, USA.
- Steiger, J. H. (1989). *EzPATH: Causal modelling*. Evanston, IL: SYSTAT Inc.
- Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioral Research*, 25(2), 173-180. https://doi.org/10.1207/s15327906mbr2502_4
- Sternberg, R. J. (1998). Metacognition, abilities, and developing expertise: What makes an expert student? *Instructional Science*, 26(1-2), 127-140. <https://doi.org/10.1023/A:1003096215103>
- Stevens, J. P. (2002). *Applied multivariate statistics for the social sciences*, Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

- Stewart, T. L. H., Clifton, R. A., Daniels, L. M., Perry, R. P., Chipperfield, J. G., & Ruthig, J. C. (2011). Attributional retraining: Reducing the likelihood of failure. *Social Psychology of Education*, 14(1), 75-92. <https://doi.org/10.1007/s11218-010-9130-2>
- Stoynoff, S. (1996). Self-regulated learning strategies of international students: A study of high-and low-achievers. *College Student Journal*, 30(3), 329-336. <https://doi.org/10.1007/BF00129109>
- Tait, H., & Entwistle, N. (1996). Identifying students at risk through ineffective study strategies. *Higher Education*, 31(1), 97-116. <https://doi.org/10.1007/BF00129109>
- Tamres, L. K., Janicki, D., & Helgeson, V. S. (2002). Sex differences in coping behavior: A meta-analytic review and an examination of relative coping. *Personality and Social Psychology Review*, 6(1), 2-30. https://doi.org/10.1207/S15327957PSPR0601_1
- Tanaka, J. S. (1987). "How big is big enough?": Sample size and goodness of fit in structural equation models with latent variables. *Child Development*, 134-146. <https://doi.org/10.2307/1130296>
- Tang, L. (2015). A Comparative Study of Metacognitive Strategy Use between Language High Achievers and Low Achievers of English in College. *International Journal of English Linguistics*, 5(5), 147-152. <http://dx.doi.org/10.5539/ijel.v5n5p147>
- Tang, M., & Neber, H. (2008). Motivation and self-regulated science learning in high-achieving students: differences related to nation, gender, and grade-level. *High Ability Studies*, 19(2), 103-116. <https://doi.org/10.1080/13598130802503959>
- Taplin, M., Yum, J., Jegede, O., Fan, R. Y., & Chan, M. S. (2007). Help-seeking strategies used by high-achieving and low-achieving distance education students. *International Journal of E-Learning & Distance Education*, 16(1), 56-69.

- Tewari, D. D., & Rai, P. N. (1976). Some differential personality correlates of low and high achievers: A comparative study. *Indian Educational Review*, 11(2), 70-82.
- Thang, S. M., Gobel, P., Nor, N. F. M., & Suppiah, V. L. (2011). Students' attributions for success and failure in the learning of English as a second language: A comparison of undergraduates from six public universities in Malaysia. *Pertanika Journal of Social Sciences and Humanities*, 19(2), 459-474.
- Thibodeaux, J., Deutsch, A., Kitsantas, A., & Winsler, A. (2017). First-year college students' time use: Relations with self-regulation and GPA. *Journal of Advanced Academics*, 28(1), 5-27. <https://doi.org/10.1177/1932202X16676860>
- Travis, C. B., Phillippi, R. H., & Henley, T. B. (1991). Gender and causal attributions for mastery, personal, and interpersonal events. *Psychology of Women Quarterly*, 15(2), 233-249. <https://doi.org/10.1111/j.1471-6402.1991.tb00794.x>
- Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, 38(1), 1-10. <https://doi.org/10.1007/BF02291170>
- Turner, J. E., & Schallert, D. L. (2001). Expectancy–value relationships of shame reactions and shame resiliency. *Journal of Educational Psychology*, 93(2), 320-329. <http://dx.doi.org/10.1037/0022-0663.93.2.320>
- Turner, J. E., & Waugh, R. M. (2007). A dynamical systems perspective regarding students' learning processes: Shame reactions and emergent self-organizations. In P. A. Schutz & R. Pekrun (Eds.), *Emotion in Education* (pp. 125-145). Massachusetts, USA: Academic Press.
- Tyson, D. F., Linnenbrink-Garcia, L., & Hill, N. E. (2009). Regulating debilitating emotions in the context of performance: Achievement goal orientations, achievement-elicited emotions, and socialization contexts. *Human Development*, 52(6), 329-356. <https://doi.org/10.1159/000242348>

- Ushioda, E. (2001). Language learning at university: Exploring the role of motivational thinking. In Z. Dornyei & R. Schmidt (Eds.), *Motivation and second language acquisition* (pp 93-125). Honolulu, HI: University of Hawaii Press.
- Van Laar, C. (2000). The paradox of low academic achievement but high self-esteem in African American students: An attributional account. *Educational Psychology Review*, 12(1), 33-61. <https://doi.org/10.1023/A:1009032900261>
- Van Rooy, D. L., Dilchert, S., Viswesvaran, C., & Ones, D. S. (2014). Multiplying intelligences: Are general emotional, and practical intelligences equal? *In A Critique of Emotional Intelligence: What are the Problems and How Can They Be Fixed* (pp 235-262). New York, NY: Psychology Press. <https://doi.org/10.4324/9781315820927>
- Vanderstoep, S. W., Pintrich, P. R., & Fagerlin, A. (1996). Disciplinary differences in self-regulated learning in college students. *Contemporary Educational Psychology*, 21(4), 345-362. <https://doi.org/10.1006/ceps.1996.0026>
- VanZile-Tamsen, C., & Livingston, J. A. (1999). The differential impact of motivation on the self-regulated strategy use of high-and low-achieving college students. *Journal of College Student Development*, 40, 54-60.
- Veloo, A., Hong, L. H., & Lee, S. C. (2015). Gender and ethnicity differences manifested in chemistry achievement and self-regulated learning. *International Education Studies*, 8(8), 1-12.
- Virtanen, P., & Nevgi, A. (2010). Disciplinary and gender differences among higher education students in self-regulated learning strategies. *Educational Psychology*, 30(3), 323-347. <https://doi.org/10.1080/01443411003606391>
- Vlachou, M., & Buchel, F. (2000, July). *Metacognition and Attributional Beliefs: Effects on Learning in Pupils with Learning Difficulties*. Paper presented in International Special Education Congress, Manchester, UK. Retrieved from <https://www.researchgate.net/publication/273455090>

- Walker, C. O., Greene, B. A., & Mansell, R. A. (2006). Identification with academics, intrinsic/extrinsic motivation, and self-efficacy as predictors of cognitive engagement. *Learning and Individual Differences*, 16(1), 1-12. <https://doi.org/10.1016/j.lindif.2005.06.004>
- Wan, T. T. (2002). *Evidence-based health care management: Multivariate modeling approaches*. Massachusetts, USA: Kluwer Academic Publisher.
- Wei, D. J. W. F. F. (2007). A Study on the Relationship between College Students' Emotion management ability and their mental health. *Chinese Journal of Special Education*, 9. Retrieved from http://en.cnki.com.cn/Article_en/CJFDTOTAL-ZDTJ200709018.htm
- Weiner, B. (2006). *Social motivation, justice and the moral emotions: An attributional approach*, Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Weiner, B. (1972). Attribution theory, achievement motivation, and the educational process. *Review of Educational Research*, 42(2), 203-215. <https://doi.org/10.3102/00346543042002203>
- Weiner, B. (1972). *Theories of motivation: From mechanism to cognition*. Oxford, England: Markham.
- Weiner, B. (1974). Motivational psychology and educational research. *Educational Psychologist* 11: 96–101. <https://doi.org/10.1080/00461527409529130>
- Weiner, B. (1974). *Achievement motivation and attribution theory*. Morristown, NJ: General Learning Press.
- Weiner, B. (1979). A theory of motivation for some classroom experiences. *Journal of Educational Psychology*, 71(1), 3-25. <http://dx.doi.org/10.1037/0022-0663.71.1.3>
- Weiner, B. (1983). Some methodological pitfalls in attributional research. *Journal of Educational Psychology*, 75(4), 530-543. <http://dx.doi.org/10.1037/0022-0663.75.4.530>

- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, 92(4), 548-573.
- Weiner, B. (1986). *An attribution theory of motivation and emotion*. New York, NY: Springer.
- Weiner, B. (1994). Integrating social and personal theories of achievement striving. *Review of Educational Research*, 64(4), 557-573. <https://doi.org/10.3102/00346543064004557>
- Weiner, B. (1995). *Judgments of responsibility: A foundation for a theory of social conduct*. New York, NY: Guilford Press.
- Weiner, B. (2000). Attributional thoughts about consumer behavior. *Journal of Consumer Research*, 27(3), 382-387. <https://doi.org/10.1086/317592>
- Weiner, B. (2008). Reflections on the history of attribution theory and research: People, personalities, publications, problems. *Social Psychology*, 39(3), 151-156. <https://doi.org/10.1027/1864-9335.39.3.151>
- Weiner, B. (2010). The development of an attribution-based theory of motivation: A history of ideas. *Educational Psychologist*, 45(1), 28-36. <https://doi.org/10.1080/00461520903433596>
- Weiner, B., Frieze, I. H., Kukla, A., Reed, L., Rest, S., & Rosenbaum, R. M. (1971). *Perceiving the causes of success and failure*. Morristown, NJ: General Learning Press.
- Weinstein, C. E., Husman, J., & Dierking, D. R. (2000). Self-regulation interventions with a focus on learning strategies. In M. Boekaerts, P. R. Pintrich & M. Zeidner, *Handbook of self-regulation* (pp. 727-747). Michigan, USA: Academic Press.
- Wharton, G. (2000). Language learning strategy use of bilingual foreign language learners in Singapore. *Language Learning*, 50(2), 203-243. <https://doi.org/10.1111/0023-8333.00117>

- Whipp, J. L., & Chiarelli, S. (2004). Self-regulation in a web-based course: A case study. *Educational Technology Research and Development*, 52(4), 5. <https://doi.org/10.1007/BF02504714>
- Wijekoon, C. N., Amaratunge, H., de Silva, Y., Senanayake, S., Jayawardane, P., & Senarath, U. (2017). Emotional intelligence and academic performance of medical undergraduates: a cross-sectional study in a selected university in Sri Lanka. *BMC Medical Education*, 17(1), 176.
- Williams, M. R., Burden, S., & Al-Baharna, H. (2001). Making sense of success and failure: The role of the individual in language learning. In Z. Dornyei & R. Schmidt (Eds.), *Motivation and second language acquisition* (pp.169-82). Honolulu, HI: University of Hawaii Press.
- Williams, R.L. and Clark, L. (2002). *Academic causal attribution and course outcomes for college students*. Retrieved from Eric database. (ED 469337) <https://files.eric.ed.gov/fulltext/ED469334.pdf>
- Wing, E., & Love, G. D. (2001). Elective affinities and uninvited agonies: Mapping emotions with significant others onto health. In Ryff, C. D., Singer, B. H., (Eds.) *Emotion, social relationships and health series in affective science* (135-175). New York, NY: Oxford University Press.
- Woehle, S. K., Harris, Forthun, L.F. (2015). Emotional ability among college students: an exploration of gender differences. *Journal of Young Investigators*, 29 (4), 18-23.
- Wolleat, P. L., Pedro, J. D., Becker, A. D., & Fennema, E. (1980). Sex differences in high school students' causal attributions of performance in mathematics. *Journal for Research in Mathematics Education*, 11 (5), 356-366. <https://doi.org/10.2307/748626>
- Wolters, C. A. (1999). The relation between high school students' motivational regulation and their use of learning strategies, effort, and classroom performance. *Learning and Individual Differences*, 11(3), 281-299. [https://doi.org/10.1016/S1041-6080\(99\)80004-1](https://doi.org/10.1016/S1041-6080(99)80004-1)

- Wolters, C. A., & Rosenthal, H. (2000). The relation between students' motivational beliefs and their use of motivational regulation strategies. *International Journal of Educational Research*, 33(7-8), 801-820. [https://doi.org/10.1016/S0883-0355\(00\)00051-3](https://doi.org/10.1016/S0883-0355(00)00051-3)
- Wolters, C. A., Shirley, L. Y., & Pintrich, P. R. (1996). The relation between goal orientation and students' motivational beliefs and self-regulated learning. *Learning and Individual Differences*, 8(3), 211-238. [https://doi.org/10.1016/S1041-6080\(96\)90015-1](https://doi.org/10.1016/S1041-6080(96)90015-1)
- Wosnitza, M., & Volet, S. (2005). Origin, direction and impact of emotions in social online learning. *Learning and Instruction*, 15(5), 449-464. <https://doi.org/10.1016/j.learninstruc.2005.07.009>
- Wosnitza, M., & Volet, S. (2005). Origin, direction and impact of emotions in social online learning. *Learning and Instruction*, 15(5), 449-464.
- Wu, J. (2011). An investigation and analysis of attribution preference and gender difference of non-English majors' English learning-based on investigation of non-English majors in Tianjin polytechnic university. *Journal of Language Teaching & Research*, 2(2), 332-337. <https://doi.org/10.4304/jltr.2.2.332-337>
- Xu, J. (2011). Homework emotion management at the secondary school level: Antecedents and homework completion. *Teachers College Record*, 113, 529-560.
- Xu, J., Du, J., & Fan, X. (2013). Individual and group-level factors for students' emotion management in online collaborative groupwork. *The Internet and Higher Education*, 19, 1-9. <https://doi.org/10.1016/j.iheduc.2013.03.001>
- Xu, J., Du, J., & Fan, X. (2014). Emotion management in online groupwork reported by Chinese students. *Educational Technology Research and Development*, 62(6), 795-819. <https://doi.org/10.1007/s11423-014-9359-0>

- Xu, M., Benson, S. N. K., Mudrey-Camino, R., & Steiner, R. P. (2010). The relationship between parental involvement, self-regulated learning, and reading achievement of fifth graders: A path analysis using the ECLS-K database. *Social Psychology of Education*, 13(2), 237-269. <https://doi.org/10.1007/s11218-009-9104-4>
- Yan, W., & Gaier, E. L. (1994). Causal attributions for college success and failure: An Asian-American comparison. *Journal of Cross-Cultural Psychology*, 25(1), 146-158. <https://doi.org/10.1177/0022022194251009>
- Yilmaz, C. (2012). An Investigation into Turkish EFL Students' Attributions in Reading Comprehension. *Journal of Language Teaching and Research*, 3(5), 823-828. <https://doi.org/10.4304/jltr.3.5.823-828>
- Yip, J. A., & Martin, R. A. (2006). Sense of humor, emotional intelligence, and social competence. *Journal of Research in Personality*, 40(6), 1202-1208. <https://doi.org/10.1016/j.jrp.2005.08.005>
- Yip, M. C. (2007). Differences in learning and study strategies between high and low achieving university students: A Hong Kong study. *Educational Psychology*, 27(5), 597-606. <https://doi.org/10.1080/01443410701309126>
- Yip, M. C. (2009). Differences between high and low academic achieving university students in learning and study strategies: a further investigation. *Educational Research and Evaluation*, 15(6), 561-570. <https://doi.org/10.1080/13803610903354718>
- Yip, M. C. (2012). Learning strategies and self-efficacy as predictors of academic performance: a preliminary study. *Quality in Higher Education*, 18(1), 23-34. <https://doi.org/10.1080/13538322.2012.667263>
- Yip, M. C. (2013). Learning strategies and their relationships to academic performance of high school students in Hong Kong. *Educational Psychology*, 33(7), 817-827. <https://doi.org/10.1080/01443410.2013.794493>

- Yip, M. C., & Chung, O. L. (2005). Relationship of study strategies and academic performance in different learning phases of higher education in Hong Kong. *Educational Research and Evaluation*, 11(1), 61-70. <https://doi.org/10.1080/13803610500110414>
- Young, D., & Ley, K. (2005). Developmental college student self-regulation: Results from two measures. *Journal of College Reading and Learning*, 36(1), 60-80. <https://doi.org/10.1080/10790195.2005.10850180>
- Yu, S. L. (1999). Women's Motivation and Strategy Use in College Science Classes. *Journal of Staff, Program & Organization Development*, 16(2), 93-101.
- Yukselturk, E., & Bulut, S. (2009). Gender differences in self-regulated online learning environment. *Educational Technology & Society*, 12(3), 12-22.
- Yukselturk, E., & Top, E. (2013). Exploring the link among entry characteristics, participation behaviors and course outcomes of online learners: An examination of learner profile using cluster analysis. *British Journal of Educational Technology*, 44(5), 716-728. <https://doi.org/10.1111/j.1467-8535.2012.01339.x>
- Zembylas, M. (2008). Adult learners' emotions in online learning. *Distance Education*, 29(1), 71-87. <https://doi.org/10.1080/01587910802004852>
- Ziegler, A., Stoeger, H., Vialle, W., & Wimmer, B. (2012). Diagnosis of self-regulated learning profiles. *Australasian Journal of Gifted Education*, 21(2), 62-74.
- Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81(3), 329-339. <http://dx.doi.org/10.1037/0022-0663.81.3.329>
- Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist*, 25(1), 3-17. https://doi.org/10.1207/s15326985ep2501_2

- Zimmerman, B. J. (1994). Dimensions of academic self-regulation: A conceptual framework for education. In D.H. Schunk and B.J. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. 21-33). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Zimmerman, B. J. (1998). Academic studying and the development of personal skill: A self-regulatory perspective. *Educational Psychologist*, 33(2-3), 73-86. <https://doi.org/10.1080/00461520.1998.9653292>
- Zimmerman, B. J. (1998). Developing self-fulfilling cycles of academic regulation: An analysis of exemplary instructional models. In D. H. Schunk & B. J. Zimmerman (Eds.), *Self-regulated learning: From teaching to self-reflective practice* (pp. 1-19). New York, NY: Guilford Publications.
- Zimmerman, B. J. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology*, 25(1), 82-91. <https://doi.org/10.1006/ceps.1999.1016>
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*, 41(2), 64-70. https://doi.org/10.1207/s15430421tip4102_2
- Zimmerman, B. J. (2004). Sociocultural influences and students' development of academic regulation: A social-cognitive approach. In D. M. McInerney & S. V. Etten (Eds.), *Big theories revisited* (pp. 139–164). Greenwich, CT: Information Age Publishing.
- Zimmerman, B. J. (2008). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects. *American Educational Research Journal*, 45(1), 166-183. <https://doi.org/10.3102/0002831207312909>
- Zimmerman, B. J., & Bandura, A. (1994). Impact of self-regulatory influences on writing course attainment. *American Educational Research Journal*, 31(4), 845-862. <https://doi.org/10.3102/00028312031004845>

- Zimmerman, B. J., & Campillo, M. (2003). Motivating self-regulated problem solvers. In J. E. Davidson & R. J. Sternberg (Eds.), *The Psychology of Problem Solving* (pp.233-262). Cambridge, UK: Cambridge University Press.
- Zimmerman, B. J., & Kitsantas, A. (1997). Developmental phases in self-regulation: Shifting from process goals to outcome goals. *Journal of Educational Psychology*, 89(1), 29-36.
- Zimmerman, B. J., & Martinez-Pons, M. (1988). Construct validation of a strategy model of student self-regulated learning. *Journal of Educational Psychology*, 80(3), 284-290. <http://dx.doi.org/10.1037/0022-0663.80.3.284>
- Zimmerman, B. J., & Martinez-Pons, M. (1990). Student differences in self-regulated learning: Relating grade, sex, and giftedness to self-efficacy and strategy use. *Journal of Educational Psychology*, 82(1), 51-59. <http://dx.doi.org/10.1037/0022-0663.82.1.51>
- Zimmerman, B. J., & Pons, M. M. (1986). Development of a structured interview for assessing student use of self-regulated learning strategies. *American Educational Research Journal*, 23(4), 614-628. <https://doi.org/10.3102/00028312023004614>
- Zimmerman, B.J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P.R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13-39). Michigan, USA: Academic Press.
- Zusho, A., Pintrich, P. R., & Coppola, B. (2003). Skill and will: The role of motivation and cognition in the learning of college chemistry. *International Journal of Science Education*, 25(9), 1081-1094. <https://doi.org/10.1080/0950069032000052207>

SURVEY FORM (DEMOGRAPHIC PROFILE)

Age: _____

Gender: Male Female

Name of the University:

Name of the College:

Program:

- BCA BBA
 B. Com B.Sc.

Program:

- MCA MBA
 M.Com M.Sc. (Chemistry)

Semester of the programme of study:

- 2nd semester 4th semester
 6th semester

Select the Course you studied in your previous semester:

- | | |
|---|--|
| <input type="radio"/> BCA-Computer Programming in C
(read in 1st Sem) | <input type="radio"/> B.Com -Financial Accounting
(read in 1st Sem) |
| <input type="radio"/> BCA- Object Oriented Programming
through C++ (read in 3rd Sem) | <input type="radio"/> B.Com - Corporate Accounting
(read in 3rd Sem) |
| <input type="radio"/> BCA- Java Programming (read in 5th
Sem) | <input type="radio"/> B.Com - Management Accounting
(read in 5th Sem) |
| <input type="radio"/> BBA- Micro economics/ Business
Economics/Managerial economics
(read in 1st Sem) | <input type="radio"/> B.Sc.- Inorganic Chemistry (read
in 1st Sem) |
| <input type="radio"/> BBA- Marketing Management (read
in 3rd Sem) | <input type="radio"/> B.Sc. Physical Chemistry (read in
3rd Sem) |
| <input type="radio"/> BBA- Business Environment (read in
5th Sem) | <input type="radio"/> B.Sc. - Inorganic Chemistry (read
in 5th Sem) |
| <input type="radio"/> MCA- Programming in C (read in 1st
Sem) | <input type="radio"/> M.Com- Organisational Behaviour
(read in 1st Sem) |
| <input type="radio"/> MBA- Managerial Economics (read
in 1st Sem) | <input type="radio"/> M.Sc. (Chemistry)- Physical
Chemistry (read in 1st Sem) |

THE REVISED CAUSAL DIMENSION SCALE (CDS II)

Fill the following information:

What was the numerical score or letter grade you made on the exam of selected course in the previous semester? (_____ / 100, if numeral score)

Do you consider the score reported above to be successful or unsuccessful?

- Successful Unsuccessful

Note : 1) If Successful Fill Question No. A
 2) If Unsuccessful Fill Question No. B

A. You feel the cause (or causes) that you received this high score is due to (you can tick more than one options also)

- Your high ability in the subject
- You studied unusually hard for the exam
- You always study hard for the exam
- You were in a very good mood when you took the exam
- You were very lucky
- The exam was very easy
- The teacher tried unusually hard to help you do well on the exam
- The teacher always tries very hard to help students do well on the exam

B. You feel the cause (or causes) that you received this low score is due to (you can tick more than one options also)

- Your low ability in the subject
- You did not study for the exam
- You never study for exams
- You were in a very bad mood when you took the exam
- You were very unlucky
- The exam was very hard
- The teacher did not try to help you do well on the exam
- The teacher never tries very hard to help students do well on the exams

In your opinion, what was the one main cause among the above selected reasons for your achieved score?

Instructions: Think about the cause you have written on Question above. The items below concern your impressions or opinions of this cause for your performance. **Circle one number for each of the following questions:-**

Is the cause something:

1.	that reflects an aspect of yourself	9 8 7 6 5 4 3 2 1	reflects an aspect of the situation
2.	manageable by you	9 8 7 6 5 4 3 2 1	not manageable by you
3.	permanent	9 8 7 6 5 4 3 2 1	temporary
4.	you can regulate	9 8 7 6 5 4 3 2 1	you cannot regulate
5.	over which others have control	9 8 7 6 5 4 3 2 1	over which others have no control
6.	inside of you	9 8 7 6 5 4 3 2 1	outside of you
7.	stable over time	9 8 7 6 5 4 3 2 1	variable over time
8.	under the power of other people	9 8 7 6 5 4 3 2 1	not under the power of other people
9.	something about you	9 8 7 6 5 4 3 2 1	something about others
10.	over which you have power	9 8 7 6 5 4 3 2 1	over which you have no power
11.	unchangeable	9 8 7 6 5 4 3 2 1	changeable
12.	other people can regulate	9 8 7 6 5 4 3 2 1	other people cannot regulate

**MOTIVATED STRATEGIES FOR LEARNING
QUESTIONNAIRE (MSLQ)**

Instructions: The following questions ask about your motivation for and learning strategies about the above-selected subject. If you think the statement is very true of you, circle 7; if a statement is not at all true of you, circle 1. If the statement is more or less true of you, find the number between 1 and 7 that best describes you.

S. No.	Statements	1 not at all true of me	2	3	4	5	6	7 very true of me
1.	In a class like this, I prefer course material that really challenges me so I can learn new things.	1 not at all true of me	2	3	4	5	6	7 very true of me
2.	If I study in appropriate ways, then I will be able to learn the material in this course.	1 not at all true of me	2	3	4	5	6	7 very true of me
3.	When I take a test, I think about how poorly I am doing compared with other students.	1 not at all true of me	2	3	4	5	6	7 very true of me
4.	I think I will be able to use what I learn in this course in other courses.	1 not at all true of me	2	3	4	5	6	7 very true of me
5.	I believe I will receive an excellent grade in this class.	1 not at all true of me	2	3	4	5	6	7 very true of me
6.	I'm certain I can understand the most difficult material presented in the readings for this course.	1 not at all true of me	2	3	4	5	6	7 very true of me
7.	Getting a good grade in this class is the most satisfying thing for me right now.	1 not at all true of me	2	3	4	5	6	7 very true of me

S. No.	Statements	1 not at all true of me	2	3	4	5	6	7 very true of me
8.	When I take a test, I think about items on other parts of the test I can't answer.	1 not at all true of me	2	3	4	5	6	7 very true of me
9.	It is my own fault if I don't learn the material in this course.	1 not at all true of me	2	3	4	5	6	7 very true of me
10.	It is important for me to learn the course material in this class.	1 not at all true of me	2	3	4	5	6	7 very true of me
11.	The most important thing for me right now is improving my overall grade point average, so my main concern in this class is getting a good grade.	1 not at all true of me	2	3	4	5	6	7 very true of me
12.	I'm confident I can learn the basic concepts taught in this course.	1 not at all true of me	2	3	4	5	6	7 very true of me
13.	If I can, I want to get better grades in this class than most of the other students.	1 not at all true of me	2	3	4	5	6	7 very true of me
14.	When I take tests, I think of the consequences of failing.	1 not at all true of me	2	3	4	5	6	7 very true of me
15.	I'm confident I can understand the most complex material presented by the instructor in this course.	1 not at all true of me	2	3	4	5	6	7 very true of me
16.	In a class like this, I prefer course material that arouses my curiosity, even if it is difficult to learn.	1 not at all true of me	2	3	4	5	6	7 very true of me
17.	I am very interested in the content area of this course.	1 not at all true of me	2	3	4	5	6	7 very true of me
18.	If I try hard enough, then I will understand the course material.	1 not at all true of me	2	3	4	5	6	7 very true of me
19.	19. I have an uneasy, upset feeling when I take an exam.	1 not at all true of me	2	3	4	5	6	7 very true of me

S. No.	Statements	1 not at all true of me	2	3	4	5	6	7 very true of me
20.	I'm confident I can do an excellent job on the assignments and tests in this course.	1 not at all true of me	2	3	4	5	6	7 very true of me
21.	I expect to do well in this class.	1 not at all true of me	2	3	4	5	6	7 very true of me
22.	The most satisfying thing for me in this course is trying to understand the content as thoroughly as possible.	1 not at all true of me	2	3	4	5	6	7 very true of me
23.	I think the course material in this class is useful for me to learn.	1 not at all true of me	2	3	4	5	6	7 very true of me
24.	When I have the opportunity in this class, I choose course assignments that I can learn from even if they don't guarantee a good grade.	1 not at all true of me	2	3	4	5	6	7 very true of me
25.	If I don't understand the course material, it is because I didn't try hard enough.	1 not at all true of me	2	3	4	5	6	7 very true of me
26.	I like the subject matter of this course.	1 not at all true of me	2	3	4	5	6	7 very true of me
27.	Understanding the subject matter of this course is very important to me.	1 not at all true of me	2	3	4	5	6	7 very true of me
28.	I feel my heart beating fast when I take an exam.	1 not at all true of me	2	3	4	5	6	7 very true of me
29.	I'm certain I can master the skills being taught in this class.	1 not at all true of me	2	3	4	5	6	7 very true of me
30.	I want to do well in this class because it is important to show my ability to my family, friends, employer, or others.	1 not at all true of me	2	3	4	5	6	7 very true of me
31	Considering the difficulty of this course, the teacher, and my skills, I think I will do well in this class.	1 not at all true of me	2	3	4	5	6	7 very true of me

S. No.	Statements	1 not at all true of me	2	3	4	5	6	7 very true of me
32.	When I study the readings for this course, I outline the material to help me organize my thoughts.	1 not at all true of me	2	3	4	5	6	7 very true of me
33.	During class time, I often miss important points because I'm thinking of other things.	1 not at all true of me	2	3	4	5	6	7 very true of me
34.	When studying for this course, I often try to explain the material to a classmate or friend.	1 not at all true of me	2	3	4	5	6	7 very true of me
35.	I usually study in a place where I can concentrate on my course work.	1 not at all true of me	2	3	4	5	6	7 very true of me
36.	When reading for this course, I make up questions to help focus my reading.	1 not at all true of me	2	3	4	5	6	7 very true of me
37.	I often feel so lazy or bored when I study for this class that I quit before I finish what I planned to do.	1 not at all true of me	2	3	4	5	6	7 very true of me
38.	I often find myself questioning things I hear or read in this course to decide if I find them convincing.	1 not at all true of me	2	3	4	5	6	7 very true of me
39.	When I study for this class, I practice saying the material to myself over and over.	1 not at all true of me	2	3	4	5	6	7 very true of me
40.	Even if I have trouble learning the material in this class, I try to do the work on my own, without help from anyone.	1 not at all true of me	2	3	4	5	6	7 very true of me
41.	When I become confused about something I'm reading for this class, I go back and try to figure it out.	1 not at all true of me	2	3	4	5	6	7 very true of me
42.	When I study for this course, I go through the readings and my class notes and try to find the most important ideas.	1 not at all true of me	2	3	4	5	6	7 very true of me
43.	I make good use of my study time for this course.	1 not at all true of me	2	3	4	5	6	7 very true of me

S. No.	Statements	1 not at all true of me	2	3	4	5	6	7 very true of me
44.	If course readings are difficult to understand, I change the way I read the material.	1 not at all true of me	2	3	4	5	6	7 very true of me
45.	I try to work with other students from this class to complete the course assignments.	1 not at all true of me	2	3	4	5	6	7 very true of me
46.	When studying for this course, I read my class notes and the course readings over and over again.	1 not at all true of me	2	3	4	5	6	7 very true of me
47.	When a theory, interpretation, or conclusion is presented in class or in the readings, I try to decide if there is good supporting evidence.	1 not at all true of me	2	3	4	5	6	7 very true of me
48.	I work hard to do well in this class even if I don't like what we are doing.	1 not at all true of me	2	3	4	5	6	7 very true of me
49.	I make simple charts, diagrams, or tables to help me organize course material.	1 not at all true of me	2	3	4	5	6	7 very true of me
50.	When studying for this course, I often set aside time to discuss course material with a group of students from the class.	1 not at all true of me	2	3	4	5	6	7 very true of me
51.	I treat the course material as a starting point and try to develop my own ideas about it.	1 not at all true of me	2	3	4	5	6	7 very true of me
52.	I find it hard to stick to a study schedule.	1 not at all true of me	2	3	4	5	6	7 very true of me
53.	When I study for this class, I pull together information from different sources, such as lectures, readings, and discussions.	1 not at all true of me	2	3	4	5	6	7 very true of me
54.	Before I study new course material thoroughly, I often skim it to see how it is organized.	1 not at all true of me	2	3	4	5	6	7 very true of me
55.	I ask myself questions to make sure I understand the material I have been studying in this class.	1 not at all true of me	2	3	4	5	6	7 very true of me

S. No.	Statements	1 not at all true of me	2	3	4	5	6	7 very true of me
56.	I try to change the way I study in order to fit the course requirements and the instructor's teaching style.	1 not at all true of me	2	3	4	5	6	7 very true of me
57.	I often find that I have been reading for this class but don't know what it was all about.	1 not at all true of me	2	3	4	5	6	7 very true of me
58.	I ask the instructor to clarify concepts I don't understand well.	1 not at all true of me	2	3	4	5	6	7 very true of me
59.	I memorize keywords to remind me of important concepts in this class.	1 not at all true of me	2	3	4	5	6	7 very true of me
60.	When course work is difficult, I either give up or only study the easy parts.	1 not at all true of me	2	3	4	5	6	7 very true of me
61.	I try to think through a topic and decide what I am supposed to learn from it rather than just reading it over when studying is for this course.	1 not at all true of me	2	3	4	5	6	7 very true of me
62.	I try to relate ideas in this subject to those in other courses whenever possible.	1 not at all true of me	2	3	4	5	6	7 very true of me
63.	When I study for this course, I go over my class notes and make an outline of important concepts.	1 not at all true of me	2	3	4	5	6	7 very true of me
64.	When reading for this class, I try to relate the material to what I already know.	1 not at all true of me	2	3	4	5	6	7 very true of me
65.	I have a regular place set aside for studying.	1 not at all true of me	2	3	4	5	6	7 very true of me
66.	I try to play around with ideas of my own related to what I am learning in this course.	1 not at all true of me	2	3	4	5	6	7 very true of me
67.	When I study for this course, I write brief summaries of the main ideas from the readings and my class notes.	1 not at all true of me	2	3	4	5	6	7 very true of me

S. No.	Statements	1 not at all true of me	2	3	4	5	6	7 very true of me
68.	When I can't understand the material in this course, I ask another student in this class for help.	1 not at all true of me	2	3	4	5	6	7 very true of me
69.	I try to understand the material in this class by making connections between the readings and the concepts from the lectures.	1 not at all true of me	2	3	4	5	6	7 very true of me
70.	I make sure that I keep up with the weekly readings and assignments for this course.	1 not at all true of me	2	3	4	5	6	7 very true of me
71.	Whenever I read or hear an assertion or conclusion in this class, I think about possible alternatives.	1 not at all true of me	2	3	4	5	6	7 very true of me
72.	I make lists of important items for this course and memorize the lists.	1 not at all true of me	2	3	4	5	6	7 very true of me
73.	I attend this class regularly.	1 not at all true of me	2	3	4	5	6	7 very true of me
74.	Even when the course materials are dull and uninteresting, I manage to keep working until I finish.	1 not at all true of me	2	3	4	5	6	7 very true of me
75.	I try to identify students in this class whom I can ask for help if necessary.	1 not at all true of me	2	3	4	5	6	7 very true of me
76.	When studying for this course I try to determine which concepts I don't understand well.	1 not at all true of me	2	3	4	5	6	7 very true of me
77.	I often find that I don't spend very much time on this course because of other activities.	1 not at all true of me	2	3	4	5	6	7 very true of me
78.	When I study for this class, I set goals for myself in order to direct my activities in each study period.	1 not at all true of me	2	3	4	5	6	7 very true of me
79.	If I get confused taking notes in class, I make sure I sort it out afterwards.	1 not at all true of me	2	3	4	5	6	7 very true of me

S. No.	Statements	1 not at all true of me	2	3	4	5	6	7 very true of me
80.	I rarely find time to review my notes or readings before an exam.	1 not at all true of me	2	3	4	5	6	7 very true of me
81.	I try to apply ideas from course readings in other class activities such as lecture and discussion.	1 not at all true of me	2	3	4	5	6	7 very true of me

MANAGING OWN EMOTIONS SCALE

Directions: Each of the following items asks you about your emotions or reactions associated with emotions. After deciding whether a statement is generally true for you, use the 5-point scale to respond to the statement.

S. No	Statements	Strongly Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Strongly Agree
		1	2	3	4	5
1.	When I am faced with obstacles, I remember times I faced similar obstacles and overcame them.	1	2	3	4	5
2.	I expect that I will do well on most things I try.	1	2	3	4	5
3.	I expect good things to happen.	1	2	3	4	5
4.	When I experience a positive emotion, I know how to make it last.	1	2	3	4	5
5.	I seek out activities that make me happy.	1	2	3	4	5
6.	I have control over my emotions.	1	2	3	4	5
7.	I motivate myself by imagining a good outcome to tasks I take on.	1	2	3	4	5
8.	When I am faced with a challenge, I give up because I believe I will fail.	1	2	3	4	5
9.	I use good moods to help myself keep trying in the face of obstacles.	1	2	3	4	5