EMPLOYEE WORK ENGAGEMENT: AN EMPIRICAL STUDY OF HIGHER EDUCATION SECTOR IN PUNJAB

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By

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DECLARATION

I declare that the thesis **entitled "Employee Work Engagement: An Empirical Study of Higher Education Sector in Punjab"** has been prepared by me under the guidance of Dr. Sanjay Modi, Professor and Executive Dean, Faculty of Business and Arts, Lovely Professional University**.** No part of this thesis has formed the basis for the award of any degree or fellowship previously.

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Dated : **Sunaina Ahuja**

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ABSTRACT

This study is aimed at investigating work engagement amongst the faculty members employed in selected Higher Education Institutions in Punjab. Kahn (1990) is considered to be the pioneer academic who introduced this construct using the term 'personal engagement' in work role. According to Kahn, engagement is harnessing of organization members' selves to their work roles. In a state of engagement people employ and express themselves physically, cognitively and emotionally. In the context of globalization, boundary less organizations need to capitalize upon the strength of work engaged employees. The strong association of work engagement with employee retention, customer satisfaction, productivity and profitability has been brought out while similar relationships have not been found for traditional constructs like job satisfaction. The rationale for the current study has been explained in the light of the challenges faced by Indian higher education system. Given the issues of below expected quality of teaching and learning, lack of quality assurance and poor accountability of teaching staff in higher education institutions, there is a massive exodus of India's bright students to seemingly greener pastures for higher education. It calls for enthusiasm of academicians to mend the flaws in the prevailing system. Hence, need was felt for a study investigating the level of faculty work engagement, factors affecting it, measures for its enhancement and its relationship with other phenomena.

The review of literature began with general literature regarding employee well being and work engagement followed by specific studies on work engagement. Approximately, more than hundred research papers published in various international journals, related articles from books and websites and significant reports published on this subject were reviewed. All the studies were categorized into five sections namely, studies on work engagement as a unique construct; studies on measurement of work engagement; studies on factors affecting work engagement; studies on relationship of work engagement with job crafting, organizational commitment, work life balance and work stress and studies on engagement –performance link.

The review revealed that engagement is clearly established as a novel and unique concept. There is enough research evidence to distinguish engagement from

job satisfaction, commitment, job involvement, workaholism and work related flow. The instruments for measuring employee work engagement were explored. The most cited instruments were found to be Gallup Workplace Audit or Q12, Maslach Burnout Inventory, Oldenburg Burnout Inventory (OLBI) and Utrecht Work Engagement Scale. Various studies on the factors affecting work engagement were reviewed. A comparative analysis revealed that work engagement is predicted by a host of factors which can be classified into: job characteristics, personal resources, interpersonal relations and organizational support. Various research studies delved deep into the relationship of these with work engagement. Being a multi dimensional concept, work engagement, was found to be related other behavioral phenomena. Extant research studies revealed a positive association between job crafting and work engagement, indicating that employees who take proactive steps to establish a better person-job fit are more work engaged. Work engagement is not limited to the work place but cuts across various domains of life. Work-life balance is positively associated with engagement. Employees who carry positive feelings from their work life to personal life and vice versa experience higher levels of engagement. Work engagement is also positively associated with organizational commitment. Studies on the relationship between work engagement and work stress revealed that the two are inversely related. Studies on the engagement performance link revealed that engaged employees outshine others in both in-role and extra-role performance. They are creative problem solvers and display the ability to inspire and coach their co-workers.

Based on the review of literature, some research gaps were noticed. The factors affecting work engagement of faculty members was found to be a less researched area, particularly in the Indian higher education sector, having its unique size and challenges. Very few studies explored the relationship of work engagement with phenomena like job crafting, work life balance, organizational commitment and work stress. Hence, this study addressed the gaps through its objectives.

A cross-sectional descriptive study was designed using the quota sampling. A fixed number of faculty members from each of the four broad faculty work areas namely Commerce and Business Management (CBM), Science, Engineering and Technology (SET), Applied Medical Sciences (AMS) and Education and Humanities (EHUM) were selected for the study. The respondents were drawn from

public and private higher education institutions located in the districts of Amritsar, Bathinda, Jalandhar, Ludhiana, Patiala and the capital of Punjab – Chandigarh as these districts are considered the hubs of higher education in Punjab. The sample consisted of 463 faculty members from 41 Higher Education Institutions. The research instrument used for data collection consisted of seven scales including (i) a self developed 92 item scale that explored the respondents' perception regarding self, current job and current organization (ii) a 12 item scale adapted from job crafting scale developed by Tims et al. (2012) (iii) work-life balance scale developed by Hayman (2005) (iv) nine-item version of the Utrecht Work Engagement Scale developed by Schaufeli et al. (2006) (v) a six item Organizational Commitment scale developed by Saks (2006) (vi) a self developed work stress scale consisting of 18 items adapted from Organization Role Stress Scale developed by Udai Pareek (1983) (vii) an ordinal scale to see respondents' ranking of changes required for improving engagement. The statistical analysis approach included descriptive statistics, one-way ANOVA, exploratory factor analysis, measurement of scale reliability with Cronbach's alpha coefficient, correlation analysis, non-metric correlation analysis using Spearmann's rank correlation coefficient and hierarchical multivariate regression analysis. The data analysis was done using SPSS version 16.0.

Data analysis resulted in the following major findings and recommendations:

[1] Faculty work engagement in higher education sector of Punjab, is at a moderate level. The statistics indicate a large scope for improvement. Given the merits of a work engaged faculty team, HEIs are urged for action in this direction.

[2] Relationship of work engagement with personal or demographic variables explored using one-way analysis of variance (ANOVA) revealed that work engagement varied significantly with faculty work area, district wise posting, designation, experience in current organization, total experience, age, educational background and salary. However, no statistically significant variation was found with respect to respondents' gender, government versus private institution and posting at university campus or affiliated college. In this regard, implications for HR policy design are discussed in chapter 4.

[3] The factors affecting work engagement were identified through exploratory factor analysis, correlation analysis and hierarchical multiple regression analysis. They include perceived organizational support, personal and professional orientation, intrinsic rewards, task variety, organizational orientation for results and supervisory coaching.

[4] The top five measures required for enhancement of work engagement are greater role clarity, more empowerment for decision making, better intrinsic rewards, more openness towards change & innovation and organizational support for career advancement. Interestingly, Spearmann's rank Correlation analysis revealed that work engagement measures can be more effective if customized according to type of institution, designation and faculty work areas. For instance, government and government aided Higher Education Institutions need to focus on providing greater role clarity, empowerment and open communication. Private sector HEIs need to pay attention to better intrinsic rewards in terms of interesting work, satisfaction from work and a sense of progress along with better organizational support for career advancement.

[5] Work engagement of faculty members was significantly predicted by two constituents of job crafting, namely, increasing structural job resources and challenging job demands. It implies that work engagement is likely to increase with a bottom–up approach wherein faculty members are encouraged to use a two pronged strategy to alter their job design. One set of initiatives they can take includes seeking structural job resources like autonomy, task and skill variety and opportunities for self development. Another set of efforts includes seeking challenging job demands by volunteering for new projects, keeping abreast of the most recent developments, taking initiative to start new projects and extra tasks.

[6] Work engagement is significantly predicted by two aspects of work – life balance namely personal life interference with work and work-personal life enhancement (WPLE). It implies that HR policy initiatives to establish a mutually enhancing relationship between work and personal life for example flexible work options could have a significant impact on work engagement. Flexible working hours can be given wherein faculty members can choose

their preferred timings subject to meeting a prefixed number of hours. The option of telecommuting allows the employees to work from anywhere and stay in touch with the office with advanced technological assistance for example video conferencing and webinars in case of faculty members. Flexible benefits or cafeteria style benefit program allows employees to choose from a range of benefit options that best suit their personal and family needs, upto the value of a set allowance. The option of having a compressed work week allows employees to work for longer hours on certain days and enjoy a longer week end for example it allows the freedom to work ten hours a day for four days instead of eight hours a day for five days. Another novel idea tried by some organizations is the option of job sharing or twinning. Herein, two employees share the job responsibilities in a full time job. Permission for availing career breaks for self development can also be a highly sought after measure for better work life balance and hence work engagement of faculty members.

[7] Work engagement was found to be inversely related with work stress. Results of the present study revealed greatest dissatisfaction on role interference dimension requiring them to compromise on quality of work due to quantity, underutilization of talent and need to make changes in current role profile. Self –role distance and role expectation conflict were inversely related with work engagement. It calls for action by those in academic leadership positions, playing supervisory role as Heads of Departments. Intrinsic rewards in the form of allocating faculty preferred courses for teaching and appreciation for good work can erode the negative impact of work stress and create a positive gain spiral for faculty work engagement.

[8] Faculty members who are highly committed to their current organizations are likely to be more work engaged. Work engagement of long tenured faculty members (>20 years) was found to be higher than others who had less experience (<5 years) in the current organization. It appears that when faculty members stay associated with an organization for a long tenure, they develop a clear understanding of organizational orientation for results which was identified as another vital factor predicting faculty work engagement. A long tenure could be an outcome of a match between organization's result

orientation with employees' personal and professional orientation. Hence, it implies that HEIs must design ingenious ways to map the two orientations so that they can retain faculty members for long tenures and capitalize upon their work engagement. An employee value proposition of care and concern fuels affective commitment which has a strong positive association with work engagement.

This study also found new vistas for future research. A majority of the studies on work engagement especially in the Indian context have used a cross-sectional design which cannot explain why even highly engaged employees may be less engaged on some days. Hence, longitudinal studies are required to analyze the pattern of daily changes in work engagement and identify the factors leading to these. Such studies could have important implications for better understanding of employee well being. The current study investigated the relationship between work engagement and job crafting and found a positive association. Further studies in this area may answer the question as to whether all employees are equally inclined for job crafting. Can people be trained for job crafting? Is there a relationship between personality and job crafting? The current study highlights the need for work-life balance measures in HEIs. Studies mapping the perception of policy makers in the government and private sector can be instrumental in identifying the feasibility of adopting such initiatives. They can dramatically change the workplace scenario and increase workforce participation of many sections of the society which can be instrumental in enhancing the overall work engagement. Work engagement will be sustainable when employee well being is also high (Robertson and Cooper, 2010). Studies on work engagement can be furthered to construct workplace happiness index – an aggregation of all vital metrics of employee well being.

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S.NO.	ABBREVIATION	FULL FORM
1	HEI	Higher Education Institution
2	HEIs	Higher Education Institutions

CHAPTER – 1

INTRODUCTION

CHAPTER – 1
INTRODUCTION

"Employee contribution becomes a critical business issue because in trying to produce more output with less employee input, companies have no choice but to try to engage not only the body, but also the mind and the soul of every employee."

David Ulrich (1997)

This chapter introduces the concept of employee work engagement, traces its evolution, definitions, theoretical frameworks, classification of employees according to engagement and culminates with the rationale and significance of the study in higher education sector.

1.1 EMPLOYEE WORK ENGAGEMENT

Contemporary organizations envision the creation of an environment in which employees give their very best and stand by during difficult times. In their quest for organizational excellence and value maximization organizations struggle to effectively manage talent and transform employees into engaged associates who are willing to go the extra mile. Bruce Henderson, the founder of Boston Consulting Group believed that dedicated people, their ideas and a commitment to acting with integrity has enormous potential to create value, influence the evolution of industries, and indeed, to change the world (Boston Consulting Group, 2014). Sarah (2014), explained in The Great Place to Work Model, that a great workplace is one where organizational objectives are achieved with employees who enjoy working, take pride in their work and give their personal best as a team, in an environment of trust. The ingredients of a great workplace include great challenges, atmosphere, rewards, pride, communication and great bosses too (Sarah, 2014). Consistent participation of companies like Google Inc, SAS and The Boston Consulting Group in surveys like Great Places to Work is an indicator of their concern for employee work engagement. Most of the companies surveyed acknowledge the need to provide an environment in which employees perceive their work to be meaningful and themselves to be empowered to contribute towards organizational and societal goals. The top ranking companies are able to engage employees from the most

diverse backgrounds and at different stages of their personal and professional lives. A perusal of Fortune's list of the 100 best companies to work, reveals wide diversity in the tangible and intangible rewards they offer, with the common outcome of being able to successfully engage their workforce (Fortune - Best Companies 2014, 2014). They take the widest range of measures from provision of personalized work space, free food, space to grow vegetables and even avail the facility of nap pods (Sarah, 2014). Unfortunately, the scenario depicted in Fortune's List of Great Places to Work is not representative of the common workplace where the large majority of the workforce is employed. Studies reveal that work engagement appears to be declining continuosly (Shuck & Wollard, 2008). Gruman and Saks (2011) suggested that incremental performance may be best achieved by orienting the performance management system to promote work engagement. Organizations need to build an environment which truly inspires people to give their best. The challenges associated with facilitating an organizational environment that promotes work engagement are well documented. In this context work culture support has been identified as an important factor for predicting higher supervisor support, colleague support and work engagement (Biggs et al., 2014).

Over the years, work engagement has become a well-known construct to both practitioners and social scientists alike. In the field of practice, many reports have been publishing the status of employee work engagement in particular sectors of the work force, thus classifying employees into various segments on the basis of their engagement levels. However there is a lot of variation in the way engagement has been defined in each of these reports. In common parlance, engagement refers to passion, enthusiasm, commitment, involvement, focused effort, absorption and dedication. Merriam - Webster dictionary describes it as "emotional involvement or commitment" and as "being in gear". The lack of clarity over a common definition of engagement was a major cause of concern for the academic researchers. Hence, some researchers made an in depth study of the construct and developed a common conceptualization of work engagement as a high level of personal investment in the tasks performed on a job (Kahn, 1990; Schaufeli et al. 2002; May et al., 2004; Macey & Schneider, 2008; Rich et al., 2010).

Engaged employees are good performers and are willing to go the extra mile. They are creative problem solvers and possess an intrinsic interest and dedication

towards work. Hence, they possess an assortment of ways to handle work related problems. They consistently perform better than their less engaged counterparts. Engagement is not a standalone phenomenon. Engaged employees develop a positive team climate, irrespective of the job demands faced and resources available to them. They influence their colleagues to imbibe a 'can do' and 'make a difference' approach. Thus engagement can be considered as transmittable. The crossover or transmission of engagement is not limited to the work sphere alone, but spreads across various domains of life. Hence, it can be said that both engagement as well as the lack of it is contagious as it crosses over from one member to the other whether at work or in personal life.

On the other hand disengaged employees do not care about organizational growth, nor do they support a good work culture. They lack enthusiasm and too are busy complaining, making excuses or gossiping. They believe that they 'know it all'. Hence they do not invest in themselves to become better people and grow within the company. They find it easy to work independently rather than collaborate within and across teams. They seldom take initiative or ask questions. They often lie, miss deadlines are distracted and are thus very difficult to depend upon.

Two critical factors that fuel employee work engagement are the degree of challenge and ownership in the work. Employees own up the work which they consider to be meaningful and challenging, thus getting engaged in it. However, too much challenge might cause stress leading to a natural reaction of withdrawal from work. Managers need to discover the sweet spot where their team can rise to the occasion without being overwhelmed. Since, the level of acceptable challenge varies from one team member to another, managers must be aware of where an associate gets stuck and offer the required support. Too much anxiety leads to disengaged employees.

Little and Little (2006) stated that employee work engagement has been widely discussed in management literature, magazines, newspapers and the websites of many human resource consulting firms. Despite the low numbers of engaged employees, organizational leaders rate employee work engagement among the top priorities (Ketter, 2008) since it has a great association with job performance (Merrill, et al., 2013). Employee work engagement has been shown to have a positive relationship with employee retention, efficiency, organizational profitability

and customer satisfaction (Buckingham & Coffman, 1999; Coffman & Gonzalez-Molina, 2002). Similar relationships have not been shown for traditional constructs such as job satisfaction (Fisher & Locke, 1992). Engaged workers are more open minded, productive and more willing to go the extra mile (Bakker, 2011).

Engaging employees requires a closer examination of the unwritten, psychological contract between the employer and the employees. It is distinguishable from the formal written contract of employment. The written contract identifies mutual duties and responsibilities in a general manner while the psychological contract represents the informal obligations between the employer and employee in the form of unwritten but strongly held beliefs and perceptions. The onset of twenty first century marked a paradigm shift in the psychological contract. A typical employer is faced with the pressure to cut costs, use cutting edge technology for higher productivity and play against rivals trying to poach both employees and customers. This is coupled with high employee attrition rates and corresponding lower average length of service. It leads to an upsurge in the direct costs for replacement and decreases the organization's ability to develop long-term customer relationships and implement people dependent strategies. Upon examining the employees' paradigm of the psychological contract it is evident that they now believe that one needs to change jobs more frequently to ensure continued salary growth and career advancement. The idea of a 'job for life' is fading and current focus is upon creating employability for future anywhere across the globe (Aselstine and Alletson, 2006). In this scenario research on exploring the dynamics of work engagement is quite meaningful and valuable.

1.2 EVOLUTION OF THE CONCEPT

According to Schaufeli (2013), it is not clear when the term engagement was used in relation to work, however Gallup organization is credited for having coined the term somewhere in the 1990s. Buckingham and Coffman (1999) in their best selling book titled, First Break All The Rules, published the results of Gallup organization's research of 'strong work places'. Employees perception of such workplaces was assessed with a set of 12 questions which later became known as Q^{12}, Gallup's engagement questionnaire. Around the turn of the century, many other consulting firms followed suit with their measures and reports on employee work

engagement. In fact the first scholarly article on engagement was published by Kahn in the year 1990 in Academy of Management Journal and it took ten years for others to pick up the topic. However, during the period 2000-2010 the number of publications on this topic grew sharply. The basic reason behind a sudden rise of interest in this topic can be understood in terms of some developments in the broader industrial scenario marked by globalization wherein employees were required to mange continuous change, work in diverse teams, craft their jobs and operate in a boundary less manner. Thus the human capital and contribution became more important in the changed scenario.

The surge in interest of academicians on the subject of work engagement can also be attributed to the positive psychology movement, rekindled by Martin E. P. Seligman, President of American Psychological Association. According to Seligman and Csikszentmihalyi (2000) positive psychology refers to the scientific study of optimal human functioning aimed at promoting factors that enhance the development of individuals, organizations and communities leading to overall happiness. Hence, under this movement research studies are aimed at studying the state of well being and its enhancement as against states like stress, burnout and the like. Work engagement clearly fits well into this novel approach. Hence, the topic blossomed in academic circles. Thus, the growing body of research on work engagement can be attributed to the increase in importance of human capital requiring psychological involvement of employees and the positive psychology movement.

1.3 DEFINITIONS

Kahn (1990) used the term personal engagement and defined it as the degree to which organizational members' harness themselves to their work roles expressing physically, mentally, cognitively and emotionally during the performance of their roles. According to Maslach and Leiter (1997) engagement and burnout are the two end points of a single continuum. Engagement is the positive antithesis of burnout. It implies that those who are high on engagement shall be low on burnout. Schaufeli et al. (2002) stated that engagement and burnout are two separate concepts, negatively related to each other. They defined engagement as a positive, fulfilling work related state of mind characterized by vigour, dedication and absorption. According to the

Gallup Organization researchers, engagement refers to an individual's involvement, satisfaction and enthusiasm for work (Harter et al., 2002). Saks (2006) defined engagement as "a distinct and unique construct consisting of cognitive, emotional and behavioral components that are associated with individual role performance" (p. 602). The common link between this definition and that of Kahn (1990) is that both focus on role performance at work. As an innovation, Saks (2006) categorized engagement into two types namely job engagement and organization engagement. Job engagement refers to performing the work role while organizational engagement relates to performing the role as a member of the organization. Engagement being such a vast and all-inclusive concept, the most sensitive question in defining it is, what to include in it and what not to include. Macey and Schneider (2008) proposed a synthesis of all aspects of engagement. Their conceptual framework includes trait engagement, state engagement and behavioral engagement.

Consultancy firms conceptualized engagement by aggregating and relabeling existing notions, such as involvement, commitment, satisfaction, motivation and extra-role performance. For example, according to the consulting firm Mercer (2007), engagement is 'commitment' or 'motivation' indicating a psychological state where employees feel a vested interest in the company's success and perform above the stated requirements of the job. On the engagement continuum, they move from being satisfied, motivated, committed to becoming advocates of organizational ethos (www.rapidbi.com). Towers Watson research (2014) defined engagement in terms of three measurable elements namely employees' willingness to expend discretionary effort on their job, availability of performance enabling factors like resources and supervisory support and work environment that gives energy for physical, emotional and interpersonal well-being. Another firm, Aon Hewitt (2015), in its survey on Global Employee Engagement Trends - 2015 defined engagement as the psychological state and behavioral outcomes that lead to better performance. They state that engaged employees constantly exhibit three general behaviors namely say, stay and strive. They speak positively about the organization, have a strong desire to be members of the organization despite having opportunities to work elsewhere and put in extra effort, time and initiative in their work. Collectively, these definitions of engagement by various consulting firms suggest that in business, engagement is defined as a mix of three existing concepts namely organizational

commitment, job satisfaction and extra-role behavior i.e. initiative to go beyond the job description.

To sum up, Shuck (2011) gave four approaches under which the various definitions of engagement in the academic circle were classified namely The Needs - Satisfying Approach, The Burnout antithesis approach, The Satisfaction-Engagement Approach, The Multi-dimensional approach. The classification of definitions according to Shuck (2011) is tabulated in Table 1.1.

Table 1.1 : Classification of Definitions of Work Engagement

Approach	Description	Definition
The Needs - Satisfying Approach	Engagement depends upon the fulfillment of three psychological conditions or needs namely, meaningfulness, safety and availability.	Kahn (1990)
The Burnout antithesis approach	Engagement is the positive antipode of burnout.	Maslach and Leiter (1997); Schaufeli et al. (2002)
The Satisfaction-Engagement Approach	Engagement depends on individual's involvement, satisfaction and enthusiasm for work	Harter et al. (2002);
The Multi-dimensional approach	The concept of engagement may relate to job and / or organization and is multi-dimensional - cognitive, emotional, behavioral and trait.	Saks (2006); Macey and Schneider (2008)

In conclusion, it can be said that the various definitions deal with the engagement as a means of satisfying certain needs, its antecedents or its various dimensions ranging from cognitive to behavioral. However, the definition of engagement as proposed by Schaufeli et al. (2002) is precise and focuses on engagement as an experience, clearly distinguished from the factors leading to it or its outcomes.

1.4 THEORETICAL FRAMEWORKS

A number of theoretical frameworks of engagement have been proposed out of which four frameworks which are widely quoted have been discussed here.

1.4.1 The Needs-Satisfying Approach

As discussed in the definitions of work engagement, Kahn (1990) gave this approach stating that engagement depends upon the fulfillment of three psychological conditions or needs. They are psychological meaningfulness, safety and availability. How meaningful one finds one's work depends on the job characteristics and the person – job fit. Psychological safety is determined by the social environment, management style and group dynamics. A non-threatening environment is best suited for engagement. Availability is governed by one's personal resources such as physical energy, mental resilience and emotional intelligence. As per this approach the strategies for enhancing employee work engagement include job enrichment, role fit coupled with an environment of mutual respect and trust generated through good interpersonal relations at work.

1.4.2 Job Demands and Resources Model (JD-R Model)

This model proposed by Bakker and Demerouti (2008) assumes that work engagement is a function of job resources and personal resources. Job resources such as performance feedback and job control play a key role in accomplishing work goals and personal growth. Personal resources such as mental resilience are aspects of the self which help in controlling the work environment. According to this model, resources energize employees to make focused efforts. While at work one also faces certain job demands such as work overload, time pressure, red tapism which required physical and mental efforts on the parts of the employee. The impact of job demands on work engagement depends on the nature of demand. Hindering job demands such as role conflict reduce engagement while challenging job demands such as high responsibility enhances work engagement. When job demands are high, job resources and personal resources are instrumental in achieving the work goals.

1.4.3 The Affective Shift Model

Individual level of work engagement might vary throughout the day as one shifts from one task to the other facing various types of events at work (Sonnentag et al., 2010). This dynamic nature of work engagement is explained by the affective shift model (Bledlow et al., 2011). The model proposes that high work engagement

results from the transition from negative to positive affect. Negative affect indicates that things are not going on well and motivates the person to take corrective action. It is this effort that creates a shift from negative to positive affect. Work engagement is most likely to occur when the down regulation of negative affect is accompanied by up regulation of positive affect, simultaneously.

1.4.4 Social Exchange Theory

This theory states that over a period of time, relationships evolve into trusting and loyal mutual commitments if both parties adhere to certain rules of exchange. For example when employees receive appropriate resources like decent salary and appreciation from the employer, they feel obliged to repay the organizations. According to Saks (2006) one form of repayment by employees is their higher level of job and organization engagement. This is also supported by Kahn (1990) who proposed that employees feel obliged to repay the organization by investing themselves fully into their work role performances. On the other hand, when the organization does not provide the required resources, employees psychologically withdraw themselves from work, thus disengaging themselves (Schaufeli, 2006).

1.5 CLASSIFICATION OF EMPLOYEES ACCORDING TO ENGAGEMENT

Gallup (2006) proposed that on the basis of engagement level, employees could be categorized into three types namely, the engaged, not engaged and the actively disengaged. A brief description of the characteristics of each category is given in Table 1.2

Table 1.2 : Levels of Engagement

Types of Employees according to Engagement Level	
1.	**The Engaged :** Such employees work with passion and feel a sense of connection with their organization.
2.	**Not – Engaged :** Such employees put in time but not their energy or passion into their work. They can be said to be ‘checked out’ or ‘sleep walking’ through their work day.
3.	**Actively Disengaged :** Such employees are not just unhappy at work but they express their unhappiness to others, thus undermining what their engaged associates achieve.

The ‘actively disengaged’ category is of utmost concern to the employer brand because these staff members have a tendency of sharing their discontent with their coworkers and the wider world.

According to a survey titled ‘The employee engagement equation in India’ conducted in partnership by two consulting firms Blessing White and HR Anexi (2008) employees can be categorized into five segments according to their work engagement levels which was considered to be a function of employee contribution and satisfaction. Table 1.3 gives a description of the characteristics of each segment along with the strategy proposed to enhance the level of employee work engagement.

Table 1.3 : Types of Employees according to Work Engagement

Segment	Description	Proposed Engagement Strategy
The Engaged	Such employees make high contribution and possess high satisfaction. They often go the extra mile in order to contribute to organizational goals and draw satisfaction from it. They are not inclined to switch organizations.	Their engagement needs to be sustained in the long term. Organization must recognize their ability to influence and motivate others.
Almost Engaged	A critical group comprising of employees make medium to high contribution and satisfaction. They are amongst the high performers and are reasonably satisfied but may not have consistently high engagement. Since they are highly employable, they are open to employment offers from other organizations. They have a tendency to shift to any of the other engagement segments.	It is critical for organization to invest into the engagement of such employees as they are good performers and are nearest to the engaged segment.
Honeymooners and Hamsters	Medium to high satisfaction but low contribution. It consists of two categories. The honeymooners are new to the organization. This period lasts from 12 to 18 months. During this time, their satisfaction is meium to high but thet are yet to find out as to how they can contribute fully. Hamsters are the long tenured	They need inputs on objectives and expectations. Feedback regarding current performance could be helpful. It should be a priority to get them aligned and contributing as soon as possible.

Segment	Description	Proposed Engagement Strategy
	employees who believe that they are contribution but actually they are just 'spinning their wheels', without reaching anywhere or contributing to take the organization higher. Some might even be 'curled up and hiding out'. They are less likely to leave the organization.	
Crash and Burn	Medium to high contribution but low satisfaction. These employees are top producers but getting bitter due to personal dissatisfaction. They are sometimes quite vocal about their dissent with colleagues or even top management. They may leave, but may stop working hard.	They need coaching and support. Recognition of their efforts can be instrumental in changing their attitude.
The Disengaged	Low to medium contribution and satisfaction. Mostly cynical about any organizational initiative or communication. They tend to spread their negativity. However they did not start out at this level but ended up being the most disconnected from organizational priorities as they feel that they did not get want they wanted from work.	They need to be very clearly told about expectations and be given an opportunity to meet. If they still fail to respond appropriately their exit from the organization will have to be planned.

Source : *The Employee Engagement Equation in India, Blessing White and HR Anexi, 2008*

1.6 RATIONALE AND SIGNIFICANCE OF THE STUDY

The higher education system in India has grown remarkably, particularly in the post-independence era. At the time of independence in 1947, there were 19 universities and several hundred affiliated colleges (CABE, 2005). According to the Ministry of HRD website, in the year 2014 India had 48,828 higher education institutions consisting of 712 Universities, 36671 colleges and 11445 stand alone institutions. There are 12,09,211 teachers employed in universities and colleges. Such statistics make it one of the largest system of its kind in the world with huge potential for further development. It is targeted that by 2022, India will have 500

million skilled workers. There is an important requirement to train fresh graduates in new skills for ensuring their employability. In the period April 2000 to January 2015, the total amount of foreign direct investments (FDI) inflow into the education sector in India was US$ 1,071.5 million, according to data released by Department of Industrial Policy and Promotion (DIPP). The corporate sector has made major investments in the education and training sector. There are plans to set up 2500 multi-skilling institutions in public private partnership mode. By 2022, India will have to develop the skills of 120 million people in non-farm sectors. The highest requirement of skilled labour is expected to come from the construction sector (31 million), followed by retail (17 million) and logistics (12 million). The Government of India is opening of IITs and IIMs in new locations. With greater popularity of online mode of education adopted by several higher education institutions, this sector is all set for some major changes and developments in the coming years. Appropriate and timely steps in this direction will enable India to take true advantage of its demographic dividend.

According to a report titled, 'Understanding India - The Future of Higher Education and Opportunities for International Cooperation' published by the British Council in 2014, despite of significant progress over the last ten years, the system is facing certain challenges:

The demand-supply gap : The rate of enrolment in higher education in India at 21.1% is lower than the global average of 26% and is again low as compared to China at 26% and Brazil at 36%. Thus there is a huge demand for higher education which is unmet at the moment. By 2030, The Government of India aims at increasing the gross enrolment to 30% which means that India requires a huge increase in the number of Higher Education Institutions.

Low quality of teaching and learning : Many of the educational institutions are suffering from a serious shortage of faculty, outdated curriculum, rigid pedagogy, poor quality teaching, separation of teaching and research, lack of quality assurance and poor accountability.

Research capacity constraints : India does not have enough high quality researchers, Ph.D enrolment is very low, opportunities for interdisciplinary research are limited and not properly utilized due to low industry engagement in higher education and on the whole a weak ecosystem for innovation.

Uneven growth and access to opportunity : The access to education is not equitable across the social strata and geographic divisions. Hence the human resource development is quite uneven.

The above constraints are reflected in the three central pillars of the government's plans for education namely expansion, equity and excellence. The system has many issues of concern at present, of which quality of higher education is a major one. The Higher Education Institutions including the universities and colleges envision to produce an intelligent human resource pool, by making innovations in teaching, research and extension activities. Pandit (2010) expressed conviction in the opinion of Nobel laureate Hans Krebs that it is only a great teacher who can produce a great student. The teacher's role as a mentor who enthuses a student to think beyond the boundaries of the given text is crucial in shaping the future of education. He further quoted Tim Hunt, 'Knowing how we know is at least as important, for a real scientist, as what is known'. This calls for a fresh approach to tertiary education, in which the teacher assumes the pivotal role. Pandit (2010) expressed his concern that it is worrying to be struggling with teacher absenteeism and disinterest in colleges and universities. It needs to be immediately reversed with encouraging statistics of teachers' work engagement in order to achieve the vision of becoming a developed society. This concern is shared by the academicians leading Indian Universities as none of Indian Universities could feature in the list of world's top 200 Universities as per QS World University rankings for the year 2014-15. According to a study titled, Skilling India: Empowering Indian Youth through World Class Education conducted by the Associated Chamber of Commerce and Industry of India (ASSOCHAM, 2014), Indians spend about $6-7 billion per annum in sending their children abroad for higher education. This is not just the case of the elite population but also the middle class families who spend their life time savings for educating their children abroad. As per the study, more than 2.9 lakh Indians went abroad in 2013 and the count shot up to 6.8 lakh in 2014. One of the major reasons cited for this trend was the lack of quality of education in India. Hence, there is a concern that the country is losing foreign exchange and revenue due to the large exodus of students. If these students could got an opportunity to obtain equivalent quality education in India, they might have stayed back. Thus, the quality of tertiary education in India definitely needs to be increased to match global standards.

Being a service, the quality of education is anchored to its service provider.

In the higher education sector, the massive exodus of India's best and brightest science and engineering students to the seemingly greener pastures calls for enthusiasm of academicians to mend the flaws in the prevailing education system. Yadav and Yadav (2010) emphasized upon the role of universities in national development by highlighting the facts that the celebrated Massachusetts Institute of Technology (MIT) graduates alone originated technologies that have generated worldwide revenues nearing US$ 2 trillion. United States houses half of the top 20 universities in engineering and technology, which leaves no doubt regarding why the country dominates the global order. For India to attain this position, it is imperative to reconstitute India's innovation systems on the lines prescribed by Pandit Jawaharlal Nehru who sowed the seeds of the Indian Institutes of Technology (Yadav and Yadav, 2010). Department of Higher Education, Ministry of HRD, Government of India launched Rashtriya Uchchatar Shiksha Abhiyan (RUSA) a Centrally Sponsored Scheme (CSS), in 2013 with the aim of providing strategic funding to eligible state higher educational institutions. The funding to states would be based on a critical appraisal of State Higher Education Plans, as to how do they address issues of equity, access and excellence in higher education. Juluri (2014) commended Prime Minister Narendra Modi's idea of investing in making good teachers expressed in his Teacher's Day address on September 5, 2014. He emphasized on making the right social investment, to make India a nation of teachers with a global presence, a "Jagat Guru", so to speak. In order to achieve this vision every higher education institution needs to emulate the world's most celebrated universities. One of the key factors driving the quality of education is teacher's engagement in their work. It highlights the vital need for investigation of work engagement of teachers or faculty members in the higher education sector. Hence, there is a strong rationale for empirical studies on work engagement of faculty members in the higher education sector, so as to understand the dynamics of this vital phenomena and measures for enhancing it. As Barkhuizen and Rothmann (2006) on the basis of their study of academic staff in South African Higher Education Institutions, aptly concluded that higher education institutions should measure the engagement of their academic staff and provide feedback to the individuals. There should be interventions to promote work engagement of academic staff at all levels.

1.7 CHAPTER SUMMARY

This chapter introduces the concept of employee work engagement and its significance in the contemporary work arena. It throws light on its evolution, definitions, theoretical frameworks, classification of employees according to engagement and finally the rationale and significance of the study.

With the onset of 21st century, the paradigm shift in psychological contract between the employer and the employee has been examined. In this light, the need to take special measures for work engagement of the 21st century employees has been brought out. The characteristics of engaged and disengaged employees have been identified. The evolution of the construct has been traced from 1990s to 2015. The relevance of work engagement has been brought out in the context of globalization giving rise to boundary less organizations. Success of global workforce is keyed in their capacity to engage physically, mentally and emotionally in their work roles. The various definitions of employee work engagement proposed by academic authors and authors from consulting firms have been given. Four theoretical frameworks for the construct have been explained in this chapter. These are (1) The Needs – Satisfying Approach (2) Job Demands and Resources Model (3) The Affective Shift Model (4) Social Exchange Theory. The classification of employees into the 'engaged', 'not-engaged' and 'disengaged' as conceived by Gallup (2006) has been explained. Another interesting and relevant classification cited is by Blessing White and HR Annexi (2008) which classifies employees into 5 categories namely the 'engaged', 'almost engaged', 'honeymooners and hamsters', 'crash and burn' and 'the disengaged' has been reported along with the proposed engagement strategy for each segment.

Towards its culmination, this chapter builds a rationale for the study. It compares the current size of Indian Higher Education Sector with scenario at the time of independence. The total Foreign Direct Investment into education sector from 2000 to 2015 has been mentioned and potential for future growth has been discussed. Government of India's steps for addressing issues of equity, access and excellence in higher education like the Rashtriya Uchchatar Shiksha Abhiyan (RUSA), launched in 2013 have been mentioned. Despite its size and growth potential, the challenges faced by Indian higher education sector have been

discussed. A major one being the massive exodus of India's best and brightest students to the seemingly greener pastures costing India a revenue loss of $ 6-7 billion per annum according to ASSOCHAM (2014). This calls for enthusiasm of academicians to mend the flaws in the prevailing education system. Given the issue of below expected quality of teaching and learning, lack of quality assurance and poor accountability of teaching staff in higher education institutions, it is vital to investigate the status of work engagement amongst faculty members, explore the factors associated with it and identify measures for its enhancement. The significance of a study on employee work engagement of teachers in the higher education sector can be estimated from Prime Minister Narendra Modi's idea of making the right social investment in making India a nation of teachers with a global presence, a "Jagat Guru". Thus, a strong rationale was found for an empirical study on work engagement of faculty members in the higher education sector, so as to understand the dynamics of this vital phenomena and measures for enhancing it.

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CHAPTER – 2

REVIEW OF LITERATURE

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The construct of work engagement is truly multidimensional and its dynamics have been explored from various perspectives. In order to arrive at a lucid understanding of the construct from a holistic perspective a comprehensive review of literature was undertaken. The classic and the contemporary research studies clarifying various dimensions of work engagement have been carefully examined. Extant research studies have been categorized as follows:

2.1 Studies on Work Engagement as a unique construct

2.2 Studies on Measurement of work engagement

2.3 Studies on Factors affecting work engagement

2.4 Studies on Relationship of work engagement with job crafting, organizational commitment, work life balance and work stress

2.5 Studies on Engagement – performance link

Based on a careful review of previous studies, the research gaps were identified. Accordingly, the objectives of the study and hypotheses were framed.

2.1 STUDIES ON WORK ENGAGEMENT AS A UNIQUE CONSTRUCT

Engagement is an important issue, not only for academics and researchers but also for practitioners in organizations (May et al., 2004). Interest in engagement arose with the shift in focus in industrial psychology to positive organizational behavior (Rothmann & Storm, 2003; Strumpfer, 2003). Research by Schaufeli et al. (2002) stimulated studies regarding work engagement as the antipode of burnout. In order to gauge the construct validity of work engagement several definitions available in extant literature were examined and the same are presented in the following paragraphs according to similarity of content rather than chronology.

According to Bakker (2011), Kahn was one of the first to theorize about work engagement. Kahn (1990) coined the terms personal engagement and personal disengagement. The terms describe the behaviours depicting personal involvement or withdrawal during performance of work roles. He defined personal engagement as the harnessing of organization members' selves to their work roles. In a state of

engagement, people employ and express themselves physically, cognitively and emotionally. He defined personal disengagement as the uncoupling of self from the work role. According to Kahn (1990) people can use varying degrees of their selves, in the roles they perform. The more people draw on their selves to perform their roles, the more stirring are their performances. Kahn (1990) based his theory upon the idea that people have an inherent tendency to protect themselves from both isolation and engulfment by alternately pulling away from and moving towards group memberships. Kahn's conceptualization is based the premises of work redesign model of Hackman & Oldham (1980) stating that people's attitudes and behaviors are driven by the psychological experience of work. Secondly, it is also built upon individual, interpersonal, group, intergroup and organizational factors influencing organizational behavior (Alderfer, 1985).Thus, engaged employees put much effort into their work because they identify with it. According to Kahn (1990) a dynamic, dialectical relationship exists between the person who invests personal energies into one's work role on the one hand and the work role that allows this person to express him or herself on the other hand.

Inspired by the work of Kahn (1990), Rothbard (2001) defined engagement as a motivational construct consisting of two dimensions namely attention and absorption. Attention refers to the duration of focus in work and remaining mentally preoccupied in the work role. It can be gauged from the time spent in thinking about and concentrating on the work role. Absorption refers to intensity of focus. It was characterized as loosing track of time and becoming engrossed in work role. It is noteworthy that the most contemporary research on work engagement has been stimulated by research on burnout. Maslach and Leiter (1997) termed engagement as the positive antipode of burnout. They rephrased burnout as an erosion of engagement with the job. In the view of these authors, work engagement is characterised by energy, involvement and efficacy, which are considered the direct opposites of the three burnout dimensions namely exhaustion, cynicism and lack of professional efficacy respectively.

Schaufeli et al. (2002) partly agreed with Maslach and Leiter's (1997) description, but took a different perspective and defined work engagement in its own right. They stated that burnout and engagement are not perfectly negatively correlated. An employee who is not burned-out may score high or low on

engagement, whereas an engaged employee may score high or low on burnout. Furthermore, they considered burnout and engagement on two independent dimensions namely activation and identification. On the lowest end of activation continuum lies exhaustion and on its highest end lies vigour. Identification ranges from cynicism on the lowest end to dedication on the highest end. The state of burnout is characterised by a combination of low activation or exhaustion with low identification or cynicism. Engagement is characterised by a combination high activation or vigour with high identification or dedication. Schaufeli et al. (2002) defined work engagement as a positive, fulfilling, work-related state of mind that is persistent and pervasive. It is not focused on any particular object, event, individual or behaviour. Work engagement consists of three dimensions namely vigour, dedication and absorption. Vigour at work is reflected in the form of high levels of energy and mental resilience, the willingness to make efforts, persistence even in the face of difficulties and not being easily fatigued. Dedication is characterised by deriving a sense of meaning from one's work, feeling enthusiastic and proud of the job while being inspired as well as challenged by it. Absorption is manifested as the incumbent being totally and happily immersed in one's work to the extent of having difficulties detaching oneself from it. In a state of absorption, one forgets everything else that is around, feels that time passes quickly, so much so that while at work one looses the sense of time.

Harter et al. (2002) defined engagement as the combination of individual's involvement, satisfaction and enthusiasm for work. Colbert et al. (2004) defined engagement as a high internal motivational state. Wellins and Concelman (2005) considered it to be a synthesis commitment, loyalty, productivity and ownership. They termed it as an illusive force that motivates employees to higher levels of performance. They addressed it as a desirable energy similar to organizational commitment, job ownership, high levels of discretionary effort, passion and excitement for work. Fleming and Asplund (2007) drew a similarity between employee work engagement and customer engagement as both are characterized by confidence, pride, integrity and passion. In a joint survey by the consultants HR Anexi and Blessing White (2008) engagement was defined in terms of an individual's personal satisfaction in the role and contribution to the company's success. Full engagement represents an alignment of maximum job satisfaction with maximum job contribution.

Establishing a constructive critique of such definitions, Macey and Schneider (2008) observed that many HR consultants avoid defining the term, instead refer only to its presumed positive consequences. The question remains as to whether engagement is a unique concept or merely a repackaging of other constructs. Newman et al. (2011) stated that engagement actually commits the jangle fallacy, in which apparently similar constructs measuring like nomological networks are labeled unique from one another (Kelley, 1927). They raised a fundamental question as to whether employee work engagement is different from an overall job attitude. Macey and Schneider (2008) and Shuck et al. (2013) discretely established work engagement as a unique concept, despite its seeming similarity with job satisfaction, organizational commitment, job involvement and workaholism as detailed in the following paragraphs.

Several authors defined engagement as a satisfaction-related concept (Fleming & Asplund, 2007; Harter et al., 2002; Wagner & Harter, 2006). Harter et al. (2002) defined engagement as "satisfaction-engagement," implying that engagement and satisfaction with one's work are conceptually the same. Furthermore, practitioner based models (Towers Watson, 2014) defined engagement as having rational and cognitive elements, suggesting that engagement and satisfaction are similar. On the contrary Erickson (2005) pointed out that, engagement is a gradually forward moving state whereas satisfaction is stationary and indicates fulfillment. Satisfaction is characterized by contentment and the fulfillment of human needs through organizational means. This suggests that while satisfaction connotes fulfillment, engagement connotes urgency, focus, and intensity (Macey et al., 2009).

Fleming, et al. (2005), Gallup Organization researchers used the term 'committed employees' as a synonym for engaged employees. The Corporate Executive Board (2004) observed that engagement is the extent of employee commitment to someone or something in their organization, the level of hard work they put in and how long they stay in the organization as a result of that commitment. According to Saks (2006) commitment is a person's attachment or attitude towards an organization. Engagement is not an attitude but rather a state and operationally speaking, it is the level upto which persons are attentive and absorbed in their work (Saks, 2006). Comparing both, Kahn (1990) observed that

organizational commitment is comparatively stable over time, while engagement is subject to variations as employees interpret and interact with a lot of environmental stimuli in the workplace.

Work engagement has been often likened with job involvement. According to Brown (1996), job involvement indicates a state of self engagement in the job. On the contrary, Salanova et al. (2005), observed that job involvement is a part of engagement but not equivalent to it. From the perspective of May et al. (2004), engagement is as an antecedent to job involvement indicating that individuals who experience high level of engagement in their roles should identify with their jobs. It was further observed that job involvement is a cognitive judgment about the job, which is anchored to self-image (Saks, 2006), whereas work engagement is a wider, more inclusive construct consisting of energy and enthusiasm towards the job (Christian et al., 2011; Kahn, 1990; Rich et al., 2010).

Another interesting investigation is that of the perceived similarity between work engagement and workaholism, thus, answering the question whether engaged employees are workaholics. The term workaholism was coined by Oates (1971), who described it as the urge, compulsion or the uncontrollable need to work persistently. Hence, workaholics tend to spend an exceptional amount of time to work and incessantly think about work, even when not working. Hence, it can be inferred that that workaholics are obsessed with their work. Simply opposite to these characteristics, the behavioral characteristics of engaged employees show that they are not addicted to work (Bakker and Demerouti, 2008). Unlike workaholics, they enjoy doing things outside work, do not feel guilty when not working and do not work hard because of a strong and irresistible inner drive. Rather, the engaged employees work because they enjoy doing so.

Bakker (2011) clarified that work engagement is different from work-related flow. Engagement refers to a longer performance experience whereas flow typically refers to a peak experience that may last only an hour or even lesser than that. He further stated that work engagement is different from motivation as it refers to cognition and affect in addition to motivation.

Thus, on the basis of the comparison made in the preceding paragraphs, engagement is clearly established as a novel and unique concept. Studies quoted here provide substantial empirical evidence of employee work engagement being a

distinct construct. Further, it is worth mentioning that Rich et al. (2010) established that performance-related outcomes were better predicted by work engagement as compared to job involvement, job satisfaction and intrinsic motivation. They found that engagement is the concurrent investment of cognitive, affective and bodily energies into performance-related outcomes representing something exclusive, differentiating engagement from other potentially related variables. Engagement is now an established term in both managerial and academic literature and appears unlikely to be forsaken as a fad (Guest, 2013).

2.2 STUDIES ON MEASUREMENT OF WORK ENGAGEMENT

Measurement of any phenomenon is vital for framing mechanisms to increase its level or spread. For measuring employee work engagement, a 12 questions instrument developed was by Gallup Organization which has been referred by various authors as the Q12, Gallup Workplace Audit (GWA) or Gallup Engagement Index. The items measure four theoretical constructs namely, 'what do I get?, what do I give?, do I belong? and how can we grow?'(Buckingham and Coffman, 1999). Macey & Schneider (2008) observed that in the world of practice some measures of conditions for engagement are relabeled as measures of engagement (such as Buckingham & Coffman, 1999). Substantiating this argument further, Schiemann and Morgan (2006) observed that the focus of measurement should be on the construct of interest; if engagement is the target, then the measure should map the content of the construct. Unfortunately Gallup Workplace Audit, fails to measure up on these criteria.

Maslach and Leiter (1997) assessed work engagement by the opposite pattern of scores on the three dimensions of Maslach Burnout Inventory - General Survey (MBI-GS) developed by Schaufeli et al. (1996). The MBI-GS measures the three dimensions of the burnout-engagement range: exhaustion-energy, cynicism-involvement, and inefficacy-efficacy. The MBI-GS includes three subscales namely exhaustion, cynicism and professional efficacy. MBI-GS is a 16-item measure. The items are statements of job-related feelings. There are five items on exhaustion sub scale, five items on cynicism sub scale and six items on professional efficacy sub scale. All items are scored on a 7-point frequency rating scale ranging from "never" indicated by 0 to "always" indicated by 6. Example items are: "I feel emotionally

drained from my work" (exhaustion); "I have become more cynical about whether my work contributes anything" (cynicism); "At my work, I feel confident that I am effective at getting things done" (professional efficacy). Maslach and Leiter (1997) concluded that low scores on exhaustion and cynicism and high scores on professional efficacy indicate engagement. In other words, according to them engagement can be measured by opposite pattern of scores on MBI-GS.

With reference to the measurement of work engagement, Schaufeli et al. (2002) disagreed with Maslach and Leiter (1997), who stated that engagement is effectively measured by the opposite pattern of MBI scores. Instead, Schaufeli et al. (2002) argued that, by using the MBI for measuring work engagement, it is not feasible to make an empirical study of its relationship with burnout since both concepts are considered to be opposite poles of a continuum that is covered by one single instrument i.e MBI. They stated that work engagement is the positive antithesis of burnout but the structure and hence measurement of both concepts differ. Hence, Schaufeli et al. (2002) developed the Utrecht Work Engagement Scale – UWES), a self-report questionnaire to measure work engagement. It includes three dimensions namely vigour, dedication and absorption. It includes items such as: "I am bursting with energy in my work" (vigour); "My job inspires me" (dedication); "I feel happy when I'm engrossed in my work" (absorption). As far as the number of items is concerned, different versions of UWES are available namely UWES – 17, UWES – 15 and UWES-9. Utrecht Work Engagement Scale (UWES) is one of the often used instrument to measure engagement as it has been validated in many countries across the world (Schaufeli et al., 2002). Schaufeli et al. (2006) developed the nine-item version of the UWES and provided evidence for its cross-national validity. UWES, is a valid and reliable indicator of work engagement that can be used for future research (Schaufeli and Bakker, 2004).

Demerouti et al.(2010) proposed another instrument for the assessment of work engagement called Oldenburg Burnout Inventory (OLBI). This instrument was developed originally to assess burnout, but includes both positively and negatively phrased items. It can be used to assess work engagement as well by recoding the negatively framed items. The OLBI includes two dimensions namely exhaustion and disengagement (from work). Contrary to MBI-GS, the OLBI encompasses not only affective domain of exhaustion but also physical and cognitive domains. This

facilitates the application of the instrument to those workers who perform physical work as well as those whose job deals mainly with processing information. Disengagement in the OLBI refers to distancing oneself from one's work. Disengagement items concern the relationship between employees and their jobs, specifically with respect to identification with work and desire to continue in the same occupation. Disengaged employees behold negative attitudes towards their work. The reliability and factorial validity of the OLBI has been confirmed in studies conducted in Germany, Greece, the Netherlands, the USA, and South Africa.

2.3 STUDIES ON FACTORS AFFECTING WORK ENGAGEMENT

Kahn (1990) did a pioneering qualitative study on personal engagement. He interviewed summer camp counselors and members of an architecture firm in order to enquire about their moments of engagement and disengagement at work. He found that these experiences are associated with three psychological conditions namely meaningfulness, safety and availability. Psychological meaningfulness is determined by characteristics of the task, role and interactions at work. People consider work to be meaningful when they feel that their tasks are worthwhile and making a difference in the lives of others. Work that is challenging, clearly outlined, varied, creative and somewhat autonomous is perceived to be meaningful. Meaningfulness is also determined by people's liking or disliking for the role identities that they are required to assume. There is more liking for roles which made people feel important about their status in the organization and their influence on the external world. Psychological meaningfulness is experienced when there are gratifying interpersonal interactions with co-workers and clients during task performance. Such interactions boost self-respect, self-appreciation and a sense of being valuable**.** According to Kahn (1990), the second determinant of personal engagement namely, psychological safety is linked with nonthreatening and predictable social situations. It is experienced when people could engage themselves in work freely, without fear of negative results to self image, career or status. Psychological safety was indicated by interpersonal relationships depicting openness, flexibility, trust, support and lack of threat. The third determinant of personal engagement, namely, psychological availability is associated with the sense of possession of the physical, psychological and emotional resources necessary for

role performance. Thus, Kahn (1990) delved deep into the factors affecting personal engagement and was successful in identifying the same.

Kahn's (1990) model was empirically tested by May et al. (2004) who substantiated the findings that psychological meaningfulness, safety, and availability are significantly related to engagement. They found that job enrichment and role fit are positive predictors of psychological meaningfulness. Gratifying co-worker relations coupled with supportive supervisor relations positively predict psychological safety. Adherence to co-worker norms and self-consciousness negatively predict psychological safety. Availability of resources positively predicts psychological availability. Participation in outside activities negatively predict psychological availability.

As per the school of thought propounded by Maslach et al. (2001) job engagement was described as the positive antithesis of burnout. According to them, engagement is determined by six aspects of work-life namely, rewards and recognition, workload, community and social support, degree of control, perceived fairness and values. Job engagement is positively associated with work that is both meaningful as well as valued, workload that is sustainable, sense of choice and control over work, suitable recognition and rewards, a helpful work community and a sense of fairness.

Saks (2006) remarked that Kahn's (1990) and Maslach et al.'s (2001) models do explain the conditions necessary for engagement but they do not fully explain why individuals react to these conditions with dissimilar degrees of engagement. Theoretically, he found a stronger underlying principle for explaining employee work engagement in Social Exchange Theory (SET) proposed by Cropanzano and Mitchell (2005). According to this theory when there is an interaction between two or more mutually dependent parties, mutual obligations are generated. Over a period of time, mutual commitments are developed, if they abide by certain rules of exchange. For example, when organization gives economic and socio-emotional resources like pay and recognition to the individuals, employees feel obliged to pay back to the organization through their level of engagement (Cropanzano and Mitchell, 2005). In consonance with Social Exchange Theory, Robinson et al. (2004) also described engagement as a two-way relationship between the employer and employee. Adding finer details to the factors affecting engagement, Saks (2006)

found that employee work engagement can be distinguished into two forms namely job engagement and organizational engagement. Both the forms of engagement are determined by a common factor, namely, perceived organizational support. Employees who perceive higher organizational support are more likely to reciprocate with greater levels of engagement in their job and in the organization. Specifically, job engagement is predicted by job characteristics. Those who are provided with jobs that are high on the job characteristics are more likely to exhibit greater job engagement. Those who perceive higher procedural justice are more likely to experience greater organization engagement. Thus, Saks (2006) concluded that the level of physical, cognitive, and emotional resources invested by an individual during role performance is predicted by the economic and socio-emotional resources received from the organization. Engaged employees are also more likely to have a high-quality relationship with their employer leading them to also have more positive attitudes, intentions, and behaviors.

Bakker and Demerouti (2008) proposed Job Demands and Resources Model of Work Engagement. This model is another important contribution to literature and the field of practice alike as it identifies the factors affecting work engagement. Bakker and Demerouti (2008) found that engagement is determined by typical job resources and personal resources.

Job Demands and Resources model of work engagement (Bakker and Demerouti, 2008) draws upon two assumptions from the Job Demands - Resources (JD-R) model (Bakker and Demerouti, 2007; Demerouti et al., 2001). The first assumption is that job resources result in work engagement and higher performance. The second assumption is that job resources particularly impact work engagement when job demands are high. It was built upon the work of Xanthopoulou et al. (2007) which established personal resources to be independent determinants of work engagement.

Job demands are those aspects of the job that require persistent effort or skills and are therefore related with certain physiological and/or psychological costs (Demerouti et al., 2001; Bakker and Demerouti, 2007). The nature of job demands may be psychological, social, physical or organizational for example emotionally

demanding communication with clients, high work pressure and an adverse physical environment. Job resources are those aspects of the job that are imperative for reducing job demands, achieving work goals and enhancing personal development (Demerouti et al., 2001; Bakker and Demerouti, 2007). Demerouti et al. (2001) explained that the source of job resources may be the organization as far as pay, career opportunities and job security is concerned. Alternately, job resources may be provided by interpersonal and social relations for example support from co-workers and team climate. The manner of organizing work for example giving role clarity and participation in decision making are other forms of job resources. A job providing task significance and identity, variety of skills, autonomy and performance feedback is considered to be rich in job resources. Schaufeli and Bakker (2004) found that job resources are essential for meeting job demands and important in their own right. Job resources are positively associated with work engagement (Bakker and Demerouti, 2007; Schaufeli and Salanova, 2007). Job resources namely job control, climate, supervisor support, innovativeness, information and appreciation were positively related to work engagement (Demerouti et al., 2001; Hobfoll, 2001). In comparison with other job resources tested, appreciation appeared to be the strongest predictor of all work engagement dimensions.

Personal resources are positive self-evaluations about individuals' perception of their ability to successfully control and influence their environment (Hobfoll et al., 2003). Xanthopoulou et al. (2007) found that work engagement was predicted by three specific personal resources namely self-efficacy, organizational-based self-esteem and optimism. Results showed that engaged employees are highly self-efficacious, thus believing they have the capacity to meet a variety of job demands. Engaged workers are optimistic and resilient thus perceiving that they will generally experience positive results and bounce back soon even after meeting failures. The level of their organizational-based self-esteem is generally high due to which they believe that can gratify their needs by performing roles within the organization (Mauno et al., 2007).

The Job Demands and Resources Model of Work engagement (Bakker and Demerouti, 2008) is synchronized with job characteristics theory of Hackman and Oldham (1980) which states that job resources such as autonomy, feedback and task significance lead to intrinsic motivation. This model is in agreement with Conservation of Resources (COR) theory of Hobfoll (2001). This theory states that people seek to find, protect and retain what they value. Actual or potential loss of resources results in individual stress. Job resources become more important when employees are faced with high job demands because they can help in work goal achievement.

Macey and Schneider (2008) proposed a framework illuminating the unique attributes of employee work engagement, in terms of trait, state and behavioral engagement and the factors predicting these. They found that trait engagement can be regarded as an inclination to experience the world positively with a feeling of enthusiasm. Trait engagement gets reflected in psychological state engagement. They conceptualized psychological state engagement as a precursor of behavioral engagement. Behavioral engagement is defined in terms of discretionary effort within or outside the assigned role (Erickson, 2005 and Towers Watson, 2014). According to this framework proposed by Macey and Scheider (2008), work engagement is determined by factors such as workplace environment, work attributes like autonomy, challenge, variety and transformational leadership. This is also in line with the earlier findings of Kahn (1990) and McGregor's (1960) Theory Y, advocating a participative management style allowing people to explore their full potential. Macey & Schneider (2008) beautifully concluded that organization that get these conditions right will have an engaged workforce, which surely is a sustainable competitive edge.

Based on the studies cited in the preceding paragraphs, the commonalties in factors affecting work engagement were deduced. The common factors across all the studies came out to be job characteristics, personal resources, interpersonal relations and organizational support. Various studies used specific terms having some factors in common. Table 2.1 depicts the common factors deduced from all the studies cited in this section :

Table 2.1 : Comparison of Studies on Factors Affecting Employee Work Engagement

S.No.	Common factor	Specific Terms used	Source Author
1.	Job Characteristics	Psychological meaningfulness : work that is challenging, clearly outlined, varied, creative and somewhat autonomous is perceived to be meaningful.	Kahn (1990)
		Degree of control and workload	Maslach et al. (2001)
		Job Enrichment	May et al. (2004)
		Job Characteristics	Saks (2006)
		Job Resources such as task significance and identity, variety of skills, autonomy etc.	Bakker and Demerouti (2008)
		Work Attributes for example autonomy, challenge and variety	Macey and Scheider (2008)
2.	Personal Resources	Psychological availability : sense of possession of the psychological and emotional resources necessary for role performance.	Kahn (1990)
		Role fit	May et al. (2004)
		Personal Resources for example self-efficacy, organizational-based self-esteem and optimism.	Bakker and Demerouti (2008)
3.	Interpersonal Relations	Psychological safety: interpersonal relationships depicting openness, flexibility, trust, support and lack of threat.	Kahn (1990)
		Community and social support	Maslach et al. (2001)
		Gratifying co-worker relations coupled with supportive supervisor relations	May et al. (2004)
		Job Resources: interpersonal and social relations for example support from co-workers and team climate.	Bakker and Demerouti (2008)

S.No.	Common factor	Specific Terms used	Source Author
4.	Organizational Support	Psychological availability associated with the sense of possession of the physical resources necessary for role performance.	Kahn (1990)
		Suitable recognition and rewards, workload that is sustainable	Maslach et al. (2001)
		Economic and socio-emotional resources ; procedural justice	Saks (2006)
		Job Resources : source of job resources may be the organization as far as pay, career opportunities and job security is concerned.	Bakker and Demerouti (2008)
		Conditions of workplace	Macey and Scheider (2008)

2.4 STUDIES ON RELATIONSHIP OF WORK ENGAGEMENT WITH JOB CRAFTING, WORK LIFE BALANCE, ORGANIZATIONAL COMMITMENT AND WORK STRESS

Various studies reveal that high levels of work engagement are associated with high levels of performance, citizenship behaviour and individual wellbeing (Christian et al., 2011). Engaged employees are passionate and always try to go an extra mile in doing their work. It necessitates a deeper analysis of the relationship of work engagement with job crafting, organizational commitment, work life balance and work stress.

An important aspect of engaged employees behavior is their tendency for job crafting. Grant and Ashford (2008) found that employees try to affect what happens in their work lives rather than just letting work life take its course. Employees may change their job design by negotiating for a different job content or attaching a meaning to their tasks or jobs (Parker & Ohly, 2008). Specifically, engaged employees behave in such a manner. The process of employees shaping their own jobs was termed as job crafting by Wrzesniewski and Dutton (2001). According to Wrzesniewski et al. (1997) job crafting involves the modifications people make in

their tasks or relational boundaries. The nature of change may be physical or cognitive or both. A physical change refers to an alteration in the number, scope or the form of job tasks. A cognitive change refers to one's perception of the job. Relational boundaries pertain to job incumbent's discretion or choice over their social interactions at work. The advantage of job crafting lies in its potential to create a better person–job fit by enhancing the balance of job demands with resources. Employees who derive a sense of enjoyment or fulfillment in their work are more likely to engage in job crafting (Wrzesniewski et al.,1997). Job crafting is a particular type of proactive work behavior that employees engage in to fine-tune their job to their requirements, skills and preferences. Grant and Parker (2009) proposed that job crafting can be classified under proactive person-environment fit behaviors. While trying to craft their jobs employees try to change the situation or oneself for better person-job fit. For example trying to increase work efficiency by devising smarter ways of working and developing new skills required by the job. Tims & Bakker (2010) defined individual job crafting as proactively increasing or decreasing the job demands and resources. Job demands can be of two types namely hindering job demands and challenging job demands (LePine et al., 2005). Hindering job demands are those which interfere with work goal achievement. Challenging job demands are those demands which appear to be difficult or stressful but have positive results such as better skills and personal growth (Crawford et al., 2010). In the face of job demands, the work environment may provide job resources that not only help meet the demands but also kindle self growth, learning and development (Demerouti et.al, 2001). On the basis of this framework of job demands and resources, Tims et. al (2012) proposed that individual job crafting includes four dimensions namely increasing social job resources for example, seeking feedback from supervisor and peers; increasing structural job resources for example requesting for greater autonomy; increasing challenging job demands for example initiating new projects and decreasing hindering job demands for example re-organizing work to avoid continuous sitting for long hours. In order to investigate the effects of job crafting behaviours on employees' self-reported engagement, Chan (2013) conducted a longitudinal study using daily diary method. The results revealed that when job demands were high, increasing structural resources improved engagement further as compared to a situation when demands were low. When

autonomy was high, increasing structural resources improved engagement further as compared to when autonomy was low.

The term “time bind” was coined by Hochschild (1997) to describe a number of situations in which workers prefer dividing their time between work and personal life in a manner which is different from the current state but find it difficult to do so or are unable to do so. Tausig and Fenwick (2001) suggested that time bind can be understood as a perceived imbalance between work and family/personal life. The opposite of a time bind is a sense of work-life balance. Montgomery et al. (2003) observed that employees who carry positive feelings from their work life to personal life or vice versa demonstrate significantly higher levels of engagement in comparison with employees experiencing no such cross-over. Bakker et al. (2003) conducted a study of work engagement amongst working couples and showed that wives' levels of vigor and dedication for work exclusively contributes to husbands' levels of the same parameters. Thornthwaite (2004) reported that employees’ desire for work-life balance is on the increase and employers have begun to offer active support in this direction. Emslie & Hunt (2009) observed that employers responded to their employees’ work-life balance needs by providing supplementary benefits such as on-site childcare service and paid maternity leave. Organizational assistance for work life balance is one of the criteria of *Fortune* magazine to declare its list of the 100 best companies to work for (Muse et al., 2008). Both employees and organizations benefit from effectively balanced work and family life. When employees experience a harmony between their professional and personal lives, they are able to devote themselves fully to their work roles. Hence, work-life balance improves work engagement, which is associated with organizational performance enhancement (Hammer et al., 2005; Greenhaus and Powell, 2006; Carlson et al., 2008). Bakker et al. (2014) found that work engagement is positively associated with work-family facilitation. Hence, it can be said that work engagement is positively associated with work-life balance.

As managers look for ways to enhance employee performance and retention, the concept of employee commitment to organizations has become all the more important in research literature. Porter et. al (1974) defined organizational commitment as the relative strength of an individual's identification with the organization and involvement in its activities. Committed employees charac-

teristically possess a strong belief in the organization's goals and values, have a willingness to exert substantial effort on behalf of the organization and a firm desire to maintain membership in the organization. Highly committed employees may outperform their less committed companions indicating that organizational commitment may be a helpful indicator of the organizational effectiveness (Mowday et. al, 1974). Hakanen et al. (2006) in a study of Finnish Teachers proved that work engagement plays a mediating role in the relationship between job resources and organizational commitment. There is a positive relationship between work engagement and affective emotional commitment (Richardsen et al., 2006; Llorens et al., 2006; Hakanen et al., 2006; Saks, 2006; Demerouti et al., 2001; Maslach et al., 2001; Brown and Leigh, 1996).

Any discussion on the behavioral aspects of engaged employees would be incomplete without explaining the results of over indulgence in work. Although work engagement is a virtuous concept, over indulgence in work might lead to some unwanted / unforeseen negative consequences for the engaged employees. In a survey study conducted by Bakker et al. (2004) amongst the Dutch workforce it was found that work engagement was positively associated with working overtime and taking work home. Further, the work-life balance literature reveals that work-home interference slows recovery from stress and may lead to health related issues (Geurts & Demerouti, 2003). Specifically, the absorption component of work engagement appears to lead to unhealthy behavior. The term ‘stress’ is quietly widely used, yet its meaning remains vague. Modern definitions of stress clarify that it is a personal experience caused by work demands or pressure which influences the individual’s coping ability or perception of the same Blaug et.al, 2007). The National Institute of Occupational Safety and Health (1999) defined stress as the harmful emotional and physical responses that occur when job requirements do not match workers’ capabilities, resources and needs. According to the demands–control model (Karasek, 1979), job stress is specifically caused by the coupling of high job demands particularly work overload and time pressure with low job control. Further research on job stress and burnout revealed a list of job demands and job resources whose deficiency leads to stress namely low social and supervisory support, emotional demands and lack of performance feedback (Kahn & Byosiere, 1992; Lee & Ashforth, 1996). The Health and Safety Executive (2006) identified six categories

of factors that can be identified as potential causes of work-related stress namely control, demands, inter-personal relationships, change and role support. Palmer et. al (2004) added a seventh driver of stress namely culture of the organization stating that what matters is how work-related stress is approached and managed. Upon a comparison of the factors affecting work engagement and the potential causes of stress many commonalities can be noticed for example job demands, job resources, inter-personal relationships and role support. The commonality in the causative factors behind the two phenomena is the rationale for a deeper examination of the relation between the two.

Pines et al. (1981) found that employees who are more vulnerable towards falling in the 'over engagement trap' are the ones who have been "on fire" at one time. Employees who are so much absorbed in their work life that they forget to rest and recoup, may develop health problems, disturb their work-life harmony and fall into the trap of 'presenteeism' or 'workaholism'. Thus it can be said that there is a thin line between engagement and over-engagement and by crossing it, one does more harm than good to self as well as the larger system. Too much stress may lead to a state of burnout. Burnout is defined as a condition of exhaustion, cynicism and reduced professional efficacy (Maslach et al., 1996). According to the Job Demands–Resources (JD–R) Model (Bakker et al.,2003) job demands and job resources may give rise to two different, but related processes. On the positive side there is a motivational process in which job resources promote engagement and organizational commitment (Schaufeli & Bakker, 2004). On the flip side, there is an energetic process in which high job demands wear out or exhaust employees' mental and physical resources therefore leading to burnout and eventually to ill health. In a specific study of burnout and work engagement amongst Finnish teachers, Hakanen et. al (2006) proved that teachers' job demands would predict ill health through their impact on burnout and that teachers' job resources would predict organizational commitment through work engagement. They proved that burnout is inversely related to work engagement.

2.5 STUDIES ON THE ENGAGEMENT – PERFORMANCE LINK

The study of work engagement would not be complete till the engagement – performance link is thoroughly investigated. Only a few studies have investigated

the relationship between work engagement and job performance (Bakker & Demerouti, 2007). Nevertheless, their results are promising. Bakker et al. (2004) reported that engaged employees received higher ratings from their colleagues on in-role and extra-role performance. It shows that engaged employees perform well and are willing to go the extra mile. They outshine others in both in-role and extra-role performance. They were more often asked to carry out additional task of particular significance to the organization. Salanova et al. (2005) in a study among personnel working in Spanish restaurants and hotels, concluded that organizational resources and work engagement predicted service climate, which in turn predicted employee performance and customer loyalty. Bakker et al. (2006) conducted a study on engagement and performance among school principals and teachers. Their study showed a strong association between engagement and performance in terms of creativity. The higher school principals' levels of work engagement, the better they were able to come up with a assortment of ways to handle work-related problems. The engaged school principals were seen as transformational leaders, able to inspire and coach their co-workers.

Xanthopoulou et al. (2007) made a strong case of work engagement as a predictor of daily performance, on the basis of their study among Greek employees working in a fast-food restaurant. Results proved that employees were more engaged on days on which they possessed many job resources as well as personal resources thus clearly showing that engaged employees perform better on a daily basis.

Thus, on the basis of various studies cited herein, it can be said that work engagement has a positive impact on job performance. Bakker et al. (2008) observed that employees who are engaged are able to create their own resources, which creates a positive gain spiral. Engaged employees outperform the less engaged ones as the former often experience positive emotions, better psychological and physical health, create their own job and personal resources and transfer their engagement to others. Fredrickson (2001) established that positive emotions broaden people's thought-action repository. Employees who create their own resources are better able to deal with their job demands and to achieve their work goals (Bakker & Demerouti, 2007). Organizational performance is the result of the combined effort of individual employees. It is therefore conceivable that the crossover of engagement among members of the same work team increases performance.

According to Westman (2001), crossover or emotional contagion is the transmission of positive or negative experiences from one person to another. An innovative laboratory study was conducted by Barsade (2002) to study the transfer of moods among people in a group and its impact on performance. It was concluded that the pleasant mood of a colleague influenced the mood of the other team members. More cooperative behaviour and better task performance resulted from the transfer of positive moods. On similar lines, Sy et al. (2005) found that team members coordinated better when leaders were in a positive mood, thus saving on efforts as compared to groups with leaders in a negative mood. Bamford et.al (2013) studied the role of managers in promoting work engagement among their team mates. In a sample survey of nursing staff working in acute care hospitals, they found that nurses who work for managers with higher levels of authentic leadership reported greater work engagement. To add significantly to these findings, Bakker et al. (2006) proved that engaged workers who communicate their sanguinity and proactive behaviors to their colleagues, develop a positive team climate, irrespective of the job demands faced and resources available to them.

Maku (2014) found that employee work engagement is a primary indicator of innovative performance. This study of library staff postulated that creativity and innovation are spurred by employee work engagement practices such as job enrichment, commitment to employees, work life balance, transparent appraisal, opportunities for continuous learning and engagement evaluation systems predict organizational performance. Engaged employees are more productive, work safer, keep healthier and are less likely to leave their employer (Fleming & Asplund, 2007; Wagner & Harter, 2006). Thus it can be said that research strongly supports the link between work engagement and performance.

2.6 THE RESEARCH GAPS

Review of literature revealed that most of the studies on work engagement used a cross-sectional design which cannot explain why even highly engaged employees may have an off day and sometimes show below average or poor performance. Daily changes in work engagement can be examined using longitudinal studies.

Various studies have shown that interaction between job demands, job resources and personal resources plays a critical role in determining work engagement. From the point to view of framing human resource management policies, it could be meaningful to conduct engagement studies on individuals from various professions in order to address specific needs of a profession.

As reported by several authors, employees try to shape their jobs, making physical or cognitive changes in order to establish a better person-job fit and this process is termed as job crafting (Wrzesniewski et al., 1997; Grant and Ashford, 2008; Parker & Ohly, 2008; Tims & Bakker, 2010; Tims et. al, 2012). Although a few studies (e.g. Chan, 2013) investigated the relationship between work engagement and job crafting, further studies in this area may answer the question whether engaged employees really create virtuous cycles.

It is more likely that work engagement will be sustainable when employee well being is also high (Robertson and Cooper, 2010). Further research exploring the links between work engagement and well being is required. Work-life balance is a significant indicator of employee well being. Since, work engagement is known to crossover from work to family setting (Montgomery et al., 2003; Bakker et al., 2003; Bakker et al., 2014), it is vital to examine the relationship between work engagement and work life balance.

Although work engagement is a virtuous concept, over indulgence in work might lead to some negative consequences for the engaged employees (Geurts and Demerouti, 2003 and Bakker et. al, 2004). They may also fall in the 'over engagement trap' (Pines et al.,1981) and eventually face situations of stress or even burnout. Hence, research studies are required to examine the relationship between work engagement and work stress.

In the corporate world managers continually look for ways to enhance employee performance and retention. In this context, employee commitment to organizations and its relationship with work engagement has become the subject of research interest. Extant research proved that work engagement plays a mediating role in the relationship between job resources and organizational commitment (Hakanen et. al, 2006). Further research to investigate the relationship between employee work engagement and organizational commitment could be instrumental in development of HR policies on a sound theoretical base.

Paying attention to the geographical spread of work engagement studies, it is noteworthy that very few studies have been conducted in India. There is a requirement to conduct such studies in India in order to map the perception of Indian population in the light of its culture and value system. The review of literature revealed the need to conduct a comprehensive study of work engagement of faculty members in the higher education sector, as very few such studies existed. One of the less researched areas was an exploration of the factors affecting work engagement of faculty members particularly in the Indian higher education sector, having its unique size and challenges. Very few studies explored the relationship of work engagement with phenomena like job crafting, work life balance, organizational commitment and work stress. Hence, it was found to be a subject of research gap and interest. Based on these, measures for enhancement of work engagement were sought to be identified. Hence, according to these research gaps, the study objectives and hypotheses were framed.

2.7 OBJECTIVES OF THE STUDY

The present study attempts to address some of the research gaps through its objectives:

1) To measure the level of work engagement amongst the employees (faculty members) working in organizations under the study.
2) To study the relationship (if any) between the level of work engagement and personal variables.
3) To identify factors affecting the level of work engagement amongst employees (faculty members).
4) To identify the measures required for enhancement of work engagement amongst the employees (faculty members).
5) To study the relationship (if any) between the level of work engagement amongst employees (faculty members) and
    - ❖ job crafting initiatives
    - ❖ work - life balance
    - ❖ level of work stress
    - ❖ level of organization commitment

2.8 HYPOTHESES

Hypothesis is an unproven statement or proposition about a factor or phenomenon (Malhotra and Dash, 2011). In the context of the study objectives, the following null hypotheses were framed:

$H_{0(1)}$: Work engagement does not differ across the type of institution.

$H_{0(2)}$: Work engagement does not differ across faculty work areas.

$H_{0(3)}$: Work engagement does not vary with posting.

$H_{0(4)}$: Work engagement does not differ across districts.

$H_{0(5)}$: Work engagement does not vary with designation.

$H_{0(6)}$: Work engagement does not vary with total experience.

$H_{0(7)}$: Work engagement does not vary with experience in current organization.

$H_{0(8)}$: Work engagement does not differ across age groups.

$H_{0(9)}$: Work engagement does not vary with gender.

$H_{0(10)}$: Work engagement does not vary with educational background.

$H_{0(11)}$: Work engagement does not vary with salary.

$H_{0(12)}$: There is no significant relationship between job crafting and work engagement.

$H_{0(13)}$: There is no significant relationship between work life balance and work engagement.

$H_{0(14)}$: There is no significant relationship between work stress and work engagement.

$H_{0(15)}$: There is no significant relationship between organizational commitment and work engagement.

2.9 CHAPTER SUMMARY

This chapter deals with the review of literature that was relevant to the subject matter of the thesis. The review began with general literature regarding employee well being and work engagement followed by specific studies classified into the following sections :

2.1 Studies on Work Engagement as a unique construct – Conceptualization of work engagement according to the pioneering academic study on personal engagement by Kahn (1990) was analyzed based on the premises of

work redesign model of Hackman & Oldham (1980) and the factors influencing organizational behavior (Alderfer, 1985). The construct of work engagement was examined according to several definitions given by *Maslach and Leiter (1997), Rothbard (2001), Harter et al. (2002), Schaufeli et al. (2002), Colbert et al. (2004), Wellins and Concelman (2005), Fleming and Asplund(2007), HR Anexi and Blessing White (2008) and Towers Watson (2014).* A fundamental question raised by many authors like *Newman et al. (2011)* as to whether engagement is different from an overall job attitude was addressed in the light of studies by *Macey and Schneider (2008)* and *Shuck et al. (2013)* who discretely established work engagement as a unique concept, despite its seeming similarity with job satisfaction, organizational commitment, job involvement and work holism. Studies by *Erickson (2005) and Macey et al.(2009)* were cited to bring out the uniqueness of work engagement with respect to job satisfaction. A study by *Saks (2006)* distinguished engagement from commitment as against *Fleming, et al. (2005) and The Corporate Executive Board (2004)* who used the terms engagement and commitment almost as synonyms. Studies by *Kahn (1990), May et al. (2004), Salanova et al. (2005), Saks (2006), Rich et al. (2010), Christian et al. (2011)* were cited for distinguishing engagement from job involvement thus clarifying the seeming overlap appearing in the definition of job involvement given by Brown (1996). The perceived similarity between work engagement and workaholism was clarified on the basis of a study by by *Bakker and Demerouti (2008).* A study by *Bakker (2011)* was cited to distinguish work engagement from work-related flow. Finally, a study by *Guest (2013) was cited to* establish engagement as a novel and unique concept accepted in both managerial and academic literature and unlikely to be forsaken as a fad.

2.2 Studies on Measurement of work engagement: This section of the review helped in identifying the various scales available for measurement of work engagement. Four widely used scales identified were Q12 or Gallup Workplace Audit (GWA) or Gallup Engagement Index developed Gallup organization researchers and reported by Buckingham and Coffman (1999); Maslach Burnout Inventory - General Survey developed by Maslach and Leiter (1997); Utrecht Work Engagement Scale – UWES developed by Schaufeli et al. (2002) and Oldenburg Burnout Inventory (OLBI) designed by Demerouti et al. (2010). Details of the dimensions and applicability of each scale were discussed in this section.

2.3 Studies on Factors affecting work engagement : Studies by *Kahn (1990) ; Maslach et al. (2001); May et al. (2004); Saks (2006); Bakker and Demerouti (2008); Macey and Scheider (2008)* were discussed to bring out the factors affecting work engagement. To sum up these studies concur that work engagement is predicted by factors such as job characteristics wherein, work that is challenging, clearly outlined, varied, creative and somewhat autonomous is perceived to be meaningful. Personal resources for example self-efficacy, organizational-based self-esteem and optimism are vital antecedents of work engagement. Interpersonal relationships depicting openness, flexibility, trust, support and lack of threat are associated with high degree of work engagement. Organizational Support in the form of economic and socio-emotional resources like recognition, rewards, procedural justice have a positive impact on employee work engagement.

2.4 Studies on Relationship of work engagement with job crafting, work life balance, organizational commitment and work stress: The relationship of work engagement and job crafting was explored on the basis of studies by *Wrzesniewski et al. (1997), Wrzesniewski and Dutton (2001), Demerouti et al. (2001) Grant and LePine et al. (2005); Ashford (2008); Parker and Ohly (2008) ; Tims and Bakker (2010); Crawford et al. (2010); Tims et. al (2012); Chan (2013).* To sum up, these studies concluded that work engagement is positively associated with job crafting or employees' efforts to make changes in self and / or work environment to establish a better person-job fit. The relationship of work engagement and work life balance was explored on the basis of studies by *Hochschild (1997); Tausig and Fenwick (2001); Thornthwaite (2004); Hammer et al. (2005); Greenhaus and Powell (2006); Muse et al. (2008); Carlson et al. (2008); Emslie and Hunt (2009).* Studies by *Montgomery et al. (2003); Bakker et al. (2003); Bakker et al. (2014)* focussed on the cross-over of work engagement from work life to personal life, thus establishing that work engagement is positively associated with work-family facilitation. To sum up these studies concluded that work-life balance is a shared responsibility of the employer and employees. Most contemporary organizations make huge investments in establishing a better work life balance for the employees as it improves role-related engagement. The relationship of work engagement and organizational commitment was explored on the basis of studies

by*; Mowday et. al (1974); Porter et. al (1974); Brown and Leigh (1996); Demerouti et al. (2001); Maslach et al. (2001); Hakanen et al. (2006); Richardsen et al. (2006); Llorens et al. (2006); Hakanen et al.(2006); Saks (2006)*. In a nutshell, these studies established a positive association between work engagement and affective organizational commitment. The relationship of work engagement and work stress was explored on the basis of studies by *Karasek (1979); Pines et al. (1981); Kahn and Byosiere (1992); Lee and Ashforth (1996); Maslach et al. (1996); Geurts & Demerouti (2003); Bakker et al.(2003); Bakker et al. (2004); Palmer et. al (2004); Schaufeli and Bakker (2004); The Health and Safety Executive (2006); Hakanen et. al (2006); Blaug et.al (2007).* On the whole these studies concluded that work stress is inversely related to work engagement.

2.5 Studies on the engagement – performance link : This section dealt with the vital issue of exploring whether there is a link between work engagement and performance of individuals, teams and the organization as a whole. Studies by *Westman (2001); Barsade (2002); Fredrickson (2001); Bakker et al. (2004);Salanova et al. (2005); Sy et al. (2005); Bakker et al. (2006); Wagner and Harter (2006); Bakker & Demerouti (2007); Xanthopoulou et al. (2007); Fleming and Asplund (2007); Bakker et al. (2008); Gopal (2010); Bamford et.al (2013) were cited in this context.* All the studies converged on a common conclusion that there is a significant positive association between work engagement and performance of individuals, teams and organization as a whole.

Finally, on the basis of review of literature, the research gaps were identified and accordingly the study objectives and hypotheses were framed.

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CHAPTER – 3

RESEARCH METHODOLOGY

CHAPTER – 3
RESEARCH METHODOLOGY

The chapter deals with the research methodology adopted for the achievement of the objectives of the current study. The chapter includes a description of the research design and sampling, data collection, sample description, research instruments employed for the measurement of the variables under study and finally the statistical analysis approach has been explained.

3.1 RESEARCH DESIGN AND SAMPLING

A survey design was chosen to reach the research objectives. A cross-sectional design was used, where a sample is drawn from a population at one time. The study was descriptive in nature implying natural observation of the characteristics of the research subject without deliberate manipulation of the variables or control over the settings. The faculty members employed in higher education institutions comprise of the population for the present study. Higher education covers many disciplines. Higher Education Institutions namely universities and colleges located across the country can be broadly categorized into two types namely the public institutions which are fully or partially supported by the Government and the private institutions which are self funded. Hence, for the sake of feasibility and economy the scope of the study was narrowed down to disciplines of Commerce and Business Management (CBM), Science, Engineering and Technology (SET), Applied Medical Sciences (AMS) and Education and Humanities (EHUM). As far as the regional scope of the sample is concerned, respondents were drawn from higher education institutions located in the districts of Amritsar, Bathinda, Jalandhar, Ludhiana, Patiala and the capital of Punjab – Chandigarh. These districts were chosen as they are the hubs of higher education in this region. Each of the districts has at least one University Campus in its jurisdiction. Sample represented faculty members from all disciplines mentioned here.

For appropriate representation of the population, quota sampling technique was followed. A fixed quota of respondents was drawn from each type of HEI,

discipline and district. Hence, the sample was targeted at 10 faculty members from each of the four disciplines of public HEIs and an equal number from private HEIs in each of the six districts selected for the study. Accordingly, a sample size of 480 respondents was targeted.

3.2 DATA COLLECTION

A list of HEIs to be approached for data collection was prepared considering University campuses and colleges having faculty members from the four disciplines covered in the study (Refer Appendix I). A web link was developed for online data collection and simultaneous preparation of database. Data collection was done through personal visits, sending the questionnaire by post and seeking response on the website. Data was collected from 41 Institutions / Departments. Personal visits helped in seeking authentic data, timely collection and making note of qualitative observations regarding the institutional work culture, which further aided in interpretation of results. Nearly 600 questionnaires were distributed to the targeted respondents out of which, 473 questionnaires were received which is a response rate of 78%. 10 questionnaires could not be used as they were incomplete. Finally 463 fully filled questionnaires were utilized for the study.

3.3 SAMPLE DESCRIPTION

The sample consisted of 463 faculty members from 41 Higher Education Institutions out of which 232 were from private sector and 231 were from public institutions. According to faculty work area 27% of the respondents were from commerce and business management 29% from science engineering and technology 22% from applied medical sciences and 22% from education and humanities. 52% were posted in University campus and 48% in affiliated colleges. According to designation, 13% were Lecturers, 64% Assistant Professors, 13% Associate Professors, 7% Professors and 3% Heads of Departments. The gender wise distribution of respondents was 58% female and 42% male. As per educational background 1% were graduates, 56% Post graduates, 37% Doctorates and 6% had done a Post doctoral study program. According to income groups 37% were drawing monthly salary of upto Rs. 30000, 35% in the range of Rs. 30,001 to 50,000, 12% in the range of Rs. 50001 to 70000, 6% in the range of Rs. 700001 to 90,000, 6% in the range of 90,001 to 1,10,000 and 4% above Rs.1,10,000.

3.4 RESEARCH INSTRUMENTS

The research instruments required for the study were developed after working out the information requirements to achieve the stated objectives. Accordingly need was felt for having six metric scales for measuring the level of work engagement, factors affecting work engagement, levels of job crafting, work life balance, work stress and organizational commitment. The seventh, an ordinal scale was required for ranking the measures for enhancement of work engagement. Finally, the demographic details or personal variables were to be captured.

For each scale, the pre-published and tested instruments were explored. Standardized scales were available for all variables except factors affecting work engagement. The available scales were considered in the light of study objectives. Accordingly some were used as such and others were adapted to suit the needs of the study. The questionnaire consisted of eight parts. It was titled as 'Work and Well Being Survey in Higher Education Institutions in Punjab'. Its development is explained scale wise:

Scale 1 : Utrecht Work Engagement Scale

Various instruments available for measurement of work engagement were explored such as Gallup Workplace Audit (GWA) or Gallup Engagement Index or Q12, Maslach Burnout Inventory (MBI), Oldenburg Burnout Inventory (OLBI), Utrecht Work Engagement Scale (UWES). Macey & Schneider (2008) noted that from both research and practice perspectives, it is one thing to get the conceptualization correct and another thing to get the operationalization correct. If an engagement measure fails on the conceptualization front, it will not measure up on the other front as well. They further observed that in the world of practice some measures of conditions for engagement are relabeled as measures of engagement (such as Buckingham & Coffman, 1999). The focus the measurement should be on the construct of interest; if engagement is the target, then the measure should map the content of the construct (Schiemann and Morgan, 2006). Considering this rationale, Utrecht Work Engagement Scale (UWES) a self-reporting instrument that has been validated in many countries across the world (Schaufeli et al., 2002) was used in the study. UWES, is a valid and reliable indicator of work engagement that can be used for future research on work engagement (Schaufeli and Bakker, 2004).

UWES includes 15 items for the assessment of the three engagement dimensions namely vigor, dedication and absorption. Schaufeli et al. (2006) subsequently developed a nine-item version of the UWES and provided evidence for its cross-national validity. UWES has quite satisfactory psychometric properties that is internal consistencies are well above the criterion of .60 that is recommended for newly developed measurement instruments (Nunnaly & Bernstein, 1994). In the present study work engagement was measured using the short nine-item version of the Utrecht Work Engagement Scale (Schaufeli et al., 2006). It includes three subscales, namely vigor, dedication and absorption (refer Appendix – II, Part IV). The response was sought on a 7 point Likert scale ranging from 0 indicating 'never' to 6 indicating 'always or everyday'. For the analyses, a composite score of all subscales was used because the 1-factor solution has acceptable goodness of fit (Schaufeli et al., 2006). The scale was found to be a reliable measure of work engagement of faculty members in the higher education sector of Punjab India as Cronbach's alpha was 0.862 which is above the acceptable limit of 0.70 (Hair et al., 2009).

Scale 2: Factors affecting work engagement

The scale was developed, on the basis of an extensive and in depth literature review. The process of scale development was an iterative one. After thorough discussions with experts in the field of management and statistical analysis, many iterations of the scale were developed with the broad aim of establishing scale validity and eliminating any sort of overlap between statements. Modifications were suggested in the statement construct with special reference to avoiding double barreled questions. The sequence of statements was kept such that statements related to a common aspect should be kept far from each other. Finally, a 92 item scale was developed that explored the respondents' perception regarding self, current job and current organization. There was a mix of positive and negatively worded statements to ensure that the respondents read all the statements carefully before they respond (refer Appendix - II, Part I).

The respondents were asked to consider their experiences of the past six months or more in relation to self, current job and current organization, while responding to the statements. They were asked to express their level of agreement or

disagreement for each statement on a seven -point Likert scale ranging from 0 representing 'strongly disagree' to 6 representing 'strongly agree'. A seven point scale was used against a five point scale in order to capture the exact perception of the respondent, by giving a larger range of response. The 92 statement scale was factor analysed and found to consist of ten unique factors or dimensions with Cronbach's alpha as mentioned in the brackets. Perceived organizational support (0.918), personal and professional orientation (0.894), supervisory support (0.904), climate of participation and recognition(0.899), organizational orientation for results(0.805), interaction with students (0.752), intrinsic rewards (0.750), empowerment (0.644), task variety (0.616), support from associates (0.841). It is noteworthy that all Cronbach's alpha values were above the acceptable limit of 0.60 for newly developed scales (Hair et al., 2009).

Scale 3 : Job Crafting

This scale sought to measure the degree to which respondents engaged in job crafting. Job crafting has been defined as self initiated change behaviours that employees engage in in order to align their jobs with their own preferences, motives and passions (Wrzesniewski and Dutton, 2001). All the 12 statements used in this scale were adapted from job crafting scale developed by Tims et al. (2012). The original scale consisted of 21 statements on 4 dimensions namely increasing structural job resources, increasing social job resources, increasing challenging job demands and decreasing hindering job demands. The fourth dimension namely decreasing hindering job demands, was found to have non-significant correlation with other three dimensions indicating that this dimension was independent from others. In addition, this dimension showed no significant correlation with work engagement (Tims et al., 2012). Hence all items falling under this dimension were excluded from the scale.

The 12 statements gauged how often did the respondents engage in the stated behaviors while pursuing their current job and / or previous jobs. The response was sought on a 7 point Likert scale ranging from 0 indicating never to 6 indicating always or everyday (refer Appendix - II, Part II). On applying Exploratory Factor Analysis, the scale was found to consist of three dimensions. The scale reliability

was estimated using Cronbach's alpha coefficient (Cronbach, 1951). Cronbach's alpha values for the three dimensions were 0.862 for increasing structural job resources, 0.809 for increasing social job resources and 0.768 for increasing challenging job demands. The reliability estimates were above the acceptable limit of 0.70 (Hair et al., 2009).

Scale 4 : Work Life Balance

Work-life balance scale developed by Hayman (2005) was used to measure the respondents' self reported work life balance. It consists of 15 statements regarding the perception of influence of work on personal life and vice-versa. The scale consists of a mix of positively and negatively worded statements. The response was sought on a 7 point Likert scale ranging from 0 indicating never to 6 indicating always or everyday (refer Appendix - II, Part III). On applying Exploratory Factor Analysis, the scale was found to consist of three dimensions. Cronbach's alpha values for the three dimensions were 0.92 for work interference with personal life (WIPL), 0.85 for personal life interference with work (PLIW), and 0.78 for work/personal life enhancement (WPLE). The reliability estimates were above the acceptable limit of 0.70 (Hair et al., 2009).

Scale 5 : Organizational Commitment

After exploring various alternatives, Organizational Commitment scale developed by Saks (2006) was used in the study. It was chosen on account of its sound psychometric properties and brevity. The scale consists of 6 statements assessing the respondent's organizational commitment which is defined as the relative strength of an individual's identification with and involvement in a particular organization. (Mowday et al., 1979). The respondents were asked to express their level of agreement or disagreement with the given statements considering their current organization. Response was sought on a seven -point Likert scale ranging from 0 representing 'strongly disagree' to 6 representing 'strongly agree'(refer Appendix - II, Part V). The scale was found to be a reliable measure of work engagement of faculty members in the higher education sector of Punjab India as Cronbach's alpha was computed as 0.911 which is above the acceptable limit of 0.70 (Hair et al., 2009)

Scale 6: Work stress

Work stress was measured using a self developed pretested scale consisting of 18 items adapted from Organization Role Stress Scale developed by Udai Pareek (1983). The statements relate to various aspects of work stress for example inter role distance, role stagnation, role expectation conflict, role erosion, role overload, role isolation, personal inadequacy, self role distance, role ambiguity and resource inadequacy. The response was sought on a 7 point Likert scale ranging from 0 indicating never to 6 indicating always or everyday (refer Appendix - II, Part VI). On applying Exploratory Factor Analysis, the scale was found to consist of four dimensions. The reliability for the work stress scale was estimated using Cronbach alpha coefficient (Cronbach, 1951). The Cronbach alpha values for the four dimensions were 0.745 for self-role distance, 0.862 for inter role distance, 0.831 for role expectation conflict and 0.68 for role inadequacy. The reliability estimates were above the acceptable limit of 0.70 (Hair et al., 2009).

Scale 7: Measures for improving Work Engagement

An ordinal scale was used to seek response on the top 5 changes that the respondent would want in their jobs and organizations so that they could work with better energy, dedication and involvement which are basically the three dimensions of work engagement. For this purpose they were given a set of 11 statements out of which they were asked to identify top five, while giving a particular rank to one statement only. Thus, response was sought on an ordinal scale. It was supplemented by an open ended question in which respondents could give their suggestions for work engagement enhancement (refer Appendix - II, Part VII).

Part 8: Demographic Profile

Part VIII of the questionnaire sought information regarding the demographic profile of the respondent in terms of name of the Institution where the respondent was currently employed; whether the Institution was Government, Government aided or Private; faculty work area / department; whether posted at University campus or affiliated college; district of posting; current designation; total experience; experience in current organization; age; gender; educational background and monthly salary (refer Appendix - II, Part VIII). Personal details like names of the respondents or telephonic contacts were not sought as anonymity and

confidentiality were primary requirements for eliciting unbiased responses. Moreover, personal details were not required as per the study objectives.

3.5 STATISTICAL ANALYSIS APPROACH

The statistical tools and techniques used for the study included descriptive statistics, one-way ANOVA, exploratory factor analysis, measurement of scale reliability, correlation analysis, non-metric correlation analysis and hierarchical multivariate regression analysis. The analysis was done using SPSS version 16.0. After entry of the data, the data was checked whether it had been uniformly entered. Data analysis was then performed by applying above said techniques. Brief description of the analytical tools and techniques used for the analysis is given as follows:

3.5.1 Analysis of Variance (ANOVA)

Analysis of Variance (ANOVA) is commonly used for examining the difference of means between two or more populations, based on the information gathered from the samples of the respective populations. This technique was developed by R.A Fisher. ANOVA is based on some assumptions. Each population should have a normal distribution with equal variances. Each sample should be randomly drawn and independent of all other samples. ANOVA is used for comparing the means when there is one metric dependent variable (measured using interval or ratio scale) and one or more non metric or categorical independent variable (Malhotra & Dash, 2011). One-way ANOVA is employed when only one independent variable is used to compare the differences in the mean values of the dependent variable. In one – way ANOVA, testing of hypothesis is carried out by partitioning the total variation of the data in two parts. The first part is the variance between the samples and the second part is the variance within the samples. The variance between the samples can be attributed to treatment effects and the variance within the samples can be attributed to experimental errors. In the present study one-way ANOVA was used to compare the differences in the level of dependent variable namely work engagement of the samples drawn according to each of the personal variables treated as independent variables. The independent variables for testing each of the hypotheses H_{01} to H_{011} stated at the beginning of this chapter were: type

of institution, faculty work area, posting, designation, total experience, experience in current organization, age, gender, educational background and salary respectively. Wherever the difference in mean responses was found to be significant Post-Hoc test using Least Square Difference (LSD) method was applied.

3.5.2 Exploratory Factor Analysis

The present study has used exploratory factor analysis (EFA) to reduce the large number of variables into manageable number of variables. Factor analysis is a technique used for data reduction which examines the relationships among sets of many interrelated variables and represents in the form of a few underlying factors. This technique is exploratory in nature; hence it is also called exploratory factor analysis (EFA) (Malhotra and Dash, 2011). The key statistics associated with factor analysis which were used by the study are described as follows:

- ***Bartlett's test of sphericity:*** This statistic was used to test the appropriateness of the data for the factor analysis. Bartlett's test of sphericity examines the null hypothesis that all variables are uncorrelated in the population. It is based on chi-square transformation of determinant of correlation matrix. Large value of the test favors the rejection of null hypothesis (Malhotra and Dash, 2011). Therefore rejection of null hypothesis determines the appropriateness of the factor model.
- ***Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy:*** This test was also used to test the appropriateness of factor analysis. A value of 0.5 is desirable to pursue factor analysis. High values between 0.5-1.0 indicate appropriateness of factor analysis, whereas value less than 0.5 mean that factor analysis is not appropriate (Malhotra and Dash, 2011).
- ***Principal component analysis:*** The study used principal component analysis method of factor analysis. In principal component analysis, the total variance in the data is considered. Principal component analysis method is recommended when the primary concern is to determine the minimum number of factors for subsequent use in analysis (Malhotra and Dash, 2011).
- ***Eigen values:*** In the study eigen value method was used to determine the number of factors to be retained. Only factors with eigen values greater than 1.0 were retained and other factors were not included in the model (Malhotra and Dash, 2011).

- ***Varimax rotation:*** In the study the factor matrix was rotated using varimax procedure of rotation. Varimax procedure is an orthogonal rotation which minimizes the number of variables with high loadings on a factor (Malhotra and Dash, 2011).

3.5.3 Scale Reliability

Scale reliability refers to the degree to which a measurement technique can be depended upon to secure consistent results upon repeated application. Reliability is the degree of consistency between multiple measurements of a variable. In this study Cronbach's alpha was computed for reliability assessment of the various scales. Cronbach's alpha is the reliability coefficient which determines the reliability of entire scale. If there is no true score and only error in the items then the coefficient *alpha* will be equal to zero. If all items are perfectly reliable and measure the same thing, then coefficient alpha is equal to 1. The acceptable limit of Cronbach's alpha is generally .70 but the limit may be decreased to .60 in case of exploratory research (Hair et al., 2009).

3.5.4 Measures of Association

Measures of Association are statistics for measuring the strength of association between two variables. Correlation measures the degree of association between two variables. Karl Pearson's coefficient of correlation is a measure of the linear correlation between two variables. It is also known as Pearson product-moment correlation coefficient Pearson's correlation coefficient is the covariance of the two variables divided by the product of their standard deviations. It is commonly represented by the letter *r*. So if there is one dataset $\{x_1,...,x_n\}$ containing *n* values and another dataset $\{y_1,...,y_n\}$ containing *n* values then formula for *r* is:

$$r = r_{xy} = \frac{\sum_{i=1}^{n}(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^{n}(x_i - \bar{x})^2}\sqrt{\sum_{i=1}^{n}(y_i - \bar{y})^2}}$$

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

Karl Pearson's coefficient of correlation takes a value between +1 and −1 where 1 indicates total positive correlation, 0 is no correlation and −1 is total

negative correlation. In the present study it was used to analyze whether work engagement, as a dependent variable, is associated with each of the ten factors identified through factor analysis namely perceived organizational support, personal and professional orientation, supervisory coaching, climate of participation and recognition, organizational orientation for results, interaction with students, intrinsic rewards, empowerment, task variety, support from associates, as independent variables. Again, it was used to analyze whether work engagement, as a dependent variable, is associated with the three dimensions of job crafting as independent variables; with the three dimensions of work life balance as independent variables; with the four dimensions of work stress as independent variables and finally with organizational commitment as a one dimensional independent variable.

3.5.5 Non-metric Correlation Analysis

Spearman's rank correlation is used to test the association between two ranked variables, or one ranked variable and one measurement variable. It is used to see whether the two variables covary. It is assumed that the observations are independent. In the present study Spearman's rho was used to study the correlation between two ordinal scale variables namely the ranking of measures for enhancement of work engagement by subgroups of respondents classified according to gender, type of institution, designation, salary, faculty work area and district of posting.

3.5.6 Hierarchical Multiple Regression Analysis

A multiple regression analysis method in which the researcher, not a computer program, determines the order that the variables are entered into and removed from the regression equation. It is used when the researcher believes that certain variables should be included in the model and in what order. The general form of multiple regression model is :

$$Y= \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3+ \ldots\ldots\ldots + \beta_kX_k + e$$

which is estimated by the following equation

$$\hat{Y} = a + b_1X_1 + b_2X_2 + b_3X_3 + \ldots\ldots\ldots\ldots + b_kX_k$$

The coefficient *a* represents the intercept, *bs* are partial regression coefficients.

The statistics associated with Multiple Regression are:

- **Adjusted R^2** : R^2, coefficient of Multiple Determination is adjusted for the number of independent variables and the sample size to account for diminishing returns. After the first few variables, the additional variables do not make much contribution.
- **Coefficient of Multiple Determination :** The strength of association in multiple regression is measured by square of the multiple correlation coefficient R^2, which is also called the coefficient of multiple determination.
- **F test** : The F test is used to test the null hypothesis that the coefficient of Multiple Determination in the population, R^2_{pop} is zero. This is equivalent to testing the null hypothesis $H_0 : \beta_{1=} \beta_{2=} \beta_{3=\ldots..} \beta_{k=}0$. The test statistic has an F distribution with k and (n-k-1) degrees of freedom.
- **Partial F Test** : The significance of a partial regression coefficient, β_i, of X_i may be tested using an incremental *F* statistic. The incremental *F* statistic is based on the increment in the explained sum of squares resulting from addition of the independent variable X_i to the partial regression equation after all the other independent variables have been included.
- **Partial Regression coefficient** : The partial regression coefficient b_1, denotes the change in predicted value, $\hat{Y}$ per unit change in X_1 when the other independent variables X_2 to X_k are kept constant.

In chapter 5 of the present study, hierarchical multiple regression was used to analyse whether work engagement, as a dependent variable, is predicted by the ten factors identified through factor analysis namely perceived organizational support, personal and professional orientation, supervisory coaching, climate of participation and recognition, organizational orientation for results, interaction with students, intrinsic rewards, empowerment, task variety, support from associates, as independent variables. A two stage hierarchical multiple regression analysis was conducted. All personal variables namely type of institution, faculty work area, posting, designation, total experience, experience in current organization, age, gender, educational background, regional background and salary were entered in stage one to treat them as control variables. In chapter 6 of the present study, this technique was used four times to analyze whether work engagement, as a dependent variable, is predicted by job crafting dimensions; work-life balance dimensions;

work stress dimensions and organizational commitment. At each time, a two stage hierarchical multiple regression analysis was conducted. All personal variables were entered in stage one to treat them as control variables. Statistical analyses associated with each research objective are summarized in Table 3.1

Table 3.1 : Statistical Analyses Associated with Research Objectives

Objective	Hypotheses	Statistical Technique
To measure the level of work engagement amongst the employees (faculty members) working in organizations under the study.	N.A	1. Scale Reliability Test Cronbach's alpha coefficient and descriptive statistics
To study the relationship (if any) between the level of work engagement and personal variables.	**$H_{0(1)}$:** Work engagement does not differ across the type of institution. **$H_{0(2)}$:** Work engagement does not differ across faculty work areas. **$H_{0(3)}$:** Work engagement does not vary with posting. **$H_{0(4)}$:** Work engagement does not differ across districts. **$H_{0(5)}$:** Work engagement does not vary with designation. **$H_{0(6)}$:** Work engagement does not vary with total experience. **$H_{0(7)}$:** Work engagement does not vary with experience in current organization. **$H_{0(8)}$:** Work engagement does not differ across age groups. **$H_{0(9)}$:** Work engagement does not vary with gender. **$H_{0(10)}$:** Work engagement does not vary with educational background. **$H_{0(11)}$:** Work engagement does not vary with salary.	1. One – way ANOVA 2. Post-Hoc tests using Least Square Difference (LSD)
To identify factors affecting the level of	N.A	1. Exploratory Factor Analysis

Objective	Hypotheses	Statistical Technique
work engagement amongst employees (faculty members).		2. Scale Reliability Test – Cronbach's alpha coefficient 3. Correlation Analysis – Karl Pearson's coefficient of correlation 4. Hierarchical Multiple Regression Analysis
To identify the measures required for enhancement of work engagement amongst the employees (faculty members).	N.A	1. Non-metric Correlation Analysis : Spearman's rank correlation coefficient
To study the relationship (if any) between the level of work engagement amongst employees (faculty members) and • job crafting initiatives • work - life balance • level of work stress • level of organization commitment	**$H_{0(12)}$:** There is no significant relationship between job crafting and work engagement. **$H_{0(13)}$:** There is no significant relationship between work life balance and work engagement. **$H_{0(14)}$:** There is no significant relationship between work stress and work engagement. **$H_{0(15)}$:** There is no significant relationship between organizational commitment and work	1. Exploratory Factor Analysis 2. Scale Reliability Test – Cronbach's alpha coefficient 3. Correlation Analysis – Karl Pearson's coefficient of correlation 4. Hierarchical Multiple Regression Analysis

3.6 LIMITATIONS OF THE STUDY

Like most other studies, this study had its own limitations. Present research study has been carried out under obligatory restraints of time and other resources. Though an effort was made to conduct a thorough and in depth review of literature, yet understanding might have been limited by the researcher's visualization. The

sample was geographically limited to the state of Punjab for the sake of economy of data collection, as it required personal visits to most of the institutions.

3.7 CHAPTER SUMMARY

The chapter deals with the research methodology adopted for the achievement of the objectives of the current study. The chapter includes a description of the research design and sampling, data collection, sample description, research instruments employed for the measurement of the variables under study and finally the statistical analysis approach has been explained.

A cross-sectional descriptive study was designed using the quota sampling technique for drawing a fixed number of faculty members from each of the four broad faculty work areas namely Commerce and Business Management (CBM), Science, Engineering and Technology (SET), Applied Medical Sciences (AMS) and Education and Humanities (EHUM) from public and private higher education institutions. The respondents from drawn from higher education institutions located in the districts of Amritsar, Bathinda, Jalandhar, Ludhiana, Patiala and the capital of Punjab – Chandigarh as these districts are considered the hubs of higher education in Punjab. The sample consisted of 463 respondents from 41 Higher Education Institutions / Departments. The sample was equitably distributed according to gender, type of institution, posting, designation, faculty work area, posting, total experience, current organization experience, educational background, regional background and salary.

The questionnaire used in the present study consisted of eight parts. Part I dealt with factors affecting work engagement for which a 92 item scale was developed that explored the respondents' perception regarding self, current job and current organization. There was a mix of positively and negatively worded statements to which response was sought on a seven -point Likert scale ranging from 0 representing 'strongly disagree' to 6 representing 'strongly agree'. The scale was factor analysed and found to consist of ten unique factors or dimensions with Cronbach's alpha values above the acceptable limit of 0.70 (Hair et al., 2009).

Part II dealt with measurement of degree to which respondents engaged in Job Crafting. A 12 item scale adapted from job crafting scale developed by Tims et al. (2012) was used. The statements gauged how often did the respondents engage in

the stated behaviors while pursuing their current job and / or previous jobs. The response was sought on a 7 point Likert scale ranging from 0 indicating never to 6 indicating always or everyday. On applying Exploratory Factor Analysis, the scale was found to consist of three dimensions having Cronbach's alpha values above the acceptable limit of 0.70 (Hair et al., 2009).

Part III was dealt with measurement of Work-life balance for which the scale developed by Hayman (2005) was used to measure the respondents' self reported work life balance. It consists of 15 positively and negatively worded statements regarding the perception of influence of work on personal life and vice-versa. The response was sought on a 7 point Likert scale ranging from 0 indicating never to 6 indicating always or everyday. On applying Exploratory Factor Analysis, the scale was found to consist of three dimensions. The Cronbach's alpha values for the three dimensions were acceptable limit of 0.70 (Hair et al., 2009).

Part IV measured work engagement using the short nine-item version of the Utrecht Work Engagement Scale (Schaufeli et al., 2006) and an answering scale ranging from 0 = never to 6 = always. For the analyses, a composite score of all subscales was used because the 1-factor solution has acceptable goodness of fit (Schaufeli et al., 2006). The scale reliability was tested by computing Cronbach's alpha which was above the acceptable limit of 0.70 (Hair et al., 2009).

Part V measured Organizational Commitment through the psychometrically strong yet brief 6 item scale developed by Saks (2006). Response was sought on a seven -point Likert scale ranging from 0 representing 'strongly disagree' to 6 representing 'strongly agree'. The scale was found to be a reliable measure of work engagement with Cronbach's alpha well above the acceptable limit of 0.70 (Hair et al., 2009).

Part VI measured Work stress using a self developed pretested scale consisting of 18 items adapted from Organization Role Stress Scale developed by Udai Pareek (1983) was used to measure work stress. The response was sought on a 7 point Likert scale ranging from 0 indicating never to 6 indicating always or everyday. On applying Exploratory Factor Analysis, the scale was found to consist of four dimensions. The reliability for the work stress scale was estimated using Cronbach's alpha coefficient (Cronbach, 1951) which were above the acceptable limit of 0.70 (Hair et al., 2009).

Part VII of the questionnaire dealt with measures for improving Work Engagement on an ordinal scale containing given a set of 11 statements from which the respondent had to rank the top 5 changes required in their jobs and organizations to work with better energy, dedication and involvement. There was an open ended question seeking any other change apart from the mentioned statements. Part VIII sought the demographic profile of the respondents.

Finally, this chapter describes the statistical analysis techniques used for the study namely, one-way ANOVA, exploratory factor analysis, measurement of scale reliability using Cronbach's alpha, correlation analysis, non-metric correlation analysis and hierarchical multivariate regression analysis. The analysis was done using SPSS version 16.0.

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CHAPTER – 4

RESULTS AND DISCUSSION : WORK ENGAGEMENT IN THE HIGHER EDUCATION SECTOR

CHAPTER – 4

RESULTS AND DISCUSSION: WORK ENGAGEMENT IN THE HIGHER EDUCATION SECTOR

This chapter is devoted to an investigation of the level of work engagement amongst the faculty members and its relationship with personal or demographic variables.

Higher education is a powerful tool to build a knowledge-based information society of the 21st Century. The Higher Education Institutions including the universities and colleges envision to produce an intelligent and skilled human resource pool, through challenging teaching, research and extension activities. Hence, they require engaged teachers who are willing to go the extra mile. According to a survey by Gallup consultants reported on their website by Steve Crabtree (2013), only 13% of employees worldwide are engaged in their work. It implies that merely one in eight employees are work engaged amongst the approximately 180 million employees in the countries surveyed, including India. This scenario raises a vital question regarding the work engagement of faculty members in the higher education sector.

4.1 LEVEL OF WORK ENGAGEMENT

In order to measure the level of work engagement, the nine - item shortened version of Utrecht Work Engagement Scale (UWES) developed by Schaufeli et al. (2006) was used. The scale was found to be a reliable measure of work engagement of faculty members in the higher education sector as Cronbach's alpha was 0.862, which is above the acceptable limit of 0.70 (Hair et al., 2009). The response was sought on a seven point Likert scale ranging from 0 to 6 where 0 stands for "never" and 6 stands for "always or everyday" (Appendix II). Descriptive statistics of response on UWES are tabulated in Table 4.1.1

Table 4.1.1 : Measurement of Faculty Work Engagement

Statement Label	Statement	Mean	S.D
S1	At my work, I feel bursting with energy.	4.07	1.466
S2	At my job, I feel strong and vigorous.	4.52	1.193
S3	I am enthusiastic about my job.	4.84	1.149
S4	My job inspires me.	4.75	1.200
S5	When I get up in the morning, I feel like going to work.	4.71	1.251
S6	I feel happy when I am working intensely.	4.97	1.126
S7	I am proud of the work that I do.	4.97	1.109
S8	I am immersed in my work.	4.79	1.150
S9	I get carried away when I'm working.	3.63	1.709

The distribution of mean work engagement score was computed in terms of percentage to indicate how frequently the respondents felt engaged while discharging their duties (Table 4.1.2). For this purpose, the scores on the UWES were recoded as tabulated in table 4.1.2.

Table 4.1.2 : Distribution of Work Engagement Score

Range of mean work engagement score	Recoding	Interpretation	Frequency (%age)
0 to .99	1	once a year or less	3 (0.65)
1 to 1.99	2	at least once a year	1 (0.22)
2 to 2.99	3	at least once a month	15 (3.24)
3 to 3.99	4	at least a couple of times a month	76 (16.41)
4 to 4.99	5	at least once a week	189 (40.82)
5 to 6	6	a couple of times per week or daily	179 (38.66)
Note : Figures in parenthesis are percentages **(N=463)**			

It was found that on a scale of 0 to 6, a majority (57.23%) of the respondents were in the recoded categories 4 and 5. They reported a moderate level of work engagement as indicated by a mean work engagement score of 3 to 4.99. While a significant number of respondents (38.66%) were in the recoded category 6 that is, they reported high level of work engagement indicated by a mean score of 5 to 6. It does highlight the scope and need to improve the work engagement of faculty members in higher education sector of Punjab to realize the national goals of higher education.

It is significant to mention that it appears that the self appraisal of work engagement by respondents of the present study was much more liberal as compared to the results reported in the unpublished Utrecht Work Engagement Scale preliminary manual version 1 reported by Schaufeli and Bakker in 2003. The manual is based upon a database of 9679 mostly Dutch respondents from different professions and the mean work engagement score is 3.74 on a scale of 0 to 6. In the current study the mean score of work engagement was 4.58. Consequently, it can also be safely concluded that had the self appraisal by respondents of the present study not been liberal, it would have pointed out an even greater need for improving the work engagement in higher education sector of Punjab.

4.2 RELATIONSHIP OF WORK ENGAGEMENT AND PERSONAL VARIABLES

The study investigated the relationship between respondents' work engagement and personal or demographic variables like faculty work area, type of institution, posting, designation, total experience, experience in the current organization, age, gender, educational background, monthly salary etc. Work engagement was considered as dependent variable and demographic variables were considered as independent variables. In the current study the dependent variable namely work engagement was measured as a scale variable and all independent variables namely the personal variables were measured as categorical variables. Hence, the difference in mean work engagement across the samples categorized on the basis of personal variables was analyzed using one-way analysis of variance (ANOVA). After performing ANOVA, wherever the difference was found to be significant, Post-Hoc tests using Least Square Difference (LSD) were applied.

It was found that work engagement of faculty members varies significantly with faculty work area/ discipline, district wise posting, designation, total experience, experience in current organization, age, educational background and salary. However, no statistically significant variation was found with respect to respondents' gender, type of institution – whether government or private and posting at university campus or affiliated college. The details are discussed in the following paragraphs.

4.2.1 Relationship of work engagement with type of institution

To study whether work engagement varies significantly across the three types of higher education institutions namely government, government aided and private, hypothesis $\mathbf{H_{0(1)}}$ was framed.

$H_{0(1)}$: Work engagement does not differ across the type of institution.

The mean scores of work engagement of respondents employed in the three types of higher education institutions are tabulated in Table 4.2.1 and were compared using one-way ANOVA. F-value at 0.918 was not significant at 0.05 level of significance (Table 4.2.2). The results of ANOVA, suggested that there was no significant difference in work engagement across the three types of HEIs. With reference to previous studies, in a study by Bakker and Hakanen (2013) work engagement level of dentists working in the public and private sectors of Finland were compared and was found that dentists in the public sector scored lower on work engagement as they were exposed to higher job demands and lower job resources. However, in the higher education sector of Punjab, work engagement does not appear to vary significantly across the government, government aided and private sectors.

Table 4.2.1 : Work Engagement according to Type of Institution

Type of Institution	Respondents	Mean	SD
Government	186	4.618	.8755
Government aided	45	4.704	.7687
Private	232	4.535	.9022
Total	463	4.585	.8794

Table 4.2.2 : ANOVA of Work Engagement according to Type of Institution

Variations	Sum of Squares	Df	Mean Square	F	*p-value
Between Groups	1.421	2	.710	.918	.400
Within Groups	355.836	460	.774		
Total	357.257	462			
*5% level of significance					

4.2.2 Relationship of work engagement and faculty work area

To study whether work engagement varies significantly across faculty work areas or disciplines, hypothesis $\mathbf{H_{0(2)}}$ was framed.

$H_{0(2)}$: Work engagement does not differ across faculty work areas.

The mean score of work engagement across the four faculty work areas namely Commerce and Business Management (CBM); Science, Engineering and Technology (SET); Applied Medical Sciences (AMS) and Education and Humanities (EHUM) are tabulated in Table 4.2.3. Mean score was compared across the four groups using one-way ANOVA. F value at 3.787 was significant at 0.05 level of significance (Table 4.2.4). The results of ANOVA, suggested that there was significant difference in work engagement across the faculty work areas. Hence, the hypothesis $\mathbf{H_{0(2)}}$ was rejected.

On making multiple comparisons using Least Square Difference (LSD) method, faculty work engagement of education and humanities (EHUM) group was found to be significantly different from commerce and business management (CBM) and applied medical sciences (AMS). Table 4.2.5 shows that p-values of these comparisons were 0.001 and 0.036 respectively (both $p<0.05$). Mean work engagement score of EHUM group was 4.79, CBM group was 4.41 and AMS group was 4.54 (Table 4.2.3). The results suggested that faculty work engagement of education and humanities group was significantly higher than applied medical sciences as well as commerce and business management. This may be viewed in the light of Job Demands and Resources Model of Work Engagement proposed by Bakker and Demerouti (2008), stating that work engagement is predicted by job resources and personal resources independently or in a combined manner. Job resources refer to those aspects of the job which are instrumental in achieving work

goals for example meaningful job, variety of skills required, autonomy, performance feedback and positive team climate. Personal resources are related to individual's perception of their ability to successfully control the environment for example self efficacy, optimism and organization based self esteem. In turn these depend on one's personality, socialization, possession of special skills etc. Particularly when job demands are high, job resources and personal resources have a profound impact on work engagement. In the context of work engagement of faculty members belonging to four different work areas taken here, in a particular organization, the job demands are almost similar due to the common nature of job. Job resources are also similar due to a common organizational culture and policies. The higher level of work engagement among the faculty members of education and humanities could be attributed possibly to the higher personal resources possessed by them. A large number of faculty members in this category belonged to the field of Teacher Education. Hence, all of them possessed formal qualification as Teacher Educators i.e M.Ed degree. It could be a personal resource that set them apart from other faculty members belonging to the commerce and business management or applied medical sciences who are not required to have any formal qualification to become an educator in their respective fields. Their technical qualifications are considered sufficient for this purpose. Hence, the results have important policy implications for human resource development of higher education institutes. Providing formal training to faculty members of all disciplines regarding curriculum design, teaching techniques, evaluation techniques, student handling and other aspects could be instrumental in improving their work engagement.

Table 4.2.3 : Work Engagement according to Faculty Work Area

Discipline	**Respondents**	**Mean**	**S.D**
Commerce & Business Management (CBM)	124	4.412	.9014
Science, Engg & Tech. (SET)	134	4.616	.8811
Applied Medical Sciences (AMS)	103	4.542	.7363
Education and Humanities (EHUM)	102	4.797	.9447
Total	463	4.585	.8794

Table 4.2.4 : ANOVA of Work Engagement across Faculty Work Areas

Variations	Sum of Squares	Df	Mean Square	F	*p-value
Between Groups	8.628	3	2.876	3.787	.011
Within Groups	348.629	459	.760		
Total	357.257	462			
*5% level of significance					

Table 4.2.5 : Post-Hoc Tests for Multiple Comparisons of Work Engagement according to Faculty Work Areas

Discipline (A)	Discipline (B)	Mean Difference (A-B)	Std. Error	Sig.
Commerce & Business Management	Science, Engg & Tech.	-.2039	.1086	.061
	Applied Medical Sciences	-.1293	.1162	.266
	Education and Humanities	-.3852*	.1165	.001
Science, Engg & Tech.	Commerce & Business Management	.2039	.1086	.061
	Applied Medical Sciences	.0746	.1142	.514
	Education and Humanities	-.1813	.1145	.114
Applied Medical Sciences	Commerce & Business Management	.1293	.1162	.266
	Science, Engg & Tech.	-.0746	.1142	.514
	Education and Humanities	-.2559*	.1217	.036
Education and Humanities	Commerce & Business Management	.3852*	.1165	.001
	Science, Engg & Tech.	.1813	.1145	.114
	Applied Medical Sciences	.2559*	.1217	.036
* The mean difference is significant at the 0.05 level.				

4.2.3 Relationship of work engagement and posting

To study whether work engagement varies significantly with faculty posting at university campus or affiliated colleges, null hypothesis $\mathbf{H_{0(3)}}$ was framed.

$H_{0(3)}$: Work engagement does not vary with posting.

The mean score of work engagement of faculty members posted at University campuses and affiliated colleges are tabulated in Table 4.2.6. Mean score was compared across the two groups using ANOVA. The F value at 0.019 was not significant at 0.05 level of significance (Table 4.2.7). The results of ANOVA, suggested that there was no significant difference in work engagement of faculty members posted at University campuses or affiliated colleges. Hence, the null hypothesis $\mathbf{H_{0(3)}}$ was accepted.

Table 4.2.6 : Work Engagement according to Posting

Posting	**Respondents**	**Mean**	**S.D**
University Campus	242	4.579	.9355
Affiliated College	221	4.591	.8155
Total	463	4.585	.8794

Table 4.2.7 : ANOVA of Work Engagement across Posting

Variations	**Sum of Squares**	**Df**	**Mean Square**	**F**	***p-value**
Between Groups	.015	1	.015	.019	.890
Within Groups	357.243	461	.775		
Total	357.257	462			
*5% level of significance					

4.2.4 Relationship of work engagement and district of posting

To study whether work engagement varies significantly across respondents working in the six districts namely Jalandhar, Ludhiana, Amritsar, Patiala, Bathinda and Chandigarh, hypothesis $\mathbf{H_{0(4)}}$ was framed.

$\mathbf{H_{0(4)}}$: Work engagement does not differ across districts.

The mean work engagement scores of faculty members posted at the six districts are tabulated in Table 4.2.8. They were compared across the groups using one-way ANOVA. The F value at 3.995 was significant at 0.05 level (Table 4.2.9). The results of ANOVA, suggested that there was significant difference in work engagement of faculty members posted across various districts. Hence, the hypothesis $\mathbf{H_{0(4)}}$ was rejected. On making multiple comparisons using Least Square

Difference (LSD) method, work engagement of faculty members posted at higher education institutions located in Chandigarh was significantly different from other five districts at 0.05 level of significance (Table 4.2.10). Mean work engagement score of faculty members employed in Chandigarh at 4.2 was significantly lower than other districts. (Table 4.2.8).

Table 4.2.8 : Work Engagement according to District

District	Respondents	Mean	S.D
Jalandhar	105	4.691	.8163
Ludhiana	71	4.668	.7509
Amritsar	93	4.726	.8782
Bathinda	46	4.606	.7336
Patiala	67	4.572	1.0261
Chandigarh	81	4.210	.9278
Total	463	4.585	.8794

Table 4.2.9 : ANOVA of Work Engagement across Districts

Variations	Sum of Squares	Df	Mean Square	F	*p-value
Between Groups	14.961	5	2.992	3.995	.001
Within Groups	342.296	457	.749		
Total	357.257	462			
*5% level of significance					

Table 4.2.10 : Post-Hoc Tests for multiple comparisons of work engagement according to district

District (A)	District (B)	Mean Difference (A-B)	Std. Error	Sig.
Jalandhar	Ludhiana	.0228	.1330	.864
	Amritsar	-.0354	.1232	.774
	Bathinda	.0847	.1530	.580
	Patiala	.1189	.1353	.380
	Chandigarh	.4811*	.1280	.000

District (A)	District (B)	Mean Difference (A-B)	Std. Error	Sig.
Ludhiana	Jalandhar	-.0228	.1330	.864
	Amritsar	-.0582	.1364	.670
	Bathinda	.0620	.1638	.705
	Patiala	.0961	.1474	.515
	Chandigarh	.4584*	.1407	.001
Amritsar	Jalandhar	.0354	.1232	.774
	Ludhiana	.0582	.1364	.670
	Bathinda	.1201	.1560	.442
	Patiala	.1543	.1387	.267
	Chandigarh	.5165*	.1315	.000
Bathinda	Jalandhar	-.0847	.1530	.580
	Ludhiana	-.0620	.1638	.705
	Amritsar	-.1201	.1560	.442
	Patiala	.0341	.1657	.837
	Chandigarh	.3964*	.1598	.013
Patiala	Jalandhar	-.1189	.1353	.380
	Ludhiana	-.0961	.1474	.515
	Amritsar	-.1543	.1387	.267
	Bathinda	-.0341	.1657	.837
	Chandigarh	.3623*	.1429	.012
Chandigarh	Jalandhar	-.4811*	.1280	.000
	Ludhiana	-.4584*	.1407	.001
	Amritsar	-.5165*	.1315	.000
	Bathinda	-.3964*	.1598	.013
	Patiala	-.3623*	.1429	.012

*. The mean difference is significant at the 0.05 level.

4.2.5 Relationship of work engagement and designation

To study whether work engagement varies significantly with the designation of faculty members, hypothesis $\mathbf{H_{0(5)}}$ was framed.

$H_{0(5)}$: Work engagement does not vary with designation.

The mean scores of work engagement across the designation based categories namely Lecturer, Assistant Professor, Associate Professor, Professor and Head of Department are tabulated in Table 4.2.11. They were compared across the groups using one-way ANOVA. The F value at 3.923 was significant at 0.05 level of significance (Table 4.2.12). The results of ANOVA, suggested that there was significant difference in work engagement across the designations. Hence, the null hypothesis $\mathbf{H_{0(5)}}$ was rejected. On making multiple comparisons using Least Square Difference (LSD) method (Table 4.2.13), work engagement of Lecturers was found to be significantly different from Associate Professors, Professors and Heads of Departments at 0.05 level of significance. Mean work engagement score of Lecturers at 4.368 was significantly lower than Associate Professors (4.83), Professors (4.75) and Heads of Departments (5.09). On similar lines the mean work engagement of Assistant Professors was 4.53, which was also significantly lower than that of Associate Professors at 4.83 and Heads of Departments at 5.09 (Table 4.2.11). The findings may be viewed in the light of Job Demands and Resources Model of Work Engagement proposed by Bakker and Demerouti (2008), stating that work engagement is determined by job resources and personal resources independently or in combination and they become instrumental, particularly when job demands are high. In the initial stages of teaching career as a Lecturer or Assistant Professor, job demands are high in terms of teaching work load, requirement to upgrade qualification, participating in committee work and leading students in co-curricular and extension activities. As far as job resources are concerned, teaching experience, professional exposure and networking are limited in the initial stages of teaching career as lecturers or Assistant Professors. Hence, the lower work engagement of Lecturers and Assistant Professors can be explained in terms of high job demands coupled with limited job resources. The findings are also in agreement with Barkhuizen and Rothmann (2006) who studied the work engagement of academic staff in South Africa and found that professors were

significantly more engaged in their work as compared to senior lecturers and junior lecturers. A sound rationale was provided by Winter et al. (2000) who stated that the professors' need for engaging in meaningful activities was satisfied by the autonomy, skill variety and job challenge available to them.

Table 4.2.11 : Work Engagement according to Designation

Designation	Respondents	Mean	Std. Deviation
Lecturer and equivalent	58	4.368	1.110
Asst. Prof. and equivalent	297	4.533	.855
Associate Prof. and equivalent	60	4.831	.705
Professor and equivalent	34	4.758	.830
Head of Department	14	5.095	.707
Total	463	4.585	.879

Table 4.2.12 : ANOVA of Work Engagement across Designations

Variations	Sum of Squares	Df	Mean Square	F	*p-value
Between Groups	11.834	4	2.958	3.923	.004
Within Groups	345.424	458	.754		
Total	357.257	462			
*5% level of significance					

Table 4.2.13 : Post-Hoc Tests for multiple comparisons of work engagement according to designations

Designation (A)	Designation (B)	Mean Difference (A-B)	Std. Error	Sig.
Lecturer and equivalent	Asst. Prof. and equivalent	-.1657	.1247	.185
	Associate Prof. and equivalent	-.4637*	.1599	.004
	Professor and equivalent	-.3904*	.1876	.038
	Head of Department	-.7274*	.2586	.005
Asst. Prof. and equivalent	Lecturer and equivalent	.1657	.1247	.185
	Associate Prof. and equivalent	-.2980*	.1229	.016
	Professor and equivalent	-.2247	.1572	.154
	Head of Department	-.5618*	.2375	.018

Designation (A)	Designation (B)	Mean Difference (A-B)	Std. Error	Sig.
Associate Prof. and equivalent	Lecturer and equivalent	.4637*	.1599	.004
	Asst. Prof. and equivalent	.2980*	.1229	.016
	Professor and equivalent	.0733	.1864	.694
	Head of Department	-.2638	.2578	.307
Professor and equivalent	Lecturer and equivalent	.3904*	.1876	.038
	Asst. Prof. and equivalent	.2247	.1572	.154
	Associate Prof. and equivalent	-.0733	.1864	.694
	Head of Department	-.3371	.2758	.222
Head of Department	Lecturer and equivalent	.7274*	.2586	.005
	Asst. Prof. and equivalent	.5618*	.2375	.018
	Associate Prof. and equivalent	.2638	.2578	.307
	Professor and equivalent	.3371	.2758	.222
*. The mean difference is significant at the 0.05 level.				

4.2.6 Relationship of work engagement and total experience

To study whether work engagement varies significantly with the total experience of faculty members, hypothesis $\mathbf{H_{0(6)}}$ was framed.

$H_{0(6)}$: Work engagement does not vary with total experience.

The mean scores of work engagement across the total experience categories namely ≤ 5 years, >5 ≤ 10 years, >10 ≤ 15 years, >15≤ 20 years and >20 years are tabulated (Table 4.2.14). They were compared across the groups using one-way ANOVA. The F value at 3.264 was significant at 0.05 level (Table 4.2.15). The results of ANOVA, suggested that there was significant difference in work engagement across the categories. Hence, the hypothesis $\mathbf{H_{0(6)}}$ was rejected. On making multiple comparisons using Least Square Difference (LSD) method (Table 4.2.16), work engagement of faculty members having total experience of > 20 years was found to be significantly different from those with total experience of ≤ 5 years as well as > 05 ≤ 10 years at 0.05 level of significance. Mean work engagement score of faculty members having total experience of > 20 years was 4.92 which was

significantly higher than those with total experience of ≤ 5 years at 4.46 as well as > 05 ≤ 10 years at 4.567 (Tables 4.2.14 and 4.2.16). The findings may be viewed in the light of Bakker et al.'s (2004) study of human service professionals including teachers proving that more job resources lead to dedication and extra-role performance. With quantum increase in experience, teachers get access to more and better job resources for example, opportunities for professional growth, more job control and more research scholars, which explains their higher work engagement as compared to those with lower experience.

Table 4.2.14 : Work Engagement according to Total experience

Total Experience	Respondents	Mean	Std. Deviation
Upto 5 years	197	4.462	.8635
> 05 upto 10	133	4.567	.9991
> 10 upto 15	62	4.708	.6988
> 15 upto 20	20	4.661	.6844
> 20	51	4.924	.7846
Total	463	4.585	.8794

Table 4.2.15 : ANOVA of Work Engagement across Total experience categories

Variations	Sum of Squares	Df	Mean Square	F	*p-value
Between Groups	9.903	4	2.476	3.264	.012
Within Groups	347.355	458	.758		
Total	357.257	462			
*5% level of significance					

Table 4.2.16 : Post-Hoc Tests for multiple comparisons of work engagement according to total experience

Total Experience (A)	Total Experience (B)	Mean Difference (A-B)	Std. Error	Sig.
≤ 5 years	> 05 ≤ 10	-.1048	.0977	.284
	> 10 ≤ 15	-.2454	.1268	.054
	> 15 ≤ 20	-.1986	.2044	.332
	> 20	-.4613*	.1368	.001

Total Experience (A)	Total Experience (B)	Mean Difference (A-B)	Std. Error	Sig.
> 05 ≤ 10	≤ 5 years	.1048	.0977	.284
	> 10 ≤ 15	-.1406	.1339	.294
	> 15 ≤ 20	-.0939	.2089	.653
	> 20	-.3565*	.1434	.013
> 10 ≤ 15	≤ 5 years	.2454	.1268	.054
	> 05 ≤ 10	.1406	.1339	.294
	> 15 ≤ 20	.0468	.2239	.835
	> 20	-.2159	.1646	.190
> 15 ≤ 20	≤ 5 years	.1986	.2044	.332
	> 05 ≤ 10	.0939	.2089	.653
	> 10 ≤ 15	-.0468	.2239	.835
	> 20	-.2626	.2298	.254
> 20	≤ 5 years	.4613*	.1368	.001
	> 05 ≤ 10	.3565*	.1434	.013
	> 10 ≤ 15	.2159	.1646	.190
	> 15 ≤ 20	.2626	.2298	.254
*. The mean difference is significant at the 0.05 level.				

4.2.7 Relationship of work engagement and experience in current organization

To study whether work engagement varies significantly with the current organization experience of faculty members, hypothesis $\mathbf{H_{0(7)}}$ was framed.

$H_{0(7)}$: Work engagement does not vary with experience in current organization.

The mean scores of work engagement across the five categories namely current organization experience ≤ 5 years, >5 ≤ 10 years, >10 ≤ 15 years, >15≤ 20 years and >20 years are tabulated in Table 4.2.17. Mean scores were compared

across the groups using one-way ANOVA. The F value at 2.686 was significant at 0.05 level of significance (Table 4.2.18). The results of ANOVA, suggested that there was significant difference in work engagement across the categories. Hence, the hypothesis $\mathbf{H_{0(7)}}$ was rejected. On making multiple comparisons using Least Square Difference (LSD) method (Table 4.2.19), work engagement of faculty members having current organization experience of > 20 years was found to be significantly different from those with current organization experience of ≤ 5 years, > 05 ≤ 10, as well as > 10 ≤ 15 years at 0.05 level of significance. Mean work engagement score of faculty members having current organization experience of > 20 years was 5.006 which was significantly higher than the other three aforementioned categories (Tables 4.2.17 and 4.2.19).

It may be noted that these findings are at variance with the results of Hermsen and Rosser (2008) who studied the work engagement of higher education staff in U.S and found the length of employment on campus to be a negative indicator of work engagement. According to the current study, the higher work engagement of the longer tenured faculty members can be attributed to the fact that as one continues to work in a particular organization over a period of time, a strong sense of identification and ownership develops, which is likely to enhance the work engagement. Thus, it has very important implications for HR policy makers to design measures that encourage faculty retention in the current organizations to ensure higher work engagement levels.

Table 4.2.17: Work Engagement according to current organization experience

Current organization Experience	Respondents	Mean	Std. Deviation
Upto 5 years	298	4.524	.9168
> 05 upto 10	83	4.620	.8080
> 10 upto 15	30	4.519	.7470
> 15 upto 20	14	4.675	.7020
> 20	38	5.006	.7941
Total	463	4.585	.8794

Table 4.2.18 : ANOVA of Work Engagement across current organization experience categories

Variations	Sum of Squares	Df	Mean Square	F	*p-value
Between Groups	8.190	4	2.047	2.686	.031
Within Groups	349.068	458	.762		
Total	357.257	462			
*5% level of significance					

Table 4.2.19 : Post-Hoc Tests for multiple comparisons of work engagement according to current organization experience

Current organization Experience (A)	Current organization (B)	Mean Difference (A-B)	Std. Error	Sig.
≤ 5 years	> 05 ≤ 10	-.0959	.1084	.376
	> 10 ≤ 15	.0053	.1672	.975
	> 15 ≤ 20	-.1507	.2387	.528
	> 20	-.4820*	.1504	.001
> 05 ≤ 10	≤ 5 years	.0959	.1084	.376
	> 10 ≤ 15	.1013	.1860	.586
	> 15 ≤ 20	-.0548	.2522	.828
	> 20	-.3860*	.1710	.024
> 10 ≤ 15	≤ 5 years	-.0053	.1672	.975
	> 05 ≤ 10	-.1013	.1860	.586
	> 15 ≤ 20	-.1561	.2826	.581
	> 20	-.4873*	.2132	.023
> 15 ≤ 20	≤ 5 years	.1507	.2387	.528
	> 05 ≤ 10	.0548	.2522	.828
	> 10 ≤ 15	.1561	.2826	.581
	> 20	-.3312	.2729	.226
> 20	≤ 5 years	.4820*	.1504	.001
	> 05 ≤ 10	.3860*	.1710	.024
	> 10 ≤ 15	.4873*	.2132	.023
	> 15 ≤ 20	.3312	.2729	.226
* The mean difference is significant at the 0.05 level.				

4.2.8 Relationship of work engagement and age

To study whether work engagement varies significantly with faculty members' age, hypothesis $\mathbf{H_{0(8)}}$ was framed.

$H_{0(8)}$: Work engagement does not differ across age groups.

The mean scores of work engagement across the five age groups namely ≤ 25 years, >25 ≤ 35 years, >35 ≤ 45 years, >45≤ 55 years and >55 years are tabulated in Table 4.2.20. Mean scores were compared across the groups using one-way ANOVA. The F value at 3.471 was significant at 0.05 level of significance (Table 4.2.21). The results of ANOVA, suggested that there was significant difference in work engagement across the age groups. Hence, the hypothesis $\mathbf{H_{0(8)}}$ was rejected. On making multiple comparisons using Least Square Difference (LSD) method (Table 4.2.22), work engagement of faculty members in the age group of 55 years and above was found to be significantly different from those with falling the age groups of ≤ 25 years, > 25 ≤ 35 years, > 35 ≤ 45 years at 0.05 level of significance. Mean work engagement score of faculty members in the age group of 55 years and above was 5.115 which was significantly higher than the other three aforementioned categories (Tables 4.2.20 and 4.2.22). This is in conformity with the results of variation of work engagement with total experience and designation, both of which are likely to increase with age.

Table 4.2.20 : Work Engagement according to Age

Age	Respondents	Mean	Std. Deviation
≤ 25	52	4.391	.8734
> 25 ≤ 35	254	4.556	.8840
> 35 ≤ 45	94	4.563	.9113
> 45 ≤ 55	36	4.725	.7164
> 55	27	5.115	.7583
Total	463	4.585	.8794

Table 4.2.21: ANOVA of Work Engagement across age categories

Variations	Sum of Squares	Df	Mean Square	F	*p-value
Between Groups	10.510	4	2.628	3.471	.008
Within Groups	346.747	458	.757		
Total	357.257	462			
*5% level of significance					

Table 4.2.22 : Post-Hoc Tests for multiple comparisons of work engagement according to age

Age (A)	Age (B)	Mean Difference (A-B)	Std. Error	Sig.
≤ 25	> 25 ≤ 35	-.1654	.1324	.212
	> 35 ≤ 45	-.1716	.1504	.254
	> 45 ≤ 55	-.3343	.1887	.077
	> 55	-.7242*	.2064	.000
> 25 upto 35	≤ 25	.1654	.1324	.212
	> 35 ≤ 45	-.0062	.1050	.953
	> 45 ≤ 55	-.1689	.1550	.276
	> 55	-.5588*	.1761	.002
> 35 upto 45	≤ 25	.1716	.1504	.254
	> 25 ≤ 35	.0062	.1050	.953
	> 45 ≤ 55	-.1627	.1705	.341
	> 55	-.5526*	.1900	.004
> 45 upto 55	≤ 25	.3343	.1887	.077
	> 25 ≤ 35	.1689	.1550	.276
	> 35 ≤ 45	.1627	.1705	.341
	> 55	-.3899	.2215	.079
> 55	≤ 25	.7242*	.2064	.000
	> 25 ≤ 35	.5588*	.1761	.002
	> 35 ≤ 45	.5526*	.1900	.004
	> 45 ≤ 55	.3899	.2215	.079
*. The mean difference is significant at the 0.05 level.				

4.2.9 Relationship of work engagement and gender

To study whether work engagement varies significantly with gender, hypothesis $\mathbf{H_{0(9)}}$ was framed.

$H_{0(9)}$: Work engagement does not vary with gender.

The mean scores of work engagement of male and female faculty members are tabulated (Table 4.2.23). Mean scores were compared across the groups using one-way ANOVA. The F value at 0.063 was not significant at 0.05 level of significance (Table 4.2.24). The results of ANOVA, suggested that there was no significant difference in work engagement between male and female faculty members. Hence, the null hypothesis $\mathbf{H_{0(9)}}$ was accepted. The findings are in line with the study by Reijula et al. (2003) amongst Finnish veterinarians wherein it was found that work engagement was not significantly related with gender.

Table 4.2.23 : Gender wise Work Engagement

Gender	Respondents	Mean	Std. Deviation
Female	266	4.576	.8898
Male	197	4.597	.8672
Total	463	4.585	.8794

Table 4.2.24 : ANOVA of Work Engagement across gender categories

Variations	Sum of Squares	Df	Mean Square	F	*p-value
Between Groups	.049	1	.049	.063	.803
Within Groups	357.209	461	.775		
Total	357.257	462			
*5% level of significance					

4.2.10 Relationship of work engagement and educational background.

To study whether work engagement varies significantly with the educational background of faculty members, hypothesis $\mathbf{H_{0(10)}}$ was framed.

$H_{0(10)}$: Work engagement does not vary with educational background.

Educational background was measured in terms of possession of Ph.D qualification and type of institution from which Ph.D was awarded. Accordingly six

categories were made namely Non-Ph.D, Ph.D from private institution, Ph.D from state government institution, Ph.D from central govt. institution, Ph.D from foreign institution., Ph.D from premier Institution inside India. Since, a premier institution inside India may be a private, state government or central government institution, this category might overlap with category number 2, 3 or 4. Hence, any of the respondents who claimed to have been awarded Ph.D from an Institution belonging to this category, were excluded from category 2, 3, or 4 so that a particular respondent is not counted twice. The mean scores of work engagement for each category are tabulated in Table 4.2.25. Mean scores were compared across the groups using ANOVA. The F value at 3.503 was significant at 0.05 level of significance (Table 4.2.26). The results of ANOVA, suggested that there was significant difference in work engagement across the categories. Hence, the hypothesis $\mathbf{H_{0(10)}}$ was rejected. On making multiple comparisons using Least Square Difference (LSD) method (Table 4.2.27), mean work engagement of faculty members who had not done the doctoral study (mean score 4.49), was lower as compared to those who had done their doctoral study from private, state govt. or central govt. institutions. The difference was significant w.r.t doctorates from state govt. institutions (mean score 4.732). This finding carries greater significance when viewed in the light of Kahn's (1990) approach towards work engagement. Kahn stated that one of the factors affecting personal engagement in work is one's psychological availability. It is the sense of possessing physical, intellectual and emotional resources which enable a person to invest oneself fully into the work role performance. Doctoral study is certainly a key intellectual resource necessary for full immersion into one's role as a faculty member. Hence, the work engagement of faculty members with Ph.D qualification is likely to be higher than the others.

The findings are in agreement with a study by Barkhuizen and Rothmann (2006) who investigated the work engagement of academic staff in South Africa using UWES and found that academic staff who possessed a doctoral degree were more absorbed in their jobs as compared to those having four year degrees or honours. These results support the conclusion that highly educated workers tend to be more absorbed in their work particularly the knowledge workers.

Secondly, faculty members currently working in Punjab after doing their doctoral study from foreign institutions were significantly less engaged (mean score

2.88) than all other categories including Non-Ph.Ds (mean score 4.4) at 0.05 level of significance (Tables Table 4.2.25 and 4.2.27). This finding can be interpreted in the light of Job Demands and Resources model (Demerouti et. al, 2001), which states that the work environment poses specific job demands and offers job resources to individuals depending on the context. In the present study, the possession of Ph.D qualification from a foreign university can be considered a personal resource. Xanthopolou et. al (2007) found that personal resources do not offset the relationship between job demands and exhaustion. It is the supply of job resources that activates employees' personal resources and makes them feel more capable of controlling their work environment thus staying engaged. Hence, mere possession of personal resources like Ph.D degree from a foreign university is not enough to fuel work engagement unless it is coupled with provision of the appropriate job resources.

Table 4.2.25 : Work Engagement according to Educational background

Qualification	Respondents	Mean	Std. Deviation
Non - Ph.D	264	4.498	.8799
Ph.D from Private Institution	16	4.736	1.1973
Ph.D from State Govt. Institution	131	4.732	.8052
Ph.D from Central Govt. Institution	36	4.796	.7773
Ph.D from Foreign Institution	2	2.889	2.9856
Ph.D from Premier Inst. In India	14	4.373	.5953
Total	463	4.585	.8794

Table 4.2.26 : ANOVA of Work Engagement across educational background categories

Variations	Sum of Squares	Df	Mean Square	F	*p-value
Between Groups	13.188	5	2.638	3.503	.004
Within Groups	344.069	457	.753		
Total	357.257	462			
*5% level of significance					

Table 4.2.27 : Post-Hoc Tests for multiple comparisons of work engagement according to educational background

Educational background (A)	Educational background (B)	Mean Difference (I-J)	Std. Error	Sig.
Non- Ph.D	Ph.D from Private Institution	-.2382	.2234	.287
	Ph.D from State Govt. Institution	-.2341*	.0927	.012
	Ph.D from Central Govt. Institution	-.2984	.1542	.054
	Ph.D from Foreign Institution	1.6090*	.6159	.009
	Ph.D from Premier Inst. In India	.1249	.2380	.600
Private Institution	Non- Ph.D	.2382	.2234	.287
	Ph.D from State Govt. Institution	.0041	.2298	.986
	Ph.D from Central Govt. Institution	-.0602	.2607	.818
	Ph.D from Foreign Institution	1.8472*	.6508	.005
	Ph.D from Premier Inst. In India	.3631	.3175	.253
State Govt. Institution	Non- Ph.D	.2341*	.0927	.012
	Ph.D from Private Institution	-.0041	.2298	.986
	Ph.D from Central Govt. Institution	-.0643	.1633	.694
	Ph.D from Foreign Institution	1.8431*	.6182	.003
	Ph.D from Premier Inst. In India	.3590	.2440	.142
Central Govt. Institution	Non- Ph.D	.2984	.1542	.054
	Ph.D from Private Institution	.0602	.2607	.818
	Ph.D from State Govt. Institution	.0643	.1633	.694
	Ph.D from Foreign Institution	1.9074*	.6304	.003
	Ph.D from Premier Inst. In India	.4233	.2733	.122
Foreign Institution	Non- Ph.D	-1.6090*	.6159	.009
	Ph.D from Private Institution	-1.8472*	.6508	.005
	Ph.D from State Govt. Institution	-1.8431*	.6182	.003
	Ph.D from Central Govt. Institution	-1.9074*	.6304	.003
	Ph.D from Premier Inst. In India	-1.4841*	.6559	.024
Premier Inst. In India	Non- Ph.D	-.1249	.2380	.600
	Ph.D from Private Institution	-.3631	.3175	.253
	Ph.D from State Govt. Institution	-.3590	.2440	.142
	Ph.D from Central Govt. Institution	-.4233	.2733	.122
	Ph.D from Foreign Institution	1.4841*	.6559	.024
*. The mean difference is significant at the 0.05 level.				

4.2.11 Relationship of work engagement and salary

To study whether work engagement varies significantly with salary, hypothesis $\mathbf{H_{0(11)}}$ was framed.

$H_{0(11)}$: Work engagement does not vary with salary.

The mean scores of work engagement across the six salary ranges are tabulated (Table 4.2.28). Mean scores were compared across the groups using one-way ANOVA. F value at 2.196 was significant at 0.05 level (Table 4.2.29). The results of ANOVA suggested that there was significant difference in work engagement across the categories. Hence, the hypothesis $\mathbf{H_{0(11)}}$ was rejected. On making multiple comparisons using Least Square Difference (LSD) method (Table 4.2.30), faculty members whose monthly salary was ≤ Rs. 30,000 (mean score 4.43) were found to be significantly less engaged than those who were in the monthly salary range of Rs. 30,001 ≤ 50,000 (mean score 4.65) as well as those whose salary was above Rs. 1,10,000 per month (mean score 4.98).

The higher work engagement of those in the better salary brackets can be explained in the light of findings of Hulkko-Nyman et. al (2012) who stated that dedication, a key dimension of work engagement is explained by employees' perception of benefits and material rewards. Also, according to Demerouti et al. (2001) salary is a vital job resource controlled at the organizational level. So, it is likely to make a difference in work engagement.

Table 4.2.28: Salary Range wise Work Engagement

Salary Range	Respondents	Mean	Std. Deviation
Upto Rs. 30,000	172	4.435	.8716
Rs. 30,001 to 50,000	160	4.658	.9462
Rs. 50,001 upto 70,000	56	4.597	.8169
Rs. 70,001 upto 90,000	26	4.714	.7277
Rs. 90,001 to 1,10,000	30	4.667	.7135
> Rs. 1,10,000	19	4.982	.8134
Total	463	4.585	.8794

Table 4.2.29 : ANOVA of Work Engagement across salary ranges

Variations	Sum of Squares	Df	Mean Square	F	*p-value
Between Groups	8.384	5	1.677	2.196	.054
Within Groups	348.874	457	.763		
Total	357.257	462			
*5% level of significance					

Table 4.2.30 : Post-Hoc Tests for multiple comparisons of work engagement according to salary range

Monthly Salary (A)	Monthly Salary (B)	Mean Difference (I-J)	Std. Error	Sig.
≤ Rs. 30,000	Rs. 30,001 ≤ 50,000	-.2236*	.0960	.020
	Rs. 50,001 ≤ 70,000	-.1625	.1344	.227
	Rs. 70,001 ≤ 90,000	-.2789	.1838	.130
	Rs. 90,001 ≤ 1,10,000	-.2319	.1729	.180
	> Rs. 1,10,000	-.5477*	.2112	.010
Rs. 30,001 ≤ 50,000	≤ Rs. 30,000	.2236*	.0960	.020
	Rs. 50,001 ≤ 70,000	.0611	.1357	.653
	Rs. 70,001 ≤ 90,000	-.0553	.1848	.765
	Rs. 90,001 ≤ 1,10,000	-.0083	.1738	.962
	> Rs. 1,10,000	-.3241	.2120	.127
Rs. 50,001 ≤ 70,000	≤ Rs. 30,000	.1625	.1344	.227
	Rs. 30,001 ≤ 50,000	-.0611	.1357	.653
	Rs. 70,001 ≤ 90,000	-.1165	.2073	.575
	Rs. 90,001 ≤ 1,10,000	-.0694	.1977	.726
	> Rs. 1,10,000	-.3852	.2320	.097
Rs. 70,001 ≤ 90,000	≤ Rs. 30,000	.2789	.1838	.130
	Rs. 30,001 ≤ 50,000	.0553	.1848	.765
	Rs. 50,001 ≤ 70,000	.1165	.2073	.575
	Rs. 90,001 ≤ 1,10,000	.0470	.2341	.841
	> Rs. 1,10,000	-.2688	.2637	.309

Monthly Salary (A)	Monthly Salary (B)	Mean Difference (I-J)	Std. Error	Sig.
Rs. 90,001 ≤ 1,10,000	≤ Rs. 30,000	.2319	.1729	.180
	Rs. 30,001 ≤ 50,000	.0083	.1738	.962
	Rs. 50,001 ≤ 70,000	.0694	.1977	.726
	Rs. 70,001 ≤ 90,000	-.0470	.2341	.841
	> Rs. 1,10,000	-.3158	.2562	.218
> Rs. 1,10,000	≤ Rs. 30,000	.5477*	.2112	.010
	Rs. 30,001 ≤ 50,000	.3241	.2120	.127
	Rs. 50,001 ≤ 70,000	.3852	.2320	.097
	Rs. 70,001 ≤ 90,000	.2688	.2637	.309
	Rs. 90,001≤ 1,10,000	.3158	.2562	.218
*. The mean difference is significant at the 0.05 level.				

4.3 CHAPTER SUMMARY

It was found that work engagement of faculty members varies significantly with faculty work area/ discipline, district wise posting, designation, experience in current organization, total experience, age, educational background and salary. However, no statistically significant variation was found with respect to respondents' gender, type of institution – whether government or private and posting at university campus or affiliated college.

Investigation of the relationship between faculty work area and work engagement using one-way ANOVA revealed that the faculty members of Education and Humanities discipline were significantly more engaged than commerce and business management and applied medical sciences. The findings were explained in terms of Job Demands and Resources Model of Work Engagement proposed by Bakker and Demerouti (2008).

Amongst the designation based categories, the work engagement of Lecturers was found to be significantly lower than Associate Professors, Professors and Heads of Departments. Assistant Professors were found to be less engaged than Associate Professors and Heads of Departments. The findings were in agreement with Barkhuizen and Rothmann (2006) and Winter et al. (2000).

Upon comparing work engagement according to total experience it was found that faculty members having total experience of more than 20 years were better work engagaged than those with total experience of upto 5 years or 5 to 10 years. The finding was in agreement with a Bakker et al.'s (2004) study of human service professionals including teachers, establishing that certain job resources which come with increase in total experience are associated with higher work engagement.

On similar lines when work engagement was compared across current organization experience of faculty members, it was found that faculty members having current organization experience of greater than 20 years were more work engaged than those with ≤ 5 years, > 05 ≤ 10 as well as > 10 ≤ 15 years. The higher work engagement of the longer tenured faculty members can be attributed to the development of a strong sense of identification and ownership over a period of time, which is likely to enhance the work engagement. Thus, it has very important implications for HR policy makers to design measures that encourage faculty retention in the current organizations.

When work engagement was compared across the various age groups faculty members aged 55 years and above were more engaged in their work as compared to those in the age groups of ≤ 25 years, >25 ≤ 35 years and >25 ≤ 35 years. This was in consonance with the results obtained according to designation and total experience which are also supposed to increase with age.

According to the educational background, faculty members who had a Ph.D qualification were more engaged than the others with post graduate degrees. The results were explained in the light of Kahn's (1990) model of personal engagement considering Ph.D to be a key intellectual resource which is likely to enhance the psychological availability of a faculty member to immerse fully in one's role.

According to salary bracket, the work engagement of faculty members drawing a salary of less than Rs. 30,000 per month was found to be lower than the next higher salary bracket 30,001 to 50,000 per month as well as the highest salary bracket Rs. 1,10,000 and above. The rationale was found in the argument of Hulko-Nyman et al (2012) stating that dedication which is a key dimension of work engagement is explained by employees perception of benefits and material rewards.

Also according to Demerouti et al. (2001) salary is an important job resource driving work engagement.

Finally, work engagement of faculty members was not found to vary according to gender, type of institution whether private, government or government aided and posting at University campus or affiliated college.

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CHAPTER – 5

RESULTS AND DISCUSSION : FACTORS AFFECTING WORK ENGAGEMENT

CHAPTER – 5
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FACTORS AFFECTING WORK ENGAGEMENT

This chapter deals with an assessment of factors affecting work engagement of faculty members employed in Higher Education Institutions (HEIs) and measures to enhance work engagement. People employ different degrees of their physical, mental and affective domains, given the appropriate conditions. Visionaries realize that engaged employees can make a significant difference to organizational effectiveness and efficiency. They experiment with different methods to encourage engagement. An endeavor to identify the factors affecting work engagement of faculty members can help higher education institutions to better approach the issue to the mutual benefit of the individual and organization.

5.1 FACTORS AFFECTING WORK ENGAGEMENT

The present study used a self developed scale consisting of 92 statements (Part I of Appendix II). The scale explored the respondents' perception regarding self, current job and current organization. The scale included statements pertaining to the degree of intrinsic rewards experienced, social support, supervisory support, role clarity, transparency in performance appraisal, opportunities for learning and development, climate of openness, participation, satisfaction with salary, employee benefits, job security, task variety and overall satisfaction with the organization. Another vital aspect explored was the respondents' perception about self in terms of self efficacy, organization based self esteem, optimism and professional orientation. The respondents were asked to express their level of agreement or disagreement for each statement on a seven -point Likert scale ranging from 0 to 6 representing 'strongly disagree', 'disagree', 'disagree somewhat', 'neither agree nor disagree, 'agree somewhat', 'agree' and 'strongly agree'. A seven point scale was used in order to capture the precise perception of the respondents, by giving a larger range of responses. Descriptive statistics are presented in Table 5.1. For interpretation of scores, the mean response was recoded such that if the statement was positively worded then mean response of 5 and above indicated high level of satisfaction; 4 to

4.9 indicated satisfaction; 3 to 3.9 indicated a borderline condition and 2 or below indicated dissatisfaction. For negatively worded statements, coding was reversed such that mean response of 5 and above indicated high level of dissatisfaction; 4 to 4.9 indicated dissatisfaction; 3 to 3.9 indicated a borderline condition, 2 and below indicated satisfaction. The respondents appeared to be highly satisfied on very few parameters like meaningful, interesting and valuable work; good interaction with students for solving problems; requirement to upgrade qualification, skills and knowledge. They were satisfied on parameters like task variety, sense of accomplishment of personal goals, intrinsic satisfaction from work, compliments for good performance, challenging work, accountability, open communication with peers, opportunities for self development, employer as a responsible social citizen and encouragement to new ideas. They were dissatisfied on aspects like transparency in performance appraisal, recognition for 'going the extra mile', employee benefits and talent utilization. On other aspects, which are quite vital, the respondents were on the borderline i.e neither optimally satisfied nor dissatisfied. These include, having a choice in the nature of work, support of colleagues and subordinates, supervisory coaching, recognition and rewards, performance feedback, role clarity, open communication, salary, status, job security, sacrifice quality for quantity and rigidity of policies and systems.

Table 5.1 Descriptive Statistics of Work Engagement Factors

Label	Statement	Mean	Std. Deviation	Min.	Max.
S1	My work is valuable for the organization.	5.27	.889	1	6
S2	My work is interesting enough to spend my time and energy on it.	5.06	.904	1	6
S3	The results of my work are likely to affect the lives of other people in the society.	4.97	1.125	0	6
S4	My job requires me to do a variety of tasks.	4.90	1.211	0	6
S5	My job gives me a sense of accomplishment of my personal goals.	4.59	1.140	1	6

Label	Statement	Mean	Std. Deviation	Min.	Max.
S6	At the end of a work day I derive a sense of satisfaction from having done my work.	4.77	1.135	0	6
S7	Usually I get compliments for performing competently.	4.22	1.361	0	6
S8	I am not able to make regular improvements in the quality of my work.	3.81	1.605	0	6
S9	Usually I do not experience a feeling of achievement when I finish a task.	4.06	1.715	0	6
S10	I do not have much choice in deciding the nature of work I have to perform.	3.11	1.722	0	6
S11	My job does not give me enough decision making power.	3.13	1.779	0	6
S12	I can depend on the support of my colleagues in any work related issue.	3.85	1.482	0	6
S13	I can depend on the support of my subordinates in any work related issue.	3.61	1.573	0	6
S14	My immediate superior usually encourages me to take independent decisions.	4.06	1.605	0	6
S15	My immediate superior does not ask for my opinion before making decisions.	3.27	1.666	0	6
S16	My immediate superior makes efforts to help me develop myself.	3.88	1.522	0	6
S17	My immediate superior provides me personalized guidance and counseling whenever required.	4.02	1.580	0	6
S18	My immediate superior is a role model for me.	3.37	1.765	0	6
S19	My immediate superior helps me with difficult tasks at work.	3.82	1.591	0	6
S20	My immediate superior does not recognize and reward cooperative behavior towards colleagues.	3.70	1.674	0	6

Label	Statement	Mean	Std. Deviation	Min.	Max.
S21	My immediate superior holds me responsible for the work I am supposed to do.	4.49	1.141	0	6
S22	My immediate superior inspires me to accept challenging tasks.	4.08	1.534	0	6
S23	I am seldom consulted when my work goals are framed.	3.01	1.573	0	6
S24	My immediate superior gives me regular feedback about my performance.	3.70	1.565	0	6
S25	My immediate superior guides me on improving performance.	3.79	1.525	0	6
S26	Usually after completing a task I come to know on my own, how well I have done it.	4.49	1.191	0	6
S27	The criteria for deciding pay raise / promotion is not clear.	2.72	1.901	0	6
S28	I cannot see a relation between the pay raise / promotions awarded to employees and their performance.	2.63	1.871	0	6
S29	No special recognition is given to employees who work beyond their job profiles, in the larger interest of the organization.	2.55	1.746	0	6
S30	There is not enough role clarity in my job.	3.57	1.678	0	6
S31	There is free flow of communication across individuals of different ranks in my department.	3.77	1.581	0	6
S32	I feel free to discuss any work related matter in my work group.	4.30	1.400	0	6
S33	I can freely approach my immediate superior to discuss any work related matter.	4.46	1.328	0	6
S34	My students approach me to discuss their ideas.	5.09	.855	0	6
S35	My students approach me for sorting out their problems.	5.08	.846	0	6

Label	Statement	Mean	Std. Deviation	Min.	Max.
S36	Students keep in touch with me even after passing out.	4.63	1.173	0	6
S37	My job requires me to upgrade my qualification, knowledge and skills continuously.	5.08	1.013	0	6
S38	Employees who improve professional knowledge and skills are highly valued in this organization.	4.30	1.518	0	6
S39	The organization regularly gives me opportunities to attend conferences, seminars and Faculty Development programs.	4.27	1.523	0	6
S40	Ever since I have joined this organization there is continuous upgradation in my knowledge and skills.	4.54	1.268	0	6
S41	The organization clearly communicates its mission to employees at all levels.	4.08	1.417	0	6
S42	In this organization, the boundaries of acceptable conduct (do's and don'ts) are clearly defined for the employees.	3.97	1.491	0	6
S43	There is free flow of communication across different departments.	3.85	1.431	0	6
S44	A clear cut career path is defined for the employees of this organization.	3.72	1.461	0	6
S45	The nature of my job is such that my talent gets noticed by my seniors.	3.93	1.426	0	6
S46	The organization provides good opportunities for career advancement.	3.96	1.451	0	6
S47	The organization provides facilities for employee training and development.	3.94	1.428	0	6
S48	I am satisfied with my salary.	3.65	1.841	0	6
S49	Employee benefits available here are inadequate.	2.66	1.694	0	6
S50	Over here, generally there is no feeling of job insecurity.	3.30	1.881	0	6
S51	I am satisfied with my status in the organizational hierarchy.	3.96	1.485	0	6

Label	Statement	Mean	Std. Deviation	Min.	Max.
S52	The organization operates in a manner which is in the interest of the larger society.	4.17	1.329	0	6
S53	The organization regularly participates in community development programs in the local area.	3.97	1.392	0	6
S54	I experience a strong bond between me and my students.	4.82	1.023	0	6
S55	I get due recognition making me feel a valued member of this organization.	4.17	1.316	0	6
S56	I have full faith that the organization takes right decisions pertaining to the employees.	3.73	1.513	0	6
S57	The policies, systems and procedures of the organization are rigid.	2.43	1.494	0	6
S58	Whenever I share a new idea, my immediate superior gives me a thorough hearing.	4.08	1.380	0	6
S59	I am encouraged to try new ideas without fear of negative consequences.	3.75	1.490	0	6
S60	The employees here, do play a role in improving the policies, systems and procedures.	3.57	1.566	0	6
S61	I have to sacrifice quality of work for quantity of work.	3.09	1.772	0	6
S62	Responsibilities of people working together are not clearly distinguished.	3.08	1.614	0	6
S63	Some of the tasks that I have to do are non-productive.	2.70	1.699	0	6
S64	Adequate staff is not available to ensure quality of work.	2.79	1.810	0	6
S65	I can manage to solve difficult problems if I try hard enough.	4.59	1.063	0	6
S66	If someone opposes me, I can find the ways to get what I want.	3.92	1.238	0	6
S67	I am confident that I can deal efficiently with unexpected events.	4.50	1.061	0	6

Label	Statement	Mean	Std. Deviation	Min.	Max.
S68	It is easy for me to stick to my aims and accomplish my goals.	4.27	1.221	0	6
S69	I can remain calm when facing difficulties.	4.37	1.227	0	6
S70	I feel that I can handle many tasks at a time.	4.44	1.188	0	6
S71	Even when I face any failure or disappointment I quickly come back to my normal state of mind.	4.09	1.336	0	6
S72	My opinions matter in the organization.	3.62	1.450	0	6
S73	I am duly respected in the organization.	4.22	1.187	0	6
S74	I am trusted by all sections of people in the organization.	4.44	1.085	0	6
S75	I believe that I have made valuable contribution to the organization.	4.73	.989	0	6
S76	I am considered to be efficient at work.	4.79	1.004	0	6
S77	I am considered to be helpful and cooperative at work.	4.89	.953	0	6
S78	I usually expect the best even in situations of uncertainty.	4.44	1.059	0	6
S79	Even when things are not right I try to play a positive role to salvage (save) the situation.	4.58	1.068	0	6
S80	I am always optimistic about my future.	4.87	1.035	0	6
S81	Lot of good things keep happening to me in life.	4.59	1.117	0	6
S82	Mostly I expect good things to happen.	4.76	1.031	0	6
S83	Mostly I perceive situations to be positive.	4.68	.957	1	6
S84	I have set clear career goals for myself.	4.71	1.070	0	6
S85	Three years ahead I visualize myself working in the same organization.	4.01	1.628	0	6
S86	I invest time, effort and money in my own learning and development.	4.62	1.035	0	6

Label	Statement	Mean	Std. Deviation	Min.	Max.
S87	I like to do a variety of tasks rather than tasks of similar nature.	4.68	1.057	0	6
S88	I am interested in events and activities other than teaching.	4.31	1.385	0	6
S89	Over here, my talent is not being utilized appropriately.	2.86	1.690	0	6
S90	I am satisfied with my present job.	4.17	1.436	0	6
S91	I am satisfied with this organization as an employee.	4.20	1.376	0	6
S92	I would recommend this organization to my friends / colleagues as a great place to work.	4.34	1.372	0	6
	N=463				

Since the number of statements was large, exploratory factor analysis was applied, with the key objective of reducing a larger set of variables to a smaller set and summarizing the data. Relationships amongst the set of many interrelated variables were examined and represented in terms of a few underlying factors. The appropriateness of factor analysis was determined by The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy which was 0.916 (Table 5.2) which is well above the minimum criteria of 0.5 (Malhotra and Dash, 2011). Bartlett's test of sphericity having null hypothesis that the variables are uncorrelated in the population or the correlation matrix is an identity matrix, was rejected as the KMO value was significant as depicted in Table 5.2

Table 5.2 : KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.916
Bartlett's Test of Sphericity	Approx. Chi-Square	21435.58
	Df	3321
	Sig.	.000

The primary concern was to determine the minimum number of factors that account for maximum variance in the data, hence, principal component analysis was considered an appropriate method of factor analysis (Malhotra and Dash, 2011). Table 5.3 shows the communalities before extraction and after extraction. It depicts that communalities for all variables before extraction were **1**, and communalities after extraction reflect the common variance in the data.

Table 5.3 : Communalities

Statement label	Initial	Extraction
S1	1	0.491
S2	1	0.518
S4	1	0.414
S5	1	0.509
S6	1	0.494
S7	1	0.413
S8*	1	0.436
S9*	1	0.531
S10*	1	0.500
S11*	1	0.542
S12	1	0.755
S13	1	0.687
S14	1	0.580
S16	1	0.681
S17	1	0.702
S18	1	0.644
S19	1	0.699
S20*	1	0.436
S22	1	0.610
S24	1	0.479
S25	1	0.621

Statement label	Initial	Extraction
S27*	1	0.573
S28*	1	0.608
S29*	1	0.411
S30*	1	0.449
S31	1	0.501
S32	1	0.454
S33	1	0.540
S34	1	0.640
S35	1	0.540
S36	1	0.474
S37	1	0.380
S38	1	0.509
S39	1	0.502
S40	1	0.450
S41	1	0.613
S42	1	0.560
S43	1	0.577
S44	1	0.583
S45	1	0.418
S46	1	0.684
S47	1	0.606
S48	1	0.533
S51	1	0.394
S52	1	0.540
S53	1	0.487
S54	1	0.503
S55	1	0.600
S56	1	0.692

Statement label	Initial	Extraction
S58	1	0.593
S59	1	0.603
S60	1	0.561
S61*	1	0.558
S62*	1	0.662
S63*	1	0.604
S64*	1	0.449
S67	1	0.338
S68	1	0.397
S69	1	0.617
S70	1	0.390
S71	1	0.442
S72	1	0.470
S73	1	0.551
S74	1	0.515
S75	1	0.527
S76	1	0.546
S77	1	0.551
S78	1	0.469
S79	1	0.509
S80	1	0.633
S81	1	0.463
S82	1	0.533
S83	1	0.573
S84	1	0.436
S85	1	0.380
S86	1	0.386
S87	1	0.560

Statement label	Initial	Extraction
S88	1	0.402
S89*	1	0.403
S90	1	0.674
S91	1	0.732
S92	1	0.644
Extraction Method: Principal Component Analysis. *reverse coded statements		

An attempt was made to extract the factors accounting for maximum amount of common variance in the data. Number of factors to be retained for further analysis and interpretation of results were determined on the basis of eigen values and the factors with eigen values greater than 1 were retained. After extraction only ten factors were left with eigen values greater than 1 (Table 5.3). Total variance explained by the ten factors was 53.3% where factor 1 accounted for maximum variance i.e 9.0% and factor 10 accounting for 2.6% variance.

Table 5.4 : Total Variance Explained

Total Variance Explained									
Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	19.8	24.1	24.1	19.8	24.1	24.1	7.4	9.0	9.0
2	5.9	7.2	31.3	5.9	7.2	31.3	6.9	8.4	17.5
3	4.0	4.9	36.1	4.0	4.9	36.1	6.2	7.6	25.0
4	2.9	3.5	39.6	2.9	3.5	39.6	5.6	6.8	31.9
5	2.2	2.6	42.3	2.2	2.6	42.3	4.3	5.3	37.1
6	2.0	2.4	44.7	2.0	2.4	44.7	3.1	3.8	40.9
7	1.9	2.3	47.0	1.9	2.3	47.0	3.1	3.7	44.7

Total Variance Explained									
Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
8	1.9	2.3	49.3	1.9	2.3	49.3	2.9	3.5	48.2
9	1.8	2.2	51.5	1.8	2.2	51.5	2.1	2.6	50.8
10	1.5	1.9	53.3	1.5	1.9	53.3	2.1	2.6	53.3
11	1.5	1.8	55.1						
12	1.4	1.7	56.8						
13	1.4	1.7	58.5						
14	1.3	1.6	60.1						
15	1.2	1.4	61.5						
16	1.1	1.4	62.9						
17	1.1	1.3	64.2						
18	1.0	1.3	65.4						
19	1.0	1.2	66.6						
20	1.0	1.2	67.8						
21	0.9	1.1	68.9						
22	0.9	1.1	70.0						
23	0.9	1.0	71.1						
24	0.8	1.0	72.1						
25	0.8	1.0	73.1						
26	0.8	1.0	74.1						
27	0.8	0.9	75.0						
28	0.7	0.9	75.9						
29	0.7	0.9	76.7						
30	0.7	0.8	77.6						
31	0.7	0.8	78.4						
32	0.6	0.8	79.2						
33	0.6	0.8	80.0						

Total Variance Explained									
Component	Initial Eigen values		Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings			
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
34	0.6	0.8	80.7						
35	0.6	0.7	81.5						
36	0.6	0.7	82.2						
37	0.6	0.7	82.9						
38	0.6	0.7	83.6						
39	0.5	0.7	84.2						
40	0.5	0.7	84.9						
41	0.5	0.6	85.5						
42	0.5	0.6	86.1						
43	0.5	0.6	86.7						
44	0.5	0.6	87.3						
45	0.5	0.6	87.9						
46	0.4	0.5	88.4						
47	0.4	0.5	89.0						
48	0.4	0.5	89.5						
49	0.4	0.5	90.0						
50	0.4	0.5	90.4						
51	0.4	0.5	90.9						
52	0.4	0.5	91.4						
53	0.4	0.4	91.8						
54	0.4	0.4	92.2						
55	0.3	0.4	92.6						
56	0.3	0.4	93.0						
57	0.3	0.4	93.4						
58	0.3	0.4	93.8						
59	0.3	0.4	94.2						

Total Variance Explained									
Component	Initial Eigen values		Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings			
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
60	0.3	0.4	94.5						
61	0.3	0.3	94.9						
62	0.3	0.3	95.2						
63	0.3	0.3	95.5						
64	0.3	0.3	95.9						
65	0.3	0.3	96.2						
66	0.2	0.3	96.5						
67	0.2	0.3	96.8						
68	0.2	0.3	97.1						
69	0.2	0.3	97.3						
70	0.2	0.3	97.6						
71	0.2	0.3	97.8						
72	0.2	0.2	98.1						
73	0.2	0.2	98.3						
74	0.2	0.2	98.5						
75	0.2	0.2	98.8						
76	0.2	0.2	99.0						
77	0.2	0.2	99.2						
78	0.2	0.2	99.3						
79	0.1	0.2	99.5						
80	0.1	0.2	99.7						
81	0.1	0.2	99.9						
82	0.1	0.1	100.0						

For interpretation of factors, the component matrix was rotated using varimax procedure of rotation. This method is orthogonal method of rotation which minimizes the number of variables with high loadings on one factor and results into uncorrelated factors (Malhotra and Dash, 2011). Rotated component matrix is reported in the table 5.5

Table 5.5 : Rotated Component Matrix

Statement Code	Factor wise loading of statements									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
S72	0.433									
S40	0.451									
S73	0.503									
S28*	0.507									
S55	0.507									
S27*	0.509									
S39	0.529									
S85	0.540									
S51	0.558									
S47	0.559									
S46	0.565									
S56	0.608									
S92	0.662									
S90	0.696									
S48	0.721									
S91	0.747									
S86		0.386								
S67		0.451								
S75		0.485								
S76		0.490								
S68		0.513								
S71		0.524								

Statement Code	Factor wise loading of statements									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
S77		0.534								
S70		0.550								
S81		0.594								
S69		0.607								
S84		0.615								
S82		0.632								
S78		0.643								
S79		0.671								
S83		0.678								
S80		0.761								
S33			0.523							
S24			0.605							
S14			0.673							
S22			0.725							
S16			0.738							
S18			0.744							
S25			0.758							
S19			0.774							
S17			0.787							
S45				0.414						
S38				0.430						
S59				0.440						
S31				0.467						
S58				0.472						
S44				0.503						
S60				0.522						
S52				0.578						
S53				0.594						

Statement Code	Factor wise loading of statements									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
S43				0.644						
S41				0.665						
S42				0.673						
S8*					0.355					
S89*					0.399					
S10*					0.456					
S29*					0.470					
S30*					0.496					
S64*					0.608					
S61*					0.695					
S63*					0.727					
S62*					0.747					
S37						0.466				
S54						0.574				
S36						0.632				
S35						0.686				
S34						0.765				
S7							0.378			
S5							0.537			
S1							0.574			
S4							0.587			
S6							0.590			
S2							0.621			
S74								0.354		
S20*								0.411		
S11*								0.413		
S9*								0.435		
S32								0.444		

Statement Code	Factor wise loading of statements									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
S88									0.586	
S87									0.685	
S13										0.784
S12										0.860
Extraction Method: Principal Component Analysis.										
Rotation Method : Varimax with Kaiser Normalization Rotation converged in 13 iterations. *Reverse Coded										

As a result of factor analysis, ten factors emerged in the rotated component matrix (Table 5.5). Table 5.5 shows the factor wise loading of statements for example statements labeled S27, S28, S39, S40, S46, S47, S48, S51, S55, S56, S72, S73, S85, S90, S91, S92 loaded on Factor 1. Factor identification was based on the fact that items having highest correlation with a factor would define its conceptual meaning. Identified factors were named based on the portfolio of items that correlate the highest with it. After identification of the number of factors and the variables associated with each factor, the next step was to name the factors based on the variables that loaded heavily on them. Table 5.6 summarizes the statements of the scale, their loadings on the corresponding factors and factor names. A brief description of the factors is given as follows:

Factor 1: Perceived Organizational Support

Perceived Organizational Support accounted for **9.0 %** of the total explained variance. This factor consisted of 16 statements which were a mix of positively and negatively framed items. This factor was named as 'perceived organizational support' as it includes a diverse range of statements capturing the respondent's perception about opportunities for professional development and career growth, participation in decision making, respect and recognition, perceived organizational justice and overall satisfaction with the organization. According to Rothmann and Rothmann (2010) work engagement is best predicted by organisational support and growth opportunities. Saks (2006) found that employee work engagement can be

distinguished into two forms namely job engagement and organizational engagement. Both the forms of engagement are determined by a common factor, namely, perceived organizational support. Employees who perceive higher organizational support are more likely to reciprocate with greater levels of engagement in their job and in the organization.

Factor 2: Personal and Professional Orientation

This factor explained 8.4% variance with 16 statements that in essence sought to capture the respondents' orientation towards life in general and work related situations in particular. The statements gauged a variety of personal and professional aspects of the individual including optimism, resilience, organization based self esteem, self efficacy, individual efforts for professional development, perception of being cooperative and ability to handle multiple tasks. Hence this factor was named as 'Personal and Professional Orientation'.

Factor 3: Supervisory Coaching

This factor explained 7.6% variance with 9 statements that sought to gauge respondents' perception about the supervisor in terms of being approachable, giving regular feedback and guidance on performance improvement, encouragement for decision making, inspiration, developmental assistance, providing help with difficult tasks at work and being a role model. Hence, the name 'supervisory coaching' was used for this factor as it encompasses all aspects of coaching by the supervisor.

Factor 4 : Climate of Participation and Recognition

This factor explained 6.8% variance with 12 statements that sought to gauge respondents' perception about the existence of a climate of participation and recognition within the organization and its image as a socially responsible employer. The statements included in this factor assess clarity of organizational mission, norms, free flow of communication within and across departments, clearly defined career paths, openness for new ideas. This factor also included two statements about participation of the organization in community development programs, gauging whether inclusiveness spread across the organizational boundaries as good societal citizenship. Hence, this factor was named as 'climate of participation and recognition'.

Factor 5 : Organizational Orientation for Results

This factor explained 5.3% variance with 9 statements that sought to gauge respondents' perception about the organizational focus on results. All the statements tapped result orientation on two important parameters namely quality and quantity.

Factor 6 : Interaction with students

This factor explained 3.8% variance with 5 statements measuring the respondents' interaction with students in terms of bond with students, whether students approach for discussion of new ideas or problem solving, keep in touch even after passing out and the need to upgrade qualification, skills and knowledge. Hence, collectively these variables have been named as 'interaction with students'.

Factor 7 : Intrinsic Rewards

This factor explained 3.7% variance with 6 statements that mapped the respondents' perception about availability of interesting work, variety of tasks, satisfaction at the end of a work day, work being valuable for the organization, appreciation and personal goal accomplishment. Hence these have been collectively termed as intrinsic rewards. The findings are in line with those of Hulkko-Nyman et. al (2012) stating that nonmonetary rewards, especially a perception of appreciated work, were positively related to all aspects of work engagement.

Factor 8 : Empowerment

This factor explained 3.5% variance with 5 statements that gauged the respondents' perception about the existence of a feeling of being empowered with trust, decision making power, recognition, achievement and freedom to discuss work related matters. Hence, collectively the statements have been labeled as empowerment.

Factor 9 : Task variety

This factor explained 2.6% variance with 2 statements that measured the respondents' interest towards doing a variety of tasks rather than tasks of a single nature.

Factor 10 : Support from Associates

This factor explained 2.6% variance with 2 statements that mapped the respondents' perception about support from associates namely colleagues and subordinates.

The reliability coefficients Cronbach's alpha values were computed for all the factors (Table 5.7) and were above 0.6 which is acceptable for newly developed scales (Hair et al., 2009).

Table 5.6 : Factor Analysis Summary

Factor (variance explained)	Statement Label	Statement	Loading
Perceived Organizational Support (9.0%)	S91	I am satisfied with this organization as an employee.	0.747
	S48	I am satisfied with my salary.	0.721
	S90	I am satisfied with my present job.	0.696
	S92	I would recommend this organization to my friends / colleagues as a great place to work.	0.662
	S56	I have full faith that the organization takes right decisions pertaining to the employees.	0.608
	S46	The organization provides good opportunities for career advancement.	0.565
	S47	The organization provides facilities for employee training and development.	0.559
	S51	I am satisfied with my status in the organizational hierarchy.	0.558
	S85	Three years ahead I visualize myself working in the same org	0.54
	S39	The organization regularly gives me opportunities to attend conferences, seminars and Faculty Development programs.	0.529
	S27**	The criteria for deciding pay raise / promotion is not clear.	0.509

Factor (variance explained)	Statement Label	Statement	Loading
	S55	I get due recognition making me feel a valued member of this organization.	0.507
	S28**	I cannot see a relation between the pay raise / promotions awarded to employees and their performance.	0.507
	S73	I am duly respected in the organization.	0.503
	S40	Ever since I have joined this organization there is continuous upgradation in my knowledge and skills.	0.451
	S72	My opinions matter in the organization.	0.433
Personal and Professional Orientation (8.4%)	S80	I am always optimistic about my future.	0.761
	S83	Mostly I perceive situations to be positive.	0.678
	S79	Even when things are not right I try to play a positive role to salvage (save) the situation.	0.671
	S78	I usually expect the best even in situations of uncertainty.	0.643
	S82	Mostly I expect good things to happen.	0.632
	S84	I have set clear career goals for myself.	0.615
	S69	I can remain calm when facing difficulties.	0.607
	S81	Lot of good things keep happening to me in life.	0.594
	S70	I feel that I can handle many tasks at a time.	0.55
	S77	I am considered to be helpful and cooperative at work.	0.534
	S71	Even when I face any failure or disappointment I quickly come back to my normal state of mind.	0.524
	S68	It is easy for me to stick to my aims and accomplish my goals.	0.513
	S76	I am considered to be efficient at work.	0.49

Factor (variance explained)	Statement Label	Statement	Loading
	S75	I believe that I have made valuable contribution to the organization.	0.485
	S67	I am confident that I can deal efficiently with unexpected events.	0.451
	S86	I invest time, effort and money in my own learning and development.	0.386
Supervisory Coaching (7.6%)	S17	My immediate superior provides me personalized guidance and counseling whenever required.	0.787
	S19	My immediate superior helps me with difficult tasks at work.	0.774
	S25	My immediate superior guides me on improving performance.	0.758
	S18	My immediate superior is a role model for me.	0.744
	S16	My immediate superior makes efforts to help me develop myself.	0.738
	S22	My immediate superior inspires me to accept challenging tasks.	0.725
	S14	My immediate superior usually encourages me to take independent decisions.	0.673
	S24	My immediate superior gives me regular feedback about my performance.	0.605
	S33	I can freely approach my immediate superior to discuss any work related matter.	0.523
Climate of participation and recognition (6.8%)	S42	In this organization, the boundaries of acceptable conduct (do's and don'ts) are clearly defined for the employees.	0.673
	S41	The organization clearly communicates its mission to employees at all levels.	0.665
	S43	There is free flow of communication across different departments.	0.644

Factor (variance explained)	Statement Label	Statement	Loading
	S53	The organization regularly participates in community development programs in the local area.	0.594
	S52	The organization operates in a manner which is in the interest of the larger society.	0.578
	S60	The employees here do play a role in improving the policies, systems and procedures.	0.522
	S44	A clear cut career path is defined for the employees of this organization.	0.503
	S58	Whenever I share a new idea, my immediate superior gives me a thorough hearing.	0.472
	S31	There is free flow of communication across individuals of different ranks in my department.	0.467
	S59	I am encouraged to try new ideas without fear of negative consequences.	0.44
	S38	Employees who improve professional knowledge and skills are highly valued in this organization.	0.43
	S45	The nature of my job is such that my talent gets noticed by my seniors.	0.414
Organizational Orientation for Results (5.3%)	S62**	Responsibilities of people working together are not clearly distinguished.	0.747
	S63**	Some of the tasks that I have to do are non-productive.	0.727
	S61**	I have to sacrifice quality of work for quantity of work.	0.695
	S64**	Adequate staff is not available to ensure quality of work.	0.608
	S30**	There is not enough role clarity in my job.	0.496
	S29**	No special recognition is given to employees who work beyond their job profiles, in the larger interest of the organization.	0.47

Factor (variance explained)	Statement Label	Statement	Loading
	S10**	I do not have much choice in deciding the nature of work I have to perform.	0.456
	S89**	Over here, my talent is not being utilized appropriately.	0.399
	S8	I am not able to make regular improvements in the quality of my work.**	0.355
Interaction with students (3.8%)	S34	My students approach me to discuss their ideas.	0.765
	S35	My students approach me for sorting out their problems.	0.686
	S36	Students keep in touch with me even after passing out.	0.632
	S54	I experience a strong bond between me and my students.	0.574
	S37	My job requires me to upgrade my qualification, knowledge and skills continuously.	0.466
Intrinsic Rewards (3.7%)	S2	My work is interesting enough to spend my time and energy on it.	0.621
	S6	At the end of a work day I derive a sense of satisfaction from having done my work.	0.59
	S4	My job requires me to do a variety of tasks.	0.587
	S1	My work is valuable for the organization.	0.574
	S5	My job gives me a sense of accomplishment of my personal goals.	0.537
	S7	Usually I get compliments for performing competently.	0.378
Empowerment (3.5%)	S32	I feel free to discuss any work related matter in my work group.	0.444
	S9**	Usually I do not experience a feeling of achievement when I finish a task.	0.435
	S11	My job does not give me enough decision making power.**	0.413

Factor (variance explained)	Statement Label	Statement	Loading
	S20**	S/he does not recognize and reward cooperative behavior towards colleagues.	0.411
	S74	I am trusted by all sections of people in the organization.	0.354
Task Variety (2.6%)	S87	I like to do a variety of tasks rather than tasks of similar nature.	0.685
	S88	I am interested in events and activities other than teaching.	0.586
Support from Associates (2.6%)	S12	I can depend on the support of my colleagues in any work related issue.	0.86
	S13	I can depend on the support of my subordinates in any work related issue.	0.784

Note ** stands for negatively worded statement.

As per the objectives of the study, the next subject of interest was to analyse whether there is an associative relationship between work engagement and factors identified through factor analysis namely perceived organizational support, personal and professional orientation, supervisory coaching, climate of participation and recognition, organizational orientation for results, interaction with students, intrinsic rewards, empowerment, task variety, support from associates. Hence, correlation analysis was performed. The results are tabulated in Table 5.7

The results displayed in Table 5.7 revealed that the mean score for the factor 'interaction with students' (M = 4.94, SD = 0.70) is highest indicating that the respondents are the most satisfied on this factor as compared to all others. The mean is lowest for 'organizational orientation for results' (M = 3.06, SD = 1.06) indicating relatively lowest satisfaction on this aspect. Further the results of correlation matrix revealed that all the factors are significantly associated with work engagement. Highest correlation of work engagement was found with 'personal and professional orientation (PPO)' (r = .506, p <.05) and the lowest with 'support from associates (SA)' (r = .123, p< .05). It implies that work engagement is strongly associated with individual's orientation towards life in general and profession in particular. People who are generally optimistic, possess high levels of resilience and self efficacy are

Table 5.7: Mean, SD and inter-correlations between the independent dimensions of variables under study

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. POS	3.88	1.01	**(.91)**										
2. PPO	4.58	.67	.425**	**(.89)**									
3. SC	3.90	1.17	.458**	.296**	**(.90)**								
4. CPR	3.92	1.00	.743**	.484**	.608**	**(.89)**							
5. OOR	3.06	1.06	.554**	.206**	.315**	.476**	**(.80)**						
6. IS	4.94	.70	.281**	.505**	.221**	.329**	.152**	**(.75)**					
7. IR	4.80	.74	.408**	.504**	.305**	.402**	.344**	.362**	**(.75)**				
8. EMP	3.92	.99	.569**	.402**	.413**	.553**	.572**	.252**	.446**	**(.64)**			
9. TV	4.49	1.04	.068	.282**	.112*	.118*	-0.045	.161**	.168**	.128**	**(.61)**		
10. SA	3.72	1.41	.130**	.109**	.169**	.120**	.074	.110*	.125**	.013	.102*	**(.84)**	
11. WE	4.58	.87	.486**	.506**	.182**	.392 **	. 344**	. 390**	.478 **	. 396**	. 243**	.123**	**(.86)**

Notes: N=463, the reliability coefficients (α) are displayed in parentheses and appear in bold on the diagonal of correlation matrix.

POS : Perceived Organizational Support, **PPO** : Personal and Professional orientation, **SC:** Supervisory Coaching, **CPR:** Climate of participation and Recognition, **OOR:** Organizational orientation for Results, **IS** : Interaction with Students, **IR** : Intrinsic Rewards, **EMP** : Empowerment, **TV** : Task variety, **SA:** Support from Associates, **WE** : Work Engagement

likely to be more engaged in their work. Professional orientation of organization based self esteem, professional development, being cooperative and ability to handle multiple tasks bears a strong association with work engagement. Work engagement of the respondents was found to be weakly associated with support from associates, when other factors were available (Table 5.7).

In order to understand the direction of the relationship between work engagement and the factors identified through exploratory factor analysis, hierarchical multiple regression analysis was performed and results obtained are shown in Table 5.8. Work engagement was taken as the dependent variable and the ten factors were independent variables. The respondents' personal variables namely type of institution, faculty work area, place of posting, designation, total experience, current organization experience, age, gender, educational background, regional background and monthly salary were taken as control variables.

Table 5.8 reveals that work engagement is significantly predicted by perceived organizational support, personal and professional orientation, intrinsic rewards, task variety, interaction with students, organizational orientation for results and supervisory coaching. At the same time support from associates, empowerment and climate of participation and recognition were not found to be statistically significant in predicting work engagement, $p < .05$, adjusted $R^2 = 0.42$.The findings are in line with Bakker and Demerouti (2008) who demonstrated through their Job Demands and Resources Model that engagement is predicted by typical job resources and is related to personal resources. They are in conformity with Hakanen et. al (2006) who found that teachers who are able to avail job resources may become more engaged in their work. According to the results of the present study, perceived organizational support, intrinsic rewards, task variety, organizational orientation for results and supervisory coaching are the job resources which are significant in predicting work engagement. Personal and professional orientation is a vital personal resource driving work engagement. The factors identified in the present study can also be compared with the pioneering study of work engagement by Kahn (1990), stating that work engagement is determined by psychological meaningfulness, safety and availability. The findings of the present study establish that task variety and intrinsic rewards make the job psychologically meaningful. A positive perception of organizational support coupled with supervisory coaching

leads to psychological safety or a sense of being able to employ oneself without fear of negative consequences to self, career or status. Psychological availability to invest oneself fully in the work is determined by the coupling of organizational orientation for results with individual's personal and professional orientation. Kyriacou and Sutcliffe (1978) as well as Barkhuizen and Rothmann (2008) placed emphasis on the overwhelming evidence that academics throughout the world deal with a great degree of occupational stress, so, it is very vital for them to stay positively engaged in their work. Hence, it is all the more important to identify the specific factors that predict their work engagement, as done in the present study.

Table 5.8 : Result of Hierarchical Multiple Regression for testing the impact of independent variables on work engagement

Variable	**Work Engagement**			**Work Engagement**		
	Step 1			**Step 2**		
Step 1: *Control Variables*	***β***	***T***	***p- value***	***β***	***T***	***P value***
Constant	4.451	13.931	.000	0.300	.785	.433
Type of Institution	-.101	-1.547	.123	-.015	-.282	.778
Discipline	.118	2.477	.014	.076	2.006	.045
Posted at	.037	.573	.567	.056	1.085	.278
District	-.175	-3.596	.000	-.097	-2.458	.014
Designation	.138	1.924	.055	.009	.166	.868
Total Experience	.025	.260	.795	.008	.111	.912
Exp in Current Organization	-.016	-.194	.846	.007	.112	.911
Age	.074	.784	.434	.072	.976	.330
Gender	-.011	-.218	.827	-.012	-.302	.763
Doctorate Degree	.028	.491	.624	.024	.550	.583
Regional Background	-.013	-.273	.785	-.044	-1.145	.253
Monthly Salary	-.095	-1.109	.268	-.073	-1.066	.287

Variable	Work Engagement			Work Engagement		
	Step 1			Step 2		
Step 2: *Independent Variables*						
POS				.330	5.044	.000
PPO				.190	3.855	.000
SC				.140	2.986	.003
CPR				0.077	1.182	.238
OOR				.105	2.220	.027
IS				.120	2.841	.005
IR				.177	3.909	.000
EMP				.036	.716	.474
TV				.140	3.682	.000
SA				.010	.268	.789
F-Value			3.088*			16.556*
R^2			.076			.453
Adjusted R^2			.051			.426
ΔR^2						.377

Notes: N = 463, Standardized beta coefficients are reported in the regression table. * $p < .05$. POS : Perceived Organizational Support, PPO : Personal and Professional orientation, SC: Supervisory Coaching, CPR: Climate of participation and Recognition, OOR: Organizational orientation for Results, IS : Interaction with Students, IR : Intrinsic Rewards, EMP : Empowerment, TV : Task variety, SA: Support from Associates

5.2 MEASURES TO ENHANCE WORK ENGAGEMENT

Engaged employees perform better and are willing to go the extra mile. They out perform their less engaged colleagues in both in-role and extra role performance. The strong link between engagement and performance has been established by Bakker et al. (2006) and Xanthopoulou et al. (2007). Hence, it is equally critical to identify the measures for enhancement of work engagement.

The factors associated with work engagement are indicators of measures for enhancement of work engagement. In the present study, as per the results of correlation analysis the strongest relation was found with perceived organizational support. This factor also came out to be the highest predictor of work engagement, as per hierarchical multiple regression. Hence, there is definitely something that HR policy makers can do to enhance the perception of organizational support. Steps in the direction of ……could be instrumental in creating a positive perception about organizational support.

One of the objectives of the study was to identify the measures required for enhancement of work engagement amongst faculty members. For this purpose, the respondents were given a list of 11 statements and asked to rank the top five changes in order to work with better energy, dedication and involvement. They were to be ranked the order of preference giving rank 1 to the most preferred and rank 5 to the least preferred, 0 to others. To prepare a summary rank ordering, the mean rank scores were calculated for the entire sample (Table 5.9) and its demographic sub groups separately (Table 5.10 to 5.15). For the purpose of calculating mean rank score, only the non-zero responses were considered. The statements were assigned ranks from 1 to 11 on the basis of mean rank score by ordering them in ascending order of the mean rank score. The statement with the lowest mean was assigned rank 1 and that with the highest mean was assigned rank 11.

Table 5.9 shows the measures suggested by the respondents for enhancement of work engagement, with their preferences indicated by the rank. The top five changes recommended were, greater role clarity, more empowerment for decision making, better intrinsic rewards, more openness towards change and innovation and organizational support for career advancement. Apart from these the other five changes ranked on the basis of mean rank score included regular feedback on performance and performance based career growth, better opportunities for learning and development, improvement in quality of manpower available, more cooperation from colleagues, more open communication within and across departments, development oriented leadership.

Table 5.9: Measures for Enhancing Work Engagement

Code	Statement	N=463	
		Mean	Rank
S1	Greater role clarity is required	2.39	1
S2	More empowerment for decision making	2.76	2
S3	Better intrinsic rewards (interesting work, satisfaction from work, sense of progress at work)	2.82	3
S10	More openness towards change and innovation	2.96	4
S9	Organizational support for career advancement	3.05	5
S6	Regular feedback on performance and performance based career growth	3.12	6
S8	Better opportunities for learning and development	3.17	7
S11	Improvement in quality of manpower available	3.21	8
S4	More cooperation from colleagues	3.23	9
S7	More open communication within and across departments	3.30	10
S5	Development oriented leadership	3.37	11

In order to evaluate the consistency of response across the demographic sub groups of respondents, comparison was made according to gender, type of institution, designation, salary, faculty work area and district of posting. Spearman's rank correlation coefficient was calculated as it is a recommended non-metric correlation measure (Malhotra and Dash, 2011). Table 5.10 to 5.15 present the comparative ranking.

On making gender wise comparison, the top three measures preferred by both male and female faculty members were common. They expressed the need for greater role clarity, more empowerment and better intrinsic rewards. Thereafter, female faculty members preferred more open communication within and across departments and organizational support for career advancement. The male faculty members expressed the need for more cooperation from colleagues and development oriented leadership. On the whole, a significant positive correlation in response of male and female faculty members was observed on the basis of Spearman's rank correlation coefficient at 0.618 (Table 5.10).

Table 5.10: Gender based comparison of measures for enhancement of work engagement

Code	Statement	Female		Male	
		Mean	Rank	Mean	Rank
S1	Greater role clarity is required	2.45	1	2.33	1
S2	More empowerment for decision making	2.76	2	2.46	2
S3	Better intrinsic rewards (interesting work, satisfaction from work, sense of progress at work)	2.86	3	2.76	3
S7	More open communication within and across departments	3.00	4	3.21	7
S9	Organizational support for career advancement	3.08	5	3.33	9
S5	Development oriented leadership	3.09	6	3.12	5
S11	Improvement in quality of manpower available	3.10	7	3.45	11
S8	Better opportunities for learning and development	3.13	8	3.29	8
S4	More cooperation from colleagues	3.17	9	2.99	4
S6	Regular feedback on performance and performance based career growth	3.24	10	3.19	6
S10	More openness towards change and innovation	3.40	11	3.38	10
Spearman's rank correlation coefficient = 0.618*; *Correlation is significant at the 0.05 level (2-tailed)					

Table 5.11 shows the comparison of measures for enhancement of work engagement according to type of institution. It is noteworthy that the ranking of measures suggested by faculty members of government institutions is not significantly correlated with those of private institutions, according to Spearman's rank correlation coefficient (0.509). It indicates that the two types of HEIs need to prioritize differently in order to engage the faculty members. Government and government aided Higher Education Institutions need to focus on providing greater role clarity, empowerment, open communication, more cooperation from colleagues and better opportunities for learning and development. Private sector HEIs need to

pay attention to better intrinsic rewards in terms of interesting work, satisfaction from work and a sense of progress at work along with better organizational support for career advancement. Nevertheless, they too need to work upon greater role clarity, empowerment and open communication within and across departments. This is a clear direction for the policy makers of the two types of HEIs aiming at having a work engaged faculty team.

Table 5.11: Comparison of measures for enhancement of work engagement according to type of institution

Code	Statement	Government and Government Aided HEIs		Private HEIs	
		Mean	Rank	Mean	Rank
S1	Greater role clarity is required	2.57	1	2.17	1
S2	More empowerment for decision making	2.58	2	2.86	2
S7	More open communication within and across departments	2.67	3	2.88	4
S4	More cooperation from colleagues	2.75	4	3.22	9
S8	Better opportunities for learning and development	3.16	5	3.21	8
S9	Organizational support for career advancement	3.23	6	2.93	5
S6	Regular feedback on performance and performance based career growth	3.24	7	3.33	10
S11	Improvement in quality of manpower available	3.27	8	3.19	7
S3	Better intrinsic rewards (interesting work, satisfaction from work, sense of progress at work)	3.28	9	2.88	3
S10	More openness towards change and innovation	3.47	10	3.42	11
S5	Development oriented leadership	3.52	11	3.13	6
Spearman’s rank correlation coefficient = 0.509					

Table 5.12: Comparison of measures for enhancement of work engagement according to designation

Code	Statement	Lecturer		Asst. Prof.		Asso. Prof		Prof.		HOD	
		Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
S1	Greater role clarity is required	2.24	1	2.40	1	2.93	5	2.50	2	1.00	1
S2	More empowerment for decision making	3.27	10	2.70	2	2.82	3	2.71	3	2.00	2
S3	Better intrinsic rewards	2.72	2	2.92	4	2.79	1	2.24	1	2.25	3
S4	More cooperation from colleagues	3.00	4	2.99	5	3.50	10	3.14	5	2.71	4
S5	Development oriented leadership	3.41	11	3.24	9	3.09	6	2.93	4	3.33	5
S6	Regular feedback on performance and performance based career growth	3.11	6	3.42	11	3.25	8	3.56	11	3.50	6
S7	More open communication within and across departments	2.93	3	2.86	3	3.13	7	3.23	7	3.80	7
S8	Better opportunities for learning and development	3.16	7	3.14	8	3.26	9	3.15	6	3.83	8
S9	Organizational support for career advancement	3.24	8	3.11	7	2.80	2	3.45	9	4.00	9
S10	More openness towards change and innovation	3.26	9	3.36	10	2.83	4	3.45	10	4.14	10
S11	Improvement in quality of manpower available	3.10	5	3.02	6	3.73	11	3.43	8	4.25	11
Spearman's rank correlation coefficients: Lecturer and Assistant Prof : 0.536 Lecturer and Asso. Prof : -0.127 Lecturer and Prof : 0.300 Lecturer and HOD : 0.291											
Assistant Prof and Asso. Prof : 0.218 Assistant Prof. and Professor : 0.709* Assistant Prof and HOD: 0.600 Asso. Prof. and Professor: 0.318 Asso. Prof and HOD : 0.327 Professor and HOD : 0.791* *Correlation is significant at the 0.05 level (2-tailed)											

Table 5.12 shows a comparison of measures for enhancement of work engagement according to designation. A significant correlation was found in the measures suggested by Professors and Heads of Departments (Spearman's rho= 0.791) as well as Assistant Professors and Professors (Spearman's rho= 0.709). Since there was no significant correlation in the measures suggested by all other designations, it indicates that the Higher Education Institutions might need to take designation or cadre specific measures for enhancing the work engagement of faculty members. Placed at starting rung of teaching hierarcy, the lecturers expressed a strong need for role clarity, intrinsic rewards, open communication, cooperation from colleagues and improvement in quality of manpower. The Assistant Professors emphasized upon the need for empowerment, over and above these measures. The Associate Professors gave top most priority to the need for intrinsic rewards for example meaningful, interesting and valuable work. They were also keen that the organization should provide support for career advancement and be more open towards change and innovation. It indicates that if HEIs can take special measures to address the dynamic needs of faculty members as they progress through the organizational hierarchy, it can lead to an enhancement in their work engagement.

Table 5.13 shows a comparison of measures for enhancement of work engagement according to respondent's salary. The results indicate that there is very low consistency in the preferred measures for enhancement of work engagement of faculty members falling in various salary brackets. Those in the salary bracket of upto Rs. 30,000 p.m stated maximum need for opportunities for learning and development followed by role clarity, development oriented leadership, performance feedback and performance based career growth. The next category consisting of faculty members drawing Rs. 30001 to 50000, gave top most priority to better opportunities for learning and development, followed by intrinsic rewards, better communication, more openness to change and role clarity. Similarly the priorities of other categories varied. A significantly consistent response was found from the categories drawing 30,001 to 50,000 and 50,001 to 70,000 with Spearman's rho at 0.691. Hence, it implies that the work engagement measures need to be customized according to salary bracket.

Table 5.13: Comparison of measures for enhancement of work engagement according to respondents' salary

Code	Statement	Upto 30,000		30,001 to 50,000		50,001 upto 70,000		70,001 upto 90,000		90,001 to 1,10,000		> 1,10,000	
		Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
S1	Greater role clarity is required	2.74	2	2.97	5	2.94	5	4.00	11	2.09	1	1.40	1
S2	More empowerment for decision making	3.38	10	3.19	7	3.21	8	3.46	8	3.08	5	2.00	2
S3	Better intrinsic rewards	3.06	5	2.59	2	2.28	2	2.93	5	3.09	6	2.30	3
S4	More cooperation from colleagues	3.25	9	3.45	11	3.93	11	2.64	2	3.64	9	2.50	4
S5	Development oriented leadership	2.82	3	3.35	10	3.08	6	2.93	6	3.38	7	3.00	5
S6	Regular feedback on performance and performance based career growth	3.02	4	3.34	9	3.20	7	2.92	4	4.00	11	3.00	6
S7	More open communication within and across departments	3.09	7	2.76	3	2.77	4	2.70	3	3.67	10	3.38	7
S8	Better opportunities for learning and development	2.31	1	2.44	1	2.17	1	2.56	1	2.31	2	3.43	8
S9	Organizational support for career advancement	3.52	11	3.10	6	2.73	3	3.59	9	3.45	8	3.63	9

Code	Statement	Upto 30,000		30,001 to 50,000		50,001 upto 70,000		70,001 upto 90,000		90,001 to 1,10,000		> 1,10,000	
		Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
S10	More openness towards change and innovation	3.17	8	2.85	4	3.76	10	3.00	7	2.78	4	3.88	10
S11	Improvement in quality of manpower available	3.07	6	3.22	8	3.23	9	3.60	10	2.69	3	3.89	11
	Upto 30,000 and 30,001 to 50,000 = 0.245 Upto 30,000 and 70,001 to 90,000 = 0.182 Upto 30,000 and >1,10,000 = 0.164							Upto 30,000 and 50,001 to 70,000 = 0.409 Upto 30,000 and 90,001 to 1,10,000 = 0.382					
	30,001 to 50,000 and 50,001 to 70,000 = 0.691* 30,001 to 50,000 and 90,001 to 110,000 = 0.400							30,001 to 50,000 and 70,001 to 90,000 = 0.136 30,001 to 50,000 and >1,10,000 = -0.109					
	50,001 to 70,000 and 70,001 to 90,000 = 0.173 50,001 to 70,000 and >1,10,000 = 0.082							50,001 to 70,000 and 90,001 to 110,000 = 0.109					
	70,001 to 90,000 and 90,001 to 110,000 = -.445							70,001 to 90,000 and >1,10,000 = -0.018					
	90,001 to 110,000 and >1,10,000 = 0.009												

Table 5.14: Comparison of measures for enhancement of work engagement according to faculty work area

Code	Statement	CBM		SET		AMS		EHUM	
		Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
S1	Greater role clarity is required	2.59	1	2.66	2	2.10	1	2.11	1
S2	More empowerment for decision making	3.34	9	3.03	6	2.59	2	2.69	2
S3	Better intrinsic rewards	2.88	4	2.67	3	2.83	3	2.95	3
S4	More cooperation from colleagues	3.14	6	3.00	5	3.27	10	3.03	4
S5	Development oriented leadership	2.73	3	2.63	1	3.03	6	3.03	5
S6	Regular feedback on performance and performance based career growth	3.52	11	3.49	10	3.19	9	3.17	6
S7	More open communication within and across departments	3.43	10	3.06	7	3.03	5	3.22	7
S8	Better opportunities for learning and development	3.32	8	3.25	9	3.02	4	3.25	8
S9	Organizational support for career advancement	2.66	2	3.52	11	3.60	11	3.31	9
S10	More openness towards change and innovation	2.90	5	2.80	4	3.15	8	3.40	10
S11	Improvement in quality of manpower available	3.15	7	3.22	8	3.05	7	3.44	11
Spearman's rank correlation coefficient for: CBM and SET = 0.500 CBM and AMS= 0.045 CBM and EHUM = 0.173									
SET and AMS = 0.482 SET and EHUM = 0.545									
AMS and EHUM = 0.591									

Above Table 5.14 shows a comparison of measures for enhancement of work engagement according to faculty work area. The results reveal that there was no significantly consistent response from any two categories, on the basis of Spearman's rho. It indicates that one way the HR policy makers of Higher Education Institutions can better understand faculty requirements is paying attention to the faculty work area as an important issue can create a more engaged faculty team, by customizing the engagement measures according to faculty work area. For example while the faculty from science, engineering and technology gave maximum importance to development oriented leadership, all others stated the requirement for greater role clarity.

Table 5.15 below shows a comparison of measures for enhancement of work engagement according to faculty members posting in terms of district. The results reveal that there was significantly consistent response from Jalandhar and Amritsar (Spearman's rho= 0.655) as well as Amritsar and Bathinda (Spearman's rho= 0.645), on the basis of Spearman's rho.

In addition to ranking the given statements, the respondents also gave a lot of open ended suggestions for improvement of work engagement. These include, greater transparency, more importance to everyday work rather than research, greater empowerment, recognition for good work, more preference to quality, encouragement to organization citizenship behavior, more emphasis on quality teaching, more opportunities for faster career growth for those who can take challenges, performance linked career growth, more platforms for interaction between students and teachers besides the classroom teaching, job security, growth in remuneration to keep pace with inflation, competitive employee welfare measures, better opportunities for interaction with leadership, resource availability & technology upgradation for better performance of work, better working environment and regular goal setting of employees in co-ordination with higher level management.

Table 5.15: Comparison of measures for enhancement of work engagement according to respondents' district of posting

Code	Statement	Jalandhar		Ludhiana		Amritsar		Bathinda		Patiala		Chandigarh	
		Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
S1	Greater role clarity is required	2.67	1	2.50	1	2.40	1	2.18	1	2.00	1	2.48	1
S2	More empowerment for decision making	2.82	4	3.45	11	2.58	2	2.64	4	2.19	2	2.75	3
S3	Better intrinsic rewards	2.88	6	3.00	5	2.64	3	2.51	3	3.03	3	2.88	7
S4	More cooperation from colleagues	3.60	10	3.14	7	3.32	8	3.22	6	3.11	4	2.87	6
S5	Development oriented leadership	3.71	11	2.98	4	3.84	11	3.52	8	3.37	9	2.98	8
S6	Regular feedback on performance and performance based career growth	3.20	9	2.57	2	3.11	5	3.89	11	3.37	8	3.23	9
S7	More open communication within and across departments	3.06	8	3.14	8	3.67	9	2.74	5	3.13	5	3.66	11
S8	Better opportunities for learning and development	2.80	3	3.02	6	3.20	7	3.57	9	3.19	7	3.61	10
S9	Organizational support for career advancement	2.68	2	3.26	10	3.15	6	3.50	7	3.64	11	2.85	5
S10	More openness towards change and innovation	2.86	5	3.21	9	3.09	4	2.29	2	3.38	10	2.79	4

Code	Statement	Jalandhar		Ludhiana		Amritsar		Bathinda		Patiala		Chandigarh	
		Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
S11	Improvement in quality of manpower available	3.00	7	2.95	3	3.75	10	3.57	10	3.16	6	2.71	2
Spearman's rank correlation coefficient =													
Jalandhar and Ludhiana = -0.191						Jalandhar and Amritsar = 0.655*							
Jalandhar and Bathinda = 0.427						Jalandhar and Patiala = 0.155							
Jalandhar and Chandigarh = 0.455													
Ludhiana and Amritsar = -0.073						Ludhiana and Bathinda = -0.255							
Ludhiana and Patiala = 0.200						Ludhiana and Chandigarh = 0.045							
Amritsar and Bathinda = 0.645*						Amritsar and Patiala = 0.445							
Amritsar and Chandigarh = 0.436													
Bathinda and Patiala = 0.464						Bathinda and Chandigarh = 0.409							
Patiala and Chandigarh = 0.291													

5.3 CHAPTER SUMMARY

This chapter deals with identification of the factors affecting faculty work engagement and measures for its enhancement. A self developed, pretested questionnaire consisting of 92 statements was crafted to seek response on a 7 point Likert scale. Descriptive statistics were closely examined. Exploratory factor analysis was used for reducing a larger set of variables to a smaller set. Reliability coefficient cronbach's alpha were computed for all the factors and were above the minimum acceptable limit. Correlation analysis was performed to study whether there is an associative relationship between work engagement and factors identified through factor analysis. Hierarchical multiple regression analysis was conducted to study the direction of relationship between the ten factors as independent variables and work engagement as dependent variable, while taking the personal variables as control variables. Thus the factors affecting work engagement were identified. The measures for enhancement of work engagement amongst faculty members employed in HEIs were suggested.

Descriptive statistical analysis revealed that the respondents appeared to be highly satisfied on very few parameters like interesting and meaningful work; interaction with students for solving problems; requirement of job to upgrade qualification, skills and knowledge. They were satisfied on parameters like task variety, sense of accomplishment of personal goals, intrinsic satisfaction from work, compliments for good performance, challenging work, accountability, open communication with peers, opportunities for self development, employer as a responsible social citizen and encouragement to new ideas. They were dissatisfied on aspects like transparency in performance appraisal, recognition for 'going the extra mile', employee benefits and talent utilization. On most other aspects, which are quite vital, the respondents were on the borderline i.e neither satisfied nor dissatisfied. These include, having a choice in the nature of work, support of colleagues and subordinates, supervisory coaching, recognition and rewards, performance feedback, role clarity, open communication, salary, status, job security, sacrifice quality for quantity and rigidity of policies and systems.

As a result of exploratory factor analysis 92 statements emerged into **ten** factors namely perceived organizational support, personal and professional

orientation, supervisory coaching, climate of participation and recognition, organizational orientation for results, interaction with students, intrinsic rewards, empowerment, task variety, support from associates. The next subject of interest was to analyse whether there is an associative relationship between work engagement and factors identified through factor analysis. Hence, correlation analysis was performed. The results of correlation matrix revealed that all the factors are significantly associated with work engagement. Highest correlation of work engagement was found with 'personal and professional orientation and the lowest with 'support from associates'. It implies that work engagement is strongly associated with individual's orientation towards life in general and profession in specific. Work engagement of the respondents was found to be weakly associated with support from associates, when other factors were present and available.

In order to understand the direction of the relationship, hierarchical multiple regression analysis was performed. The results revealed that work engagement is significantly predicted by perceived organizational support, personal and professional orientation, intrinsic rewards, task variety, interaction with students, organizational orientation for results and supervisory coaching. At the same time support from associates, empowerment and climate of participation and recognition were not found to be statistically significant in predicting work engagement. The findings are in line with Bakker and Demerouti (2008) who demonstrated through their Job Demands and Resources Model that engagement is predicted by typical job resources and is related to personal resources. It is in conformity with Hakanen et. al (2006) who found that teachers who are able to avail job resources may become more engaged in their work. According to the results of the present study, the job resources that predict faculty work engagement are perceived organizational support, intrinsic rewards, task variety, organizational orientation for results and supervisory coaching. Personal and professional orientation is a vital personal resource driving work engagement. The factors identified in the present study were also be compared with the pioneering study of work engagement by Kahn (1990). Given the backdrop of the observations of Kyriacou & Sutcliffe (1978) and Barkhuizen & Rothmann (2008) teaching profession is known for having many job demands. Academics around the world face a high degree of occupational stress which makes it vital them to stay work engaged. Hence, it is equally important to

identify the specific factors that predict teachers' work engagement, as done in the present study. Finally, the measures for enhancement of work engagement were suggested on the basis of work engagement factors and respondents suggestions. The top five changes recommended in the order to priority were, greater role clarity, more empowerment for decision making, better intrinsic rewards, more openness towards change and innovation and organizational support for career advancement. Interestingly it was found if HEIs in Punjab can customize the engagement measures according the type of institution, designation, salary bracket and faculty work area, they can be more effective in having a work engaged faculty team.

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CHAPTER – 6

RESULTS AND DISCUSSION: RELATIONSHIP OF WORK ENGAGEMENT WITH JOB CRAFTING, WORK-LIFE BALANCE, WORK STRESS AND ORGANIZATIONAL COMMITMENT

CHAPTER – 6

RESULTS AND DISCUSSION: RELATIONSHIP OF WORK ENGAGEMENT WITH JOB CRAFTING, WORK-LIFE BALANCE, WORK STRESS AND ORGANIZATIONAL COMMITMENT

This chapter deals with the study of the relationship of the level of work engagement with job crafting, work - life balance, work stress and organizational commitment. Accordingly the chapter is divided into four sections: Section 6.1 deals with the study of relationship between work engagement and job crafting; Section 6.2 deals with the study of relationship between work engagement and work - life balance; Section 6.3 deals with the study of relationship between work engagement and work stress; Section 6.4 deals with the study of relationship between work engagement and organizational commitment.

Work engaged employees seem to perceive work as a calling rather than simply a means of livelihood. They are passionate and absorbed in their work deriving intrinsic pleasure from it. This notion about work is bound to have an impact on many aspects of an employee's life. It is closely associated with initiatives to influence the job structure, social environment or attitude towards work in order to establish a better person-job fit. Various studies reveal that high levels of work engagement are associated with high levels of performance, organizational commitment and individual wellbeing (Christian et al.,2011; Hakanen & Schaufeli, 2012; Soane 2013). Hence, there is a need for a deeper analysis of work engagement in relation with other aspects of work life.

6.1 RELATIONSHIP BETWEEN WORK ENGAGEMENT AND JOB CRAFTING

Employees working in present-day organizations are likely to have at least some opportunity to modify and craft their jobs (Oldham & Hackman, 2010). Job crafting is a bottom-up approach, with employees taking initiative to align work with their personal preferences and abilities (Tims & Bakker, 2010). According to Wrzesniewski and Dutton (2001), job crafting complements the customary focus on

top-down job redesign techniques. It permits employees to modify the meaning of their work or their work identity by proactively changing the social work environment or characteristics of the job. Job crafting includes modification in what one does in the form of job, one's approach towards work or manner of interaction with others (Tims et. al, 2013). According to Berg et. al (2010) and Lyons (2008) employees are proactive to craft certain job characteristics for a better person-job fit. As per the objectives of the current study, relationship between job crafting as an independent variable and work engagement as a dependent variable was investigated. A twelve item scale based on Job Crafting Scale developed by Tims et al. (2012) was used to measure job crafting initiatives on a seven point Likert scale ranging from 0 indicating 'never' to 6 indicating 'always or everyday'. Descriptive statistics of response on the job crafting scale were computed. Exploratory Factor Analysis was done to identify the factors constituting job crafting. Scale reliability was assessed by calculating Cronbach's alpha coefficient. Correlation analysis was done to study whether there is an associative relationship between job crafting as an independent variable and work engagement as a dependent variable. The direction of association was investigated through hierarchical multiple regression analysis.

Table 6.1 shows the descriptive statistics. The highest mean response, 5 and above, was on aspects like 'I try to learn new things at work' and 'I make sure that I use my capacities to the maximum' On the other hand relatively lower mean response, between 3 to less than 4, was on aspects like 'I ask whether my supervisor is satisfied with my work'; 'I ask others for feedback on my job performance' and 'I approach my supervisor for inspiration, coaching and advice'. It implies that faculty members make relatively less frequent efforts to seek feedback and suggestions from their supervisors or colleagues for enhancing performance. On all other aspects namely taking initiative in new projects, updating with new developments, starting new projects and self development efforts, the response was moderate, between 4 to 5.

Table 6.1 : Descriptive statistics (Job Crafting)

					N= 463
St. Code	**Statement**	**Min.**	**Max.**	**Mean**	**S.D**
S1	When an interesting project comes along, I offer my services proactively.	0	6	4.47	1.327
S2	If there are new developments in my field, I am one of the first to learn about them and try them out.	0	6	4.36	1.283
S3	When there is not much to do at work, I see it as a chance to start new projects.	0	6	4.19	1.306
S4	I approach my supervisor for inspiration, coaching and advice.	0	6	3.97	1.487
S5	I ask whether my supervisor is satisfied with my work.	0	6	3.69	1.607
S6	I ask others for feedback on my job performance.	0	6	3.68	1.596
S7	I ask colleagues for advice.	0	6	4.04	1.300
S8	I try to develop my capabilities.	0	6	4.87	1.084
S9	I try to develop myself professionally.	0	6	4.97	1.079
S10	I try to learn new things at work.	0	6	5.07	1.079
S11	I make sure that I use my capacities to the maximum.	0	6	5.11	1.039
S12	I decide on my own how to do things.	0	6	4.64	1.230

The appropriateness of factor analysis was determined by The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy which was 0.827 (Table 6.2) which is well above the minimum criteria of 0.5 (Malhotra and Dash, 2011). Bartlett's test of sphericity having null hypothesis that the variables are uncorrelated in the population or the correlation matrix is an identity matrix, was rejected on the basis of significance value .000.

Table 6.2 : KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.827
Bartlett's Test of Sphericity	Approx. Chi-Square	2817.12
	Df	66
	Sig.	.000

An exploratory factor analysis was undertaken to examine the factors constituting job crafting. Principal components method was adopted for extraction, with the varimax option which converged in five rotations and factors with eigen values greater than one were retained (Hair et al. 1998). Once the dimensionalities of the instrument were verified, the internal consistencies of the scales were checked with reliability analysis.

Table 6.2.1 shows factor loadings for each item along with the eigen values, percentage of variance explained and the cumulative percentages of the variance explained. Exploratory Factor analysis of the items resulted in three dimensions of job crafting scale. Since the scale used in the present study was adapted from the job crafting scale developed by Tims et al. (2012), the three dimensions were operationalised as ‘increasing structural job resources’, ‘increasing social job resources’ and ‘increasing challenging job demands’. Table 6.2.1 demonstrates a robust three factor solution. According to Tims et al (2012), the factor increasing structural job resources refers to acquiring job related resources like autonomy, task variety, skill variety, opportunity for development etc. Social job resources include social aspects of the job for example social support, supervisory coaching and feedback. Challenging job demands include proactive participation in new projects, making efforts to stay updated with the latest developments in the field, taking initiative in doing new or extra tasks.

Table 6.2.1 : Factor Analysis of Job Crafting Scale

Statement Label		Factor 1	Factor 2	Factor 3
	Eigen Value	4.861	1.982	1.221
	%age of Variance explained	40.51	16.51	10.17
	Cumulative %age of Variance explained	40.51	57.02	67.2
S 8	I try to develop my capabilities.	.866		
S 9	I try to develop myself professionally.	.903		
S10	I try to learn new things at work.	.851		
S11	I make sure that I use my capacities to the maximum.	.682		
S12	I decide on my own how to do things.	.441		
S 4	I approach my supervisor for inspiration, coaching and advice.		.795	
S 5	I ask whether my supervisor is satisfied with my work.		.836	
S 6	I ask others for feedback on my job performance.		.830	
S 7	I ask colleagues for advice.		.640	
S1	When an interesting project comes along, I offer my services proactively.			.831
S2	If there are new developments in my field, I am one of the first to learn about them and try them out.			.794
S3	When there is not much to do at work, I see it as a chance to start new projects.			.679

Having verified the dimensionality of the scale, the constructs were assessed for reliability. The scale reliability was estimated using Cronbach's alpha coefficient. Cronbach's alpha values for the three factors were 0.862 for increasing structural job resources, 0.809 for increasing social job resources and 0.768 for increasing challenging job demands. The reliability estimates were above the acceptable limit of 0.70 (Hair et al., 2009).

As per the objectives of the study, the next subject of interest was to analyse whether there is an associative relationship between work engagement and job crafting. Hence, correlation analysis was performed. The results displayed in Table 6.3 revealed that the mean score was highest for the job crafting dimension 'increasing structural job resources' (*M* =4.93, *SD* = 0.88). It indicated that faculty members made relatively more frequent efforts to seek autonomy, variety of tasks, skills and opportunities for development. The mean score was lowest for the job crafting dimension 'increasing social job resources' (*M* = 3.84, *SD* = 1.19). It indicated that faculty members invested relatively lower efforts on modifying the social aspects of the job for example seeking support from colleagues, coaching and performance feedback from supervisors. As far as the third dimension of job crafting namely, 'increasing challenging job demands' is concerned the mean was moderate (M=4.34 SD=1.07) indicating that faculty members make moderate efforts to seek challenge at work in the form of proactive participation in new projects, staying updated with the latest developments in the field and taking initiative in doing new or extra tasks. Further, the results of correlation matrix revealed that all the dimensions of job crafting were significantly associated with work engagement. It implies that efforts towards all dimensions of job crafting are likely to enhance faculty work engagement. Highest correlation was found with 'increasing structural job resources (JC_STR)' (r = .566, p <.05) and the lowest with 'increasing social job resources (JC_SOC)' (r = .139, p< .05). Hence faculty work engagement is likely to be enhanced with efforts to seek autonomy, task variety, skill variety, opportunities for development. Faculty initiatives in seeking new projects, staying updated with the latest developments in the field and doing new or extra tasks is also likely to significantly enhance work engagement.

Table 6.3: Mean, SD and inter correlations between the independent dimensions of variables under study.

Variables	**Mean**	**SD**	**1**	**2**	**3**
1. JC_STR	4.93	.88	**(0.86)**		
2. JC_SOC	3.84	1.19	.309**	**(.80)**	
3. JC_CJD	4.34	1.07	.536**	.340**	**(.76)**
4. WE	4.58	.87	.566**	.139**	.459**
** Correlation is significant at 0.01 level					

In order to understand the direction of the relationship between job crafting dimensions as independent variables and work engagement as dependent variable, hierarchical multiple regression analysis was performed and results obtained are shown in Table 6.4. The respondents' personal variables namely type of institution, faculty work area, place of posting, designation, total experience, current organization experience, age, gender, educational background, regional background and monthly salary were taken as control variables. The hypothesis $\mathbf{H_{0(12)}}$ was tested.

$H_{0(12)}$: There is no significant relationship between job crafting and work engagement.

$\mathbf{H_{0(12)}}$ was rejected on the basis of results obtained.

Table 6.4 : Result of Multiple Hierarchical Regression for testing the impact of job crafting on work engagement

Variable	**Work Engagement**			**Work Engagement**		
	Step 1			**Step 2**		
Step 1: *Control Variables*	***B***	***T***	***p- value***	***B***	***T***	***p- value***
Constant	4.451	13.931	.000	1.625	4.904	.000
Type of Institution	-.101	-1.547	.123	-.040	-.752	.452
Discipline	.118	2.477	.014	.040	1.022	.308
Posted at	.037	.573	.567	.003	.055	.956
District	-.175	-3.596	.000	-.110	-2.723	.007
Designation	.138	1.924	.055	.095	1.623	.105
Total Experience	.025	.260	.795	-.038	-.490	.625
Exp in CO	-.016	-.194	.846	-.010	-.160	.873
Age	.074	.784	.434	.122	1.585	.114
Gender	-.011	-.218	.827	-.022	-.553	.581
Doctorate	.028	.491	.624	-.003	-.066	.947
Regional BG	-.013	-.273	.785	.015	.392	.695
Monthly Salary	-.095	-1.109	.268	-.043	-.612	.541

Variable	Work Engagement			Work Engagement		
	Step 1			Step 2		
Step 2: *Independent Variables*						
JC_STR				.423	9.145	.000
JC_SOC				-.059	-1.438	.151
JC_CJD				.249	5.393	.000
F-Value			3.088			19.234
R^2			0.076			0.392
Adjusted R^2			0.051			0.372
ΔR^2						0.316

Notes: N = 463, Standardized beta coefficients are reported in the regression table. * $p < .05$.

Table 6.4 reveals that work engagement is predicted by job crafting with significant F value. Multiple hierarchical regression analysis revealed that work engagement of faculty members was significantly predicted by two constituents of job crafting, namely, increasing structural job resources and challenging job demands. At the same time increasing social job resources did not significantly predict work engagement, $p < .05$, adjusted $R^2 = 0.372$. It implies that work engagement is likely to increase with a bottom –up approach wherein faculty members are encouraged to use a two pronged strategy to alter their job design. One set of initiatives they can take include seeking structural job resources like autonomy, task and skill variety and opportunities for self development. Another set of efforts include seeking challenging job demands by volunteering for new projects, keeping abreast of the most recent developments, taking initiative to start new projects and extra tasks.

The results obtained regarding the relationship between job crafting and work engagement, carry unique significance when viewed in the light of findings of Gruman and Saks (2011) who proposed that job crafting may lead to higher levels of work engagement and ultimately performance, when managers are able to communicate clear goals. Tims et. al (2013) concluded that job crafting can be used both at the team and individual levels simultaneously, for higher work engagement

and performance. In the light of previous research, the results of the current study have important implications for HR policy design. Work engagement of faculty members is likely to increase if they are given opportunities to craft their jobs by increasing structural job resources like having the autonomy to design the curriculum, opting for a desired blend of teaching, research and administrative responsibilities and choosing the required faculty development programs. Work engagement will also be enhanced when faculty members opt for challenging job demands like introducing new courses in the curriculum, adopting innovative teaching methods for example a blend of class room teaching with online education, experimenting with novel methods of evaluation for example open book exams and many more. Such job crafting initiatives are likely to enhance faculty work engagement, substantially.

6.2 RELATIONSHIP BETWEEN WORK ENGAGEMENT AND WORK LIFE BALANCE

The term "time bind" was coined by Hochschild (1997) to describe a number of situations in which workers prefer dividing their time between work and personal life in a manner which is different from the current state but find it difficult to do so or are unable to do so. Tausig and Fenwick (2001) suggested that time bind can be understood as a perceived imbalance between work and family/personal life. The opposite of a time bind is a sense of work-life balance. As per the objectives of the current study, relationship between work life balance as an independent variable and work engagement as a dependent variable was investigated. Work-life balance was measured with the 15 item work-life balance scale developed by Hayman (2005). Response was sought on a seven point Likert scale ranging from 0 indicating never to 6 indicating always or everyday. Descriptive statistics of response on the work life balance scale were computed. Exploratory Factor Analysis was done to identify the factors constituting work life balance. Scale reliability was assessed by calculating Cronbach's alpha coefficient. Correlation analysis was done to study whether there is an associate relationship between work life balance as an independent variable and work engagement as a dependent variable. The direction of association was investigated through hierarchical multiple regression analysis.

Table 6.5 shows the descriptive statistics of response on the work life balance scale. The mean response on various statements regarding negative impact of work life on personal life was between 3 to 4, indicating that it happened sometimes to often. The negative impact of personal life on work life was between 4 to 5 indicating that, it happened often to very often. The mutually supporting impact of work and personal life on each other was rated in the range of 4 to 5 that is often to very often.

Table 6.5 : Descriptive Statistics (Work - life Balance)

Statement Label	Statement	Min.	Max.	Mean	S.D
S1	My personal life suffers because of work.	0	6	3.49	1.590
S2	My job makes personal life difficult.	0	6	3.80	1.573
S3	I neglect personal needs because of work.	0	6	3.46	1.634
S4	I put personal life on hold for work.	0	6	3.30	1.557
S5	I miss personal activities because of work.	0	6	3.32	1.603
S6	I struggle to juggle work and non work.	0	6	3.71	1.502
S7	I am happy with the amount of time for non work activities.	0	6	3.35	1.486
S8	My personal life drains me of energy for work.	0	6	3.76	1.562
S9	I am too tired to be effective at work.	0	6	4.18	1.477
S10	My work suffers because of my personal life.	0	6	4.67	1.317
S11	It is hard to work because of personal matters.	0	6	4.59	1.347
S12	My personal life gives me energy for my job.	0	6	4.27	1.427
S13	My job gives me energy to pursue personal activities.	0	6	3.88	1.567
S14	I have a better mood at work because of personal life.	0	6	4.43	1.400
S15	I have a better mood because of my job.	0	6	4.24	1.439
N = 463					

The appropriateness of factor analysis was determined by The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. The value of KMO was 0.882 (Table 6.6) which is well above the minimum criteria of 0.5 (Malhotra and Dash, 2011). Bartlett's test of sphericity having null hypothesis that the variables are uncorrelated in the population or the correlation matrix is an identity matrix, was rejected on the basis of significance value .000.

Table 6.6 : KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.882
Bartlett's Test of Sphericity	Approx. Chi-Square	4142.20
	Df	105
	Sig.	.000

An exploratory factor analysis was undertaken to examine the factors constituting work life balance. Principal components method was adopted for extraction, with the varimax option which converged in five rotations and factors with eigen values greater than one were retained (Hair et al., 1998). Table 6.7 shows factor loadings for each item along with eigen values, percentage of variance explained and the cumulative percentage of the variance explained. The factor analysis of the items resulted in three dimensions to the work life balance scale. They were operationalised as work interference with personal life (WIPL), personal life interference with work (PLIW) and work/personal life enhancement (WPLE), in accordance with Hayman (2005). Table 6.7 demonstrates a robust three factor solution. The factor ‘work interference with personal life’ included statements aimed at evaluating whether personal life suffers due to job demands. Personal life interference with work (PLIW) included statements evaluating whether work suffers because of personal life. The third factor labeled ‘work-personal life enhancement (WPLE)’ included statements evaluating whether there is a synergy between work and personal life. In other words whether personal life is such that one derives from it the energy to work on the job and whether work life is such that one carries energy and enthusiasm in personal life as well. Having verified the dimensionality of the scale, the constructs were assessed for reliability. The reliability for the work life balance scale was estimated using Cronbach’s alpha coefficient (Cronbach, 1951).

The Cronbach alpha values for the three factors were 0.92 for work interference with personal life (WIPL), 0.85 for personal life interference with work (PLIW), and 0.78 for work/personal life enhancement (WPLE). Acceptable reliability estimates and factor loading patterns for the work life balance items supported a three factor solution.

Table 6.7 : Factor Analysis (Work-Life Balance)

		Factor 1	**Factor 2**	**Factor 3**
	Eigen Value	6.159	2.290	1.627
	%age of Variance explained	41.063	15.267	10.850
	Cumulative %age of Variance explained	41.063	56.331	67.180
S1	My personal life suffers because of work.	**.840**		
S2	My job makes personal life difficult.	**.829**		
S3	I neglect personal needs because of work.	**.859**		
S4	I put personal life on hold for work.	**.804**		
S5	I miss personal activities because of work.	**.827**		
S6	I struggle to juggle work and non work.	**.662**		
S8	My personal life drains me of energy for work.		**.680**	
S9	I am too tired to be effective at work.		**.763**	
S10	My work suffers because of my personal life.		**.834**	
S11	It is hard to work because of personal matters.		**.815**	
S12	My personal life gives me energy for my job.			**.744**
S13	My job gives me energy to pursue personal activities.			**.826**
S14	I have a better mood at work because of personal life.			**.754**
S15	I have a better mood because of my job.			**.795**
S7	I am happy with the amount of time for non work activities.			**.448**

As per the objectives of the study, the next subject of interest was to analyse whether there is an associative relationship between work engagement and work life balance. Hence, correlation analysis was performed. The results tabulated in Table 6.8 revealed that the mean score for one of the three dimensions of work life balance namely 'personal life interference with work' (*M* =4.29, *SD* = 1.18) was the highest. It indicated that faculty members felt that their personal life interfered with their work life relatively more than the work life interfered with personal life or the two aspects enhanced each other. The mean was lowest for 'work interference with personal life' (*M* =3.51, *SD* =1.34). As far as the third dimension of work life balance namely, 'work-personal life enhancement (WPLE) is concerned the mean was moderate (M=4.03 SD=1.06) indicating that faculty members experience a moderate level of synergy between work and personal lives. Further, the results of correlation matrix revealed that all the dimensions of work life balance were significantly associated with work engagement. Highest correlation was found with 'work personal life enhancement' (**WLB_WPLE**)' (*r* = .518, *p* <.05) and the lowest with 'work interference with personal life' (**WLB_WIPL**)' (*r* = .232, p< .05). Hence it can be inferred that efforts to establish a better work life balance are likely to enhance faculty work engagement.

Table 6.8 : Mean, SD and inter correlations between the independent dimensions of variables under study.

Variables	**Mean**	**SD**	**1**	**2**	**3**
1. WLB_WIPL	3.51	1.34	**(0.92)**		
2. WLB_PLIW	4.29	1.18	.554**	**(.85)**	
3. WLB_WPLE	4.03	1.06	0.315**	.213**	**(.78)**
4. WE	4.58	.87	0.232**	0.293**	.518**
** Correlation is significant at 0.01 level ; N=463					

In order to understand the direction of the relationship, hierarchical multiple regression analysis was performed and results obtained are shown in Table 6.9. The respondents' personal variables namely type of institution, faculty work area, place of posting, designation, total experience, current organization experience, age, gender, educational background, regional background and monthly salary were taken as control variables. The hypothesis $\mathbf{H_{0(13)}}$ was tested.

$H_{0(13)}$: There is no significant relationship between work life balance and work engagement.

$H_{0(13)}$ was rejected on the basis of results obtained.

Table 6.9 : Result of Multiple Hierarchical Regression for testing the impact of work – life balance on work engagement

Variable	**Work Engagement**			**Work Engagement**		
	Step 1			**Step 2**		
Step 1: *Control Variables*	***B***	***T***	***p- value***	***B***	***T***	***p- value***
Constant	4.451	13.931	.000	2.188	6.799	.000
Type of Institution	-.101	-1.547	.123	-.006	-.107	.915
Discipline	.118	2.477	.014	.103	2.526	.012
Posted at	.037	.573	.567	.033	.600	.548
District	-.175	-3.596	.000	-.108	-2.600	.010
Designation	.138	1.924	.055	.075	1.220	.223
Total Experience	.025	.260	.795	.033	.411	.681
Exp in CO	-.016	-.194	.846	.000	.002	.999
Age	.074	.784	.434	.016	.202	.840
Gender	-.011	-.218	.827	.000	-.012	.991
Doctorate	.028	.491	.624	.067	1.414	.158
Regional BG	-.013	-.273	.785	-.007	-.178	.859
Monthly Salary	-.095	-1.109	.268	-.056	-.761	.447
Step 2: *Independent Variables*						
1. WLB_WIPL				-.024	-.495	.621
2. WLB_PLIW				.199	4.200	.000
3. WLB_WPLE				.461	11.074	.000
F-Value			3.088			15.486
R^2			0.076			0.342
Adjusted R^2			0.051			0.320
ΔR^2						0.266

Notes: N = 463, Standardized beta coefficients are reported in the regression table.
* $p < .05$.

Table 6.9 reveals that work engagement is significantly predicted by two aspects of work – life balance ($p<0.05$) namely personal life interference with work and work-personal life enhancement (WPLE). The results coincide with the findings of Kim (2014) stating that when employees experience work-life balance it enhances their affective commitment. Further, Albdour and Altarawneh (2014) proved that affective commitment is positively associated with high job engagement and organizational engagement. On the basis of the previous studies and the results of the present study it can be said that HR policy initiatives to establish a mutually enhancing relationship between work and personal life could have a significant impact on work engagement. In this direction, giving, flexible work options can be explored with the objective of better faculty work engagement. Flexible working hours can be given wherein faculty members can choose their preferred timings subject to meeting a prefixed number of hours. The option of telecommuting allows the employees to work from home and stay in touch with the office with advanced technological assistance for example video conferencing and webinars in case of faculty members. Flexible benefits or cafeteria style benefit program allows employees to choose from a range of benefit options that best suit their personal and family needs, upto the value of a set allowance. The option of having a compressed work week allows employees to work for longer hours on certain days and enjoy a longer week end for example it allows the freedom to work ten hours a day for four days instead of eight hours a day for five days. Another novel idea tried by some organizations is the option of job sharing or twinning. Herein, two employees share the job responsibilities in a full time job. Permission for availing career breaks for self development can also be a highly sought after measure for better work life balance and hence work engagement of faculty members.

6.3 RELATIONSHIP BETWEEN WORK ENGAGEMENT AND WORK STRESS

As per the objectives of the current study, relationship between work stress as an independent variable and work engagement as a dependent variable was investigated. **Work stress** was measured using a self developed pretested scale consisting of 18 items adapted from Organization Role Stress Scale developed by Udai Pareek (1983). The response was sought on a 7 point Likert scale ranging

from 0 indicating never to 6 indicating always or everyday. Descriptive statistics of response on the work stress scale were computed. Exploratory Factor Analysis was done to identify the factors constituting work stress. Scale reliability was assessed by calculating Cronbach's alpha coefficient. Correlation analysis was done to study whether there is an associate relationship between work stress as an independent variable and work engagement as a dependent variable. The direction of association was investigated through hierarchical multiple regression analysis. **Table 6.10** shows the descriptive statistics. The mean response on majority of the statements was between 2 and 3 indicating that respondents experienced various aspects of work related stress only rarely to sometimes. The mean response on three statements was between 3 and 4, indicating that on these aspects, they experienced more frequent dissatisfaction ranging from sometimes to often. Hence, these deserve special attention. These three aspects are the need to compromise quality of work due to quantity of work, need for training to meet role requirements and opportunity to change the current role profile.

Table 6.10 : Descriptive statistics (Work Stress)

Statement label	Statement	Min.	Max.	Mean	S.D
S1	My role does not allow enough time for my family and friends.	0	6	2.56	1.565
S2	I have various other interests (social, religious etc) which get neglected because I do not have time to attend these.	0	6	2.64	1.479
S3	I do not have time and opportunities to prepare myself for future challenges of my role.	0	6	2.72	1.414
S4	There is very little scope for personal growth in my role.	0	6	2.39	1.561
S5	I am not able to satisfy the conflicting demands of various people above me.	0	6	2.41	1.440
S6	I am not able to satisfy the conflicting demands of my peers and juniors.	0	6	2.17	1.388
S7	I am not able to satisfy the demands of students and others since these are conflicting with one another.	0	6	1.89	1.446

Statement label	Statement	Min.	Max.	Mean	S.D
S8	The expectations of my seniors conflict with those of my juniors.	0	6	2.13	1.423
S9	I can do much more than what I have been assigned.	0	6	2.11	1.414
S10	The amount of work I have to do interferes with the quality I want to maintain.	0	6	3.05	1.608
S11	There is not enough scope for making my views heard.	0	6	2.77	1.464
S12	I need more training and preparation to be effective in my role / job / work.	0	6	3.28	1.474
S13	If I had full freedom to define my role I would be doing some things differently from the way I am doing them now.	0	6	3.57	1.563
S14	I experience a conflict between my values and what I have to do in my role / job.	0	6	2.50	1.584
S15	The work I do in the organization is not related to my interests.	0	6	1.90	1.533
S16	I am not clear on the scope and responsibilities of my role (job).	0	6	1.70	1.423
S17	I do not get enough resources to be effective in my role.	0	6	2.34	1.612
S18	I do not get the information needed to carry out the responsibilities assigned to me.	0	6	2.05	1.491
N=463					

The appropriateness of factor analysis was determined by The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy which was 0.886 which is well above the minimum criteria of 0.5 (Malhotra and Dash, 2011). Bartlett's test of sphericity having null hypothesis that the variables are uncorrelated in the population or the correlation matrix is an identity matrix, was rejected on the basis of significance value .000.

Table 6.11 : KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.886
Bartlett's Test of Sphericity	Approx. Chi-Square	4036.41
	Df	153
	Sig.	.000

An exploratory factor analysis was undertaken to examine the factors constituting work stress. Principal components method was adopted for extraction, with the varimax option which converged in six rotations and factors with eigen values greater than one were retained (Hair et al.,1998). Once the dimensionalities of the instrument were verified, the internal consistencies of the scales were checked with reliability analysis. Table 6.12 shows factor loadings for each item along with the eigen values, percentage of variance explained and the cumulative percentages of variance explained. The factor analysis of the items resulted in four dimensions of the work stress scale. The factors were operationalised as self-role distance, inter-role distance, role expectation conflict and role inadequacy.

Self-role distance refers to dissatisfaction with the current role in a manner that one is not able to fully identify with it. It includes lack of interest in the current role, conflict between personal values and role demands, lack of role clarity, information, resources and training to carry out the role effectively and lack of avenues for participation in role conduct or job redesign. Inter role distance refers to dissatisfaction with lack of balance between various roles expected to be discharged by the incumbent, whether on the job or outside the job. It covers the inability to balance current role demands with personal life, preparation for future job roles, personal growth and pursuit of personal interests and hobbies in non-work time. Role expectation conflict refers to the dissatisfaction with conflicting role demands of seniors, peers, juniors, students and others. Role interference refers to conflict between quantity and quality of work expected, perception about under utilization of talent and dissatisfaction with nature of job role. Table 6.12 demonstrates a robust four factor solution.

Table 6.12 : Factor Analysis of Work Stress Scale

Statement Label		Factor 1	Factor 2	Factor 3	Factor 4
	Eigen Value	7.042	1.654	1.415	1.109
	%age of Variance explained	39.12	9.19	7.86	6.16
	Cumulative %age of Variance explained	39.12	48.31	56.17	62.33
S11	There is not enough scope for making my views heard.	.454			
S12	I need more training and preparation to be effective in my role / job / work.	-.318			
S14	I experience a conflict between my values and what I have to do in my role / job.	.602			
S15	The work I do in the organization is not related to my interests.	.762			
S16	I am not clear on the scope and responsibilities of my role (job).	.813			
S17	I do not get enough resources to be effective in my role.	.772			
S18	I do not get the information needed to carry out the responsibilities assigned to me.	.778			
S1	My role does not allow enough time for my family and friends.		.795		
S2	I have various other interests (social, religious etc) which get neglected because I do not have time to attend these.		.802		
S3	I do not have time and opportunities to prepare myself for future challenges of my role.		.822		
S4	There is very little scope for personal growth in my role.		.734		

Statement Label		Factor 1	Factor 2	Factor 3	Factor 4
	Eigen Value	7.042	1.654	1.415	1.109
	%age of Variance explained	39.12	9.19	7.86	6.16
	Cumulative %age of Variance explained	39.12	48.31	56.17	62.33
S5	I am not able to satisfy the conflicting demands of various people above me.			.609	
S6	I am not able to satisfy the conflicting demands of my peers and juniors.			.772	
S7	I am not able to satisfy the demands of students and others since these are conflicting with one another.			.816	
S8	The expectations of my seniors conflict with those of my juniors.			.732	
S9	I can do much more than what I have been assigned.				-.527
S10	The amount of work I have to do interferes with the quality I want to maintain.				.585
S13	If I had full freedom to define my role I would be doing some things differently from the way I am doing them now.				.745
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. ; Rotation converged in 6 iterations.					

Having verified the dimensionality of the scale, the constructs were assessed for reliability. The reliability for the work stress scale was estimated using Cronbach's alpha coefficient (Cronbach, 1951). Cronbach's alpha values for the four factors were 0.745 for self-role distance, 0.862 for inter role distance, 0.831 for role expectation conflict and 0.68 for role inadequacy. The reliability estimates were above or close to the acceptable limit of 0.70 (Hair et al., 2009). The acceptable

limit of Cronbach's alpha is generally .70 but the limit may be decreased to .60 in case of exploratory research (Hair et al., 2009).

As per the objectives of the study, the next subject of interest was to analyse whether there is an associative relationship between work engagement and work stress. Hence, correlation analysis was performed. The results tabulated in Table 6.13 revealed that the mean score for role interference (WS_RI) was the highest (*M* =2.91, *SD* = 0.90). It indicated that faculty members experienced greatest dissatisfaction on this aspect requiring them to compromise on quality of work for the sake of quantity, perceived that their talent was under utilized and wanted to make changes in their job profiles. Further, the results of correlation matrix revealed that all the dimensions of work stress were significantly and negatively associated with work engagement. It implies that an increase in any of the four dimensions of work stress would be associated with decline in faculty work engagement.

Table 6.13 : Mean, SD and inter correlations between the independent dimensions of variables under study.

Variables	**Mean**	**SD**	**1**	**2**	**3**	
1. WS_SRD	2.36	.95	**(0.745)**			
2. WS_IRD	2.57	1.26	0.498**	**(.862)**		
3. WS_REC	2.14	1.16		0.554**	**(.831)**	
4. WS_RI	2.91	.90			0.335**	**(0.68)**
5. WE	4.58	.87	-0.345**	-0.252**	-0.339**	-0.165**
** Correlation is significant at 0.01 level ; N=463						

In order to understand the direction of the relationship, hierarchical multiple regression analysis was performed and results obtained are shown in Table 6.14. The respondents' personal variables namely type of institution, faculty work area, place of posting, designation, total experience, current organization experience, age, gender, educational background, regional background and monthly salary were taken as control variables. The hypothesis $\mathbf{H_{0(14)}}$ was tested.

$\mathbf{H_{0(14)}}$ **:** There is no significant relationship between work stress and work engagement.

$\mathbf{H_{0(14)}}$ was rejected on the basis of results obtained.

Table 6.14 : Result of Multiple Hierarchical Regression for testing the impact of work stress on work engagement

Variable	**Work Engagement**			**Work Engagement**		
	Step 1			**Step 2**		
Step 1: *Control Variables*	***B***	***T***	***p- value***	***B***	***T***	***p- value***
Constant	4.451	13.931	.000	4.934	15.233	.000
Type of Institution	-.101	-1.547	.123	-.073	-1.189	.235
Discipline	.118	2.477	.014	.093	2.080	.038
Posted at	.037	.573	.567	.055	.903	.367
District	-.175	-3.596	.000	-.111	-2.382	.018
Designation	.138	1.924	.055	.091	1.359	.175
Total Experience	.025	.260	.795	.040	.450	.653
Exp in CO	-.016	-.194	.846	-.008	-.102	.919
Age	.074	.784	.434	.082	.924	.356
Gender	-.011	-.218	.827	.032	.693	.488
Doctorate	.028	.491	.624	.052	.980	.328
Regional BG	-.013	-.273	.785	.006	.123	.902
Monthly Salary	-.095	-1.109	.268	-.096	-1.199	.231
Step 2: *Independent Variables*						
1. WS_SRD				-.192	-3.415	.001
2. WS_IRD				-.041	-.746	.456
3. WS_REC				-.193	-3.399	.001
4.WS_RI				.012	.257	.797
F-Value			3.08			6.96
R^2			0.076			0.200
Adjusted R^2			3.08			6.96
ΔR^2						0.124

Notes: N = 463, Standardized beta coefficients are reported in the regression table * $p < .05$.

Table 6.14 reveals that work engagement is predicted by work stress with significant F value. There is an inverse relationship between work stress and work engagement. It implies that increase in work stress is likely to lower work engagement. Two dimensions of work stress namely self-role distance and role expectation conflict had a significant negative relationship with work engagement $p < .05$, adjusted $R^2 = 6.96$. It highlights the need for HR policy makers and all those in leadership roles to take enough measures to control work stress so that it does not have a dampening effect on work engagement. It also necessitates the need for taking measures such as encouraging employees to craft their jobs so as to minimize self role distance, inter role distance, role expectation conflict and role interference. Job crafting measures as explained in section 6.1 can be instrumental in establishing a better person-job fit. Besides, other measures for stress control such as role clarity, work life balance initiatives, flexible work options and participative management techniques can be instrumental in managing work stress. The findings reiterate the empirical evidence given by Gonza´lez-Roma´et. al (2006) supporting that burnout and engagement are conceptual opposites. They are also in line with the conclusion of Maslach et al. (2001) stating that conceptually, burnout and engagement act as each other's opposites.

6.4 RELATIONSHIP BETWEEN ORGANIZATIONAL COMMITMENT AND WORK ENGAGEMENT

Porter et. al (1974) defined organizational commitment as the relative strength of an individual's identification with the organization and involvement in its activities. Committed employees characteristically possess a strong belief in the organization's goals and values, have a willingness to exert substantial effort on behalf of the organization and a firm desire to maintain membership in the organization. As per the objectives of the current study, relationship between organizational commitment as an independent variable and work engagement as a dependent variable was investigated. Organizational Commitment was measured with the six item scale developed by Saks (2006). The respondents were asked to express their level of agreement or disagreement with the given statements considering their current organization. Response was sought on a seven -point Likert

scale ranging from 0 representing 'strongly disagree' to 6 representing 'strongly agree'.

Descriptive statistics of response on the organizational commitment scale were computed. Exploratory Factor Analysis was done to identify the factors constituting organizational commitment. Scale reliability was assessed by calculating Cronbach's alpha coefficient. Correlation analysis was done to study whether there is an associate relationship between work stress as an independent variable and work engagement as a dependent variable. The direction of association was investigated through hierarchical multiple regression analysis. **Table 6.15** shows the descriptive statistics. The mean response was between 4 to 5 on five out of six positively worded statements. A relatively lower response (3.98) was noticed for the statement 'I would be happy to work in this organization until I retire'. Such a response indicates the need for sound measures to retain good faculty members in their current organizations.

Table 6.15 Descriptive statistics (Organizational Commitment)

Statement Label	Statement	Min.	Max.	Mean	S.D
S1	I would be happy to work in this organization until I retire.	0	6	3.98	1.779
S2	Working in this organization has a great deal of personal meaning to me.	0	6	4.21	1.476
S3	I really feel that problems faced by this organization are also my problems.	0	6	4.21	1.336
S4	I feel personally attached to this organization.	0	6	4.42	1.290
S5	I am proud to tell others I work at this organization.	0	6	4.80	1.216
S6	I feel a strong sense of belonging to this organization.	0	6	4.63	1.304

The appropriateness of factor analysis was determined by The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy which was 0.883 (Table 6.16) which is well above the minimum criteria of 0.5 (Malhotra and Dash, 2011). Bartlett's test of

sphericity having null hypothesis that the variables are uncorrelated in the population or the correlation matrix is an identity matrix, was rejected on the basis of significance value .000. An exploratory factor analysis was undertaken to examine the factors constituting organizational commitment. The internal consistencies of the scales were checked with reliability analysis.

Table 6.16 : KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.883
Bartlett's Test of Sphericity	Approx. Chi-Square	1922.28
	Df	15
	Sig.	.000

Table 6.17 shows factor loadings for each item along with the eigen values, percentage of variance explained and the cumulative percentages of the variance explained. The factor analysis of the items resulted in one dimensional organizational commitment scale (Table 6.17).

Table 6.17 : Factor Analysis of Organizational Commitment Scale

Statement Label		**Factor 1**
	Eigen Value	4.243
	%age of Variance explained	70.71
S1	I would be happy to work in this organization until I retire.	.827
S2	Working in this organization has a great deal of personal meaning to me.	.851
S3	I really feel that problems faced by this organization are also my problems.	.758
S4	I feel personally attached to this organization.	.871
S5	I am proud to tell others I work at this organization.	.861
S6	I feel a strong sense of belonging to this organization.	.871
Extraction Method: Principal Component Analysis.		

Having verified the dimensionality of the scale, the construct was for reliability. The reliability of the organizational commitment scale was estimated using Cronbach's alpha coefficient (Cronbach, 1951). Cronbach's alpha value was 0.911 which is well above the acceptable limit of 0.70 (Hair et al., 2009).

As per the objectives of the study, the next subject of interest was to analyze whether there is an associative relationship between work engagement and organizational commitment. Hence, correlation analysis was performed. The results are tabulated in Table 6.18. A strong correlation was found between organizational commitment and work engagement (r = .539, p <.05). It indicates that faculty members who are highly committed to their current organizations are likely to be more work engaged than their less committed counterparts. It simply highlights the need for measures to enhance organizational commitment through suitable HR policies and their spirited adherence by all those in leadership positions.

Table 6.18 : Mean, SD and inter correlations between the independent dimensions of variables under study.

Variables	**Mean**	**SD**	**1**
1. OC	4.37	1.17	**(**0.911)
2. WE	4.58	.87	.539*
** Correlation is significant at 0.01 level ; N=463			

In order to understand the direction of the relationship, hierarchical multiple regression analysis was performed and results obtained are shown in Table 6.19. The respondents' personal variables namely type of institution, faculty work area, place of posting, designation, total experience, current organization experience, age, gender, educational background, regional background and monthly salary were taken as control variables. The hypothesis $\mathbf{H_{0(15)}}$ was tested.

$\mathbf{H_{0(15)}}$ **:** There is no significant relationship between organizational commitment and work engagement.

Table 6.19 : Result of Multiple Hierarchical Regression for testing the impact of organizational commitment on work engagement

Variable	**Work Engagement**			**Work Engagement**		
	Step 1			**Step 2**		
Step 1: *Control Variables*	***B***	***T***	***p- value***	***B***	***T***	***p- value***
Constant	4.451	13.931	.000	2.434	7.735	.000
Type of Institution	-.101	-1.547	.123	.047	.817	.414
Discipline	.118	2.477	.014	.071	1.740	.083
Posted at	.037	.573	.567	.071	1.290	.198
District	-.175	-3.596	.000	-.107	-2.535	.012
Designation	.138	1.924	.055	.043	.703	.483
Total Experience	.025	.260	.795	-.028	-.349	.727
Exp in CO	-.016	-.194	.846	-.043	-.625	.532
Age	.074	.784	.434	.028	.350	.726
Gender	-.011	-.218	.827	.007	.173	.863
Doctorate	.028	.491	.624	.059	1.231	.219
Regional BG	-.013	-.273	.785	-.005	-.121	.904
Monthly Salary	-.095	-1.109	.268	.025	.341	.734
Step 2: *Independent Variables*						
OC				.542	12.905	.000
F-Value			3.08			16.71
R^2			0.276			0.571
Adjusted R^2			0.051			0.307
ΔR^2						0.295

Notes: N = 463, Standardized beta coefficients are reported in the regression table. * $p < .05$.

$H_{0(15)}$ was rejected on the basis of results obtained. Table 6.18 reveals that work engagement is predicted by organizational commitment with significant F value. There is a significant positive relationship between organizational commitment and work engagement, $p < .05$, adjusted $R^2 = 0.307$. It implies that increase in organizational commitment is likely to enhance work engagement. The findings reinforce the results obtained by Albdour and Altarawneh (2014) who found that affective commitment is positively associated with high job engagement and organizational engagement.

6.5 CHAPTER SUMMARY

This chapter deals with the study of relationship of work engagement with job crafting, work-life balance, work stress and organizational commitment. It is a bottom-up approach, with employees taking initiative to align work with their personal preferences and abilities (Tims & Bakker, 2010; Wrzesniewski & Dutton, 2001). Job crafting includes modification in what one does in the form of job, one's approach towards work or manner of interaction with others (Tims et. al, 2013). Section 6.1 of this chapter dealt with the investigation of the relationship between job crafting as an independent variable and work engagement as a dependent variable. A twelve item scale based on Job Crafting Scale developed by Tims et al. (2012) was used to measure job crafting initiatives. Response was sought on a seven point Likert scale seeking how frequently the respondents took the mentioned job crafting initiatives, ranging from 0 indicating 'never' to 6 indicating 'always or everyday'. Descriptive statistics of response on the job crafting scale were computed. Exploratory Factor Analysis was done to identify the factors constituting job crafting. Scale reliability was assessed by calculating Cronbach's alpha coefficient. Correlation analysis was done to study whether there is an associative relationship between job crafting as an independent variable and work engagement as a dependent variable. The direction of association was investigated through hierarchical multiple regression analysis. Exploratory Factor analysis of the items resulted in three dimensions of job crafting scale which were operationalised as 'increasing structural job resources', 'increasing social job resources' and 'increasing challenging job demands'. The scale reliability was estimated using

Cronbach alpha coefficient and the reliability estimates were above the acceptable limit of 0.70 (Hair et al., 2009). The results of correlation matrix revealed that all the dimensions of job crafting were significantly associated with work engagement. Hierarchical multiple regression analysis revealed that work engagement of faculty members was significantly predicted by two constituents of job crafting, namely, increasing structural job resources and challenging job demands. It implies that work engagement is likely to increase with job crafting, a bottom –up approach wherein faculty members seek autonomy, task and skill variety and opportunities for self development, and at the same time also volunteer for new projects, keep abreast of the most recent developments and take on new projects / extra tasks.

Section 6.2 of this chapter investigated the relationship between work life balance as an independent variable and work engagement as a dependent variable. Work-life balance symbolizes harmony between work and personal life. The 15 item work-life balance scale developed by Hayman (2005) was used to measure the respondents' work life balance on a seven point Likert scale ranging from 0 indicating never to 6 indicating always or everyday. Descriptive statistics of response on the work life balance scale were computed. Exploratory Factor Analysis was done to identify the factors constituting work life balance. Scale reliability was assessed by calculating Cronbach's alpha coefficient. Correlation analysis was done to study whether there is an associate relationship between work life balance as an independent variable and work engagement as a dependent variable. The direction of association was investigated through hierarchical multiple regression analysis. Exploratory factor analysis of the items resulted in three dimensions to the work life balance scale. They were operationalised as work interference with personal life (WIPL), personal life interference with work (PLIW) and work/personal life enhancement (WPLE), in accordance with Hayman (2005). The scale reliability was estimated using Cronbach alpha coefficient and the reliability estimates were above the acceptable limit of 0.70 (Hair et al., 2009). Correlation analysis revealed that the mean score was highest for 'personal life interference with work'. It indicated that faculty members felt that their personal life interfered with their work life relatively more than the work life interfered with personal life or the two aspects enhanced each other. Further, the results of correlation matrix revealed that all the dimensions

of work life balance were significantly associated with work engagement. Highest correlation was found with 'work personal life enhancement' and the lowest with 'work interference with personal life'. Hierarchical multiple regression analysis revealed work engagement is significantly predicted by two aspects of work – life balance namely personal life interference with work and work-personal life enhancement. The results coincide with the findings of Kim (2014) and Albdour and Altarawneh (2014). Hence faculty work engagement is likely to be enhanced with efforts to establish a better work life balance. HR policy initiatives like flextime, telecommuting, flexible benefits program, job sharing, compressed work week and career breaks can be explored with the objective of better faculty work engagement.

Section 6.3 of this chapter investigated the relationship between work stress as an independent variable and work engagement as a dependent variable. **Work stress** was measured using a self developed pretested scale consisting of 18 items adapted from Organization Role Stress Scale developed by Udai Pareek (1983). The response was sought on a 7 point Likert scale ranging from 0 indicating never to 6 indicating always or everyday. Descriptive statistics of response on the work stress scale were computed. Exploratory Factor Analysis was done to identify the factors constituting work stress. Scale reliability was assessed by calculating Cronbach alpha coefficient. Correlation analysis was done to study whether there is an associative relationship between work stress as an independent variable and work engagement as a dependent variable. The direction of association was investigated through hierarchical multiple regression analysis. Exploratory factor analysis of the items resulted in four dimensions of the work stress scale. The factors were operationalised as self-role distance, inter-role distance, role expectation conflict and role inadequacy. The reliability for work stress scale was estimated using Cronbach alpha coefficient (Cronbach, 1951). The reliability estimates were above or close to the acceptable limit of 0.70 (Hair et al., 2009). Correlation analysis revealed that the faculty members experienced greatest dissatisfaction on the aspect of role interference which required them to compromise on quality of work for the sake of quantity, they perceived that their talent was under utilized and wanted to make changes in their job profiles. Further, the results of correlation matrix revealed that all the dimensions of work stress were significantly and negatively associated with

work engagement. It implies that an increase in any of the four dimensions of work stress would be associated with decline in faculty work engagement. In order to understand the direction of the relationship, hierarchical multiple regression analysis was performed which also revealed that there is an inverse relationship between work stress and work engagement. Two dimensions of work stress namely self-role distance and role expectation conflict had a significant negative relationship with work engagement. It highlights the need for HR policy makers and all those in leadership roles to take measures such as encouraging employees to craft their jobs; provide role clarity, engage in work life balance initiatives, provide flexible work options and participative management techniques. The findings coincide with those of Gonza´lez-Roma´et. al (2006) and Maslach et al. (2001).

Section 6.4 investigated the relationship between organizational commitment as an independent variable and work engagement as a dependent variable. Porter et. al (1974) defined organizational commitment as the relative strength of an individual's identification with the organization and involvement in its activities. Organizational Commitment was measured with the six item scale developed by Saks (2006). The respondents were asked to express their level of agreement or disagreement with the given statements considering their current organization. Response was sought on a seven -point Likert scale ranging from 0 representing 'strongly disagree' to 6 representing 'strongly agree'. The scale was found to be a reliable measure of organizational commitment as Cronbach's alpha was well acceptable limit of 0.70 (Hair et al., 2009). Descriptive statistics of response on the organizational commitment scale were computed. Exploratory Factor Analysis was done to identify the factors constituting organizational commitment. Scale reliability was assessed by calculating Cronbach's alpha coefficient. Correlation analysis was done to study whether there is an associate relationship between work stress as an independent variable and work engagement as a dependent variable. The direction of association was investigated through hierarchical multiple regression analysis. Exploratory factor analysis of the items resulted in one dimensional organizational commitment scale. A strong correlation was found between organizational commitment and work engagement. It indicates that faculty members who are highly committed to their current organizations are likely to be more work engaged than

CHAPTER – 7

SUMMARY AND CONCLUSIONS

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This chapter summarizes the entire study, draws the major conclusions from each chapter and delineates the future avenues for research.

7.1 SUMMARY AND FINDINGS

Chapter 1 introduced the concept of employee work engagement and its significance in the contemporary work arena. In the context of globalization, boundary less organizations need to capitalize upon the strength of work engaged employees. The strong association of work engagement with employee retention, customer satisfaction, productivity and profitability was brought out while similar relationships were not found for traditional constructs like job satisfaction. The rationale for the current study was explained in the light of the challenges faced by Indian higher education system. Given the issues of below expected quality of teaching and learning, lack of quality assurance and poor accountability of teaching staff in higher education institutions, it was found essential to investigate the status of work engagement amongst faculty members, explore the factors associated with it and identify measures for its enhancement.

Chapter 2 dealt with the review of literature that was relevant to the subject matter of the thesis. Approximately, more than hundred research papers published in various international journals, related articles from books and websites and significant reports published on this subject were reviewed. All the studies were categorized into five sections namely studies on work engagement as a unique construct; studies on measurement of work engagement; studies on factors affecting work engagement; studies on relationship of work engagement with job crafting, organizational commitment, work life balance and work stress and studies on engagement –performance link. The review revealed that engagement is a novel and unique concept accepted in both managerial and academic literature and unlikely to be forsaken as a fad. Engagement was distinguished from job satisfaction, commitment, job involvement, work holism and work related flow. The instruments for measuring employee work engagement were explored. The commonly cited

instruments were found to be Gallup Workplace Audit or Q12, Maslach Burnout Inventory, Oldenburg Burnout Inventory (OLBI) and Utrecht Work Engagement Scale. Various studies on the factors affecting work engagement were reviewed. A comparative analysis revealed that work engagement is predicted by factors such as job characteristics, personal resources, interpersonal relations and organizational support. The studies detailed the qualitative aspects of each of these factors. Work engagement, being a multi dimensional concept was found to be related other behavioral phenomena. A few studies revealed a positive association between job crafting and work engagement, indicating that employees who take proactive steps to establish a better person-job fit are more work engaged. The relationship of work -life balance and work engagement was explored by a few studies. They found that employees who carry positive feelings from their work to personal life and vice versa experience higher levels of engagement. A few studies investigated the relationship between work engagement and organizational commitment. They found a positive association between the two. Studies on the relationship between work engagement and work stress revealed that the two are inversely related. Studies on the engagement performance link highlighted that engaged employees outshine others in both in-role and extra-role performance. They are creative problem solvers and display the ability to inspire and coach their co-workers.

The review of literature revealed the need to conduct a comprehensive study of work engagement of faculty members in the higher education sector, as very few such studies existed in the Indian context. The factors affecting work engagement of faculty members was found to be a less researched area, particularly in the Indian higher education sector, having its unique size and challenges. The relationship of work engagement with related phenomena like job crafting, work life balance, organizational commitment and work stress was found to be a subject of research gap and interest. Based on these, measures for enhancement of work engagement were sought to be identified. Hence, according to these research gaps, the present study was undertaken with the following objectives:

1) To measure the level of work engagement amongst the employees (faculty members) working in organizations under the study.
2) To study the relationship (if any) between the level of work engagement and personal variables.

3) To identify factors affecting the level of work engagement amongst employees (faculty members).

4) To identify the measures required for enhancement of work engagement amongst the employees (faculty members).

5) To study the relationship (if any) between the level of work engagement amongst employees (faculty members) and

- ❖ job crafting initiatives
- ❖ work - life balance
- ❖ level of work stress
- ❖ level of organization commitment

Chapter 3 explained the research methodology including the research design and sampling technique, data collection, sample description, research instruments and finally the statistical analysis approach was explained. A cross-sectional descriptive study was designed using the quota sampling technique for drawing a fixed number of faculty members from each of the four broad faculty work areas namely Commerce and Business Management (CBM), Science, Engineering and Technology (SET), Applied Medical Sciences (AMS) and Education and Humanities (EHUM) from public and private higher education institutions. The respondents were drawn from higher education institutions located in the districts of Amritsar, Bathinda, Jalandhar, Ludhiana, Patiala and the capital of Punjab – Chandigarh as these districts are considered the hubs of higher education in Punjab. A total of 463 fully filled questionnaires were received from 41 Higher Education Institutions.

The research instrument used for data collection consisted of eight parts including (i) a self developed 92 item scale that explored the respondents' perception regarding self, current job and current organization (ii) job crafting scale adapted from Tims et al. (2012) (iii) work-life balance scale developed by Hayman (2005) (iv) nine-item version of the Utrecht Work Engagement Scale developed by Schaufeli et al., 2006 (v) Organizational Commitment scale developed by Saks (2006) (vi) a work stress scale adapted from Organization Role Stress Scale developed by Udai Pareek (1983) (vii) an ordinal scale to see respondents' ranking of changes required for improving engagement. The statistical analysis approach included descriptive statistics, one-way ANOVA, exploratory factor analysis,

measurement of scale reliability with Cronbach's alpha coefficient, correlation analysis, non-metric correlation analysis using Spearmann's rank correlation coefficient and hierarchical multivariate regression analysis. The data analysis was done using SPSS version 16.0.

Chapter 4 dealt with data analysis related to level of faculty work engagement and investigated its relationship with personal variables chosen for the study. While a majority (57.23%) of the respondents reported a moderate level of work engagement a significant number of respondents (38.66%) reported high level of work engagement, thus highlighting the scope and need to improve the work engagement of faculty members. The difference in mean work engagement across the samples categorized on the basis of personal variables was analyzed using one-way analysis of variance (ANOVA). Wherever the difference in the level of engagement was found to be significant, Post-Hoc tests using Least Square Difference (LSD) were applied. Work engagement of faculty members varied significantly with faculty work area, district wise posting, designation, experience in current organization, total experience, age, educational background and salary. However, no statistically significant variation was found with respect to gender, regional background, government versus private institution and posting at university campus or affiliated college. Work engagement of faculty members belonging to education and humanities (EHUM) was significantly higher than those belonging to commerce and business management (CBM) and applied medical sciences (AMS). It could be attributed possibly to the higher personal resources possessed by the Education and humanities faculty most of whom possessed a formal qualification as Teacher Educators. Faculty members who possessed a doctoral degree (Ph.D) reported higher engagement than the others. In the light of Kahn's (1990) model of personal engagement, doctoral degree can be considered a key intellectual resource to enhance the psychological availability for the faculty role. This points to the need to increase faculty enrolment in doctoral degrees. Those drawing a salary of less than Rs. 30,000 per month were significantly less engaged than the next higher salary bracket 30,001 to 50,000 per month as well as the highest salary bracket Rs. 1,10,000 and above.

Chapter 5 dealt with identification of the factors affecting work engagement of faculty members and measures for enhancing the same. Exploratory factor

analysis was applied in the light of its key objective of reducing a larger set of variables to a smaller set and to summarize the data. Ten unique factors or dimensions were identified, all having acceptable Cronbach's alpha. They were named as perceived organizational support, personal and professional orientation, supervisory coaching, climate of participation and recognition, organizational orientation for results, interaction with students, intrinsic rewards, empowerment, task variety and support from associates. Correlation analysis was done to study whether there is an associative relationship between work engagement and the ten factors identified through factor analysis. The results revealed that all the factors were significantly associated with work engagement. The highest correlation of work engagement was found with 'personal and professional orientation' and the lowest with 'support from associates'. In order to understand the direction of the relationship, hierarchical multiple regression analysis was performed. The results revealed that typically in the higher education sector, the job related factors which significantly predict faculty work engagement are perceived organizational support, intrinsic rewards, task variety, organizational orientation for results and supervisory coaching. At the individual level, personal and professional orientation is a vital resource driving work engagement.

Chapter 5 also reported the measures required for enhancement of work engagement amongst faculty members. The respondents were given a list of 11 statements and asked to rank the top five changes in order to work with better energy, dedication and involvement. The top five measures identified were greater role clarity, more empowerment for decision making, better intrinsic rewards, more openness towards change and innovation and organizational support for career advancement. In order to evaluate the consistency of response across the demographic sub groups of respondents, comparison was made according to gender, type of institution, designation, salary, faculty work area and district of posting. Spearman's rank correlation coefficient was calculated. Results revealed that the measures required for work engagement enhancement were significantly correlated according to gender but there was no statistically significant correlation in the response of faculty sub groups according to type of institution, designation, salary bracket and work area. Placed at starting rung of teaching hierarchy, the lecturers expressed a strong need for role clarity; Assistant Professors emphasized upon the

need for empowerment; Associate Professors gave top most priority to the need for intrinsic rewards for example meaningful, interesting and valuable work. While the faculty from science, engineering and technology gave maximum importance to development oriented leadership, faculty from other work areas stated the requirement for greater role clarity. It implies that if the target is to engage the faculty in their work roles, a 'one size fits all approach' may be insufficient. Engagement measures might need to be customized to suit the needs of various groups.

Chapter 6 dealt data analysis for investigation of the relationship of work engagement with other phenomena. The results revealed that work engagement is positively associated with job crafting, work-life balance and organizational commitment and inversely related with work stress.

7.2 KEY RECOMMENDATIONS

In the light of previous research and the results of the current study the key recommendations are:

[1] Faculty work engagement in higher education sector of Punjab, is at a moderate level. The statistics indicate a large scope of improvement. Given the merits of a work engaged faculty team, HEIs are urged for action in this direction.

[2] The significant factors affecting work engagement of faculty members, as per the current study are: perceived organizational support, personal and professional orientation, intrinsic rewards, task variety, organizational orientation for results and supervisory coaching.

[3] The top five measures required for enhancement of work engagement include greater role clarity, more empowerment for decision making, better intrinsic rewards, more openness towards change and innovation and organizational support for career advancement. Interestingly, it was found that if work engagement measures can be more effective if customized according to type of institution, designation and faculty work areas. For instance, government and government aided Higher Education Institutions need to focus on providing greater role clarity, empowerment and open communication. Private sector HEIs need to pay attention to better intrinsic

rewards in terms of interesting work, satisfaction from work and a sense of progress along with better organizational support for career advancement.

[4] Work engagement of faculty members was significantly predicted by two constituents of job crafting, namely, increasing structural job resources and challenging job demands. It implies that work engagement is likely to increase with a bottom –up approach wherein faculty members are encouraged to use a two pronged strategy to alter their job design. One set of initiatives they can take include seeking structural job resources like autonomy, task and skill variety and opportunities for self development. Another set of efforts include seeking challenging job demands by volunteering for new projects, keeping abreast of the most recent developments, taking initiative to start new projects and extra tasks.

[5] Work engagement is significantly predicted by two aspects of work – life balance namely personal life interference with work and work-personal life enhancement (WPLE). It implies that HR policy initiatives to establish a mutually enhancing relationship between work and personal life could have a significant impact on work engagement. In this direction, flexible work options can be explored. Flexible working hours can be given wherein faculty members can choose their preferred timings subject to meeting a prefixed number of hours. The option of telecommuting allows the employees to work from anywhere and stay in touch with the office with advanced technological assistance for example video conferencing and webinars in case of faculty members. Flexible benefits or cafeteria style benefit program allows employees to choose from a range of benefit options that best suit their personal and family needs, upto the value of a set allowance. The option of having a compressed work week allows employees to work for longer hours on certain days and enjoy a longer week end for example it allows the freedom to work ten hours a day for four days instead of eight hours a day for five days. Another novel idea tried by some organizations is the option of job sharing or twinning. Herein, two employees share the job responsibilities in a full time job. Permission for availing career breaks for self development can also be a highly sought after

measure for better work life balance and hence work engagement of faculty members.

[6] Work engagement was found to be inversely related with work stress. Results of the present study revealed greatest dissatisfaction on role interference dimension requiring them to compromise on quality of work due to quantity, underutilization of talent and need to make changes in current role profile. Self –role distance and role expectation conflict were inversely related with work engagement. It calls for action by those in academic leadership positions, playing supervisory role as Heads of Departments. Intrinsic rewards in the form of allocating faculty preferred courses for teaching and appreciation for good work can erode the negative impact of work stress and create a positive gain spiral for faculty work engagement.

[7] Faculty members who are highly committed to their current organizations are likely to be more work engaged. Work engagement of long tenured faculty members (>20 years) was found to be higher than others who had less experience (<5 years) in the current organization. It appears that when faculty members stay associated with an organization for a long tenure, they develop a clear understanding of organizational orientation for results which was identified as another vital factor predicting faculty work engagement. A long tenure could be an outcome of a match between organization's result orientation with employees' personal and professional orientation. Hence, it implies that HEIs must design ingenious ways to map the two orientations so that they can retain faculty members for long tenures and capitalize upon their work engagement. An employee value proposition of care and concern fuels affective commitment which has a strong positive association with work engagement.

7.3 FUTURE RESEARCH PROSPECTS

This study also found the vistas for future research. A majority of the studies on work engagement especially in the Indian context have used a cross-sectional design which cannot explain why even highly engaged employees may be less engaged on some days. Hence, longitudinal studies are required to analyze the pattern of daily changes in work engagement and identify the factors leading to

these. Such studies could have important implications for better understanding of employee well being. The current study investigated the relationship between work engagement and job crafting and found a positive association. Further studies in this area may answer the question as to whether all employees are equally inclined for job crafting. Can people be trained for job crafting? Is there a relationship between personality and job crafting? The current study highlights the need for work-life balance measures in HEIs. Studies mapping the perception of policy makers in the government and private sector can be instrumental in identifying the feasibility of adopting such initiatives. They can dramatically change the workplace scenario and increase workforce participation of many sections of the society which can be instrumental in enhancing the overall work engagement. Work engagement will be sustainable when employee well being is also high (Robertson and Cooper, 2010). Studies on work engagement can be furthered to construct workplace happiness index – an aggregation of all vital metrics of employee well being.

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APPENDIX-I

LIST OF HIGHER EDUCATION INSTITUTIONS SURVEYED

SR. NO	GOVERNMENT AND GOVERNMENT AIDED HIGHER EDUCATION INSTITUTIONS
1	DAV COLLEGE, CHANDIGARH
2	IMTECH,CHANDIGARH
3	PGGC, CHANDIGARH
4	PGIMER, CHANDIGARH
5	PU, CHANDIGARH
6	PAU, LUDHIANA
7	DAV COLLEGE, JALANDHAR
8	GNDU REGIONAL CAMPUS, JALANDHAR
9	HMV COLLEGE, JALANDHAR
10	NIT, JALANDHAR
11	PTU, JALANDHAR
12	GOVT. MEDICAL COLLEGE, AMRITSAR
13	GNDU, AMRITSAR
14	DAV COLLEGE, BATHINDA
15	CENTRAL UNIVERSITY OF PUNJAB, BATHINDA.
16	YCOE, BATHINDA
17	PU REGIONAL CAMPUS, MAUR
18	PUNJABI UNIVERSITY, PATIALA

SR. NO	PRIVATE HIGHER EDUCATION INSTITUTIONS
1	CHANDIGARH COLLEGE OF ENGG., CHANDIGARH
2	CHANDIGARH POLYTECHNIC COLLEGE, CHANDIGARH
3	CHANDIGARH UNIVERSITY, CHANDIGARH
4	GNDEC, LUDHIANA
5	PCTE, LUDHIANA
6	SHRI ATAM VALLABH JAIN COLLEGE, LUDHIANA
7	DMC, LUDHIANA
8	CT COLLEGE OF EDUCATION, JALANDHAR
9	CT COLLEGE OF MANAGEMENT, JALANDHAR
10	CTIT, JALANDHAR
11	DAVIET, JALANDHAR
12	DAVIPTR, JALANDHAR
13	LLRINE, JALANDHAR
14	LPU, JALANDHAR
15	PIMS, JALANDHAR
16	MHR DAV INSTITUTE OF NURSING, JALANDHAR
17	ACOE, AMRITSAR
18	ACTE, AMRITSAR
19	GIMET, AMRITSAR
20	SGRDMSR, AMRITSAR
21	THAPAR UNIVERSITY, PATIALA
22	LCET, KATANI KALAN
23	MBIN, TARAN TARN

APPENDIX-II

S.no D……/F……..…/…

WORK AND WELL BEING SURVEY IN HIGHER EDUCATION INSTITUTIONS IN PUNJAB

SUNAINA AHUJA
Research Scholar
Lovely Professional University

Dear Sir/Madam,

I am conducting a survey amongst faculty members of Higher Education Institutions (HEIs) in Punjab, as a part of my Ph.D dissertation from Lovely Professional University (www.lpu.in). Please spare some time from your busy schedule to respond to this questionnaire. It is assured that the information is sought anonymously and will be kept confidential, to be used for academic purpose only.

Part I : This part contains some statements regarding your **current job, current organization and yourself.** Considering your **experiences of the past six months or more,** please indicate how far do you agree or disagree with the given statements on the following scale :

0	1	2	3	4	5	6
Strongly Disagree	**Disagree**	**Disagree somewhat**	**Neither agree nor disagree**	**Agree somewhat**	**Agree**	**Strongly agree**

S. No.	Statement	Response (0-6)
1	My work is valuable for the organization.	
2	My work is interesting enough to spend my time and energy on it.	
3	The results of my work are likely to affect the lives of other people in the society.	

S. No.	Statement	Response (0-6)
4	My job requires me to do a variety of tasks.	
5	My job gives me a sense of accomplishment of my personal goals.	
6	At the end of a work day I derive a sense of satisfaction from having done my work.	
7	Usually I get compliments for performing competently.	
8	I am not able to make regular improvements in the quality of my work.	
9	Usually I do not experience a feeling of achievement when I finish a task.	
10	I do not have much choice in deciding the nature of work I have to perform.	
11	My job **does not** give me enough decision making power.	
12	I can depend on the support of my colleagues in any work related issue.	
13	I can depend on the support of my subordinates in any work related issue.	
	Note : Please read statement # 14 to 25 in relation to your immediate superior (e.g Head of Department or Principal or Director or equivalent)	
14	My immediate superior usually encourages me to take independent decisions.	
15	S/he does not ask for my opinion before making decisions.	
16	S/he makes efforts to help me develop myself.	
17	S/he provides me personalized guidance and counseling whenever required.	
18	S/he is a role model for me.	
19	S/he helps me with difficult tasks at work.	
20	S/he does not recognize and reward cooperative behavior towards colleagues.	
21	S/he holds me responsible for the work I am supposed to do.	
22	S/he inspires me to accept challenging tasks.	
23	I am seldom consulted when my work goals are framed.	

S. No.	Statement	Response (0-6)
24	My immediate superior gives me regular feedback about my performance.	
25	My immediate superior guides me on improving performance.	
26	Usually after completing a task I come to know on my own, how well I have done it.	
27	The criteria for deciding pay raise / promotion is not clear.	
28	I cannot see a relation between the pay raise / promotions awarded to employees and their performance.	
29	No special recognition is given to employees who work beyond their job profiles, in the larger interest of the organization.	
30	There is not enough role clarity in my job.	
31	There is free flow of communication across individuals of different ranks in my department.	
32	I feel free to discuss any work related matter in my work group.	
33	I can freely approach my immediate superior to discuss any work related matter.	
34	My students approach me to discuss their ideas.	
35	My students approach me for sorting out their problems.	
36	Students keep in touch with me even after passing out.	
37	My job requires me to upgrade my qualification, knowledge and skills continuously.	
38	Employees who improve professional knowledge and skills are highly valued in this organization.	
39	The organization regularly gives me opportunities to attend conferences, seminars and Faculty Development programs.	
40	Ever since I have joined this organization there is continuous upgradation in my knowledge and skills.	
41	The organization clearly communicates its mission to employees at all levels.	
42	In this organization, the boundaries of acceptable conduct (do's and don'ts) are clearly defined for the employees.	
43	There is free flow of communication across different departments.	

S. No.	Statement	Response (0-6)
44	A clear cut career path is defined for the employees of this organization.	
45	The nature of my job is such that my talent gets noticed by my seniors.	
46	The organization provides good opportunities for career advancement.	
47	The organization provides facilities for employee training and development.	
48	I am satisfied with my salary.	
49	Employee benefits available here are inadequate.	
50	Over here, generally there is no feeling of job insecurity.	
51	I am satisfied with my status in the organizational hierarchy.	
52	The organization operates in a manner which is in the interest of the larger society.	
53	The organization regularly participates in community development programs in the local area.	
54	I experience a strong bond between me and my students.	
55	I get due recognition making me feel a valued member of this organization.	
56	I have full faith that the organization takes right decisions pertaining to the employees.	
57	The policies, systems and procedures of the organization are rigid.	
58	Whenever I share a new idea, my immediate superior gives me a thorough hearing.	
59	I am encouraged to try new ideas without fear of negative consequences.	
60	The employees here, do play a role in improving the policies, systems and procedures.	
61	I have to sacrifice quality of work for quantity of work.	
62	Responsibilities of people working together are not clearly distinguished.	
63	Some of the tasks that I have to do are non-productive.	

S. No.	Statement	Response (0-6)
64	Adequate staff is not available to ensure quality of work.	
65	I can manage to solve difficult problems if I try hard enough.	
66	If someone opposes me, I can find the ways to get what I want.	
67	I am confident that I can deal efficiently with unexpected events.	
68	It is easy for me to stick to my aims and accomplish my goals.	
69	I can remain calm when facing difficulties.	
70	I feel that I can handle many tasks at a time.	
71	Even when I face any failure or disappointment I quickly come back to my normal state of mind.	
72	My opinions matter in the organization.	
73	I am duly respected in the organization.	
74	I am trusted by all sections of people in the organization.	
75	I believe that I have made valuable contribution to the organization.	
76	I am considered to be efficient at work.	
77	I am considered to be helpful and cooperative at work.	
78	I usually expect the best even in situations of uncertainty.	
79	Even when things are not right I try to play a positive role to salvage (save) the situation.	
80	I am always optimistic about my future.	
81	Lot of good things keep happening to me in life.	
82	Mostly I expect good things to happen.	
83	Mostly I perceive situations to be positive.	
84	I have set clear career goals for myself.	
85	Three years ahead I visualize myself working in the same organization.	
86	I invest time, effort and money in my own learning and development.	
87	I like to do a variety of tasks rather than tasks of similar nature.	
88	I am interested in events and activities other than teaching.	

S. No.	Statement	Response (0-6)
89	Over here, my talent is not being utilized appropriately.	
90	I am satisfied with my present job.	
91	I am satisfied with this organization as an employee.	
92	I would recommend this organization to my friends / colleagues as a great place to work.	

Part –II : This part contains statements to which you are expected to respond in view of your **current job and / or previous jobs.** Please indicate on the scale given below, how frequently (if ever) you act according to the given statements :

Never	Almost Never	Rarely	Sometimes	Often	Very often	Always
0	**1**	**2**	**3**	**4**	**5**	**6**
Never	**A few times a year or less**	**Once a month or less**	**A few times a month**	**Once a week**	**A few times a week**	**Everyday**

S.No.	Statement	Response (0-6)
1	When an interesting project comes along, I offer my services proactively.	
2	If there are new developments in my field, I am one of the first to learn about them and try them out.	
3	When there is not much to do at work, I see it as a chance to start new projects.	
4	I approach my supervisor for inspiration, coaching and advice.	
5	I ask whether my supervisor is satisfied with my work.	
6	I ask others for feedback on my job performance.	
7	I ask colleagues for advice.	
8	I try to develop my capabilities.	
9	I try to develop myself professionally.	
10	I try to learn new things at work.	
11	I make sure that I use my capacities to the maximum.	
12	I decide on my own how to do things.	

Part III : This part contains statements regarding **your work and personal life**. Please respond spontaneously how frequently (if ever) you face the following situations :

Never	Almost Never	Rarely	Sometimes	Often	Very often	Always
0	**1**	**2**	**3**	**4**	**5**	**6**
Never	**A few times a year or less**	**Once a month or less**	**A few times a month**	**Once a week**	**A few times a week**	**Everyday**

S.No.	Statement	Response (0 to 6)
1	My personal life suffers because of work.	
2	My job makes personal life difficult.	
3	I neglect personal needs because of work.	
4	I put personal life on hold for work.	
5	I miss personal activities because of work.	
6	I struggle to juggle work and non work.	
7	I am happy with the amount of time for non work activities.	
8	My personal life drains me of energy for work.	
9	I am too tired to be effective at work.	
10	My work suffers because of my personal life.	
11	It is hard to work because of personal matters.	
12	My personal life gives me energy for my job.	
13	My job gives me energy to pursue personal activities.	
14	I have a better mood at work because of personal life.	
15	I have a better mood because of my job.	

Part IV : *The following 9 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, mark '0' (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by assigning a number (from 1 to 6) that best describes how frequently you feel that way.*

Never	Almost Never	Rarely	Sometimes	Often	Very often	Always
0	**1**	**2**	**3**	**4**	**5**	**6**
Never	**A few times a year or less**	**Once a month or less**	**A few times a month**	**Once a week**	**A few times a week**	**Everyday**

S.No.	Statement	Response (0 to 6)
1	At my work, I feel bursting with energy.	
2	At my job, I feel strong and vigorous.	
3	I am enthusiastic about my job.	
4	My job inspires me.	
5	When I get up in the morning, I feel like going to work.	
6	I feel happy when I am working intensely.	
7	I am proud of the work that I do.	
8	I am immersed in my work.	
9	I get carried away when I'm working.	

Part V : Please respond how far do you agree or disagree with the following statements **about you and your current organization**. Please respond on the following scale:

0	1	2	3	4	5	6
Strongly Disagree	**Disagree**	**Disagree somewhat**	**Neither agree nor disagree**	**Agree somewhat**	**Agree**	**Strongly agree**

S.No.	Statement	Response (0 to 6)
1	I would be happy to work in this organization until I retire.	
2	Working in this organization has a great deal of personal meaning to me.	
3	I really feel that problems faced by this organization are also my problems.	
4	I feel personally attached to this organization.	
5	I am proud to tell others I work at this organization.	
6	I feel a strong sense of belonging to this organization.	

Part VI : How often you experience the feeling expressed in the statements given below, in relation to your role (work profile) in the organization. Please respond on the following scale:

Never	Almost Never	Rarely	Sometimes	Often	Very often	Always
0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Everyday

S.No.	Statement	Response (0 to 6)
1	My role does not allow enough time for my family and friends.	
2	I have various other interests (social, religious etc) which get neglected because I do not have time to attend these.	
3	I do not have time and opportunities to prepare myself for future challenges of my role.	
4	There is very little scope for personal growth in my role.	
5	I am not able to satisfy the conflicting demands of various people above me.	
6	I am not able to satisfy the conflicting demands of my peers and juniors.	

S.No.	Statement	Response (0 to 6)
7	I am not able to satisfy the demands of students and others since these are conflicting with one another.	
8	The expectations of my seniors conflict with those of my juniors.	
9	I can do much more than what I have been assigned.	
10	The amount of work I have to do interferes with the quality I want to maintain.	
11	There is not enough scope for making my views heard .	
12	I need more training and preparation to be effective in my role / job / work.	
13	If I had full freedom to define my role I would be doing some things differently from the way I am doing them now.	
14	I experience a conflict between my values and what I have to do in my role / job.	
15	The work I do in the organization is not related to my interests.	
16	I am not clear on the scope and responsibilities of my role (job).	
17	I do not get enough resources to be effective in my role.	
18	I do not get the information needed to carry out the responsibilities assigned to me.	

Part VII :

1. Out of the following 11 statements, what are the **top 5 changes** you would want in your job / organization so that you can work with better energy, dedication and involvement? **Rank them in the order of preference giving rank 1 to the most preferred and rank 5 to the least preferred (ONLY TOP FIVE changes, give 0 rank to others).**

S.No.	Change desired	Order of priority (Rank 1 to 5)
1	Greater role clarity is required	
2	More empowerment for decision making	

S.No.	Change desired	Order of priority (Rank 1 to 5)
3	Better intrinsic rewards (interesting work, satisfaction from work , sense of progress at work)	
4	More cooperation from colleagues	
5	Development oriented leadership	
6	Regular feedback on performance and performance based career growth	
7	More open communication within and across departments	
8	Better opportunities for learning and development	
9	Organizational support for career advancement	
10	More openness towards change and innovation	
11	Improvement in quality of manpower available	

2. Apart from the above, any other change that you would like to bring about :

3. Would you like to **change anything in yourself** so that you can work with better energy, dedication and involvement? If yes, rank the following in the order of preference.

Greater belief in self	
More optimistic about results	
Greater belongingness with the organization	
More professional orientation	

4. Apart from the above, any other change that you would like to bring about :

Part VIII : Please tick the relevant option

1. Name of the Institution where you are employed : _____

2. Type of Institution :

Government ☐ Government aided ☐ Private ☐

3. Department / Faculty work area :

Commerce and Business Management ☐

Science, Engineering and Technology ☐

Applied medical Sciences ☐

Education and Humanities ☐

4. Posted at:

University Campus ☐ Affiliated Institute ☐

District : _____

5. Designation:

Lecturer or equivalent ☐

Assistant Professor or equivalent ☐

Associate Professor or equivalent ☐

Professor or equivalent ☐

Head of Department or equivalent ☐

Head of Institution or equivalent ☐

6. Total Experience (in years) :

Upto 5 ☐ > 05 upto 10 ☐ > 10 upto 15 ☐

> 15 upto 20 ☐ > 20 ☐

7. Experience in this organization (in years) :

Upto 5 ☐ > 05 upto 10 ☐ > 10 upto 15 ☐

> 15 upto 20 ☐ > 20 ☐

8. Age (in years)

Upto 25 ☐ > 25 upto 35 ☐ > 35 upto 45 ☐

> 45 upto 55 ☐ > 55 ☐

9. Gender

Female ☐ Male ☐

10. **Educational background : Please tick the relevant option**

	Private Institution	**State Govt. Institution**	**Central Govt. Institution**	**Foreign institution (outside India)**	**Premier Institution (one of the top 10 in India)**
Graduation from					
Post Graduation from					
Doctoral study from					
Post doctoral study from …….					

11. Regional background

Rural ☐ Urban ☐

12. Your Monthly Salary (Rs.)

Upto 30,000 ☐ 30,001 to 50,000 ☐

50,001 upto 70,000 ☐ 70,001 upto 90,000 ☐

90,001 to 1,10,000 ☐ > 1,10,000 ☐

Thanks a lot for your cooperation.

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