ROLE OF NAAC ACCREDITATION IN QUALITY IMPROVEMENT: AN EVALUATIVE STUDY OF NORTH INDIAN UNIVERSITIES

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PUNJAB

2017

DECLARATION

I declare that the thesis entitled ***'Role Of NAAC Accreditation in Quality Improvement: An Evaluative Study of North Indian Universities'*** has been prepared by me under the guidance of Dr. Anoop Beri, Registrar, C.T. University, Ludhiana. No part of this thesis has formed the basis for the award of any degree or fellowship previously.

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ABSTRACT

The aim of the present study was to study the role of NAAC Accreditation in quality improvement of NAAC accredited Universities of North India. Mixed method research approach was used in the present study i.e. both quantitative and qualitative approaches were used. Thus the current study utilized both quantitative and qualitative methods. To conduct the present study, 8 NAAC accredited Universities were selected from North India.7 Universities were selected from 7 States i.e. Haryana, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Rajasthan, Punjab and Jammu & Kashmir and 1 University was selected from NCT, Delhi. The respondents of the present study consisted of different stakeholders from the Universities selected for the study. Stakeholders selected were IQAC members, Teachers and Students. The sample consisted of 2 IQAC Members, 20 teachers and 80 students per University. Thus the total sample consisted of 16 IQAC members, 160 teachers and 640 students in total from 8 NAAC accredited universities of North India.

The objectives of the study were: to identify the perceived outcomes of NAAC accreditation from the perspectives of the stakeholders of North Indian Universities; to investigate the alignment of perceived outcomes of accreditation by the stakeholders of accredited North Indian Universities with the stated assessment and accreditation objectives as set by UGC; to explore the contribution of quality processes, adopted consequent to NAAC accreditation, towards quality improvement in North Indian Universities; to identify the challenges faced by the stakeholders during the accreditation process and to identify the progress of quality improvement measures after the accreditation to the time of re-accreditation.

Sources used for the collection of primary and secondary data were in the context of the objectives framed for the study. For the collection of primary data, tools constructed and used were Interview Schedule for IQAC Members, Questionnaire for Teachers and Questionnaire for Students The secondary data from the sources were pooled up and analyzed. Various Sources used for the collection of secondary data are enlisted as, NAAC Peer Team Reports; AQAR (Annual Quality Assurance Report); SSR (Self-Study Report); AQR (Annual Quality Report); NAAC related

material on NAAC Website (NAAC Annual Reports, Books, Newsletters, Manuals, Seminars and Conference Proceedings and Accreditation Status list of Universities), University Websites (Universities selected for data collection), UGC and MHRD Websites (XI and XII Five Year Plans, UGC documents and Publications). The analysis of the quantitative data collected was done using statistical techniques such as frequency and percentage. The technique used in the analysis of qualitative secondary data was content analysis.

The results related to the perceived outcomes of accreditation from the perspectives of the stakeholders revealed the perceived outcomes of accreditation in terms of indicators of general benefits of accreditation to the higher education institutions. Other results of the present study revealed the perceived outcomes of accreditation in terms of indicators of quality initiatives as per NAAC Criteria i.e. Curricular Aspects, Teaching-Learning and Evaluation, Research, Consultancy and Extension, Infrastructure and Learning Resources, Student Support and Progression, Governance, Leadership and Management and Innovations and Best practices.

Perceived outcomes of accreditation identified from the perspectives of the stakeholders were further aligned with the assessment and accreditation objectives as set by UGC. Results obtained revealed that the accredited Universities were in tune with the objectives set by UGC. Thus, indicating that the Universities were aiming to augment quality as emphasized by NAAC by benchmarking uniform reference points.

In order to explore the contribution of quality processes, adopted consequent to NAAC accreditation, towards quality improvement in North Indian Universities, NAAC Peer Team Suggestions given to the eight NAAC Accredited Universities were considered. It was revealed that these Universities were given suggestions in the context of Quality Assurance Mechanism, External Academic Audit, Faculty Development Programmes, Faculty Empowerment Strategies, Campus Wide Networking, Promotion of Research, Suitable Facilities as per the Needs of the Area, Autonomous College System, Infrastructure and Learning Resources, Teaching-Learning and Use of ICT, Decentralization of Academic Administration, Choice-Based Credit System, Examination System, Review of Programs, Consultancy

Services, Recruitment of Faculty, Student Support Services, Enrollment of Foreign Students and Innovative Practices. In the study, all the suggestions were further mapped with the NAAC criteria. All this, highlighted quality processes, adopted consequent to NAAC Accreditation, by the Universities in the context of Peer Team suggestions. This further revealed domains improved/strengthened for Key Aspects, reflecting the contribution of quality processes in the Universities.

Various challenges faced by the stakeholders during the accreditation process were identified such as added workload; the unrealized impact of the accreditation process; lack of basic knowledge or formal training of the accreditation process; staff inadequacy; lenient attitude of some teachers; lack of teamwork and documentation. Various strategies to cope with these challenges were suggested. Various positive changes expected in the institution on overcoming the challenges were also suggested.

In order to identify the progress of quality improvement measures after the accreditation to the time of re-accreditation, the University wise Analysis of Progress of quality improvement measures was done. For this, Case Study method was used. Analysis of the Progress of quality improvement measures of eight NAAC Accredited Universities was done in terms of Quality Processes adopted as per the NAAC Peer Team Suggestions.

Key Words: Accreditation, Quality Improvement, Perceived Outcomes, Challenges, Quality processes

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B	QUESTIONNAIRE FOR TEACHERS
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D	NAAC ACCREDITED UNIVERSITIES

LIST OF ABBREVIATIONS

AICTE	—	All India Council for Technical Education
AIEEE	—	All India Engineering Entrance Examination
AISHE	—	All India Survey on Higher Education
AQAR	—	Annual Quality Assurance Report
AQR	—	Annual Quality Report
ATM	—	Automatic Teller Machine
BCI	—	Bar Council of India
BOS	—	Board of Studies
B.Tech.	—	Bachelor of Technology
CAT	—	Common Aptitude Test
CBCS	—	Choice Based Credit System
CCH	—	Central Council of Homeopathy
CCIMV	—	Central Council of Indian Medicine
CCTV	—	Closed-Circuit Television
CD ROM	—	Compact Disc, Read Only Memory
CII	—	Confederation of Indian Industry
Cr. 1	—	NAAC Criterion-I (Curricular Aspects)
Cr.2	—	NAAC Criterion-II (Teaching, Learning and Evaluation)
Cr.3	—	NAAC Criterion-III (Research, Consultancy and Extension)
Cr.4	—	NAAC Criterion-IV (Infrastructure and Learning Resources)
Cr.5	—	NAAC Criterion-V (Student Support and Progression)
Cr.6	—	NAAC Criterion-VI (Governance, Leadership and Management)
Cr.7	—	NAAC Criterion-VII (Innovations and Best Practices)
CSIR	—	Council of Scientific and Industrial Research
DA	—	Dearness Allowance

DAAD	—	Deutscher Akademischer Austauschdienst
DCI	—	Dental Council of India
DEC	—	Distance Education Council
DELNET	—	Developing Library Network
DIC	—	District Industrial Chamber
DIQA	—	Directorate of Internal Quality Assurance
DBT	—	Department of Biotechnology
DST	—	Department of Science and Technology
DST-FIST	—	Department of Science and Technology-Fund for Improvement of Science and Technology Infrastructure
FICCI	—	Federation of Indian Chambers of Commerce and Industry
FRRO	—	Foreign Regional Registration Offices
GATE	—	Graduate Aptitude Test in Engineering
GOs	—	Government Organizations
GRE	—	Graduate Record Examinations
HDFC	—	Housing Development Finance Corporation
HEIs	—	Higher Education Institutions
HOD	—	Head of Department
HOI	—	Head of Institute
HOS	—	Head of School
HSE	—	Health, Safety and Environment Lab
IBM	—	International Business Machines
ICD	—	Integrated Certificate Diploma Course
ICT	—	Information and Communications Technology
ICAR	—	Indian Council of Agricultural Research
INC	—	Indian Nursing Council
INFLIBNET	—	Information and Library Network
INSA	—	Indian National Science Academy
INFN	—	Italian Institute for Nuclear Physics

ISTE	—	Indian Society for Technical Education
IQAC	—	Internal Quality Assurance Cell
IT	—	Information Technology
MCI	—	Medical Council of India
MC & IT	—	Ministry of Communication and Information Technology
MHRD	—	Ministry of Human Resource Development
MIT	—	Massachusetts Institute of Technology
MoA	—	Memorandum of Association
MoU	—	Memorandum of Understanding
NAAC	—	National Assessment and Accreditation Council
NBA	—	National Board of Accreditation
NCC	—	National Cadet Corps
NCT	—	National Capital Territory
NCTE	—	National Council for Teacher Education
NEP	—	National Education Policy
NET	—	National Eligibility Test
NGOs	—	Non-Governmental Organizations
NKN	—	National Knowledge Network
NPE	—	National Policy on Education
NSS	—	National Service Scheme
OBC	—	Other Backward Class
OPAC	—	Online Public Access Catalog
PCI	—	Pharmacy Council of India
PG	—	Post Graduate
PCS	—	Provincial Civil Service
QAE	—	Quality Assurance and Enhancement
RCI	—	Rehabilitation Council of India
R&D	—	Research and Development

RUSA	—	Rashtriya Uchchatar Shiksha Abhiyan
SAP	—	Special Assistance Programme
SET	—	State Eligibility Test
SIDBI	—	Small Scale Industries Development Bank of India
SS	—	Support System
SSR	—	Self Study Report
STP	—	Sewage Treatment Plant
SWOC	—	Strengths, Weaknesses, Opportunities and Challenges
TA	—	Travel Allowance
TEQIP	—	Technical Education Quality Improvement Programme
UGC	—	University Grants Commission
UG	—	Under Graduate
UK	—	United Kingdom
UNESCO	—	United Nations Educational, Scientific and Cultural Organization
UPSC	—	Union Public Service Commission
UT	—	Union Territory
VCD	—	Video Compact Disc
VRV	—	Variable Refrigerant Volume

CHAPTER – I

INTRODUCTION

1.1 THEORETICAL ORIENTATION OF THE PROBLEM

Education is a human development effort which contributes towards the cultural transformation of the citizens. It is a powerful instrument of social, economic and cultural development. If education is to achieve this end, it must be planned to enable every individual in a society to develop his innate potentialities and aptitudes to the maximum extent, so that the country can achieve full economic growth and healthy social order. Education is thus both a product of and a feedback from the developmental process. Education is a process of human illumination and authorization for the achievement of a superior and eminent quality of life by which a nation transforms from what is into what it hopes to be. It is this social instrument through which policymakers and citizens can guide nation's destiny and shape its future. UNESCO (I972) has visualized the fundamental aim of education as the "Physical, intellectual, emotional and ethical integration of the individual into a complete man". Education is the only instrument for welfare and security of the people. Education has been a dominant mechanism to serve societal needs since civilizations. In the present highly competitive scenario, quality has become the keyword in education. The growing concern of educationists is focused to bring quality in education. In the context of education, merit or worth refers to the characteristics of education which has to content the wants of the society, parents and students at large by developing suitable skills and knowledge. Educational quality refers to the accessibility of efficient teachers, an ideal student-teacher ratio, suitable infrastructure facilities and the like.

1.2 ROLE OF HIGHER EDUCATION

Economic growth and scientific and technological development of a nation are very much concerned to the higher education system. Developments in hi-tech technology, industry development, agriculture production are feasible as a result of our world-class higher education. The Kothari Commission (1964-66) highlighted the roles of universities to seek and cultivate new knowledge; to help understand old

knowledge in the reference of new needs; to make available the society with competent humans trained in various fields; to continuously strive for continuous improvement and to minimize cultural and social dissimilarities through education. The report named "Learning The Treasure Within" stressed that education has 4 pillars: the first one is learning to know, the second one is learning to do, the third one is learning to live together and the fourth one is learning to be. The report emphasized that the higher education main functions are to make students ready for research related and teaching related activities; to make available exclusive courses for training which are suitable to the requirements of social life & economic life; to boost international collaboration through internationalization of technology, research and networking.

1.3 QUALITY CONCEPT

The word Quality is very known term but its meaning and uses differ extensively. It is linked as well as associated with shortcomings in process or product. The Quality word is linked with meeting consumer needs and demands. One of the important definitions is that "Quality is fitness for purpose". As per the British Standards, quality is stated as "the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs".

"Quality, as defined by Johnson, 1987, is the capability of product or services to knowingly satisfy those preconceived composite wants of the user (s) that are intelligently related to the characteristics of performance, and do not cause major overt or covert reaction or actions by other people"

"Quality means fitness of use" as defined by Juran, 1974.

"Quality means performance to requirement" as defined by Crosby, 1984.

In one of the discussions on quality in the system of education, Alexander Astin (1993) highlighted the following aspect:

One-can't-define-it-but-one-know-it-when-one-visualize-it.

As per Alexander Astin, there are 4 perspectives on quality of higher education excellence.

One is excellence in reputation; one is excellence in the resource; one is excellence in content; one is excellence in the outcome.

1.4 QUALITY CULTURE IN HIGHER EDUCATION

"Quality in Higher Education has become the prime concern of countries the world over."

– Antony Stella

Since the beginning of civilization, there has always been a quest for quality in human life. Every time, we try to improve ourselves over the previous stage. A pursuit of qualitative education is a major part of our lives towards achieving best life. Quality cannot be instantly acquired or achieved. This is more so in human-centric organizations, particularly, in Higher Educational Institutions. Growing middle classes and expanding urbanization are the driving forces of a need for the highest form of Quality in Higher Education. The impact made by reputed Higher Education Institutions (HEIs) on socio-economic conditions is quite visible. Quality Higher Education is the process primarily aimed at the following three things:

"Accountability, autonomy and innovations"

This process of quality higher education benefits the stakeholders directly, be it students, employees, funding agencies and thus overall institutions themselves (Srinivas, 2016). Several articles have been published on the importance of Quality Higher Education. These articles have mentioned that Quality Higher Education is the best instrument of growth and development of the society. Significant changes have happened in Higher Education because of Globalization, private participation and technological applications. It has rapidly grown and moved towards student centeredness. For confirming the economic development of country it is important for higher education to upskill people to take up various economic parts in society and all this is possible only through quality higher education (Srinivas, 2016; Aggarwal, 2014; Ravi, 2014).

Higher education institutions of today face challenges that they have not faced before- the need for expansion coupled with the demand for diversity, the need to integrate with the rest of the world coupled with the competition at the international

level and the like. They face now, not a paradigm shift, but a landslide of changing trends. The pressures of globalization like the restructuring of the economic system and the consequent increase in the real and virtual mobility of people have made our traditional academic provisions out of place. Some of the articles have discussed that there are various challenges to quality higher education particularly in developing countries such as under-performance of teachers, outdated organization and administration, and indifference to research and rapid and messy expansion thus leading to crisis of quality in higher education (Chaudhari, 2014; Trivedi, 2013; Pazhani, 2013).Further, the erosion of the nation-state and its capacity to master the economic and political transformations, complex cultural changes like increasing homogenization and multicultural realities, the worldwide hegemony of the English language as the universal lingua franca and the spread of commercial culture demand new adjustment strategies. They have a far-reaching impact on the citadels of higher learning the world over. To cope with the challenges of the new paradigms, a pragmatic approach, rather than any dogmatism is called for.

Higher Education Institutions internationally, are currently facing challenges of increasing student population, diversity within student group, under-prepared students, increasing workloads and decreasing resources (Gandhi, 2013; Shantakumari, 2012; Valera, 2015). Today's higher educational institutions are anticipated to reorganize their structure, rejuvenate their function, assure the quality of their products and remain answerable. They are to put emphasize on the world-class competitiveness of the country's system of higher education and develop abilities collectively with knowledge of a new type. Application orientation, Transdisciplinarity, application orientation and heterogeneity in the skills vital for its practice features knowledge of the new type. HEIs have to be resourceful in the great use of the new types of educational delivery systems that are based on Information and Communication Technologies (ICT), specifically the Internet. Moving to these advanced sources and techniques of learning has become important as they encourage not only the students and the teachers in malleable educational dealings but also forever learning. The universities have to react now to fast-changing areas faster than never. Analyzing these demands on education and their implications, evaluating the options available and identifying the workable strategies are the need of the hour.

Characteristics of the New Paradigms in Higher Education

The new paradigms are characterized by the following major changes:

- Shift in the objective of higher education from transfer of knowledge to skill and competency building.
- Change in curricular transaction from a teacher-centered approach to a student-oriented approach.
- Moving away from rigid curricula to a flexible curricular structure.
- Growth in the non-traditional modes of educational provisions.
- Introduction of new forms of delivery of education.
- Replacing the traditional academic proficiency by computer-fortified skills.
- Moving away from career specific qualifications towards more general training.
- Increasing leaning towards private providers and private sources of funding.
- Shift from a non-competitive ambience of higher education to a competitive environment.
- Shift from national focus to international orientation.

Due to the science and technology impact, most of the changes are necessitated by the demand for value-added human resources in a variety of settings that have proliferated. The higher education systems in various areas have been reacting to these modifying perspectives variably. The different ways to be accepted to meet the new areas, though they cover various aspects of the educational system, are not collectively exclusive. Coordination among the different functionaries of the education system as a whole is required for the successful implementation of the strategies. The teachers, institutions and the governments have to share the obligation of bringing the required modifications. The main work to be done to tackle with the new areas may be extensively categorized into five levels under the following known academic structural domains.

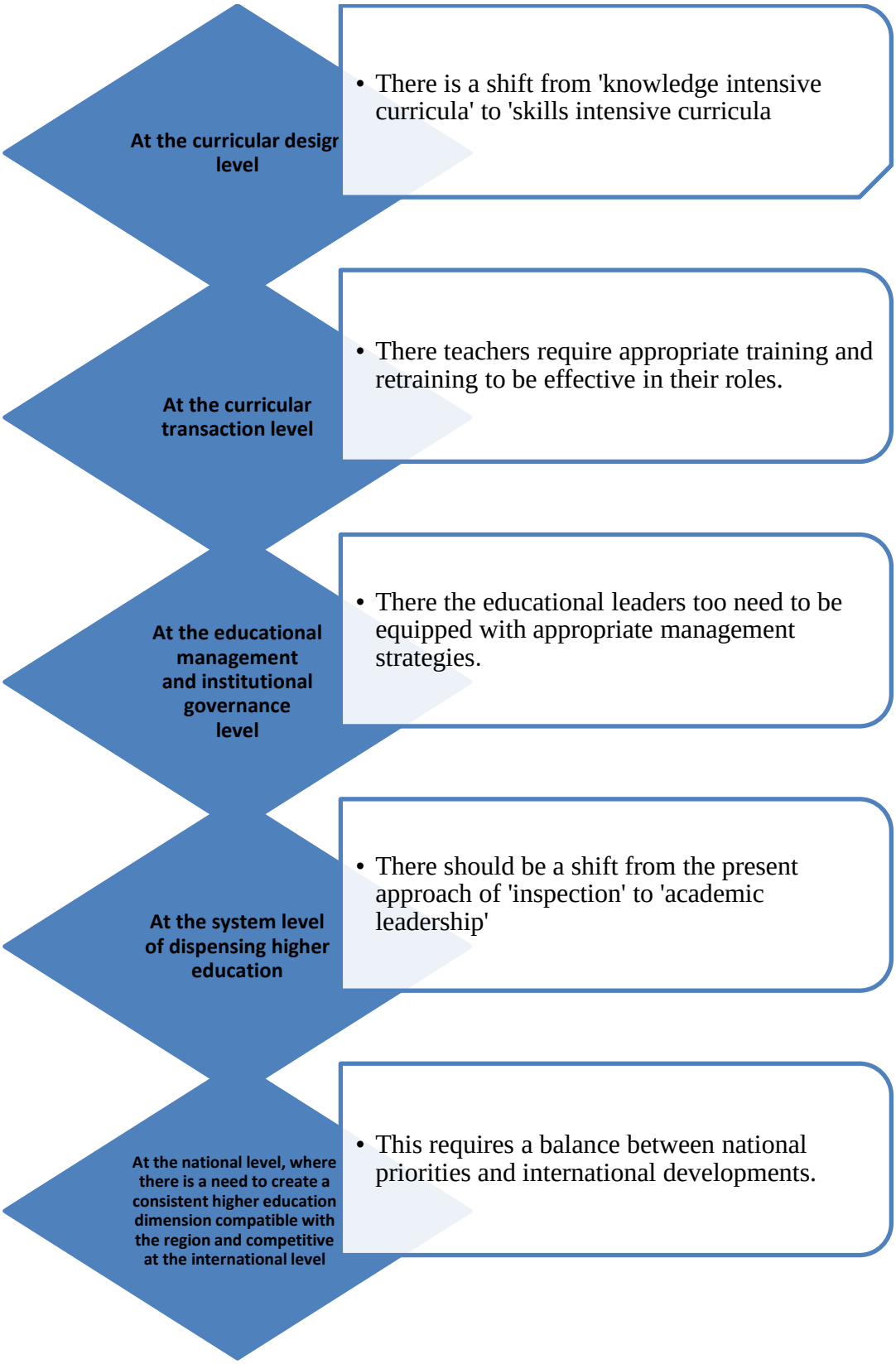

Fig. 1.1: New Paradigms in Higher Education- Stella, A. and Gnanam A.

1.5 HIGHER EDUCATION SCENARIO IN INDIA

The University Grants Commission with statutory powers is the agency set up to preserve quality in higher education institutions of India. UGC is accountable for "the determination and maintenance of ideals of teaching, research and examinations in universities". To put this into reality UGC is making continuous efforts to develop various systems to check quality in higher educational institutions. Various committees and commissions on education have emphasized the need for acknowledging and improvement of higher education system quality in India. Autonomous college's idea as suggested by Indian Education Commission (1964-66) was given with the motive of improvement in quality. With the educational institutions, huge expansion quality concern was highlighted. In 1976 the constitutional amendment made education to the list i.e. concurrent list thereby making the government in centre more accountable for improvement of quality. Detection and appreciation of excellence were stressed in the New Education Policy (1986) in whole institutions performance and monitor on institutions with low standards. In 1986 Programme of Action stated, "As a part of its responsibility to maintain and promote standards of education, the UGC will, to begin with, take a forward step to establish an Accreditation and Assessment Council as an autonomous body". NAAC was established at Bangalore as a registered autonomous agency on 16th September 1994 by the UGC after eight years of continuous and serious deliberations.

In 1990 Project report of Dr. Sukumaran Naik was submitted to UGC revealing an agreement to having an agency i.e. accreditation agency accountable to UGC. In 1992 for all-round development of educational institutions the revised New Education Policy was restated. In 1994 Professor G.Ram Reddy committee was appointed to finalize everything regarding the accreditation board (July 1994). NAAC was set up in September 1994 at Bangalore.

NAAC's main objectives as conceptualized in MoA are as follows:

- Grade higher educational institutions;
- Encourage the quality of teaching and research and academic environment in higher education institutions;

- Encourage institutions of higher education to accomplish their academic objectives;
- Encourage essential modifications, innovations & renovations in each and every aspect of the institutions aiming for above motive and
- Motivate self-evaluation, innovations and liability in higher education.

In India, there are various statutory bodies to assure professional education quality. These are:

All India Council for Technical Education, National Council for Teacher Education, Medical Council of India, Indian Nursing Council and Bar Council of India.

In 1994 to accredit programmes offered by technical institutions the All India Council for Technical Education set up the National Board of Accreditation. The National Board of Accreditation accredits programs of technical institutions. Other professional statutory bodies enlisted above are set up to recognize or de-recognize the higher education institutions as per their quality audit. Thus, quality aspect is the top agenda of Indian higher education.

12th Five Year Plan

The 11th Five Year Plan led as a step towards a quantum jump in diversifying and reinforcing the higher education system. The 12th Five Year Plan was pointed to maximizing the outcome of access, equity and quality, standing up to the international benchmarks. It is expected to offer an opportunity to develop upon the progress made during the 11th Five Year Plan, undertake effective course improvements where it is essential and lead to innovative measures to provide the much-wanted energy to the system so as to expand access, make higher education fully inclusive and encourage international quality and best to fulfill the aim of the core of Indian social and economic development planning. In 12thFive Year Plan guidelines for higher education has been given in relation to following six aspects:

- Access
- Equity
- Quality
- Promotion of Talent

- Skill Development
- Stand Alone Schemes

12th Plan's main objective was to increase higher education enrolment with quality, inclusiveness and necessary education with important changes in the academic aspect in the system of college/university. Some of the important points stressed in 12^{th} five-year plan were diversification & entry to higher education by increasing institutional capability and intake capacity to be increased, inclusive education to be encouraged by equal availability to different groups in higher education, to undertake academic activities and governance, reforms, etc.

Centrally Sponsored Scheme, Rashtriya Uchchatar Shiksha Abhiyan launched in 2013 aims at providing funding to eligible state higher education institutions. The central funding would be outcome and norm base. State Higher Education Councils would directly receive funding from the central ministry through the governments of state and union territories before coming to the identified institutions. The criteria of giving funding to states would be the basis of a critical appraisal of State Higher Education Plans, which is related to each state's plan to answer equity issues, access and best provided in higher education. Rashtriya Uchchatar Shiksha Abhiyan puts more stress on the better change of the quality of teaching-learning processes in order to make employable and competitive graduates, post-graduates and PhDs. Mentioned across two plan periods (XII and XIII), the programme stresses on state higher educational institutions and results upon the best practices from universities and colleges around the nation. In summarized form, Rashtriya Uchchatar Shiksha Abhiyan isn't a touch-up tint of paint. It is the central govt's plan to develop every state university to its most well-known version. Rashtriya Uchchatar Shiksha Abhiyan, emphasizes on best quality of state higher education institutions.

All India Survey on Higher Education (AISHE)

The great landmark in higher education came in 2011 in the form of All India Survey on Higher Education. During the same year under AISHE data for the year, 2010-11 was compiled. All India Survey on Higher Education gave the complete picture of higher education in India. It was the first time in Indian history that all the main stakeholders related with higher education such as University Grants

Commission, All India Council for Technical Education and Medical Council of India as well as state governments actively participated in the data collection process. The electronic mode was used to prepare the whole survey and a portal*http://aishe.gov.in* was developed for this purpose, thus making the whole process paperless. All the higher education Institutions in the country were engaged in giving the higher education information as required in the survey. Several areas were covered for the purpose of data collection such as student enrolment, teachers, programmes, results of the examination, education finance, infrastructure etc. Educational development indicators such as Institutional Density, Pupil-Teacher Ratio, Gender Parity Index, Gross Enrolment Ratio, etc. are calculated from the collected data through All India Survey on Higher Education. These are useful in making policy decisions and research for the development of the sector of education. The survey is being conducted on yearly basis. Higher Education institutions were classified in following three broad categories for this purpose: University and University Level Institutions; Colleges/Institutions and Stand-alone Institutions (not affiliated to Universities) which do not have the power to provide degree and run Diploma Level Programmes.

Thus AISHE is a great initiative in the field of higher education which clearly reveals the picture of higher education in the country.

1.6 GOVERNANCE PRACTICE

Higher education in India is controlled by University Grants Commission. It acts as the regulatory body and came on 28th December 1953 was made a statutory body of Government of India by an Act of Parliament. Different regulatory bodies such as Medical Council of India (MCI), All India Council for Technical Education (AICTE), Bar Council of India (BCI), Distance Education Council (DEC), Indian Council of Agricultural Research (ICAR), National Council for Teacher Education (NCTE), Rehabilitation Council of India (RCI), Pharmacy Council of India (PCI), Indian Nursing Council (INC), Dental Council of India (DCI), Central Council of Homeopathy (CCH), Central Council of Indian Medicine (CCIMV) of India among others, leads in managing various professional courses. There are two accrediting agencies–NBA (National Board of Accreditation) established by AICTE and NAAC

(National Assessment and Accreditation Council) established by UGC. As per UGC Regulations, 2012 it is mandatory for all higher education institutions to be accredited.

Indian Higher Education System- Aiming towards Quest for Excellence- Flagship Programmes of University Grants Commission

Extensive growth has been recorded in Indian higher education since Independence. Various programmes and schemes have been introduced in form of academic, administrative and financial support by University Grants Commission. All this has resulted in measure to the growth and development of Indian higher education system. All this has been done for encouraging a competent human resource needed for the social, economic and ethical development of the country with the regular commitment of both the Central and State governments towards the development of institutions. University Grants Commission has been discharging its main function of coordinating and maintaining standards of higher education thereby evolving a diverse variety of programmes for the realization of the aims of higher education. These Programmes have assumed 'Flag-Ship' status as they not only emphasize on teachers, students, socially vulnerable groups, researchers, thematic priorities in teaching & research & higher education institutions ranging from Departments and Colleges to Universities. For bringing increased qualitative improvement in the higher education in the country, the University Grants Commission has launched various 'Flag-Ship' programmes such as special assistance program, universities with potential for excellence, basic scientific research program, centres with potential for excellence in particular areas, minor & major research projects, inter university centres of university grants commission, colleges with potential for excellence, sigh-obama 21st century knowledge initiative, UK-India education and research initiative, autonomous colleges, academic staff colleges, faculty development programs, faculty recharge programs, encore, coaching scheme for scheduled castes, scheduled tribes, OBC and minorities, significant UGC fellowships/awards, fellows of different academia, chairs, establishing chairs in the name of nobel laureates, program in the offing and UGC fellowships and scholarships.

1.7 PRESENT SCENARIO OF HIGHER EDUCATION IN INDIA

In India after independence there has been remarkable development in the higher education. Various facts and figure representing the higher education system development in India have been stated further. In terms of size of higher education, after China and the United States next comes India. There is a great increase in the no. of Universities/colleges and University level Institutions in India since Independence. Only 20 universities and 500 colleges in the country with 2.1 lakh students were there at the time of independence in the Indian higher education system. There has been a tremendous growth in all these numbers after independence. As per recorded data there is an increase of 42.35 times in the number of degree awarding Institutions/Universities, 82.87 times increase in the number of colleges, and the enrolment of students has risen to over 135.64 times in the Indian higher education system as compared to the data of independent Year of India. The great expansion in enrolment of this way has been only possible with the growth in the no. of HEIs, both colleges and universities in particular, and expansion in intake capacity of present courses.

(Source: UGC Annual Report 2015-16)

1.8 TRENDS IN THE GROWTH OF HIGHER EDUCATION INSTITUTIONS

India is having one of the largest higher education systems in the World. There were only 20 universities and 500 colleges in India at the time of independence. This has expanded to 789 universities as on 22.02.2017 and to 11001 colleges as on 30.04.2017 as updated on UGC website on the mentioned dates.

Type of Higher Education Institutions:

Table 1.1 : Number of Higher Education Institutions in India

Type of Institution	Number	As updated on UGC website
Central Universities	47	15.01.2016
State Universities	359	22.02.2017
State Private Universities	260	22.02.2017
Deemed to be Universities	123	22.02.2017
Total	789	22.02.2017

Type of Institution	Number	As updated on UGC/MHRD website
Institutions of National Importance	74	19.04.2016
Institutions established under state legislature Acts	5	

Type of Institution (College) State/UT wise	Number	As updated on UGC Website
Number of Colleges covered under Section 2(f) and 12(B) of the UGC Act,1956 State wise	9023	30.04.2017
Number of Colleges covered under 2(f) but not considered under Section 12(B)	1978	
Total	11001	

1.9 QUALITY ASSURANCE MECHANISM

The higher education system is undergoing far-reaching transformations in the wake of rapid socio-economic changes the world over; India is no exception. Significant among the changes is the emergence of a quality assurance mechanism with national standards. Quality in higher education has become the main concern of countries over the world. National External Quality Assurance mechanism was established to maintain and make positive changes in the education standards as is considered to be the better way of answering to the quality aspect. Various countries have accepted this concept like Canada, UK and Australia. National Assessment and Accreditation Council (NAAC) establishment has made India to join the international trend in 1994.

Indian education system after independence came under the Indian government governance. The number of commissions and committees were appointed to make some positive changes in education system. This led to the quantitative and qualitative expansion of education institutions at primary, secondary and higher educational level. Initially, more focus was given on quantitative aspect. This led to increased growth of institutions thereby affecting the quality aspect and non-uniformity in the educational system all over the country. Therefore in order to bring positive change in educational system one innovative policy i.e. National Policy on

Education- 1986 was introduced in India. It would be right to call it as “Magna Carta of Indian Education system”. Various suggestions were given to make new changes in Indian educational system. Uniform education system in the form of 10+2+3 was suggested for the whole country. Some constructive suggestions regarding higher education were also made.

1.10 QUALITY ASSURANCE AGENCIES IN INDIA

India has presently two national level accreditation bodies for assessment and accreditation of HEIs in India. As a follow-up action to the NEP 1986 Policy Statement and in pursuance of the function, specified in the AICTE Act 1988, the AICTE has constituted the National Board of Accreditation (NBA), which has to accredit programs in professional disciplines like engineering, management and pharmacy. National Assessment and Accreditation Council as an autonomous agency was established to assess and accredit higher education institutions and its units, with its headquarters at Bangalore. The NAAC has main aim of judging and assuring quality in arts, sciences and various other disciplines (Gandhi, 2013). In all times, more so in the present knowledge era, quality education is an important tool for national development. The assessment and accreditation process is the instrument, today in use world-over, to assess the quality of education and consider ways to make it better (Pillai, 2014).The lexical meanings of accreditation are official recognition; quality guarantee and general acceptance. The main aim of accreditation is to ensure quality control and quality assurance, generally with reference to a system of certification in the areas of education, training, testing, etc (Natarajan, 2000).

India is a rapidly developing democratic country. Along with substantial economic growth, it is characterized by social development which includes educational development. The Indian educational development in India is marked by relatively higher literacy rate, a substantial proportion of primary and secondary education and increasing higher education. The development of higher education is necessary for the further economic development, effective functioning of democratic institutions and the transformation of India into a knowledge society (Trivedi, 2013).

1.11 NAAC: AN OVERVIEW

The National Assessment and Accreditation Council (NAAC) is an agency that assesses and accredits higher education institutions in India. It is an autonomous body funded by University Grants Commission of India headquartered in Bangalore. NAAC was set up in 1994 in response to suggestions of NPE (1986). This policy was to "address the aspects of lowering standards in quality of education", and the Plan of Action, 1992 laid out main plans for the policies including the setting up of an independent national accreditation body. Consequently, the NAAC was set up in 1994.

Overview of NAAC Accreditation Process:

Vision and Mission:

Vision

To make quality the defining element of higher education in India through a combination of self and external quality evaluation, promotion and sustenance initiatives.

Mission

- To arrange for periodic assessment and accreditation of institutions of higher education or units thereof, or specific academic programmes or projects;
- To stimulate the academic environment for promotion of quality of teaching-learning and research in higher education institutions;
- To encourage self-evaluation, accountability, autonomy and innovations in higher education;
- To undertake quality-related research studies, consultancy and training programmes, and
- To collaborate with other stakeholders of higher education for quality evaluation, promotion and sustenance.

Guided by its vision and striving to achieve its mission, the NAAC primarily assesses the quality of institutions of higher education that volunteer for the process, through an internationally accepted methodology.

Core Values:

NAAC aims to promote the following core values among the higher education institutions of the country:

1) Contribution to National Development
2) Fostering Global Competencies among Students
3) Inculcating a Value System among Students
4) Promoting the Use of Technology
5) Quest for Excellence

Assessment and Accreditation Methodology:

NAAC has been continuously revising and reviewing its methodology to make its methodology as robust as possible to keep abreast of the developments in Higher Education. The scenario of higher education has changed during recent times. The purpose of this exercise of change is to implement an appropriate strategy for improvement in line with NAAC's vision and mission. Thus grading system and criteria for assessment have been modified from time to time in order to keep abreast with the changes in higher education in national and international perspective.

Changes in NAAC Grading System:

The grading system during initial years was on 9 point scale i.e. A++, A+, A, B++, B+, B, C++, C+, C and these grades were categorized on the basis of institutional scores ranging in between 60 to 100. If the overall score is more than 55%, the higher education institution gets the 'Accredited Status' and any score less than that would lead to 'Not Accredited' status of a higher education institution. The NAAC accredited institutions were graded on a 9-point scale with the above scale values. The new methodology including grading and criteria was introduced from 1st April 2007. The criterion, key aspects as well as core-indicators as guidelines were introduced to make the methodology more rigour and robust. The grading pattern of 9 (nine) point letter grades was changed to three letter grades, A,B,C with Cumulative Grade Point Average for accredited institutions and D for not accredited. Each letter grade stands for separate Cumulative Grade Point Average ranging from 4.00 to less than 1.50. These letter grades were described as 'A' for

Very Good, 'B' for Good, 'C' for Satisfactory and 'D' for Unsatisfactory. Under this system of grading, a Cumulative Grade Point Average is arrived at, which reveals the quality status of the institution. The Grading system of NAAC was recently revised and comes into effect from 01st July 2016. This new grading system consists of 8 letter grades i.e. A++, A+, A, B++, B+, B, C, D. Each letter grade stands for separate Cumulative Grade Point Average ranging from 4.00 to less than 1.50. These letter grades were described as 'Accredited' for grades A++, A+, A, B++, B+, B, C and 'Not Accredited' for grade D. This new grading pattern would help the NAAC to categorize the institutions in a systematic manner.

Accreditation Process:

Higher Education institutions undergoing accreditation for the first time come under Cycle 1 of accreditation. After the first cycle of accreditation every higher education institution go for accreditation at consecutive five year periods referred to as Cycles 2, 3, etc. As per new notification on the NAAC website, there is extension of the validity period of NAAC accreditation period from 5 to 7 years for a 3rd cycle for those institutions which have obtained a higher grade for two cycles continuously in condition if the institution again obtains a higher grade in the third cycle. The same process will continue if the institution again obtains the higher grade in the third cycle also.

For Cycle 1, accreditation's initial process is to be followed. In case of Cycles 2, 3, etc. there are some prerequisites such as, in the accredited institution IQAC should be functional; institution should timely submit Annual Quality Assurance Report; institutions should submit Letter of Intent six months before the expiry of the accreditation period. Other steps to be taken remain same as the first cycle.

Table 1.2 : Revisions made in NAAC Criteria from time to time

S. No.	Criteria in initial years		Criteria revised in 2007		Criteria revised in 2012		Criteria Revised in 2017	
	NAAC Criterion	**Key Aspects**	**NAAC Criterion**	**Key Aspects**	**NAAC Criterion**	**Key Aspects**	**NAAC Criterion**	**Key Indicators**
1.	Curricular Aspects	1.1 Compatibility of the programmes with goals and objectives 1.2 Initiation, review and redesign of programmes 1.3 Feedback on programmes and interaction with academic peers and employers 1.4 Programme options	Curricular Aspects	1.1 Curricular design and development 1.2 Academic flexibility 1.3 Feedback on curriculum 1.4 Curriculum update 1.5 Best Practices in Curricular Aspects	Curricular Aspects	1(U) Curriculum Design and Development *(For* Universities *and Autonomous Colleges)* 1.1 (A) Curriculum Planning and Implementation 1.2 Academic Flexibility 1.3 Curriculum Enrichment 1.4 Feedback System	Curricular Aspects	1(U) Curriculum Design and Development *(For* Universities *and Autonomous Colleges)* 1.1 (A) Curriculum Planning and Implementation 1.2 Academic Flexibility 1.3 Curriculum Enrichment 1.4 Feedback System
2.	Teaching-Learning and Evaluation	2.1 Judging students' knowledge & bridge / remedial courses 2.2 Teaching-learning process & use of new technology in teaching 2.3 Co-curricular activities 2.4 Examination process & innovative evaluation methods 2.5 Recruitment of faculty & faculty	Teaching-Learning And Evaluation	2.1 Admission Process and student profile 2.2 Catering to diverse needs 2.3 Teaching-Learning process 2.4 Teacher Quality 2.5 Evaluation process and Reforms 2.6 Best Practices in Teaching, Learning and Evaluation	Teaching-Learning and Evaluation	2.1 Student Enrolment and Profile 2.2 Catering to Student Diversity 2.3 Teaching-Learning Process 2.4 Teacher Quality 2.5 Evaluation Process and Reforms 2.6 Student Performance and Learning Outcomes	Teaching, Learning and Evaluation	2.1 Student Enrolment and Profile 2.2 Catering to Student Diversity 2.3 Teaching-Learning Process 2.4 Teacher Profile and Quality 2.5 Evaluation Process and Reforms 2.6 Student Performance and Learning

S. No.	Criteria in initial years		Criteria revised in 2007		Criteria revised in 2012		Criteria Revised in 2017	
	NAAC Criterion	**Key Aspects**	**NAAC Criterion**	**Key Aspects**	**NAAC Criterion**	**Key Aspects**	**NAAC Criterion**	**Key Indicators**
		development programmes 2.6 Evaluation of teaching, research and work satisfaction of faculty & monitoring and rewarding successful teaching innovation 2.7 Access to national and / or international likages						Outcomes 2.7 Student Satisfaction Survey
3.	Research, Consultancy and Extension	3.1 Promotion and sustenance of research culture and research output 3.2 Freedom to publish in academic forum and publication 3.3 Benefits of Consultancy to the institution an d society 3.4 Faculty participation in extension programmes and	Research, Consultancy And Extension	3.1 Promotion of Research 3. 2 Research and publication output 3.3 Consultancy 3.4 Extension activities 3.5 Collaborations 3.6 Best Practices in Research, Consultancy &Extension	Research, Consultancy And Extension	3.1 Promotion of Research 3.2 Resource Mobilization for Research 3.3 Research Facilities 3.4 Research Publications and Awards 3.5 Consultancy 3.6 Extension Activities and Institutional Social Responsibility	Research, Innovations and Extension	3.1 Promotion of Research 3.2 Resource Mobilization for Research 3.3 Innovation Ecosystem 3.4 Research Publications and Awards 3.5 Consultancy 3.6 Extension Activities 3.7 Collaborations

S. No.	Criteria in initial years		Criteria revised in 2007		Criteria revised in 2012		Criteria Revised in 2017	
	NAAC Criterion	**Key Aspects**	**NAAC Criterion**	**Key Aspects**	**NAAC Criterion**	**Key Aspects**	**NAAC Criterion**	**Key Indicators**
		the extension activities conducted so far 3.5 Resources to conduct extension activities and service provided in the area of expertise				3.7 Collaborations		
4.	Infrastructure and Learning Resources	4.1 Physical facilities 4.2 Maintenance 4.3 Optimal use of infrastructure 4.4 Library 4.5 Computer facilities 4.6 Laboratories 4.7 Health services & sports and physical education 4.8 Hostel, canteen, guest house 4.9 Others	Infrastructure And Learning Resources	4.1 Physical facilities for learning 4.2 Maintenance of infrastructure 4.3 Library as a learning resource 4.4 ICT as learning Resources 4.5 Other facilities 4.6 Best Practices in the development of Infrastructure and Learning Resources	Infrastructure and Learning Resources	4.1 Physical Facilities 4.2 Library as a learning Resource 4.3 IT Infrastructure 4.4 Maintenance of Campus Facilities	Infrastructure and Learning Resources	4.1 Physical Facilities 4.2 Library as a learning Resource 4.3 IT Infrastructure 4.4 Maintenance of Campus Infrastructure
5.	Student Support and Progression	5.1 Progression to employment and further study 5.2 Pass and dropout rate and student achievement 5.3 Alumni association,	Student Support and Progression	5.1 Student Progression 5.2 Student Support 5.3 Student Activities 5.4 Best Practices in Student Support	Student Support and Progression	5.1 Student Mentoring and Support 5.2 Student Progression 5.3 Student Participation and	Student Support and Progression	5.1 Student Support 5.2 Student Progression 5.3 Student Participation and Activities

S. No.	Criteria in initial years		Criteria revised in 2007		Criteria revised in 2012		Criteria Revised in 2017	
	NAAC Criterion	Key Aspects	NAAC Criterion	Key Aspects	NAAC Criterion	Key Aspects	NAAC Criterion	Key Indicators
		its activities and Alumni Profile 5.4 Financial aid to students Personnel and Academic counseling 5.5 Placement services		and Progression		Activities		5.4 Alumni Engagement
6.	Organisation and Management	6.1 Organisation structure & functions and powers of functionaries 6.2 Human power requirement & recruitment of staff 6.3 Performance appraisal & new technologies in communication 6.4 Welfare schemes & grievance redressal mechanism 6.5 Budgeting and auditing procedures 6.6 Resource mobilization and effective utilization	Governance and Leadership	6.1 Institutional vision and leadership 6.2 Organizational Arrangements 6.3 Strategy Development and Deployment 6.4 Human Resource Management 6.5 Financial Management and Resource Mobilization 6.6 Best Practices in Governance and Leadership	Governance, Leadership and Management	6.1 Institutional vision and Leadership 6.2 Strategy Development and Deployment 6.3 Faculty Empowerment Strategies 6.4 Financial Management and Resource Mobilization 6.5 Internal Quality Assurance System (IQAS)	Governance, Leadership and Management	6.1 Institutional vision and Leadership 6.2 Strategy Development and Deployment 6.3 Faculty Empowerment Strategies 6.4 Financial Management and Resource Mobilization 6.5 Internal Quality Assurance System (IQAS)
7.	Healthy Practices	7.1 Complementary System like self-financing courses, need-based	Innovative Practices	7.1 Internal Quality Assurance System	Innovations and Best Practices	7.1 Environment Consciousness 7.2 Innovations	Institutional Values and Best Practices	7.1 Institutional Values and Social

S. No.	Criteria in initial years		Criteria revised in 2007		Criteria revised in 2012		Criteria Revised in 2017	
	NAAC Criterion	Key Aspects	NAAC Criterion	Key Aspects	NAAC Criterion	Key Aspects	NAAC Criterion	Key Indicators
		courses 7.2 National / International linkages for teaching and research 7.3 Industry linkage 7.4 Educational Innovations such as credit system, examination reforms and modular curriculum 7.5 Working with specific mission and goals 7.6 Awards won by the faculty Others		7.2 Inclusive Practices 7.3 Stakeholder Relationships		7.3 Best Practices		Responsibilities 7.2 Best Practices 7.3 Institutional Distinctiveness
	Source: Quality Assessment in Indian Higher Education; Issues of Impact and Future Perspectives (Antony Stella)		Source: NAAC Website		Source: NAAC Website		Source: NAAC Website	

(U)- applicable only for Universities and Autonomous Colleges

(A)- applicable only for Affiliated /Constituent Colleges

Analysis of the Result is done as per NAAC Criteria, 2012

1.12 IMPORTANCE AND BENEFITS OF ACCREDITATION

Accreditation is a process which helps an educational program or institution in providing information about its working to external quality assurance agency that assesses and judges that information in order to make a public statement about the worth or quality of the institution or program (El-Khawas,1998). The world over quality assurance is an evolving mechanism. The quality assurance started with the philosophy of making a good beginning. External quality assurance in the form of assessment and accreditation process has made quality a culture of higher educational institutions. Accreditation is an assessment of the performance of the program/institution as per the accreditation criteria. It is an assurance that a program or institution meets establish quality standards. Accreditation results in quality improvement, quality maintenance and quality assurance (Ferrara, 2007; Maric, 2008). Accreditation as an external quality assurance process provides a proper framework to the institute/department to identify their strengths, weaknesses, opportunities and threats. Accreditation creates awareness in the institute/department of the above factors inherent in the program offered by them, and give suggestions for proper use of their strengths, opportunities; to be aware of threats and make improvements in their inherent weaknesses (Bhar, 2010) Thus accreditation as an external quality assurance process all over the world acts as tool of SWOT analysis for higher educational institutions. Accreditation encourages the institute to move continuously towards quality improvement and the pursuit of excellence thereby aiming for quality higher education. The process is primarily aimed at promoting accountability, autonomy and innovations in Higher Education (Srinivas, 2016; Rajendran, 2012). Accreditation gives institutions the impetus to update program curriculum, teaching and learning processes, faculty achievements, and students' skills / abilities / knowledge. Accreditation encourages excellence among stakeholders - students, faculty, alumni, employers, industries, government, regulators, management, etc. It benefits the stakeholders directly, be it students, employers, funding agencies and thus overall institutions themselves (Srinivas, 2016; Knutson, 2010). Accreditation helps to reduce duplication among departments within universities to create a defined identity. Students who complete their course from accredited programs perform better on various outcome measures than students

from non-accredited programs (Ferrara, 2007). According to one of the studies, the average percentage of awareness of accreditation concept was above 75%. Accreditation has led to quality improvement in education in institutions. In every stage of accreditation in the institution i.e. before accreditation, during accreditation and after accreditation there is use of proper management in the form of teamwork leading to unity, follow up, proper management of time, transparency which leads to the core of successful and high ranking to be awarded from accreditation agency (Sharma, 2014; Jisha, 2015). Interviewees in the study revealed that university leaders used the accreditation requirements of professional accrediting agencies as a leveraging tool to spread good assessment practices to other non-accredited programs in the institution. The study also showed that how leadership and dedication, coupled with external pressures provided by accreditors demanding an increased commitment to student learning outcomes and assessment procedures, changed the course of several programs and set key academic units on a path to academic distinction and fiscal soundness (Ferrara 2007).

The accreditation process plays a crucial role in ensuring that students are given the opportunity to receive a quality education. Accrediting bodies have to carefully negotiate standards, policies, and processes through federally mandated guidelines. Accreditation process strengths are financial aid access; credibility; continuous improvement framework; critical analysis of self-study using internal teams; and gaining external peer-review team perspectives (Burris, 2008; Nash, 2008). Participants from the accredited institutions under study reported more clearly defined divisions of labour, a higher degree of motivation, and a greater degree of integration. The richest source of data regarding institutional culture and practices around accreditation came from long-term faculty who had been at the institution for twenty or more years and had been heavily involved in governance and accreditation processes. Some of the positive effects of accreditation are that it allows for a college and its students to receive financial aid, both federal and state. It also provides for outside insight via peer-review from like-institutions and outside accountability. Furthermore, it enables the transferability of credit hours and the acceptance of accredited degrees from institution to institution (Tharp, 2012; Tevis, 2013)

1.13 OUTCOMES OF ACCREDITATION

Outcomes of Accreditation as perceived by different Stakeholders of Higher Educational Institutions

The literature review helps in knowing the role of accreditation in higher education institutions of different countries. Accreditation serves as a measure of quality assurance in many contexts including healthcare, business, and education, but little empirical or theoretical research on accreditation exists. Although limited in scope, the review that follows explores conceptual frameworks and theoretical models of accreditation and summarizes outcomes, effects or results of accreditation. Program changes and curriculum revision; Reorganization of administrative structures; Personnel changes; Students receive more employment opportunities; Faculty more professionally active; Faculty actively participates in publication of papers in national and international journals, and faculty presents more and Faculty engagement in curriculum revision and research are identified as some of the outcomes of accreditation (Brew, 2001). Accreditation in the institution motivates the institution to provide world-class education with the help of latest technology; gives new sense of direction and identity to the institution; modify the behaviour of students through extension activities; help students and parents to make right decision regarding choice of educational institution as accredited institution definitely value quality in every sphere; the society definitely gets reliable information on quality education offered and leads to improvement in quality of education (Sharma & Chaudhary, 2014; Jisha, 2015). The purpose of accreditation is variously defined from the point of view of the institution, the student and society. Accreditation, as it concerns the institution, protects academic freedom, assists institutions in securing the necessary resources to do the job; increased engagement in assessment and planning, development of enhanced program review processes; a catalyst for positive change and encourages experimentation and self-evaluation. Accreditation, as it concerns societal interests, promotes and maintains high standards of education and protects society against incompetent practitioners. Accreditation from the students' view guides students in selecting quality institutions; assist students in transferring from one institution to another; assists students in understanding the nature of their programs and degrees, (Elliott, 2010).

The pursuit of accreditation, from application to candidacy to accredited status, does exert significant positive influence on institutions engaged in the process. Research participants recall many changes and improvements resulting from institutional efforts to achieve accreditation standards, and they define the longer-term results of accreditation in terms of increased quality and organizational effectiveness. Research participants perceived a significant number of accreditation outcomes such as increased Accountability, enhanced reputation, official recognition, increased unity of purpose, increased collaboration in decision making, continuous improvement, increased enrollment, enhanced team culture, improved academic quality, institutional development, leverage for institutional change, increased networking opportunities, increased trust in the institution, increased professionalism, increased partnership opportunities and external Affirmation (Beatty, 2013). The real institutional improvements for the institution came from the emphasis on students learning outcomes; higher student achievement; increased organizational effectiveness and not from simply achieving the accreditation status per se. (Brew, 2001; Nash, 2008).

1.14 QUALITY INPUTS IN HIGHER EDUCATION INSTITUTIONS AS PER NAAC CRITERIA

In one of the published documents of NAAC entitled, "Accreditation Outcome – Emerging Issues for Policy Planning and Systemic Action**"** some policies related to quality issues has been discussed regarding various aspects such as curricular, teaching-learning aspect and evaluation and aspect related to research, consultancy and extension. In curricular aspects, it has been stated that NAAC stresses on an innovative curriculum in this fast growing and changing world. As 83% of education which is formal in discipline i.e. traditional discipline Art, Humanities, Social Sciences, Science, Commerce and Law. New & interdisciplinary fields have to be explored and evolved. For this, it is essential to restructure the courses aiming towards balanced curriculum thus focusing on inter-disciplinary approach, innovation, employability and reorganizing the curriculum on the verge of technology. In issues related to teaching, learning and evaluation it has been discussed that there should be staff development facilities to ensure their training for professional development. Student feedback should be an essential mechanism.

More emphasis should be given on evolution and beneficial use of multimedia to enhance active classroom and laboratory teaching. In case of research, consultancy and extension it is stated that higher educational institutions should evolve the aura of research and institutionalize services related to consultancy. Further, in this document, some Accreditation Outcomes and quality related issues emerged as a result of the 4 State-wise workshops and action plan has been discussed and enlisted. These are stated as follows:

Higher educational institutions should promote research culture by orienting the faculty regarding research-related activities; increase input related to research and output related to publications and projects; encouraging &ensuring consultancy services by faculty for research and other projects. Every higher education institution should have a policy related to appointment of adequate faculty. Institutions should increase more resources for encouraging teaching-related activities, learning related activities and extension related activities. Various resources of library and facilities of computer should be increased. INFLIBNET services and DELNET services should be made available. An institution should regularly formalize and collect feedback from the stakeholders. For enhancing teaching and research activities the institution should provide adequate computer and internet facilities. The up-to-date and relevant curriculum should be reframed from time to time. Essential reforms related to curricular aspect should be initiated such as introducing various courses such as remedial, vocational, value-based and choice-based credit system. Participatory and ICT enabled teaching-learning should be encouraged by HEIs. From time to time evaluation related processes are to be reformed. Higher Educational Institutions should make efforts to enhance the infrastructural facilities and various resources of learning; provide adequate support services related to guidance and counseling. For proper organization and management of higher education institutions, there should be participative and transparent management system appraisals. There should be IQAC in every institution to take care of continuous improvement in the entire functioning of the institution.

In Book entitled, “NAAC A DECADE OF DEDICATION TO QUALITY ASSURANCE” in one of the chapters entitled, “The impact of Assessment and

Accreditation" in which result of the survey conducted by NAAC on hundred higher education institutions that had undergone a process of assessment and accreditation has been discussed in detail. It has been stated that the success of any strategy can be evaluated by the impact the strategy makes on the main beneficiaries. The significant impact has been made by NAAC assessment and accreditation on the main i.e. primary beneficiaries and the benefits also extend as well to a number of secondary beneficiaries. Awareness of being quality the responsibility of higher education institutions has been created by NAAC's process of assessment and accreditation. NAAC's process of assessment and accreditation has led higher education institutions towards quality enhancement thereby motivating these institutions to take up innovative programs. In order to increase the program options, most of the accredited institutions have introduced need-based programs. Accredited institutions have developed the habit of reviewing and updating the curriculum from time to time thereby focusing more on innovation. The NAAC accredited institutions after accreditation has become more attentive thereby focusing on right priorities particularly related to teaching, learning and evaluation. Improved teaching methods using educational technology and various other innovative techniques for quality improvements in teaching-learning were observed in accredited institutions. Institutions underwent the process of assessment and accreditation has shown improvement in research-related activities such as there is more orientation towards research thereby leading to more and more organization of seminars, conferences, workshops. Students and teachers are encouraged to write and publish papers in national and international journals. Some staff from the accredited institutions stated that the various tasks during accreditation such as to prepare SSR & to get ready for the process of assessment visit of NAAC Peer Team involved a great deal of unnecessary paperwork, most of the staff stated that it acted as a promising tool for improvement of their paperwork especially related with student mentoring and progression, teacher development programs, alumni-related aspects and placement aspect. No doubt institutions as a whole motivated to record and properly manage data that has resulted in improving their performance. Various faculty members too revealed that they have now developed the habit of maintaining regular teaching diaries, proper documentation and paperwork related to their academic contributions and other scholarly pursuits that are outside their institution and community-oriented services data.

Higher Education Institutions after accreditation is now paying more attention to the student support services in the way they had never thought before. Various student support services like student mentoring, coaching classes, placement cell, guidance and counseling cell, financial assistance in form of various types of scholarships, extending library working hours, issuing of latest books, availability of good journals, centralized centre of computer with an access to it, interviews in campus, on-the-job training were greatly improved. Many higher education institutions have improved and advanced their centralized computer facilities providing easy access to teachers and students. The admission, examination and library services were computerized. More faculty development and student personal development programs were organized. An open and transparent policy is followed by the institution as a result acting as a facilitator for faculty, staff and students.

NAAC published a book entitled, "Great Institutions of Higher Learning- Accredited Colleges in India" In this book quality improvement strategies used under NAAC criteria in these colleges have been given. Various new courses have been introduced. NAAC accredited institutions are regularly conducting seminars, workshops, conferences, orientation and refresher courses for encouraging thereby helping their teachers to upgrade their knowledge and skills from time to time. Students are motivated to aim for achieving academic excellence and are also encouraged to aim for developing an overall personality through value-based education. Various types of innovative courses such as career-oriented and skill-oriented courses are initiated in the institutions. All these innovative changes are related to one aspect i.e. curricular (Curricular Aspects). The transparent admission policy is being followed by the institutions. Students have various curricular options as a result of curricular flexibility. Activity-oriented and interactive teaching-learning process is being initiated in the institutions as classroom teaching is characterized by the use of various audio-visual aids, models display, maps, charts, field work, brainstorming sessions, tutorials and regular classroom tests. Students are also given home assignments and are encouraged to participate in seminars, quizzes, workshops and debates. Student's performance is also evaluated regularly through periodic tests. Educationally disadvantaged students belonging to weaker sections of the society are provided with the facility of remedial teaching. Teaching-

learning methods characterized by interaction and participatory approaches are being used such as industrial visits, educational trips, audio-visual methods, group discussions, field work, conferences, seminars, presentations, workshops etc. Guest lectures are regular features aiming towards sharing of guest's faculty their expertise thereby providing practical skills to students. Regular tests and attendance are being used for regularly monitoring the student's performance. Students and teachers are encouraged to participate in national and international seminars, conferences, refresher and orientation courses. Bridge and remedial courses are there in the institution for educationally disadvantaged students. Activity-oriented methods are being encouraged. For evaluating the performance of teachers self-appraisal method is being encouraged in the institution. University results, feedback from students and parent interaction are corroborated with teacher performance appraisal. Various faculty development programs are organized.

All students are provided with printed/cyclostyled handouts for giving information on examination and evaluation methods (Teaching-Learning and Evaluation). Institution's regular feature is a publication of research papers, articles and books. Consultancy services are regularly provided by the faculty members to other educational institutions. Various community needs are being addressed by the institution through extension services such as NCC, NSS and youth welfare club and the Alumni Association. Various extension activities are being planned and worked on in collaboration with NGOs like Lion's club, Rotary club and Village Panchayat etc. Institution organizes various extension activities in collaboration with NGOs & GOs. Sensitization programs are organized. Teachers and students publish papers in national and international journals. The career counseling cell, the Placement cell and the Employment cell are there in institutions (Research, Consultancy and Extension). Infrastructural facilities are adequate in the institutions thereby resulting in effective educational programs, administrative functions and extension activities. The Central library is fully computerized. Well-maintained infrastructure is there. Facilities related to the library are augmented. Modern amenities are present in hostels (Infrastructure and Learning Resources). Under various government schemes, various scholarships are given to students and economically backward sections are also have the provision of freeships. Alumni meet is organized from

time to time. The institution gives financial aid to high achievers and outstanding sports persons. Placement, Employment and Career Guidance Cells are working efficiently in institutions for students support. Fee concession is also there in the institution. (Student Support and Progression) Well defined and organized management system is there in the institution. Accounts are well maintained and audited often by internal and external auditors (Governance and Management). Internal quality checks are kept in all administrative and academic activities through a built-in system. Spirit of teamwork and collective synergy exists in the institution which reflects cordial atmosphere. IQAC Cell is working efficiently for reviewing educational and administration programs (Healthy Practices).

"Great Institutions of Higher Learning-Accredited Universities in India" is a book published by NAAC. This book is a result of the NAAC's effort to present a select group of universities among those assessed and accredited. This book is all about the strategies of quality improvement used under NAAC criteria by these universities.

Various courses focusing on self-employment are being provided in the accredited universities. University focuses on providing courses that lead to self-employment. As per the advances taking place in the subjects of the programs the course syllabi in the university are reviewed from time to time. Various courses that are interdisciplinary are also offered. Different types of courses such as traditional, unconventional, professional and vocational are also being offered in the university. Semester system is being introduced as can be referred as curricular innovation. Curricular construction is done while keeping in view both theoretical and practical aspects. Innovative and need-based courses are being introduced. From time to time curriculum is reviewed. Choice Based Credit System has been introduced and courses in the university are restructured on the basis of it. As per situational needs and changes curricula are updated and diversified. Various types of innovative, skill-oriented courses and interdisciplinary courses have been introduced. Various other activity oriented elements of course work are being emphasized such as field observations, project work, assignment-based work and fieldwork. A number of opportunities are provided to the students to participate in curricular, co-curricular and sports activities (Curricular Aspects). Admission is made on the basis of academic records, entrance tests thus reflecting the transparent admission policy is

being followed. Applications for Admission are processed to individual departments thereby resulting in the decentralization of academic administration of admission process. Project work, field work, laboratory training are important components of almost all the courses. Various faculty development programs are such as seminars, workshops, symposium, orientation courses are organized. There is active participation of students and teachers in seminars, conferences and workshops etc. Innovative evaluation practices are being introduced from time to time in the university. Evaluation is continuous & overall aspects including theoretical and practical aspect are evaluated (Teaching-Learning and Evaluation). University continues to encourage research, consultancy and extension activities in the University. In the universities, there are departmental research committees to facilitate and monitor research activities.

Various projects are being undertaken by the faculty and various national agencies fund these projects. Research development and research orientation are there in university as being clearly reflected from university leading in the national and international publication of research papers. Most research departments have identified various thrust areas of research. For different course and research related activities, the university has collaboration with institutions of national and international repute. Consultancy services are being provided by the university. There is active participation of faculty members in consultancy services. NCC and NSS activities are being organized in the University. Library facilities are advanced with a good number of reference books and Wi-Fi facilities. INFLIBNET & DELNET services are also provided (Research, Consultancy and Extension). Infrastructure is well maintained in the university. An adequate number of buildings is there in the university. There are many facilities for sports and physical education; hostel accommodation, computer centre, primary health centre. Residential accommodation is provided to the staff and student of the university. For indoor and outdoor games sufficient space is provided. Proper arrangement of health services is there. Health facilities are provided. A computer centre is maintained by the University with almost all facilities. Besides, there are adequate basic services on the campus (Infrastructure and learning resources). Continuous feedback from students and analysis of feedback result in form of outcomes is a regular feature of the

university thus aiming to continuous improvement. There is a provision of scholarships, freeships and educational loans for providing financial assistance to students. Competitive examinations information, guidance for unemployed youth regarding self-employment is being provided by the employment and guidance bureau. University conducts campus interviews from time to time. Alumni meet is being conducted and for this Alumni Association is being formed. University makes each and every possible effort for the overall development of students and regards students as a pivotal member of the university. In university's Senate, some of the students are representative (Student Support and Progression).

University has a very strong internal audit system. The Academic and administrative audit committee is there for internal quality check in its academic and administrative matters. Staff is deputed for various orientation and refresher courses of the UGC (Governance and Management). A number of self-funded and need-based courses are offered. National and international linkages are made for teaching and learning. Collaborative research-linkages have been established with national institutions for research purposes. Several departments provide career guidance and placement services. Many departments hold regular student seminars. For providing horizontal mobility to students and to enable them to opt. for inter-disciplinary and multi-disciplinary courses university has introduced Choice-based credit system. For students, there is grievance redressal mechanism. For the welfare of students, there is a student council and career guidance facility. In university, there is good inter-departmental coordination. The overall teaching and learning environment provided by the University to its wards is highly appreciable (Healthy Practices).

1.15 SIGNIFICANCE OF THE STUDY

In India, promoting quality in education has been the focus of all the committees constituted at different stages of the development of the Indian Higher Education system. Among the various national consultations, discussions and recommendations that gave a direction and focus to our developmental strategies after independence, was National Policy on Education 1986. One of the strategic plans to focus on the quality of higher education was the establishment of an independent council to promote assessment, which later culminated in the

establishment of the National Assessment and Accreditation Council (NAAC) as an autonomous institution of the University Grants Commission (UGC) for primarily assessing and accrediting institutions of higher learning in India. The tremendous impact has been made in the market as well as in the student community due to expansion and globalization of Higher Education. Diversification of Higher Education has resulted in the growing need for certification and recognition of quality. Higher education should be such that it should cater to the needs of the most important stakeholder i.e. student by way of access, relevance, availability and utility. But all these are appropriate only in the arena of quality education which is the sole responsibility of higher education institutions. Higher education institutions should also cater to the needs of other stakeholders in quality assurance developments. Thus due to cut-throat competition at higher education level higher education institutions prerequisite condition is to be accountable to all the stakeholders and work towards providing quality in all aspects. Everyone associated with the higher education sector – higher education institutions, parents, students, employers, funding bodies and the governments - is interested in quality of the higher education sector. The stakeholders have various interests such as students first and foremost interest is for choice of institution; parents first and foremost interest is for worth of personal investment in the education of their children; governments interest is for accountability & policy-making; funding agencies interest is related to funding decisions; society's main interest is for value of taxpayers' money; industry is mainly concerned with institution-industry partnership; and employers are concerned mainly with recruitment. All these stakeholders are important in one or other sense so higher education system should be careful to appropriately balance the roles of the various stakeholders. Till now talks about the role of NAAC accreditation in quality improvement of higher education have been taken place in policy formulations or different articles are written on it. So far only one research study at a Doctoral level has been conducted in India on NAAC accreditation but the area of study is narrow as it has been conducted only on one State and it is quantitative study.

The area of the present study is broad as seven States and one NCT in North India have been covered. Mixed method research approach is used in the present study i.e.

both quantitative and qualitative approaches are used. Thus the current study utilized both quantitative and qualitative methods. Such type of work has not been conducted so far anywhere. The findings of the present study can be useful in the sense that the result will provide details on the role of NAAC accreditation in quality improvement in higher education. The present study will be helpful in creating awareness in the higher education institutions regarding various benefits of being accredited institution as revealed in terms of perceived outcomes of accreditation.

The results of the present study related to perceived outcomes of accreditation in terms of indicators of NAAC criteria will be helpful for administrators, IQAC, staff, students, parents and other society members. As they will be aware of the benefits that they can avail as per their needs and requirements, of being a part of NAAC accredited higher education institutions.

1.16 STATEMENT OF THE PROBLEM

The study is entitled as "ROLE OF NAAC ACCREDITATION IN QUALITY IMPROVEMENT: AN EVALUATIVE STUDY OF NORTH INDIAN UNIVERSITIES".

1.17 OPERATIONAL DEFINITIONS OF THE TERMS USED

Accreditation:

Accreditation is a process which focuses on educational quality and institutional integrity leading to the concept of accountability. It is the process of awarding certification of competency, authority, or credibility to higher education institutions that maintain suitable standards. Accreditation body awards certificate to higher education institutions.

NAAC:

The National Assessment and Accreditation Council (NAAC) is an organization that assesses and accredits institutions of higher education in India. It is an autonomous body funded by University Grants Commission of Government of India headquartered in Bangalore.

Quality Improvement

Quality improvement is anything which causes a beneficial change in quality performance. It is the actions taken to increase the effectiveness of activities and processes to provide added benefits to both the organization and its customers.

1.18 OBJECTIVES OF THE STUDY

1) To identify the perceived outcomes of NAAC accreditation from the perspectives of the stakeholders of North Indian Universities.
2) To investigate the alignment of perceived outcomes of accreditation by the stakeholders of accredited North Indian Universities with the stated assessment and accreditation objectives as set by UGC.
3) To explore the contribution of quality processes, adopted consequent to NAAC accreditation, towards quality improvement in North Indian Universities.
4) To identify the challenges faced by the stakeholders during the accreditation process.
5) To identify the progress of quality improvement measures after the accreditation to the time of re-accreditation.

1.19 RESEARCH QUESTIONS

1) What are the perceived outcomes of NAAC accreditation from the perspectives of stakeholders of North Indian Universities?
2) Up to what extent the perceived outcomes of accreditation by the stakeholders of accredited North Indian Universities align with the stated assessment and accreditation objectives as set by UGC to assure higher education quality and improvement in higher education?
3) What is the contribution of quality processes, adopted consequent to NAAC accreditation, towards quality improvement in North Indian Universities?
4) What are the different challenges faced by the stakeholders during the accreditation process?
5) What progress of quality improvement measures are being taken by North Indian Universities for seeking re-accreditation?

1.20 DELIMITATIONS OF THE STUDY

1) The study was delimited to North India.
2) 8 NAAC accredited Universities were selected from North India.7 Universities were selected from 7 States i.e. Haryana, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Rajasthan, Punjab and Jammu & Kashmir and 1 University was selected from NCT, Delhi.
3) Data was collected from students, teachers and IQAC members of Universities as stakeholders.
4) Students of final year (excluding one year program) of different UG and PG academic programs from Arts & Humanities, Science & Engineering and Commerce & Management of accredited Universities were selected.
5) Teachers, at least five years of employment at the university were selected.
6) Few having significant involvement in the accreditation process and sufficient institutional knowledge i.e. IQAC members were selected to constitute the sample.
7) The Accreditation Assessment Report prepared by NAAC Peer Team during their visit to the institution specifying observations and suggestions is considered as a confidential document meant only for that specific institution. NAAC office has provided these reports to the researcher only for the research purpose. Hence, name and identity of the universities were not disclosed during analysis.

CHAPTER – II

METHOD AND PROCEDURE

Research Methodology is one of the most important aspects of any study. A well-defined procedure provides the researcher with a plan of action for collecting, selecting and analyzing data economically and efficiently. It helps the investigator to avoid aimless wandering and ultimately saves time, efforts and money. Research methodology does constitute methods and procedures to conduct a study. The selection of method and procedure for the research study rely upon the approach, type and scope of the problem in hand.

2.1 MIXED RESEARCH APPROACH TO THE PRESENT STUDY

Mixed research approach was used in the present study i.e. both quantitative and qualitative approaches were used. Thus the current study utilized both quantitative and qualitative methods.

2.2 SAMPLING TECHNIQUE

This study involved two layers of sampling—one at the institutional level and other at the subject level within each participating institution. A criterion sampling method has been employed at each level. Criterion sampling involves the study of cases that "meet some predetermined criterion of importance".

► Site selection for this study involved consideration of following main factor:

- The main factor under consideration was institutional memory or the time elapsed since the accreditation period or universities on the verge of completion of their accreditation period i.e. with valid accreditation period.

► Reasons for setting above factor/criteria for selection of Universities are as follows:

- Some separation allows for meaningful reflection on the process, leading to more nuanced perspectives. Too much temporal distance may result in less

detailed perspectives on the outcomes of the process and risks related to employee turnover. The researcher started by identifying such universities that have just completed their accreditation period or are about to complete their accreditation period i.e with valid accreditation period.

- The researcher identified eight NAAC Accredited Universities of North India from the updated list of Accredited Institutions from NAAC Website.
- Eight NAAC Accredited Universities of North India were selected.

► Criterion sampling method also informed the subject selection process.

Reasons for setting criteria for selection of SUBJECTS (Students, Teachers and IQAC members) are as follows:

- In order to provide meaningful data on perceived outcomes of accreditation, participants must have sufficient tenure at their institutions to adequately reflect on institutional characteristics prior to, during, and following the accreditation process.
- The criterion related in selection of students from universities was association tenure with the institution. In order to adequately reflect on institutional characteristics, students of final year (excluding one year program) of different UG and PG academic programs from Arts & Humanities, Science & Engineering and Commerce & Management of accredited Universities were selected.
- Similarly teachers, at least five years of employment at the university were selected.
- Additionally, few having significant involvement in the accreditation process and sufficient institutional knowledge i.e. IQAC members were selected to constitute the sample.

Table 2.1 : Sampling Technique for Data Collection

S. No.	Universities	Subjects	Collection of Primary and Secondary Data
1.	Criterion sampling technique of purposive sampling method was used to select the Universities.	Criterion sampling method was used for the selection of students, teachers and IQAC members as stakeholders on the basis of their association tenure with the institution.	Questionnaire for Students and Teachers (Tools used for the collection of Primary data)
2.	Criterion sampling was used at first level i.e. for selection of Universities accredited by NAAC from different states of North India.	The first criterion was related to association tenure with the institution. In order to adequately reflect on institutional characteristics, students of final year (excluding one year program) of different UG and PG academic programs from Arts & Humanities, Science & Engineering and Commerce & Management of accredited Universities were selected.	Interview Schedule for IQAC Members (Tool used for the collection of Primary data)
3.	Criterion used for the selection of Universities was that those universities were selected which have just completed their accreditation period or were about to complete their accreditation period i.e with valid accreditation period.	Similarly teachers, at least five years of employment at the university were selected.	
4.	8 NAAC accredited Universities were selected from North India.	Additionally, few having significant involvement in the accreditation process and sufficient institutional knowledge i.e. IQAC members were selected to constitute the sample.	NAAC Peer Team Reports (Source for collection of Secondary data)

S. No.	Universities	Subjects	Collection of Primary and Secondary Data
5.	8 NAAC accredited Universities were selected from North India.7 Universities were selected from 7 States i.e. Haryana, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Rajasthan, Punjab and Jammu & Kashmir and 1 University was selected from NCT, Delhi.	Sample of 816 respondents was selected from NAAC accredited Universities. This includes 640 students, 160 teachers and 16 IQAC members.	SSR Reports of NAAC accredited Universities (Source for collection of Secondary data)
6.		80 students, 20 teachers and 2 IQAC members were selected from each University.	AQAR and AQR Reports of the NAAC accredited universities (Sources for collection of Secondary data)

2.3 SAMPLING FRAME

To conduct the present study, a sample of 816 respondents was selected from NAAC accredited Universities of North India. 8 NAAC accredited Universities were selected from North India.7 Universities were selected from 7 States i.e. Haryana, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Rajasthan, Punjab and Jammu & Kashmir and 1 University was selected from NCT, Delhi.

The sample consisted of different stakeholders from the Universities selected for the study. Stakeholders selected were IQAC members, Teachers and Students. The distribution of the sample is as given below:

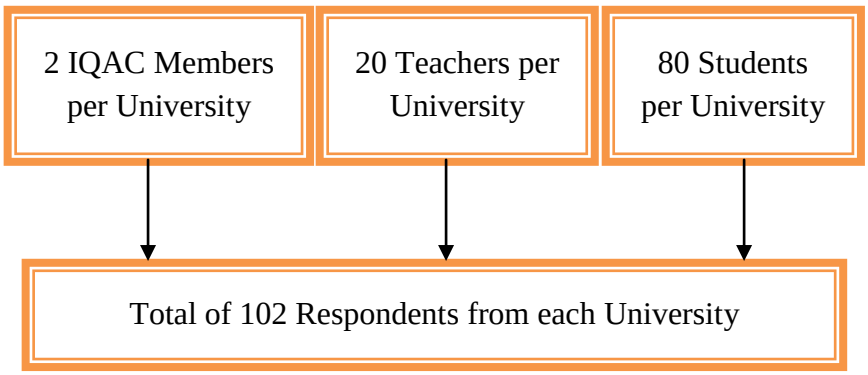

Fig. 2.1: Sample Distribution per University

Table 2.1: Total Sample of Selected Stakeholders

Stakeholders	**Total Sample**
IQAC Members	16
Teachers	160
Students	640
Total	**816**

2.4 COLLECTION OF DATA

The selection of tools for a study either for the collection of primary or secondary data depends on the objectives framed for the study by the investigator i.e. as per requirements of the study. Tools constructed for the study should be in the context of the study.

Following sources were used for the collection of primary and secondary data in the context of the objectives framed for the study and as per the requirement of the study:

2.4.1 Primary Data

For collection of primary data following tools were constructed and used:

- Interview Schedule for IQAC Members
- Questionnaire for Teachers
- Questionnaire for Students

2.4.2 Secondary Data

The secondary data from the sources mentioned below has been pooled up and analyzed:

- NAAC Peer Team Reports.
- AQAR (Annual Quality Assurance Report) and SSR (Self-Study Report) prepared by the Universities for submission to NAAC.
- AQR (Annual Quality Report)
- NAAC Website (NAAC Annual Reports, Books, Newsletters, Manuals, Seminars and Conference Proceedings).
- University Websites
- UGC and MHRD Websites (XI and XII Five Year Plans, UGC documents and Publications).

2.5 TOOL CONSTRUCTION

2.5.1 Interview Schedule for IQAC Members

An interview schedule is a set of structured questions prepared by an interviewer to collect information or data from an interviewee about a specific topic.

Formulation of Interview Schedule for IQAC Members:

Item content:

The main purpose of constructing this interview schedule was to identify the perceived outcomes of NAAC accreditation and challenges faced during the accreditation from the perspectives of the IQAC members of North Indian Universities. Interview constructed was of a structured type.

Validity of the Interview Schedule:

Interview Schedule should be designed consciously with the degree of validity and reliability of the instrument. Interview Schedule has a very limited purpose. It does not possess universal and eternal validity. It is a one-time data gathering tool valid for use in one situation as per requirement of the study.

Validity is essential for the effective use of any data gathering tool. In order to check the validity of interview schedule in terms of content/information what it claims to collect the content validity was estimated.

"Content Validity is primarily judgmental and intuitive. It can also be determined by a panel of persons who shall judge how well the measuring instrument meets the standards, but there is no numerical way to express it."- Koul, L. (2004, p.91)

For estimating the content validity of the interview schedule, various educationists involved in the accreditation process as members in the IQAC cell of their institutions were met. For this purpose researcher visited Guru Nanak Dev University, Amritsar; Panjabi University, Patiala and University of Jammu, Jammu. Experts who acted as NAAC Peer Team members were also met to estimate the content validity of the tools. The help of these subject experts as eminent educationists, with long-standing experience in the field of accreditation as IQAC members and NAAC Peer Team Members, was sought. The expert gave their opinion for deletion, addition and modification of the items. Accordingly, the final form of the tool was developed by incorporating the suggestions given by the subject experts.

Reliability of the Interview Schedule through Pilot Study (Preliminary tryout of the Interview Schedule):

The test-retest method was used to carry out the reliability of the interview schedule for IQAC Members.

During the month of January 2016 and March 2016, the investigator conducted the pilot study in the accredited universities of Punjab i.e. Guru Nanak Dev University, Amritsar and Panjabi University, Patiala; accredited University of UT, Chandigarh i.e. Panjab University and accredited University of J&K i.e. the University of Jammu, Jammu to have an idea regarding the responses to the various questions of the tool.

The Pilot study was conducted on 2 IQAC members of each selected University. The final draft of the Interview Schedule was given to 2 IQAC members each selected University and the responses were recorded. After a gap of one month, the same tool was given to the same IQAC members.

The responses given by the respondents in the second administration were compared with that of the first and it was checked whether the responses were nearly similar to the first. Thus the main purpose was to know the consistency of the responses of an alternate form with the original form of Interview Schedule. Besides, consistency of the question responses, the accuracy of responses and the comparison of the accuracy of the question responses are made so as to fulfill the following purpose:

The first purpose of the pre-test was to examine the tool from the researcher point of view i.e. whether the responses fulfill the objectives of the investigation.

The second purpose of tryout was to determine the extent to which the tool fulfills the following two criteria:

(i) Does the interview-schedule promote a congenial and appropriate relationship with respondents?

(ii) Do respondents understand the questions without having to be explained or reworded?

This was how the reliability of the interview schedule for IQAC members was established.

Item format and Administration of the Interview Schedule:

In the interview schedule, the investigator has included 57 closed-ended and open-ended questions. Closed-ended questions were of two types. One type was in which there were three options i.e. Yes, Not Sure and No. In this type of questions subjects were asked to put check mark ✓ in the box marked 'Yes' if they agree with the statement; check mark ✓ in the box marked 'No' if they disagree with the statement and check mark ✓ in the box marked 'Not Sure' if they don't know about the information sought in the statement.

In order to cover the aspect of uncertainty, "Not Sure" option was put in the questions having "Yes" and "No" options.

"While processing the data if the "Not Sure" response group is small, it is of little significance. - Kothari, C. (2004, p.159)

The second type of closed-ended questions was with multiple options with a little freedom given to subjects to give an option on their own other than options suggested if they feel like for the question asked in the space provided in the interview schedule in the form of 'Any other'. On the other hand, the subjects were asked that they are free to express their views on open-ended questions.

Analysis of the Interview Schedule:

Processing of data was done through editing, coding, classification, tabulation, frequency and percentages. Presentation of results in tabular form, in totals, percentages or averages was made. The closed-ended questions were first analyzed in terms of total number/frequencies and then converted into percentages for which qualitative analysis had been made. For the open-ended questions, the interpretations were provided after making specific generalizations. The responses for each open-ended question were noted down from the interview schedule number wise and then an attempt had been made to generalize it. Such responses were first converted into brief notes and then cumulated under various categories in order to make generalizations.

2.5.2 Questionnaire for Teachers

A questionnaire is that form of inquiry which contains a systematically compiled and organized series of questions that are to be given to the population samples for the purpose of data collection.

Formulation of Questionnaire for Teachers:

Item content:

The main purpose of constructing this questionnaire was to identify the perceived outcomes of NAAC accreditation and challenges faced during accreditation from the perspectives of the teachers' of North Indian Universities.

Validity of the Questionnaire for Teachers:

It must, however, be recognized, that

"Questionnaires, unlike psychological tests and inventories, have a very limited purpose. They are one-time data-gathering devices with a very short life, administered to a limited population."-Best, J.W. & Kahn, V.J. (2010, p.324)

"A questionnaire however does not possess universal and eternal validity. It may be valid for use in one situation but invalid if used in another."- Koul, L. (2009, p.221)

Basic to the validity of a questionnaire is asking the right questions phrased in the least ambiguous way. In other words, do the items sample a significant aspect of the purpose of investigation? Validity is essential for the effective use of any data gathering tool. In order to check the validity of questionnaire in terms of content/information what it claims to collect the content validity was estimated.

"Content Validity is primarily judgmental and intuitive. It can also be determined by a panel of persons who shall judge how well the measuring instrument meets the standards, but there is no numerical way to express it."- Koul, L. (2004, p.91)

For estimating the content validity of the questionnaire for teachers, various educationists involved in the accreditation process as members in the IQAC cell of their institutions were met. For this purpose researcher visited Guru Nanak Dev University, Amritsar; Panjabi University, Patiala and the University of Jammu, Jammu. Experts who acted as NAAC Peer Team members were also met to estimate the content validity of the tools. The help of these subject experts as eminent educationists, with long-standing experience in the field of accreditation as IQAC members and NAAC Peer Team Members, was sought. The expert gave their opinion for deletion, addition and modification of the items. Accordingly, the final form of the tool was developed by incorporating the suggestions given by the subject experts.

Reliability of the Questionnaire for Teachers through Pilot Study (Preliminary tryout of the Questionnaire):

The test-retest method was used to carry out the reliability of the questionnaire for teachers.

During the month of January 2016 and March 2016, the investigator conducted the pilot study in the accredited universities of Punjab i.e. Guru Nanak Dev University, Amritsar and Panjabi University, Patiala; accredited University of UT, Chandigarh i.e. Panjab University and accredited University of J&K i.e. the University of Jammu, Jammu to have an idea regarding the responses to the various questions of the tool.

The Pilot study was conducted on 15 teachers of each selected University. The final draft of the questionnaire for teachers was given to 15 teachers of each selected University. After a gap of one month, the same questionnaire was given to the same teachers though the investigator was able to contact only a sample of 10-12 teachers.

The responses given by the respondents in the second administration were compared with that of the first and it was checked whether the responses were nearly similar to the first. Thus the main purpose was to know the consistency of the responses of an alternate form with the original form of the questionnaire. Besides, consistency of the question responses, the accuracy of responses and the comparison of the accuracy of the question responses are made so as to fulfill the following purpose:

The first purpose of the pre-test was to examine the tools from the researcher point of view i.e. whether the responses fulfill the objectives of the investigation.

The second purpose of tryout was to determine the extent to which the questionnaire fulfills the following two criteria:

(i) Does the questionnaire promote a congenial and appropriate relationship with respondents?

(ii) Do respondents understand the questions without having to be explained or reworded?

This was how the reliability of the questionnaire for teachers was established.

Item format and Administration of the Questionnaire for Teachers:

In the teacher's questionnaire, the investigator has included 64closed-ended and open-ended questions. Closed-ended questions were of two types. One type was in which there were three options i.e. Yes, Not Sure and No. In this type of questions subjects were asked to put check mark ✓ in the box marked 'Yes' if they agree with the statement; to put check mark ✓ in the box marked 'No' if they disagree with the statement and to put check mark ✓ in the box marked 'Not Sure' if they don't know about the information sought in the statement.

"In a good questionnaire there should always be provision for indications of uncertainty, e.g., "do not know," "no preference" and so on."- Kothari, C. (2004, p.128).

So in order to cover this aspect of uncertainty, "Not Sure" option was put in the questions having "Yes" and "No" options.

"While processing the data if the "Not Sure" response group is small, it is of little significance. - Kothari, C. (2004, p.159)

The second type of closed-ended questions was with multiple options with a little freedom given to subjects to give an option on their own other than options suggested if they feel like for the question asked in the space provided in the questionnaire in the form of 'Any other'. On the other hand, the subjects were asked that they are free to express their views on open-ended questions.

Analysis of the Questionnaire for Teachers:

Processing of data was done through editing, coding, classification, tabulation, frequency and percentages. Presentation of results in tabular form, in totals, percentages or averages was made. The closed-ended questions were first analyzed in terms of total number/frequencies and then converted into percentages for which qualitative analysis has been made. For the open-ended questions, the interpretations were provided after making specific generalizations. The responses for each open-ended questions were noted down from the questionnaires number wise and then an attempt had been made to generalize it. Such responses were first converted into

brief notes and then cumulated under various categories in order to make generalizations.

2.5.3 Questionnaire for Students

A questionnaire is that form of inquiry which contains a systematically compiled and organized series of questions that are to be sent to the population samples.

Formulation of Questionnaire for Students:

Item content:

The main purpose of constructing this questionnaire was to identify the perceived outcomes of NAAC accreditation from the perspectives of the students' of North Indian Universities.

Validity of the Questionnaire for Students:

It must, however, be recognized, that

"Questionnaires, unlike psychological tests and inventories, have a very limited purpose. They are one-time data-gathering devices with a very short life, administered to a limited population."-Best, J.W. &Kahn, V.J. (2010, p.324)

"A questionnaire however, does not possess universal and eternal validity. It may be valid for use in one situation but invalid if used in another."- Koul, L. (2009, p.221)

Validity is essential for the effective use of any data gathering tool. In order to check the validity of questionnaire in terms of content/information what it claims to collect the content validity was estimated.

"Content Validity is primarily judgmental and intuitive. It can also be determined by a panel of persons who shall judge how well the measuring instrument meets the standards, but there is no numerical way to express it."- Koul, L. (2004, p.91)

For estimating the content validity of the questionnaire for students, various educationists involved in the accreditation process as members in the IQAC cell of their institutions were met. For this purpose researcher visited Guru Nanak Dev University, Amritsar; Panjabi University, Patiala and the University of Jammu,

Jammu. Experts who acted as NAAC Peer Team members were also met to estimate the content validity of the tools. The help of these subject experts as eminent educationists, with long-standing experience in the field of accreditation as IQAC members and NAAC Peer Team Members, was sought. The expert gave their opinion for deletion, addition and modification of the items. Accordingly, the final form of the tool was developed by incorporating the suggestions given by the subject experts.

Reliability of the Questionnaire for Students through Pilot Study (Preliminary tryout of the Questionnaire):

The test-retest method was used to carry out the reliability of the questionnaire for students.

During the month of January 2016 and March 2016, the investigator conducted the pilot study in the accredited universities of Punjab i.e. Guru Nanak Dev University, Amritsar and Panjabi University, Patiala; accredited University of UT, Chandigarh i.e. Panjab University and accredited University of J&K i.e. the University of Jammu, Jammu to have an idea regarding the responses to the various questions of the tool.

The Pilot study was conducted on 60 students of each selected university. The final draft of the questionnaire was given to 60 students of each selected University. After a gap of one month, the same questionnaire was given to the same students though the investigator was able to contact sample of 40-50 students from each university.

The responses given by the respondents in the second administration were compared with that of the first and it was checked whether the responses were nearly similar to the first. Thus the main purpose was to know the consistency of the responses of an alternate form with the original form of the questionnaire. Besides, consistency of the question responses, the accuracy of responses and the comparison of the accuracy of the question responses are made so as to fulfill the following purpose:

The first purpose of the pre-test was to examine the tools from the researcher point of view i.e. whether the responses fulfill the objectives of the investigation.

The second purpose of tryout was to determine the extent to which the questionnaire fulfills the following two criteria:

(i) Does the questionnaire promote a congenial and appropriate relationship with respondents?

(ii) Do respondents understand the questions without having to be explained or reworded?

This was how the reliability of the questionnaire for students was established.

Item format and Administration of the Questionnaire for Students:

In the student's questionnaire the investigator has included 40 closed-ended questions. Closed-ended questions were of two types. One type was in which there were three options i.e. Yes, Not Sure and No. In this type of questions subjects were asked to put check mark ✓ in the box marked 'Yes' if they agree with the statement; to put check mark ✓ in the box marked 'No' if they disagree with the statement and to put check mark ✓ in the box marked 'Not Sure' if they don't know about the information sought in the statement.

"In a good questionnaire there should always be provision for indications of uncertainty, e.g., "do not know," "no preference" and so on."- Kothari, C. (2004, p.128).

So in order to cover this aspect of uncertainty, "Not Sure" option was put in the questions having "Yes" and "No" options.

"While processing the data if the "Not Sure" response group is small, it is of little significance. - Kothari, C. (2004, p.159)

The second type of closed-ended questions was with multiple options with a little freedom given to subjects to give an option on their own other than options suggested if they feel like for the question asked in the space provided in the questionnaire in the form of 'Any other'.

Analysis of the Questionnaire for Students:

Processing of data was done through editing, coding, classification, tabulation, frequency and percentages. Presentation of results in tabular form, in totals,

percentages or averages was made. The closed-ended questions were first analyzed in terms of total number/frequencies and then converted into percentages for which qualitative analysis has been made.

2.6 STATISTICAL TECHNIQUES

The analysis of the quantitative data was done using statistical techniques such as frequency and percentage.

2.7 ANALYSIS OF QUALITATIVE SECONDARY DATA

The technique most commonly used in the analysis of qualitative secondary data is content analysis.

"Content Analysis is a procedure for systematically examining textual or visual materials to extract information bearing on the message or messages they communicate."

– McTavish, D.G. & Loether, H.J. (2011, p.214)

Krippendroff (1980) has given three different levels of units for content analysis. - McTavish, D.G. & Loether, H.J. (2011, p.214)

2.8 CASE STUDY

A case study is a detailed examination of one setting, or a single object, a single depository of documents, or one particular event.

The Rationale for Case Study Research:

Case studies are used in social science research for several reasons. For e.g. a case study is appropriate when there is only one or a very few cases available to study, perhaps because a phenomenon occurs very rarely (e.g. the study of impact of a particular program etc.) Case studies help provide insight into meanings people give to the reality around them.

DATA COLLECTION METHODS:

The most commonly employed research methods in the Case Study are-

- Interviews (Formal and Informal Conversations)

- Documentary Analysis &
- Observation

With the balance between them being largely determined by the resources available and the disciplinary and professional tradition in which the case study is being conducted.

- Thus interviews offer an insight into respondents' memories and explanations of why things have come to be what they are, as well as descriptions of current problems and aspirations.
- Documents can be examined for immediate content, changing content over time and the values that such changing content manifests.

Observations can offer an insight into the sedimented, enduring verities.

► **Case study method was used in the present study for identifying the progress of quality improvement measures after the accreditation to the time of re-accreditation.**

Following research methods were employed for data collection in the case study:

- Interviews (Formal-Informal Conversations with IQAC Members)
- Observation
- Documentary Analysis (AQAR, SSR, AQR, Website Content of the University)

CHAPTER – III

ANALYSIS AND INTERPRETATION

In the preceding chapter of method and procedure, sample, a design of the study, development and description of the tools along with the statistical techniques used for the analysis of the data is discussed. The data as such have no meaning unless analyzed and interpreted by some dependable techniques. Once the research data have been collected and the analysis is made the researcher can proceed to the stage of interpreting the results. Interpretation of results is not a routine and mechanical process. It involves a careful, logical and critical examination of the sample chosen, the tools selected and used in the study. Analysis of data means a study of tabulated material in order to determine inherent facts or meaning. It involves in breaking up the complex factors into the simpler one and putting them into new arrangements.

Data analysis is also the process of systematically arranging the data that has been accumulated to enable the researcher to come up with the findings. Data interpretation refers to developing an idea about the findings of the study and relating them to the literature and broader concept. The analysis involves working with the data, organizing it, breaking it into manageable units, coding it, synthesizing it and searching for the pattern. Thus for any research, the analytical task of coming up with findings and interpretation is indispensable.

3.1 RESULTS PERTAINING TO PERCEIVED OUTCOMES OF ACCREDITATION FROM THE PERSPECTIVES OF THE STAKEHOLDERS OF NORTH INDIAN UNIVERSITIES IN TERMS OF INDICATORS OF GENERAL BENEFITS OF ACCREDITATION TO HIGHER EDUCATION INSTITUTIONS; INDICATORS OF CURRICULAR ASPECTS; INDICATORS OF TEACHING-LEARNING AND EVALUATION; INDICATORS OF RESEARCH, CONSULTANCY AND EXTENSION; INDICATORS OF INFRASTRUCTURE AND LEARNING RESOURCES; INDICATORS OF STUDENT SUPPORT AND PROGRESSION; INDICATORS OF GOVERNANCE, LEADERSHIP AND MANAGEMENT AND INDICATORS OF INNOVATIONS AND BEST PRACTICES

3.1.1 Perception of the IQAC Members/Teachers regarding perceived outcomes of Accreditation in terms of Indicators of General Benefits of Accreditation to Higher Education Institutions.

3.1.2 Perception of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Curricular Aspects.

3.1.3 Perception of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Teaching-Learning and Evaluation.

3.1.4 Perception of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Research, Consultancy and Extension.

3.1.5 Perception of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Infrastructure and Learning Resources.

3.1.6 Perception of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Student Support and Progression.

3.1.7 Perception of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Governance, Leadership and Management.

3.1.8 Perception of the IQAC Members/Teachers regarding perceived outcomes of Accreditation in terms of Indicators of Innovations and Best Practices.

3.1.9 Perceived outcomes of accreditation as per order (Highly perceived) of perception of stakeholders in terms of indicators of general benefits of accreditation to Higher Education Institutions.

3.1.10 Perceived outcomes of accreditation as per order (Average perceived) of perception of stakeholders in terms of indicators of general benefits of accreditation to Higher Education Institutions.

3.1.11 Perceived outcomes of accreditation as per order (Highly perceived) of perception of stakeholders in terms of indicators of various aspects of NAAC Criteria.

3.1.12 Perceived outcomes of accreditation as per order (Average perceived) of perception of stakeholders in terms of indicators of various aspects of NAAC Criteria.

3.1.13 Perceived outcomes of accreditation as per order (Least perceived) of perception of stakeholders in terms of indicators of various aspects of NAAC Criteria.

SECTION – I

3.1.1 Perception of the IQAC Members/Teachers regarding perceived outcomes of Accreditation in terms of Indicators of General Benefits of Accreditation to Higher Education Institutions

The results of table 3.1.1 revealed that 88% of IQAC members and 75% of teachers from the NAAC accredited universities agreed that NAAC assessment is essential for educational improvement in higher education institutions whereas 12% of IQAC members and 25% of teachers disagreed on this outcome of accreditation. Sharma (2014) and Jisha (2015) supported the result and revealed that NAAC assessment is essential for educational improvement in higher education institutions.

94% of IQAC members and 87% of teachers responded that NAAC process of assessment and accreditation has motivated their university towards quality improvement whereas 6% of IQAC members and 11% of teachers disagreed. The findings of the study are supported by Srinivas (2016) and Rajendran (2012). As per their findings, accreditation encourages institutions to move continuously towards quality improvement. As NAAC accreditation is mandatory for higher education institutions, 75% of IQAC members and 75% of teachers responded that it has made quality a culture of these institutions whereas 25% of IQAC members and 19% of teachers responded in the negative.

Table 3.1.1 : Percentage of Responses of the IQAC Members/Teachers regarding perceived outcomes of Accreditation in terms of Indicators of General Benefits of Accreditation to Higher Education Institutions

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of General Benefits of Accreditation	Total no. of items	IQAC Members			Teachers		
			Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)
1	Educational Improvement in higher education institutions	1	88	0	12	75	0	25
2	Quality Improvement	1	94	0	6	87	2	11
3	Quality culture	1	75	0	25	75	6	19
4	Tool of SWOC	1	81	0	19	76	4	20
5	New sense of direction and identity	1	75	0	25	68	3	29
6	Promotion of intra-institutional interactions	1	63	6	31	54	5	41
7	Catalyst for institutional self-improvement	1	75	0	25	76	4	20
8	Quality assurance, quality enhancement and quality maintenance	1	88	6	6	66	4	30
9	Public accountability	1	94	0	6	87	2	11
10	Enhanced reputation	1	94	0	6	88	4	8
11	Enhanced the work environment	1	63	6	31	59	6	35
12	Increased collaboration in decision making resulting in increased unity of purpose	1	69	0	31	71	0	29
13	Clarified roles and responsibilities	1	88	0	12	65	5	30

81% of IQAC members and 76% of teachers responded that NAAC assessment has acted as a tool of SWOC i.e. has helped their university in identifying strengths, weaknesses, opportunities and constraints. On the other hand, 19% IQAC members

and 20% of teachers disagreed on this aspect. Srinivas (2016) revealed that assessment and accreditation acts as a tool of SWOT Analysis for higher education institutions. Bhar (2010) and Hodson (2003) conducted study on assessment and accreditation process of their respective countries. Findings of these studies revealed that assessment and accreditation process has created awareness regarding strengths, weaknesses, opportunities and threats in the institution/program.

75% of IQAC members and 68% of teachers responded that NAAC accreditation has given a new sense of direction and identity to their university while 25% of IQAC members and 29% of teachers disagreed. The findings of the study are supported by Chaudhary and Sharma (2014) and Jisha (2015). According to them accreditation gives new sense of direction and identity to the institution and motivates the institution to provide world-class education with the help of latest technology. Furthermore it helps students and teachers to make right decision regarding choice of educational institution and also society gets reliable information on quality education offered. Accreditation as it concerns the institution protects academic freedom, assists institutions in securing the necessary resources to do the job.

63% of IQAC members and 54% of teachers agreed that accreditation has promoted intra-institutional interactions in their university while 31% of IQAC members and 41% of teachers disagreed to this. Study conducted by Beatty (2013) revealed that accreditation in higher education institutions led to increased networking opportunities, increased professionalism and increased partnership opportunities.

75% of IQAC members and 76% of teachers agreed that NAAC assessment has acted as a catalyst for institutional self-improvement. On the contrary, 25% of IQAC members and 20% of teachers disagreed. Findings of the study conducted by Rajendran (2012) highlighted that assessment and accreditation has encouraged institutions to move continuously towards quality improvement. Hence, assessment and accreditation process acted as a catalyst for institutional self-improvement. 88% of IQAC members and 66% of teachers approved that the NAAC assessment and accreditation process has helped their institution in various domains of quality such as quality assurance, quality enhancement and quality maintenance in totality

whereas 6% of IQAC members and 30% of teachers responded no. Ferrara (2007) and Maric (2008) conducted studies on assessment and accreditation process of their respective countries. Findings of these studies revealed that accreditation is an assurance that a program or institution meets established quality standards. Again assessment and accreditation helps institutions in various domains of quality such as quality improvement, quality maintenance and quality assurance. 94% of IQAC members and 87% of teachers agreed that NAAC accreditation has resulted in public accountability of their university. On the other hand, 6% of IQAC members and 11% of teachers disagreed on this outcome. Beatty (2013) mentioned that process of accreditation is aimed at promoting accountability, autonomy and innovations in higher education institutions.

94% of IQAC members and 88% of teachers revealed that NAAC accreditation as an award of status has enhanced reputation of their university whereas 6% of IQAC members and 8% of teachers disagreed. Beatty (2013) found that accreditation in higher educational institutions has resulted in increased accountability thereby leading to enhanced reputation. 63% of IQAC members and 59% of teachers agreed that NAAC accreditation has enhanced the work environment in the university. Contrarily, 31% of IQAC members and 35% of teachers disagreed. 69% of IQAC members and 71% of teachers agreed that after accreditation there is increased collaboration in decision making resulting in increased unity of purpose in the university but 31% of IQAC members and 29% of teachers disagreed. According to 88% of IQAC members and 65% of teachers as a result of assessment and accreditation, every member of the university was clearer about his role and responsibilities but 12% of IQAC members and 30% of teachers disagreed with this. Safi (2012) and Tharp (2012) studied the accreditation process of their country in terms of impact on higher education institutions. They found that participants from the accredited institutions under study reported more clearly defined divisions of labour, a higher degree of motivation and a greater degree of integration. Accreditation was looked on favourably by all participants, not just in terms of the implementation of accountability-based tools, but also in terms of the impact on the climate and quality of the institution. Some institutions went as far to say accreditation had “saved the institution from itself,” by providing a framework for

self-improvement. Some described how accreditation brought a degree of unity and focus on the institution.

3.1.2 Perception of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Curricular Aspects

NAAC accredited universities have gone through assessment and accreditation process which in turn has resulted in various quality initiatives in these universities as a direct outcome of accreditation and quality initiatives as per requirement of NAAC criteria.

The results of the table 3.1.2 revealed that after the NAAC accreditation various new quality sustenance and quality enhancement measures were undertaken by the universities as revealed from the IQAC members and teachers' responses. Out of the stakeholders who responded yes, 66% of IQAC members and 61% of teachers agreed that after NAAC accreditation there was periodic curriculum revision. Also, 66% of IQAC members and 36% of teachers responded that after accreditation there was introduction of inter-disciplinary and innovative schemes in thrust areas. Furthermore, 58% of IQAC members and 57% of teachers responded that there was a strengthening of interaction with industry / trade / civil society organizations / educational institutions. While 83% of IQAC members and 54% of teachers agreed that Choice-Based Credit system was introduced.

75% of IQAC members, 73% of teachers and 59% of students of the Universities perceived that the employability and innovation have been addressed in the curriculum whereas 25% of IQAC members, 27% of teachers and 36% of students disagreed. Thus, focus on employability and innovation in the curriculum is indicative of this as quality initiative as per requirement of NAAC criterion, Curricular aspects. As a result of innovation, a number of courses should be available so that students can make choices by themselves. 94% of IQAC members, 83% of teachers and 73% of students accepted that as a result of innovation in the curriculum, the students have the freedom to make choices among the available courses but 6% of IQAC members, 17% of teachers and 27% of students did not accept this.

Table 3.1.2 : Percentage of Responses of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Curricular Aspects

S. No.	Perceived Outcomes of Accreditation in terms of Indicators of Curricular Aspects	Total no. of items	IQAC Members			Teachers			Students		
			Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)
1.	New quality sustenance and quality enhancement measures undertaken by the university, ensuring the effective development of the curricula after NAAC accreditation process	1	75	6	19	92	3	5	———		
	Periodic curriculum revision		66			61					
	Introduction of inter-disciplinary and innovative schemes in thrust areas		66			36					
	Strengthening of interaction with industry/trade/civil society organizations/educational institutions		58			57					
	Choice-Based Credit System		83			54					
2	Focus on Employability and Innovation in the curriculum	1	75	0	25	73	0	27	59	5	36
3	Freedom to make choices among the available courses as a result of innovation in the curriculum.	1	94	0	6	83	0	17	73	0	27

S. No.	Perceived Outcomes of Accreditation in terms of Indicators of Curricular Aspects	Total no. of items	IQAC Members			Teachers			Students		
			Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)
4	Balanced Curriculum covering need-based, socially relevant programmes, Indian heritage and values	1	81	6	13	74	0	26	63	5	32
5	Flexible time-table and academic plan of the university for providing varied learning experiences both at the institution and on the field	1	75	6	19	71	2	27	65	5	30
6	Feedback regarding curriculum design and enrichment sought from students and teachers	1	88	0	12	69	3	28	67	3	30
7	Curriculum is updated as per perceived needs	1	75	6	19	85	2	13	67	4	29

A curriculum should be balanced covering need-based, socially relevant programmes, Indian heritage and values. Responses of the stakeholders on this quality initiative as per requirement of NAAC criterion, curricular aspects revealed that 81% of IQAC members, 74% of teachers and 63% of students accepted this whereas 13% of IQAC members, 26% of teachers and 32% of students did not accept this. 75% of IQAC members, 71% of teachers and 65% of students revealed that flexibility in time-table and academic plan of the university was made for providing varied learning experiences both at the institution and on the field. On the other hand, 19% of IQAC members, 27% of teachers and 30% of students disagreed. Very important aspect is that the curriculum should be updated from time to time as per feedback received from various stakeholders regarding curriculum design and enrichment in the university. 88% of IQAC members, 69% of teachers and 67% of students agreed that feedback was sought from the students and the teachers regarding curriculum design and enrichment and 75% of IQAC members, 85% of teachers and 67% of students agreed that curriculum was updated as per perceived needs. Conversely, 12% of IQAC members, 28% of teachers and 30% of students stated that no feedback was sought and 19% of IQAC members, 13% of teachers and 29% of students stated that curriculum was not updated as per perceived needs.

3.1.3 Perception of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Teaching-Learning and Evaluation

As per NAAC's core values, higher education institutions play a significant role in serving the society by ensuring equity and increasing access to higher education. In this sense, NAAC's criterion, teaching-learning and evaluation is indicative of the efforts made by an institution to admit students of different backgrounds and abilities by using transparent and well-administered admission procedure.

Table 3.1.3 revealed that 88% of IQAC members and 56% of teachers agreed that the accreditation process has positively enhanced publicity and transparency in the admission process whereas 6% of IQAC members and 41% of teachers responded that there was no such change. 65% of students agreed that their university has a transparent admission policy whereas 30% of students disagreed. Majority of the

IQAC members and the teachers agreed that accreditation process has positively enhanced publicity and transparency in the admission process. Also, large number of students agreed on the issues related to transparent admission policy. This reflects that fair and non-discriminating policy was followed in the Universities thus providing platform for high educational experience through a fair and transparent admission system. Results thus indicate that these universities admit students who are eligible for higher education. All this is indicative of quality initiative transparent admission policy being adopted by the Universities as stated in one of the NAAC's core values. 94% of IQAC members, 83% of teachers and 68%of students agreed that the university has a well-administered admission rules, rather 6% of IQAC members, 17% of teachers and 28% of students responded in the negative. Large number of the stakeholders agreed on the issues related to well-administered admission rules which reflect that fair and non-discriminating policy was followed in the Universities. Thus all this provides platform for high educational experience through a fair and transparent admission system. Results obtained indicate that the students were admitted through a well-administered mechanism which complied with the educational norms of the government. Hence, it can be concluded that all this is indicative of quality initiative, well-administered admission rules as adopted by the accredited Universities as stated in one of the NAAC's core values. All this is also indicative of that in these universities students of different abilities were taken care of as per their needs. 94% IQAC members, 61% teachers and 53% students of the Universities revealed that there was provision of remedial and bridge courses for weaker students thus catering to the diverse needs of the students whereas 6% of IQAC members, 35% of teachers and 41% of students disagreed. 88% of IQAC members, 81% of teachers and 64% of students stated that the University provided information on all type of scholarships at the time of admission but 12% of IQAC members, 17% of teachers and 32% of students disagreed.

88% of IQAC members and 78% of teachers revealed that the NAAC's assessment has positively impacted teaching-learning process in the the University but 12% of IQAC members and 22% of teachers responded there was no such impact. 75% of students revealed that teachers in the University were more oriented towards using latest and innovative pedagogy whereas 25% of students disagreed on this aspect.

88% of IQAC members and 81% of teachers agreed that after the NAAC's assessment, innovative teaching methods were encouraged whereas 12% of IQAC members and 19% of teachers responded in the negative. 81% of students revealed that teachers in their university were employing innovative methods of teaching and 15% disagreed.

Thus 88% of IQAC members and 81% of teachers responded that after the NAAC's assessment innovative teaching methods were encouraged. As per the responses, there was a special focus on interactive learning through promotion and use of ICT. Various participatory methods were encouraged such as group discussions, industrial visits, project works, seminar presentations, field trips, special lectures, quizzes, problem-solving methodology, practicum and computer-aided teaching. The programmes also focussed on experiential learning. LCD projectors were provided to all the departments. Smart classrooms and online learning methods were introduced in some courses. NAAC in one of its core values entitled promoting the use of technology stated that higher educational institutions should introduce technological advancements and innovations in educational transactions to keep pace with the changing global scenario successfully with global competencies. Higher educational institutions should enrich the learning experiences of their students by using interactive instructional techniques as traditional methods of teaching-learning are less motivating to the students. Responses of teachers and students from the Universities revealed that various interactive instructional techniques were used in their university as 74% of teachers and 65% of students replied focused group discussions; 85% of teachers and 61% of students replied debates; 77% of teachers and 65% of students said projects; 75% of teachers and 73% of students responded presentations; 74% of teachers and 69% of students said experiments; 63% of teachers and 58% of students replied practicum and 94% of teachers and 65% of students replied application of ICT resources. From all this, it can be analyzed that teaching-learning process in the Universities can be characterized by originality, inventiveness and innovation. Interactive instructional techniques that engage the students in higher order of thinking and investigation were used thus standing up to the quality mark set up by NAAC.

Table 3.1.3 : Percentage of Responses of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Teaching-Learning and Evaluation

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of Teaching-Learning and Evaluation	Total no. of items	IQAC Members			Teachers			Students		
			Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)
1	Positively enhanced publicity and transparency in the admission process/ The university has a transparent admission policy	2	88	6	6	56	3	41	65	5	30
2	Emphasis on well-administered admission rules	1	94	0	6	83	0	17	68	4	28
3	Provision of Remedial and bridge courses for weaker students	1	94	6	0	61	4	35	53	6	41
4	Information on all type of scholarships at the time of admission as per student diversity for welfare of students	1	88	0	12	81	2	17	64	4	32
5	Positively impacted teaching-learning process in the University/ Teachers in the university are more oriented towards using latest and innovative pedagogy	2	88	0	12	78	0	22	75	0	25
6	Innovative teaching methods being encouraged after NAAC's assessment/ Teachers in university employ innovative methods of teaching	2	88	0	12	81	0	19	81	4	15

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of Teaching-Learning and Evaluation	Total no. of items	IQAC Members			Teachers			Students		
			Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)
7	For effective teaching-learning, various interactive instructional techniques are being used in the university such as o Focused Group Discussions o Debates o Projects o Presentations o Experiments o Practicum o Application of ICT resources	1	-----	----	------	74 85 77 75 74 63 94			65 61 65 73 69 58 85		
8	Variety of learning experiences are provided for enhancing the quality of classroom instruction such as o Individual learning o Collaborative learning o Interactive and participatory approach o Constructive teaching-learning o Field experiences	1	-----	----	-----	85 75 80 74 94			65 58 68 69 75		

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of Teaching-Learning and Evaluation	Total no. of items	IQAC Members			Teachers			Students		
			Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)
9	Interaction with industry, trade, civil society organizations, educational institutions for providing varied learning experiences to the students is a unique feature of the university as students are made to interact with o Industry o Trade/Commerce o Civil society organizations o Educational Institutions	1	------	----	-----	70 75 80 75			65 68 56 65		
10	ICT as a learning resource is extensively used after NAAC's assessment	1	94	0	6	78	0	22	----	----	-----
11	Inter-departmental collaboration in teaching and research related activities.	1	81	0	19	75	0	25	----	-----	-----
12	The performance of teaching faculty is evaluated by students through teacher assessment questionnaire	1	81	0	19	74	0	26	68	4	28
13	Evaluation process has become more skill oriented as various types of assessment techniques are used such as o Objective-type tests o Group discussions o Oral presentations o Field-based experiences o Assignments	1	-------	----	----	85 80 74 75 85			74 70 65 65 75		

85% of teachers and 65% of students agreed that the students were encouraged for individual learning; 75% of teachers and 58% of students responded that collaborative learning was emphasized; 80% of teachers and 68% of students accepted that there was active participation in class as interactive and participatory approach was used; 74% of teachers and 69% of students agreed that constructive teaching-learning was done and 94% of teachers and 75% of students revealed that for live knowledge the students were provided opportunity for field experiences.

Universities should provide varied learning experiences to students by providing opportunities to them to have interaction with an outer world so as to develop entrepreneurial skills among them. All this may be possible through collaboration with industries and another world of work and the world of learning. 70% of teachers and 65% of students accepted that the students were made to interact with experts from industry; 75% of teachers and 68% of students replied that the students interacted with experts from trade and commerce field; 80% of teachers and 56% of students agreed that the students were made to interact with civil society organizations; 75% of teachers and 65% of students revealed that the students were made to interact with educationists from educational institutions.

94% of IQAC members and 78% of teachers affirmed that ICT as a learning resource was extensively used after the NAAC's assessment and 6% of IQAC members and 22% of teachers denied. 81% of IQAC members and 75% of teachers said that NAAC's accreditation has resulted in the inter-departmental collaboration in teaching and research related activities whereas 19% of IQAC members and 25% of teachers disagreed. 81% of IQAC members, 74% of teachers and 68% of students affirmed that the performance of the teaching faculty was evaluated by the students through teacher assessment questionnaire. Contrarily 19% of IQAC members, 26% of teachers and 28% of students denied.

For evaluation of students learning outcomes various types of assessment techniques were used as 85% of teachers and 74% of students responded objective-type tests; 80% of teachers and 70% of students responded group discussions; 74% of teachers and 65% of students replied oral presentations; 75% of teachers and 65% of students responded field-based experiences and 85% of teachers and 75% of students replied assignments. Thus the students learning outcomes were assessed through skill-oriented evaluation process thereby reflecting the areas where learning has happened and where it has to be improved upon.

3.1.4 Perception of the IQAC Members / Teachers / Students regarding perceived outcomes of Accreditation in terms of Indicators of Research, Consultancy and Extension

NAAC through its assessment procedure has stimulated a research culture. NAAC through its criterion, Research, consultancy and extension seeks information on the practices and outcomes of institution with reference to this criterion. It deals with the facilities provided by institutions to promote a research culture and practices encouraged to serve the society through an extension which is also emphasized by NAAC as a core value to be demonstrated by higher educational institutions.

The results of table 3.1.4 revealed that 88% of IQAC members and 78% of teachers agreed that orientation towards research has increased in their University after NAAC's assessment but 12% of IQAC members and 18% of teachers disagreed. 75% of IQAC members, 79% of teachers and 60% of students agreed that research facilities were encouraging in their University. On the contrary 25% of IQAC members, 18% of teachers and 34% of students responded negatively. 100% of IQAC members, 81% of teachers and 75% of students from the accredited Universities revealed that departmental research committees were there for encouraging and advancing research and to monitor and address issues related to research but 19% of teachers and 25% of students responded negatively.

As majority of the stakeholders were in favor of encouraging research facilities in their University thereby reflecting good research environment in the accredited Universities. This was further confirmed from percentage of responses received regarding various research facilities in the Universities. The results of table 3.1.10 revealed that 80% of teachers and 65% of students accepted that there were research labs; 94% of teachers and 81% of students said research and development cell existed; 94% of teachers and 85% of students responded that their campus was having wi-fi facility; 78% of teachers and 65% of students responded that they have access to online journals; 94% of teachers and 65% of students agreed that various journals, magazines, dissertations and books were available in the library; 90% of teachers and 80% of students agreed that in order to encourage research there was provision of number of scholarships for research scholars; 63% of teachers and 58% of students agreed that funds were provided for successful completion of various research projects.

Table 3.1.4 : Percentage of Responses of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Research, Consultancy and Extension

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of Research, Consultancy and Extension	Total no. of items	IQAC Members			Teachers			Students		
			Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)
1	Orientation towards research increased after NAAC accreditation in the university	1	88	0	12	78	4	18	—	—	—
2	Encouraging research facilities	1	75	0	25	79	3	18	60	6	34
3	Formation of departmental research committees for encouraging and advancing research	1	100	0	0	81	0	19	75	0	25
4	Research facilities have augmented thereby fulfilling all requirements for research in university Such as o Research labs o Research and Development Cell o Wi-Fi connectivity o Access to online journals o Availability of various journals, magazines, dissertations and books in library o Provision of number of scholarships for research scholars o Funds are provided for successful completion of various research projects	1	—	—	—	80 81 94 78 94 90 63			65 75 85 65 65 80 58		

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of Research, Consultancy and Extension	Total no. of items	IQAC Members			Teachers			Students		
			Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)
5	Publishing of papers in national and international journals in University is given more impetus after accreditation / Students and teachers are encouraged to publish papers in national and international journals	2	88	0	12	68	3	29	62	6	32
6	More emphasis on organization of various programmmes to promote a research culture such as o Seminars o Conferences o Workshops	1	—	—	—	94 86 88			77 70 71		
7	Some activities organized or managed by the faculty for an external agency	1	81	0	19	63	4	33	—	—	—
8	Enhancement in the organization of extension activities after accreditation	1	75	0	25	58	6	36	—	—	—
9	Promoting the participation of the students and faculties in extension activities such as o NSS (National Service Scheme) o NCC (National Cadet Corps) o Community programmes (awareness/campaigns on social issues) by interaction with NGOs (Non-Governmental Organizations)	1	88 94 100			82 78 90			62 59 75		
10	Liaisons and collaboration with national and international institutions for different courses and research related activities.	1	100	0	0	76	0	24	62	6	32

88% of IQAC members and 68% of teachers accepted that publishing of papers in national and international journals in the university was given more impetus after accreditation and 12% of IQAC members and 29% of teachers did not accept this. 62% of students agreed that the students and the teachers were encouraged to publish papers in national and international journals whereas 32% of students disagreed. All this clearly revealed that research orientation was there in the Universities. More emphasis was on the organization of seminars, conferences and workshops to promote a research culture as revealed by the teachers and the students' responses. 94% of teachers and 77% of students responded that seminars were organized; 86% of teachers and 70% of students replied conferences and 88% of teachers and 71% of students agreed that workshops were organized to promote a research culture in their University.

81% of IQAC members and 63% of teachers agreed that some activities were organized or managed by the faculty for an external agency but 19% of IQAC members and 33% of teachers disagreed.

75% of IQAC members and 58% of teachers responded that NAAC's assessment process has motivated their institution in regard to organization of extension activities. Various good initiatives have been taken such as the institution has adopted neighbouring villages for educating girl child, from weaker sections. More programmes on gender sensitization and women empowerment through Women studies centre, Youth Red Cross etc. were encouraged. Socially relevant advocacy programmes were undertaken. Programmes for neighborhood (rural) development has been strengthened. Many outreach activities relating to academic and industrial development issues have also been taken up by the faculty. The institution has made effective use of community radio for providing information related to education, health etc. which is of value to the local community. The institutions have organized extension programmes to ensure social justice and to empower the underprivileged through various projects, rehabilitation of child labour, and training for empowerment of girls.

88% of IQAC members, 82% of teachers and 62% of students agreed that there was participation of students in NSS; 94% of IQAC members, 78% of teachers and 59%

of students replied in favour of NCC and 100% of IQAC members, 90% of teachers and 75% of students accepted that various community programmes were organized. For providing large platform to students and teachers, the Universities have liaisons and collaboration with national and international institutions for different courses and research related activities as 100% of IQAC members, 76% of teachers and 62% of students agreed whereas 24% of teachers and 32% of students disagreed.

3.1.5 Perception of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Infrastructure and Learning Resources

In order to maintain the quality of academic and other programmes in the higher education institutions, adequate infrastructure and learning resources are prerequisite conditions. As NAAC through its criterion, "Infrastructure and learning resources" seek to elicit data on the adequacy and optimal use of the facilities available in the institution in order to maintain the quality of academic and other programmes in higher education institutions.

The results of table 3.1.5 revealed that 100% of IQAC members, 94% of teachers and 88% of students agreed that various infrastructural facilities in the campus were adequate to contribute towards effective ambience for curricular, extra-curricular and administrative activities whereas 6% of teachers and 8% of students disagreed. Thus this clearly indicates that various facilities were provided in the campus to suit the individual needs of students. Majority of the stakeholders agreed that various infrastructural facilities were adequate. This was further supported by seeking information from the teachers and students regarding different facilities present in their institution. 100% of teachers and 100% of students replied that there was library facility. 100% of teachers and 90% of students replied that there was laboratory facility; 94% of teachers and 85% of students agreed that there was auditorium; 96% of teachers and 90% of students replied that there was conference hall, 88% of teachers and 78% of students replied that there was hostel facility, 100% of teachers and 100% of students replied that there was health centre; 84% of teachers and 75% of students agreed that they were provided with the facility of gymnasium/fitness centre.

Table 3.1.5 : Percentage of Responses of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Infrastructure and Learning Resources

S.No.	Perceived Outcomes of Accreditation in terms ofIndicators of Infrastructure and Learning Resources	Total no. of items	IQAC Members			Teachers			Students		
			Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)
1	Various infrastructural facilities in the campus are adequate to contribute towards effective ambience for curricular, extra-curricular and administrative activities.	1	100	0	0	94	0	6	88	4	8
2	In the university, various infrastructural facilities are provided such as • Library • Laboratory • Auditorium • Conference Hall • Hostel Facility • Health Centre • Gymnasium/Fitness Centre • Playground • Indoor Stadium • Common Room • Computer Centre • Cafeteria • Guest House	1	—	—	—	100 100 94 96 88 100 84 100 85 94 100 100 89			100 90 85 90 78 100 75 100 74 89 96 100 78		

S.No.	Perceived Outcomes of Accreditation in terms ofIndicators of Infrastructure and Learning Resources	Total no. of items	IQAC Members			Teachers			Students		
			Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)
3	Suitable facilities for differently-abled students have been given priority	1	94	0	6	85	2	13	67	5	28
4	Proper maintenance of infrastructure thereby indicating regular check on maintenance of infrastructure facilities, services and equipments	1	88	0	12	86	1	13	77	4	19
5	Library resources are adequate and supplemented from time to time	1	94	0	6	85	0	15	71	0	29
6	Procurement of latest books and number of journals in universitylibrary	1	81	0	19	69	1	30	66	0	34
7	Adequate facilities of online teaching and learning resources	1	94	0	6	73	0	27	62	2	36
8	Institution has taken various initiatives after NAAC accreditation to make improvement of the library services.	1	69			53			_____		

100% of teachers and 100% of students agreed that they have playground facility; 85% of teachers and 74% of students agreed that they have indoor stadium; Common room facility was there as responded by 94% of teachers and 89% of students; 100% of teachers and 96% of students replied that computer centre was there; Cafeteria facility was provided as replied by 100% of teachers and 100% of students and 89% of teachers and 78% of students agreed that there was guest house facility. Thus this clearly indicates that various facilities were provided in the campus to suit the individual needs of students.

94% of IQAC members, 85% of teachers and 67% of students agreed that suitable facilities for differently-abled students have been given priority whereas 6% of IQAC members, 13% of teachers and 28% of students disagreed. 88% of IQAC members, 86% of teachers and 77% of students agreed that there was proper maintenance of the infrastructure in their University but 12% of IQAC members, 13% of teachers and 19% of students disagreed. The library resources were adequate and supplemented from time to time as replied by 94% of IQAC members, 85% of teachers and 71% of students whereas 6% of IQAC members, 15% of teachers and 29% responded no. 81% of IQAC members, 69% of teachers and 66% of students revealed that there was the procurement of latest books and number of journals in the university library. On the contrary, 19% of IQAC members, 30% of teachers and 34% of students disagreed. 94% of IQAC members, 73% of teachers and 62% of students agreed that they were provided adequate facilities of online teaching and learning resources but 6% of IQAC members, 27% of teachers and 36% of students disagreed.

69% of IQAC members and 53% of teachers revealed that after the accreditation the library services have been augmented for improvement. More standard text and reference books have been procured. The process of computerization in the library has been initiated. The library has been fully automated. E-resources relevant to the UG, PG and Ph.D. programmes have been enhanced. The Library’s book bank and reading room facilities have been improved.

3.1.6 Perception of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Student Support and Progression

As per NAAC criteria, higher education institutions should provide necessary assistance to students in form of helping them to acquiring meaningful experiences for learning at the campus and to facilitate their holistic progress. For this, institution should make available sufficient and well-run support services to their students. Higher education institutions should have an effective mechanism, to use student feedback for quality enhancement. Sustainable good practices should be introduced for student support and progression. As per response to the first indicator in table 3.1.6, 75% of IQAC members and 58% of teachers revealed that after NAAC's assessment the University was paying more attention to supportive facilities for students. The University was paying focus on counselling on personal problems and special counseling for girls. The University has introduced full-fledged career service department facilitating campus placement assistance and there was a good record of placement of students in jobs. Cells for counselling, grievance and sexual harassment have been strengthened. Students were provided scholarships under various schemes and through the student welfare fund. Holistic Development of the students through various activities has been initiated. Online Grievance redressal mechanism has been introduced. Scholarships/freeships provided to the meritorious students and also to those from the weaker sections of the society have been augmented. Training for the competitive examinations was provided. A separate department of the Student Welfare has been established to take care of diverse needs of the students. Many facilities for the physically challenged students have been provided.

The results of table 3.1.6 revealed that 94% of IQAC members, 75% of teachers and 68% of students agreed that special coaching classes have been introduced for the students whereas 6% of IQAC members, 25% of teachers and 30% of students disagreed. Majority of the stakeholder's agreement revealed that the Universities were aiming at tapping the talent in students, encouraging them to appear for competitive examinations and helping them to improve their preparation for the examination.

For the personal and professional growth of the students emphasis was given on various academic and non-academic activities. 100% of IQAC members, 87% of teachers and 85% of students responded that seminars were organised; 100% of IQAC members, 85% teachers and 78% of students agreed that guest lectures were organized; 100% of IQAC members, 86% of teachers and 83% of students responded conferences were organised; 100% of IQAC members, 87% teachers and 85% of students revealed workshops were organized and 100% of IQAC members, 96% teachers and 89% of students revealed that sensitization programmes were organized for creating awareness on various society related sensitive issues. 81% of IQAC members, 73% of teachers and 65% of students accepted that effective implementation of the career guidance and placement cell has been done. On the other hand, 19% of IQAC members, 27% of teachers and 30% of students responded no. 88% of IQAC members, 78% of teachers and 63% of students agreed that there was effective implementation of the grievance redressal cell but 12% of IQAC members, 22% of teachers and 33% of students disagreed.

100% of IQAC members, 94% of teachers and 81% of students agreed that there was provision of scholarships; 94% of IQAC members, 89% of teachers and 60% of students responded that there was provision of freeships and 88% of IQAC members, 70% of teachers and 58% of students agreed that the University gave assistance to students in acquiring educational loans. From this, it can be deduced that these Universities were strongly supporting students as far as financial support is concerned and for the welfare of students, various welfare measures were there in these universities. 81% of IQAC members, 74% of teachers and 67% of students agreed that student satisfaction surveys concerning the quality of education imparted in the university were initiated whereas 19% of IQAC members, 26% of teachers and 30% of students disagreed with this. 94% of IQAC members, 70% of teachers and 71% of students agreed that students were intimate about the results of different surveys and action taken on the basis of results. Contrarily, 6% of IQAC members, 30% of teachers and 27% of students disagreed.

81% of IQAC members, 76% of teachers and 62% of students responded that alumni meets were conducted in their University whereas 19% of IQAC members, 21% of teachers and 34% of students disagreed.

Table 3.1.6 : Percentage of Responses of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Student Support and Progression

S.No.	Perceived Outcomes of Accreditation in terms ofIndicators of Student Support and Progression	Total no. of items	IQAC Members			Teachers			Students		
			Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)
1	Supportive facilities for students have been enhanced in the university after NAAC's assessment	1	75	6	19	58	4	38			
2	Special coaching classes have been introduced	1	94	0	6	75	0	25	68	2	30
3	Emphasis on academic and non-academic activities for the personal and professional development of students such as	1									
	o Seminars		100			87			85		
	o Guest lectures		100			85			78		
	o Conferences		100			86			83		
	o Workshops		100			87			85		
	o Sensitization programmes (Awareness programmes on various social issues)		100			96			89		
4	Effective implementation of career guidance and placement cell has been done for students	1	81	0	19	73	0	27	65	5	30
5	Effective implementation of the grievance redressal cell has been done for students	1	88	0	12	78	0	22	63	4	33

S.No.	Perceived Outcomes of Accreditation in terms ofIndicators of Student Support and Progression	Total no. of items	IQAC Members			Teachers			Students		
			Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)
6	Enhancement of various welfare measures for students such as o Scholarships o Freeships o Educational loans	1	100 94 88			94 89 70			81 60 58		
7	Student satisfaction surveys concerning the quality of education imparted in university are being initiated	1	81	0	19	74	0	26	67	3	30
8	Students active involvement in the form of intimation about the results of different feedback surveys (Student feedback on courses, on programs, on teaching, on overall experience in university)and action taken on the basis of results	1	94	0	6	70	0	30	71	2	27
9	Alumni meets are being conducted from time to time	1	81	0	19	76	3	21	62	4	34

3.1.7 Perception of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Governance, Leadership and Management

The results of table 3.1.7 revealed that 94% of IQAC members, 76% of teachers and 62% of students responded that there was sound and good e-Governance in the the University. On the other hand, 6% of IQAC members, 24% of teachers and 34% of students disagreed.

88% of IQAC members and 51% of teachers responded that the NAAC's accreditation has led to co-ordination of the academic and administrative planning and implementation. 100% of IQAC members and 69% of teachers revealed that after the NAAC's assessment organizational work was efficiently carried out through various committees. NAAC through its assessment process puts more emphasis on research, teaching and publication activities. Being aware of this, the Universities was providing more incentive for research, teaching and publication related activities. With this, 81% of IQAC members and 68% of teachers concurred. 100% of both IQAC members and teachers affirmed that a quality cell in form of IQAC has been formed in their University. This has further led to administrative and academic excellence thereby keeping a check on quality aspect as emphasized by 88% of IQAC members and 66% of teachers. The University administration focused on keeping and maintaining a healthy relationship with students, alumni and parents as revealed by 94% of IQAC members and 73% of teachers. As a result of this, focus on the interpersonal relationship between all the stakeholders has improved as revealed from 94% of IQAC members and 59% responses of teachers. Accounts were audited often after the NAAC's assessment as responded by 81% of IQAC members and 68% of teachers.

Table 3.1.7 : Percentage of Responses of the IQAC Members/Teachers/Students regarding perceived outcomes of Accreditation in terms of Indicators of Governance, Leadership and Management

S.No.	Perceived Outcomes of Accreditation in terms ofIndicators of Governance, Leadership and Management	Total no. of items	IQAC Members			Teachers			Students		
			Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)
1	Sound and good e-Governance in the university	1	94	0	6	76	0	24	62	4	34
2	Led to co-ordination of the academic and administrative planning and implementation	1	88			51			———		
3	Organizational work is efficiently carried out through various committees		100			69					
4	More incentive for research, teaching and publication output		81			68					
5	A Quality cell in form of IQAC has been formed		100			100					
6	Led to administrative and academic excellence thereby keeping check on quality aspect		88			66					
7	University administration focuses on keeping and maintaining healthy relationship with students, alumni and parents		94			**73**					
8	Interpersonal relationship between all stakeholders has improved.		94			59					
9	Accounts are audited often		81			68					

3.1.8 Perception of the IQAC Members/Teachers regarding perceived outcomes of Accreditation in terms of Indicators of Innovations and Best Practices

Table 3.1.8 : Percentage of Responses of the IQAC Members/Teachers regarding perceived outcomes of Accreditation in terms of Indicators of Innovations and Best Practices

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of Innovations and Best Practices	IQAC Members/Teachers					
		Yes (%)	NS (%)	No (%)	Yes (%)	NS (%)	No (%)
1.	Various innovative and best practices have been introduced in the university as a result of NAAC accreditation	75	0	25	55	4	41

The results of table 3.1.8 revealed that 75% of IQAC members and 55% of teachers responded that various innovative and best practices have been introduced in their University as a result of NAAC accreditation. Students' participation in quality assurance was initiated through feedback mechanism and assessment of the teachers. Gender-related sensitization programmes have been initiated. The IQAC has been formally set up. The Qsuality Assurance and Enhancement mechanism was in place. Good complaint management process existed. There was a progressive increase in the number of sponsored research projects and in the research publications in indexed journals. There were various visible institutional social responsibility initiatives for a local community.

SECTION – II

3.1.9 Perceived outcomes of accreditation as per order (Highly perceived) of perception of stakeholders in terms of indicators of general benefits of accreditation

Table 3.1.9 : Analysis of Perceived outcomes of accreditation as per order (Highly Perceived) of perception of stakeholders in terms of indicators of general benefits of accreditation

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of General Benefits of Accreditation	Highly Perceived (75% and above) As per % of Responses from IQAC Members and Teachers	
		I	T
1	Educational Improvement in higher education institutions	✓	✓
2	Quality Improvement	✓	✓
3	Quality culture	✓	✓
4	Tool of SWOC	✓	✓
5	Catalyst for institutional self-improvement	✓	✓
6	Public accountability	✓	✓
7	Enhanced reputation	✓	✓
8	New sense of direction and identity	✓	-----
9	Quality assurance, quality enhancement and quality maintenance	✓	-----
10	Clarified roles and responsibilities	✓	-----

II.

- I-IQAC Members
- T- Teachers

As per table 3.1.9, educational improvement in higher education institutions, quality improvement, quality culture, tool of SWOC, catalyst for institutional self-improvement, public accountability and enhanced reputation are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers.

As per table 3.1.9, new sense of direction and identity, quality assurance, quality enhancement and quality maintenance, and clarified roles and responsibilities are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members.

3.1.10 Perceived outcomes of accreditation as per order (Average Perceived) of perception of stakeholders in terms of indicators of general benefits of accreditation

Table 3.1.10 : Analysis of Perceived outcomes of accreditation as per order (Average Perceived) of perception of stakeholders in terms of indicators of general benefits of accreditation

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of General Benefits of Accreditation	Average Perceived (Between 50% and 75%) As per % of Responses from IQAC Members and Teachers	
		I	T
1	Promotion of intra-institutional interactions	✓	✓
2	Enhanced work environment	✓	✓
3	Increased collaboration in decision making resulting in increased unity of purpose	✓	✓
4	New sense of direction and identity	--------	✓
5	Quality assurance, quality enhancement and quality maintenance	--------	✓
6	Public accountability	--------	✓
7	Clarified roles and responsibilities	-------	✓

The results of Table 3.1.10 revealed that promotion of intra-institutional interactions, enhanced work environment and increased collaboration in decision making resulting in increased unity of purpose are enlisted as average perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers.

As per results of table 3.1.10, new sense of direction and identity, quality assurance, quality enhancement and quality maintenance and clarified roles and responsibilities are enlisted as average perceived outcomes of accreditation as per percentage of responses received from the teachers.

3.1.11 Perceived outcomes of accreditation as per order (Highly Perceived) of perception of stakeholders in terms of indicators of various aspects of NAAC Criteria

Table 3.1.11 : Analysis of Perceived outcomes of accreditation as per order (Highly Perceived) of perception of stakeholders in terms of indicators of various aspects of NAAC Criteria

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of Various Aspects of NAAC Criteria	Highly Perceived (75% and Above) As per % of Responses from IQAC Members, Teachers and Students		
		I	T	S
1	Innovative teaching methods being encouraged after NAAC's assessment/ Teachers in the university employ innovative methods of teaching	✓	✓	✓
2	Formation of departmental research committees for encouraging and advancing research	✓	✓	✓
3	Liaisons and collaboration with national and international institutions for different courses and research related activities	✓	✓	✓
4	Various infrastructural facilities in the campus are adequate to contribute towards effective ambience for curricular, extra-curricular and administrative activities.	✓	✓	✓
5	NAAC's assessment has positively impacted teaching-learning process at the University/ Teachers in the university are more oriented towards using latest and innovative pedagogy	✓	✓	✓

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of Various Aspects of NAAC Criteria	Highly Perceived (75% and Above) As per % of Responses from IQAC Members, Teachers and Students		
		I	T	S
6	Proper maintenance of infrastructure thereby indicating regular check on maintenance of infrastructure facilities, services and equipments	✓	✓	✓
7	Enhancement of various welfare measures for students in the form of scholarships, freeships, and educational loans.	✓	✓	✓
8	Freedom to make choices among the available courses as a result of innovation in the curriculum.	✓	✓	—
9	Focus on Employability and Innovation in the curriculum	✓	✓	—
10	Flexible timetable and academic plan of the university for providing varied learning experiences both at the institution and on the field	✓	✓	—
11	Curriculum is updated as per perceived needs	✓	✓	—
12	Emphasis on well-administered admission rules	✓	✓	—
13	Information on all type of scholarships at the time of admission as per student diversity for welfare of students	✓	✓	—
14	Adequate library resources and supplemented from time to time	✓	✓	—
15	Orientation towards research increased after NAAC accreditation in the university	✓	✓	—
16	Encouraging research facilities	✓	✓	—
17	Suitable facilities for differently-abled students have been given priority	✓	✓	—

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of Various Aspects of NAAC Criteria	Highly Perceived (75% and Above) As per % of Responses from IQAC Members, Teachers and Students		
		I	T	S
18	Adequate facilities of online teaching and learning resources	✓	✓	—
19	Special coaching classes have been introduced	✓	✓	—
20	Effective implementation of the grievance redressal cell has been done for students	✓	✓	—
21	Alumni meets are being conducted from time to time	✓	✓	—
22	Sound and good e-Governance in the university	✓	✓	—
23	A Quality cell in form of IQAC has been formed	✓	✓	—
24	ICT as a learning resource is extensively used after NAAC's Assessment	✓	✓	—
25	Periodic curriculum revision	✓	—	—
26	Choice-Based Credit System	✓	—	—
27	Balanced Curriculum covering need-based, socially relevant programmes, Indian heritage and values	✓	—	—
28	Feedback regarding curriculum design and enrichment sought from students and teachers	✓	—	—
29	The performance of teaching faculty is evaluated by students through teacher assessment questionnaire	✓	—	—
30	Accreditation process has positively enhanced publicity and transparency in the admission process	✓	—	—
31	Provision of Remedial and bridge courses for weaker students	✓	—	—

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of Various Aspects of NAAC Criteria	Highly Perceived (75% and Above) As per % of Responses from IQAC Members, Teachers and Students		
		I	T	S
32	Inter-departmental collaboration in teaching and research related activities.	✓	—	—
33	Writing and publishing of papers in national and international journals in University is given more impetus after accreditation	✓	—	—
34	Some activities organized or managed by the faculty for an external agency	✓	—	—
35	Effective implementation of career guidance and placement cell for all students	✓	—	—
36	Enhancement in the organization of extension activities after accreditation	✓	—	—
37	Procurement of latest books and number of journals in university library	✓	—	—
38	Student satisfaction surveys concerning the quality of education imparted in university are being initiated	✓	—	—
39	Students active involvement in the form of intimation about the results of different feedback surveys (Student feedback on courses, on programs, on teaching, on overall experience in university)and action taken on the basis of results	✓	—	—
40	Co-ordination of the academic and administrative planning and implementation	✓	—	—
41	Organizational work is efficiently carried out through various committees	✓	—	—
42	More incentive for research, teaching and publication output	✓	—	—
43	Administrative and academic excellence thereby keeping check on quality aspect	✓	—	—

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of Various Aspects of NAAC Criteria	Highly Perceived (75% and Above) As per % of Responses from IQAC Members, Teachers and Students		
		I	T	S
44	Interpersonal relationship between all stakeholders has improved.	✓	—	—
45	University administration focuses on keeping and maintaining healthy relationship with students, alumni and parents	✓	—	—
46	Accounts are audited often	✓	—	—
47	Various innovative and best practices have been introduced in the university as a result of NAAC accreditation	✓	—	—

- I-IQAC Members
- T-Teachers
- S-Students

Table 3.1.11 revealed that innovative teaching methods being encouraged after NAAC's assessment is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members and teachers in terms of indicators of quality initiatives as per NAAC criterion, teaching, learning and evaluation. Teachers in the University employ innovative methods of teaching is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the students in terms of indicators of quality initiatives as per NAAC criterion, teaching, learning and evaluation. Formation of departmental research committees for encouraging and advancing research and liaisons and collaboration with national and international institutions for different courses and research related activities are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members, teachers and students in terms of indicators of quality initiatives as per NAAC criterion, research, consultancy and extension.

As per table 3.1.11, various infrastructural facilities in the campus are adequate to contribute towards effective ambience for curricular, extra-curricular and administrative activities and proper maintenance of infrastructure are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members, teachers and students in terms of indicators of quality initiatives as per NAAC criterion, infrastructure and learning resources.

The results of table 3.1.11 revealed that NAAC's assessment has positively impacted teaching-learning process at the University/ Teachers in the University are more oriented towards using latest and innovative pedagogy are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members, teachers and students in terms of indicators of quality initiatives as per NAAC criterion, teaching, learning and evaluation.

As per table 3.1.11, enhancement of various welfare measures for students in the form of scholarships, freeships, and educational loans is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members, teachers and students in terms of indicators of quality initiatives as per NAAC criterion, Student Support and Progression.

The results of table 3.1.11 revealed that freedom to make choices among the available courses as a result of innovation in the curriculum; focus on employability and innovation in the curriculum; flexible time-table and academic plan of the university for providing varied learning experiences both at the institution and on the field and curriculum is updated as per perceived needs are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers in terms of indicators of quality initiatives as per NAAC criteria, curricular aspects and teaching, learning and evaluation. Emphasis on well-administered admission rules; information on all type of scholarships at the time of admission as per student diversity for welfare of students and the performance of teaching faculty is evaluated by students through teacher assessment questionnaire are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers in terms of

indicators of quality initiatives as per NAAC criterion, teaching, learning and evaluation.

As per table 3.1.11, orientation towards research increased after NAAC accreditation and encouraging research facilities are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers. Suitable facilities for differently-abled students have been given priority and adequate facilities of online teaching and learning resources are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers in terms of indicators of quality initiatives as per NAAC criterion, infrastructure and learning resources.

Results of table 3.1.11 revealed that special coaching classes being introduced; effective implementation of career guidance and placement cell; effective implementation of the grievance redressal cell and alumni meets are being conducted from time to time are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers in terms of indicators of quality initiatives as per NAAC criterion, student support and progression.

Table 3.1.11 revealed that sound and good e-Governance in the university ; a Quality cell in form of IQAC and ICT as a learning resource is extensively used after NAAC's Assessment are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers.

Table 3.1.11 revealed that periodic curriculum revision; choice-based credit system; student feedback regarding curriculum design and enrichment sought from students and balanced curriculum covering need-based, socially relevant programmes, Indian heritage and values are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members in terms of indicators of quality initiatives as per NAAC criterion, curricular aspects.

The results of table 3.1.11 revealed that the performance of teaching faculty is evaluated by students through teacher assessment questionnaire; accreditation process has positively enhanced publicity and transparency in the admission process; provision of remedial and bridge courses for weaker students and inter-departmental collaboration in teaching and research related activities are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members in terms of indicators of quality initiatives as per NAAC criterion, teaching, learning and evaluation.

As per table 3.1.11, publishing of papers in national and international journals in University is given more impetus after accreditation; some activities organized or managed by the faculty for an external agency; effective implementation of career guidance and placement cell; enhancement in the organization of extension activities after accreditation; student satisfaction surveys concerning the quality of education imparted in university are being initiated and students active involvement in the form of intimation about the results of different feedback surveys and action taken on the basis of results are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members in terms of indicators of quality initiatives as per NAAC criterion, research, consultancy and extension and student support and progression.

Procurement of latest books and number of journals in the university library is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members in terms of indicators of quality initiatives as per NAAC criterion, infrastructure and learning resources.

Table 3.1.11 revealed that coordination of the academic and administrative planning and implementation; organizational work is efficiently carried out through various committees; more incentive for research, teaching and publication output; administrative and academic excellence thereby keeping check on quality aspect; interpersonal relationship between all stakeholders has improved and accounts are audited often are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC Members in terms of indicators of quality initiatives as per NAAC criterion, governance, leadership and management.

Various innovative and best practices introduced in the university as a result of NAAC accreditation is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members.

3.1.12 Perceived outcomes of accreditation as per order (Average Perceived) of perception of stakeholders in terms of indicators of various aspects of NAAC Criteria

Table 3.1.12 : Analysis of Perceived outcomes of accreditation as per order (Average Perceived) of perception of stakeholders in terms of indicators of various aspects of NAAC Criteria

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of Various Aspects of NAAC Criteria	Average Perceived (Between 50% and 75%) As per % of Responses from IQAC Members, Teachers and Students		
		I	T	S
1	Balanced Curriculum covering need-based, socially relevant programmes, Indian heritage and values	✓	✓	✓
2	Strengthening of interaction with industry / trade / civil society organizations/educational institutions	✓	✓	—
3	Feedback regarding curriculum design and enrichment sought from students and teachers	—	✓	✓
4	Accreditation process has positively enhanced publicity and transparency in the admission process/ The university has a transparent admission policy	—	✓	✓
5	Procurement of latest books and number of journals in university library	—	✓	✓
6	The performance of teaching faculty is evaluated by students through teacher assessment questionnaire	—	✓	✓
7	Provision of Remedial and bridge courses for weaker students	—	✓	✓

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of Various Aspects of NAAC Criteria	Average Perceived (Between 50% and 75%) As per % of Responses from IQAC Members, Teachers and Students		
		I	T	S
8	Effective implementation of career guidance and placement cell for all students	—	✓	✓
9	Student satisfaction surveys concerning the quality of education imparted in university is being initiated	—	✓	✓
10	Students active involvement in the form of intimation about the results of different feedback surveys (Student feedback on courses, on programs, on teaching, on overall experience in university) and action taken on the basis of results	—	✓	✓
11	Introduction of inter-disciplinary and innovative schemes in thrust areas	✓	—	—
12	Choice-Based Credit System	—	✓	—
13	University administration focuses on keeping and maintaining healthy relationship with students, alumni and parents	—	✓	—
14	Periodic curriculum revision	—	✓	—
15	Inter-departmental collaboration in teaching and research related activities.	—	✓	—
16	Writing and publishing of papers in national and international journals in University is given more impetus after accreditation	—	✓	—
17	Some activities organized or managed by the faculty for an external agency	—	✓	—
18	Enhancement in the organization of extension activities after accreditation	—	✓	—
19	Co-ordination of the academic and administrative planning and implementation	—	✓	—
20	Organizational work is efficiently carried out through various committees	—	✓	—

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of Various Aspects of NAAC Criteria	Average Perceived (Between 50% and 75%) As per % of Responses from IQAC Members, Teachers and Students		
		I	T	S
21	More incentive for research, teaching and publication output	—	✓	—
22	Administrative and academic excellence thereby keeping check on quality aspect	—	✓	—
23	Interpersonal relationship between all stakeholders has improved.	—	✓	—
24	Accounts are audited often	—	✓	—
25	Various innovative and best practices introduced in the university as a result of NAAC accreditation	—	✓	—
26	Freedom to make choices among the available courses as a result of innovation in the curriculum.	—	—	✓
27	Focus on Employability and Innovation in the curriculum	—	—	✓
28	Flexible time-table and academic plan of the university for providing varied learning experiences both at the institution and on the field	—	—	✓
29	Curriculum is updated as per perceived needs	—	—	✓
30	Emphasis on well-administered admission rules	—	—	✓
31	Information on all type of scholarships at the time of admission as per student diversity for welfare of students	—	—	✓
32	Encouraging research facilities	—	—	✓
33	Adequate library resources and supplemented from time to time	—	—	✓
34	Suitable facilities for differently-abled students have been given priority	—	—	✓
35	Adequate facilities of online teaching and learning resources	—	—	✓

S.No.	Perceived Outcomes of Accreditation in terms of Indicators of Various Aspects of NAAC Criteria	Average Perceived (Between 50% and 75%) As per % of Responses from IQAC Members, Teachers and Students		
		I	T	S
36	Special coaching classes have been introduced	—	—	✓
37	Effective implementation of the grievance redressal cell has been done for students	—	—	✓
38	Alumni meets are being conducted from time to time	—	—	✓
39	Sound and good e-Governance in the university	—	—	✓

As per table 3.1.12, balanced curriculum covering need-based, socially relevant programmes, Indian heritage and values is enlisted as an average perceived outcome of accreditation as per percentage of responses received from the IQAC members, teachers and students in terms of indicators of quality initiatives as per NAAC criterion, curricular aspects. Strengthening of interaction with industry/trade/civil society organizations/educational institutions is enlisted as an average perceived outcome of accreditation as per percentage of responses received from the IQAC members and teachers in terms of an indicator of a quality initiative as per NAAC criterion, curricular aspects. Feedback regarding curriculum design and enrichment sought from students and teachers is enlisted as an average perceived outcome of accreditation as per percentage of responses received from teachers and students in terms of an indicator of a quality initiative as per NAAC criterion, curricular aspects.

Table 3.1.12 revealed that accreditation process has positively enhanced publicity and transparency in the admission process is enlisted as an average perceived outcome of accreditation as per percentage of responses received from the teachers. The university has a transparent admission policy is enlisted as an average perceived outcome of accreditation as per percentage of responses received from the students. Procurement of latest books and number of journals in the university library is enlisted as an average perceived outcome of accreditation as per percentage of

responses received from the teachers and students in terms of an indicator of a quality initiative as per NAAC criterion, infrastructure and learning resources.

The results of table 3.1.12 revealed that the performance of teaching faculty is evaluated by students through teacher assessment questionnaire and provision of remedial and bridge courses for weaker students are enlisted as average perceived outcomes of accreditation as per percentage of responses received from the teachers and students in terms of indicators of quality initiatives as per NAAC criterion, teaching-learning and evaluation.

As per table 3.1.12, effective implementation of career guidance and placement cell; student satisfaction surveys concerning the quality of education imparted in university are being initiated and students active involvement in the form of intimation about the results of different feedback surveys and action taken on the basis of results are enlisted as average perceived outcomes of accreditation as per percentage of responses received from the teachers and students in terms of indicators of quality initiatives as per NAAC criterion, student support and progression.

Table 3.1.12 results revealed that Inter-departmental collaboration in teaching and research related activities is enlisted as an average perceived outcome of accreditation as per percentage of responses received from the teachers.

Table 3.1.12 revealed that publishing of papers in national and international journals in University is given more impetus after accreditation; some activities organized or managed by the faculty for an external agency and enhancement in the organization of extension activities after accreditation are enlisted as average perceived outcomes of accreditation as per percentage of responses received from the teachers.

Table 3.1.12 revealed that coordination of the academic and administrative planning and implementation; organizational work is efficiently carried out through various committees; more incentive for research, teaching and publication output; administrative and academic excellence thereby keeping check on quality aspect; interpersonal relationship between all stakeholders has improved and accounts are audited often are enlisted as average perceived outcomes of accreditation as per

percentage of responses received from the IQAC members in terms of indicators of quality initiatives as per NAAC criterion, governance, leadership and management.. Various innovative and best practices introduced in the university as a result of NAAC accreditation is enlisted as an average perceived outcome of accreditation as per percentage of responses received from the teachers.

Table 3.1.12 revealed that freedom to make choices among the available courses as a result of innovation in the curriculum; focus on employability and innovation in the curriculum, flexible timetable and academic plan of the university for providing varied learning experiences both at the institution and on the field and curriculum is updated as per perceived needs are enlisted as average perceived outcomes of accreditation as per percentage of responses received from the students in terms of indicators of quality initiatives as per NAAC criteria, curricular aspects and teaching-learning and evaluation.

As per table 3.1.12, emphasis on well-administered admission rules is enlisted as an average perceived outcome of accreditation as per the percentage of responses received from the students. Information on all type of scholarships at the time of admission is enlisted as an average perceived outcome of accreditation as per percentage of responses received from the students in terms of an indicator of a quality initiative as per NAAC criterion, teaching-learning and evaluation.

Table 3.1.12 revealed that the performance of teaching faculty is evaluated by students through teacher assessment questionnaire is enlisted as an average perceived outcome of accreditation as per percentage of responses received from the students in terms of an indicator of a quality initiative as per NAAC criterion, teaching-learning and evaluation.

The results of table 3.1.12 revealed that encouraging research facilities is enlisted as an average perceived outcome of accreditation as per percentage of responses received from the students in terms of an indicator of a quality initiative as per NAAC criterion, research, consultancy and extension.

As per table 3.1.12, a suitable facility for differently-abled students is enlisted as an average perceived outcome of accreditation as per percentage of responses received

from the students. Adequate facilities of online teaching and learning resources are enlisted as average perceived outcome of accreditation as per the percentage of responses received from the students in terms of an indicator of a quality initiative as per NAAC criterion, infrastructure and learning resources.

The results of table 3.1.12 revealed that special coaching classes being introduced; effective implementation of the grievance redressal cell and alumni meets are being conducted from time to time are enlisted as average perceived outcomes of accreditation as per percentage of responses received from the students in terms of indicators of quality initiatives as per NAAC criterion, student support and progression. Sound and good e-Governance in the university is enlisted as an average perceived outcome of accreditation as per percentage of responses received from the students in terms of an indicator of a quality initiative as per NAAC criterion, governance, leadership and management.

3.1.13 Perceived outcomes of accreditation as per order (Least Perceived) of perception of stakeholders in terms of indicators of various aspects of NAAC Criteria

Table 3.1.13 : Analysis of Perceived outcomes of accreditation as per order (Least Perceived) of perception of stakeholders in terms of indicators of various aspects of NAAC Criteria

S.No.	Perceived Outcomes of Accreditation in terms of Indicator of various aspects of NAAC Criteria	Least Perceived (50% and Below 50%) As per % of Responses from Teachers
		T
1	Introduction of inter-disciplinary and innovative schemes in thrust areas	✓

As per table 3.1.13, introduction of inter-disciplinary and innovative schemes in thrust areas is enlisted as the least perceived outcome of accreditation as per percentage of responses received from the teachers in terms of an indicator of a quality initiative as per NAAC criterion, curricular aspects.

3.2 RESULTS PERTAINING TO THE ALIGNMENT OF PERCEIVED OUTCOMES OF ACCREDITATION BY THE STAKEHOLDERS OF THE ACCREDITED NORTH INDIAN UNIVERSITIES WITH THE STATED ASSESSMENT AND ACCREDITATION OBJECTIVES AS SET BY UGC.

3.2.1 List of Perceived Outcomes of Accreditation

3.2.2 Alignment of Perceived Outcomes of Accreditation with the Stated Assessment and Accreditation Objectives as set by UGC

3.2.3 Perceived Outcomes of Accreditation reflecting the advanced academic quality in terms of Ist Assessment and Accreditation Objective

3.2.4 Perceived Outcomes of Accreditation reflecting the informed choices with regard to Higher Educational Institutions in terms of 2nd Assessment and Accreditation Objective

3.2.5 Perceived Outcomes of Accreditation reflecting inputs concerning the quality of education imparted by the Higher Educational Institutions in terms of 3rd Assessment and Accreditation Objective

3.2.6 Perceived Outcomes of Accreditation reflecting augmented quality in terms of 4th Assessment and Accreditation Objective

3.2.7 Perceived Outcomes of Accreditation reflecting inputs concerning the additional funding and other incentives in terms of 5th Assessment and Accreditation Objective

3.2.8 Perceived Outcomes of Accreditation reflecting collaborations in terms of 6th Assessment and Accreditation Objective

3.2.9 Perceived Outcomes of Accreditation reflecting learning outcomes appropriate to the course and relevant to the context in terms of 7th Assessment and Accreditation Objective

3.2.10 Perceived Outcomes of Accreditation reflecting students' entitlements in terms of 8th Assessment and Accreditation Objective

3.2.11 Perceived Outcomes of Accreditation reflecting teaching and research standards in terms of 9th Assessment and Accreditation Objective

3.2.12 Perceived Outcomes of Accreditation reflecting effective teaching-learning in terms of 10th Assessment and Accreditation Objective

3.2.13 Perceived Outcomes of Accreditation reflecting effective governance mechanisms in terms of 11th Assessment and Accreditation Objective

Table 3.2.1 : List of perceived outcomes of accreditation

S.No.	Perceived Outcomes of Accreditation
1.	Educational Improvement in higher education institutions
2.	Quality Improvement
3.	Quality culture
4.	Tool of SWOC
5.	New sense of direction and identity
6.	Promotion of intra-institutional interactions
7.	Catalyst for institutional self-improvement
8.	Quality assurance, quality enhancement and quality maintenance
9.	Public accountability
10.	Enhanced reputation
11.	Enhanced work environment
12.	Increased collaboration in decision making resulting in increased unity of purpose
13.	Clarified roles and responsibilities
14.	Periodic curriculum revision
15.	Introduction of inter-disciplinary and innovative schemes in thrust areas
16.	Strengthening of interaction with industry/trade/civil society organizations / educational institutions
17.	Choice-Based Credit System
18.	Focus on Employability and Innovation in the curriculum
19.	Freedom to make choices among the available courses as a result of innovation in the curriculum.

S.No.	Perceived Outcomes of Accreditation
20.	Balanced Curriculum covering need-based, socially relevant programmes, Indian heritage and values
21.	Flexible time-table and academic plan of the university for providing varied learning experiences both at the institution and on the field
22.	Feedback regarding curriculum design and enrichment sought from students and teachers
23.	Curriculum is updated as per perceived needs
24.	Accreditation process has positively enhanced publicity and transparency in the admission process/ The university has a transparent admission policy.
25.	Emphasis on well-administered admission rules
26.	Provision of remedial and bridge courses for weaker students
27.	Information on all type of scholarships at the time of admission as per student diversity for welfare of students
28.	NAAC's assessment has positively impactedteaching-learning process in the University/ Teachers are more oriented towards using latest and innovative pedagogy
29.	Innovative teaching methods being encouraged
30.	Special focus on interactive learning through promotion and use of ICT.
31.	Smart class rooms and online learning methods being introduced in some courses.
32.	Programmes focus on experiential learning.
33.	Inter-departmental collaboration in teaching and research related activities.
34.	Evaluation process has become more skill oriented
35.	The performance of teaching faculty is evaluated by students through teacher assessment questionnaire
36.	Orientation towards research has increased
37.	Encouraging research facilities
38.	Formation of departmental research committees for encouraging and advancing research
39.	Publishing of papers in national and international journals in University is given more impetus after accreditation
40.	Students and teachers are encouraged to publish papers in national and international journals

S.No.	Perceived Outcomes of Accreditation
41.	Some activities are organized or managed by the faculty for an external agency
42.	Organization of extension activities being enhanced
43.	More programmes on gender sensitization and women empowerment through Women studies centre, Youth Red Cross etc. are being encouraged.
44.	Liaisons and collaboration with national and international institutions for different courses and research related activities.
45.	Various infrastructural facilities in the campus are adequate
46.	Suitable facilities for differently-abled students have been given priority
47.	Proper maintenance of infrastructure
48.	Adequate library resources and supplemented from time to time
49.	Procurement of latest books and number of journals in university library
50.	Adequate facilities of online teaching and learning resources
51.	Various initiatives to make improvement of the library services.
52.	More standard text and reference books have been procured.
53.	The process of computerization in the library has been initiated.
54.	Library has been fully automated.
55.	Enhanced e-resources relevant to UG, PG and Ph.D. programmes.
56.	Library's book bank and reading room facilities improved.
57.	Supportive facilities for students have been enhanced in the university after NAAC's assessment
58.	Focus on counseling on personal problems, and special counseling for girls.
59.	The University has introduced fully fledged career service department facilitating campus placement assistance.
60.	Good record of placement of students in jobs.
61.	Cells for counseling, grievance and sexual harassment have been strengthened.
62.	Holistic Development of students through various activities initiated.
63.	Online Grievance redressal mechanism has been introduced.
64.	Scholarships/freeships provided to meritorious students and also to those from the weaker sections of the society have been augmented.

S.No.	Perceived Outcomes of Accreditation
65.	Special coaching classes have been introduced
66.	A separate department of Student Welfare has been established to take care of diverse needs of the students.
67.	Effective implementation of career guidance and placement cell has been done for students
68.	Effective implementation of the grievance redressal cell has been done for students
69.	Enhancement of various welfare measures for students in the form of scholarships, freeships, and educational loans.
70.	Student satisfaction surveys concerning the quality of education imparted in university are being initiated
71.	Students active involvement in the form of intimation about the results of different feedback surveys (Student feedback on courses, on programs, on teaching, on overall experience in university)and action taken on the basis of results
72.	Alumni meets are being conducted from time to time
73.	Sound and good e-Governance in the university
74.	Co-ordination of the academic and administrative planning and implementation
75.	Organizational work is efficiently carried out through various committees
76.	More incentive for research, teaching and publication output
77.	A Quality cell in form of IQAC has been formed
78.	Administrative and academic excellence thereby keeping check on quality aspect
79.	University administration focuses on keeping and maintaining healthy relationship with students, alumni and parents
80.	Interpersonal relationship between all stakeholders has improved.
81.	Accounts are audited often
82.	Various innovative and best practices have been introduced in the university as a result of NAAC accreditation
83.	Quality Assurance and Enhancement mechanism in place.
84.	Gender related sensitization programmes have been initiated.
85.	Students' participation in quality assurance is initiated through feedback mechanism and assessment of teachers.

S.No.	Perceived Outcomes of Accreditation
86.	Progressive increase in the number of sponsored research projects and in the research publications in indexed journals.
87.	Funds are provided for successful completion of various research projects
88.	Reasonably international linkages have been established in university
89.	ICT as a learning resource is extensively used after NAAC's assessment.

Table 3.2.2 : Alignment of Perceived Outcomes of Accreditation with the Stated Assessment and Accreditation Objectives as set by UGC

S. No.	Perceived Outcomes of Accreditation	Assessment and Accreditation objectives as per Regulations i.e. University Grants Commission (Mandatory Assessment and Accreditation of Higher Educational Institutions), Regulations, 2012
1.	14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 26, 28, 29, 30, 31, 32, 34, 35, 36, 37, 38, 39, 40, 48, 49, 50, 52, 55, 65, 67, 68, 86	To accord recognition to the quality and excellence of education imparted by Higher Educational Institutions and thereby to advance academic quality.
2.	9, 10, 24, 25, 27	To enable students and other stakeholders to make informed choices with regard to Higher Educational Institutions.
3.	22, 35, 70, 71, 79, 80	To enable students, teachers and other stakeholders to provide inputs concerning the quality of education imparted by the Higher Educational Institutions.
4.	77, 1, 2, 3, 78	To facilitate Higher Educational Institutions to augment quality, by benchmarking uniform reference points pertaining to academic standards.
5.	87,76	To facilitate Higher Educational Institutions to secure additional funding and other incentives, if found eligible, from appropriate regulatory and or funding agencies.
6.	44, 88	To facilitate Higher Educational Institutions to acquire international recognition, cross-border and trans-national collaborations.
7.	14, 15, 16, 17, 18, 19, 20, 21, 23, 26, 29, 46, 50, 65, 67, 68	To facilitate students achieve learning outcomes appropriate to their course and relevant to their context, as shall be declared by Higher Educational Institutions.

S. No.	Perceived Outcomes of Accreditation	Assessment and Accreditation objectives as per Regulations i.e. University Grants Commission (Mandatory Assessment and Accreditation of Higher Educational Institutions), Regulations, 2012
8.	24, 28, 29, 89, 67, 68, 69, 65, 45, 46, 47, 48, 49, 50	To facilitate students' entitlements, as prescribed by the commission or declared by the Higher Educational Institution, as the case may be, to be met by Higher Educational Institutions.
9.	26, 29, 46, 50, 36, 38, 37, 39, 40, 41, 42, 44	To facilitate teachers achieve and maintain teaching and research standards as shall be declared by Higher Educational Institutions.
10.	28, 29, 89, 33, 48, 49, 50	To facilitate effective teaching-learning and access to quality teaching learning material in all the languages permitted by the Higher Educational Institution as medium of instruction or examination.
11.	12, 13, 74, 75, 77, 78, 79, 80, 81, 83	To facilitate Higher Educational Institution achieve effective governance mechanisms in their management and administration.

3.2.3 Perceived Outcomes of Accreditation reflecting the advance academic quality in terms of Ist Assessment and Accreditation Objective

Table 3.2.3 : Alignment of Perceived Outcomes of Accreditation reflecting the advance academic quality with Ist Assessment and Accreditation Objective

Indicators (Perceived Outcomes of Accreditation)
Periodic curriculum revision (14)
Introduction of inter-disciplinary and innovative schemes in thrust areas (15)
Strengthening of interaction with industry / trade / civil society organizations / educational institutions (16)
Choice-Based Credit System (17)
Focus on Employability and Innovation in the curriculum (18)
Freedom to make choices among the available courses as a result of innovation in the curriculum (19)
Balanced Curriclum covering need-based, socially relevant programmes, Indian heritage and values (20)

Indicators (Perceived Outcomes of Accreditation)
Flexible time-table and academic plan of the university for providing varied learning experiences both at the institution and on the field (21)
Feedback regarding curriculum design and enrichment sought from students and teachers (22)
Curriculum is updated as per perceived needs (23)
Provision of Remedial and bridge courses for weaker students (26)
NAAC's assessment has positively impacted teaching-learning process in the University/ Teachers are more oriented towards using latest and innovative pedagogy (28)
Innovative teaching methods being encouraged (29)
Special focus on interactive learning through promotion and use of ICT (30)
Smart class rooms and online learning methods being introduced in some courses (31)
Programmes focus on experiential learning (32)
Evaluation process has become more skill oriented (34)
The performance of teaching faculty is evaluated by students through teacher assessment questionnaire (35)
Orientation towards research has increased (36)
Encouraging research facilities (37)
Formation of departmental research committees for encouraging and advancing research (38)
Publishing of papers in national and international journals in University is given more impetus after accreditation (39)
Students and teachers are encouraged to publish papers in national and international journals (40)
Adequate library resources and supplemented from time to time (48)
Procurement of latest books and number of journals in university library (49)
Adequate facilities of online teaching and learning resources (50)
More standard text and reference books have been procured (52)
Enhanced e-resources relevant to UG, PG and Ph.D. programmes (55)

Indicators (Perceived Outcomes of Accreditation)
Special coaching classes have been introduced (65)
Effective implementation of career guidance and placement cell has been done for students (67)
Effective implementation of the grievance redressal cell has been done for students (68)
Progressive increase in the number of sponsored research projects and in the research publications in indexed journals (86)

Ist Assessment and Accreditation objective as set by UGC states that accreditation agency should accord recognition to the quality and excellence of education imparted by Higher Educational Institutions and thereby to advance academic quality. NAAC has accorded recognition to the quality and excellence of education imparted by the Universities by giving the accreditation status to these Universities. Table 3.2.3 revealed the alignment of the perceived outcomes of accreditation reflecting the advance academic quality or academic standards with Ist assessment and accreditation objective.

Academic quality refers to the procedures that emphasize students' achievement and high expectations of teaching, learning and research related activities. Table 3.2.3 revealed perceived outcomes of accreditation reflecting academic quality related to curriculum, curriculum update, teaching methodology, teachers' proficiency, research facilities, learning resources, assessment and evaluation and guidance facilities. As per table 3.2.3, in the Universities after accreditation, there was periodic curriculum revision; an introduction of inter-disciplinary and innovative schemes in thrust areas; a strengthening of interaction with industry/trade/civil society organizations/educational institutions and choice-Based Credit System was introduced in the accredited universities. There was a focus on employability and innovation in the curriculum. The students have the freedom to make choices among the available courses as a result of innovation in the curriculum. The curriculum of the Universities was balanced covering need-based, socially relevant programmes, Indian heritage and values. Flexible timetable and academic plan of the University was there for providing varied learning experiences both at the institution and on the

field. Feedback regarding curriculum design and enrichment was sought from the students and teachers. The Curriculum was updated as per perceived needs. There was a provision of remedial and bridge courses for the weaker students. The accreditation process has positively impacted teaching-learning process in the University and teachers were more oriented towards using latest and innovative pedagogy. Innovative teaching methods were encouraged after the NAAC's accreditation. There was a special focus on interactive learning through promotion and use of ICT. Smart classrooms and online learning methods were introduced in some of the courses. The programs focussed on experiential learning. The evaluation process has become more skill oriented. The performance of the teaching faculty was evaluated by the students through teacher assessment questionnaire. Orientation towards research has increased after the NAAC's accreditation. Encouraging research facilities were there. There was a formation of the departmental research committees for encouraging and advancing research. Publishing of papers in national and international journals in the University was given more impetus after accreditation. The students and teachers were encouraged to publish papers in national and international journals.

The library resources were adequate and supplemented from time to time. Procurement of latest books and number of journals was there in the University library. There were adequate facilities of online teaching and learning resources. After the accreditation more standard text and reference books have been procured and there were enhanced e-resources relevant to the UG, PG and Ph.D. programs. Special coaching classes have been introduced in these Universities. Effective implementation of the career guidance and placement cell and also the grievance redressal cell has been done for the students. There was a progressive increase in the number of sponsored research projects and increase in the research publications in indexed journals.

Thus all the above stated perceived outcomes of accreditation revealed the advance academic quality of the NAAC accredited universities as is being stated as a pre requisite feature of accredited universities in Ist assessment and accreditation objective.

3.2.4 Perceived Outcomes of Accreditation reflecting the informed choices with regard to Higher Educational Institutions in terms of 2nd Assessment and Accreditation Objective

Accreditation agency's main task is to accredit higher educational institutions on the basis of assessment criteria. By giving accreditation status to higher educational institutions, accreditation agency makes clear the status of these institutions in terms of quality aspect to stakeholders of institutions. All this helps stakeholders to make informed choices with regard to higher educational institutions.

Table 3.2.4 : Alignment of Perceived Outcomes of Accreditation reflecting the informed choices with regard to Higher Educational Institutions with 2nd Assessment and Accreditation Objective

Indicators (Perceived Outcomes of Accreditation)
Public accountability (9)
Enhanced reputation (10)
Accreditation process has positively enhanced positively enhanced publicity and transparency in the admission process. (24)
Emphasis on well-administered admission rules (25)
Information on all type of scholarships at the time of admission as per student diversity for welfare of students (27)

Table 3.2.4 revealed that the NAAC accredited Universities due to their accreditation status has enhanced reputation and public accountability. Accreditation process in these Universities has positively enhanced publicity and transparency in the admission process. In these Universities, there was an emphasis on well-administered admission rules indicating that fair and non-discriminating policy is being followed. These Universities also provided information on all type of scholarships at the time of admission. All this revealed that the NAAC accredited Universities as a result of recognition of quality accorded to them by accreditation agency has been giving right direction to the stakeholders in making informed choices with regard to higher educational institutions.

3.2.5 Perceived Outcomes of Accreditation reflecting inputs concerning the quality of education imparted by the Higher Educational Institutions in terms of 3rd Assessment and Accreditation Objective

One of the assessment and accreditation objectives as per regulations i.e. UGC Regulations, 2012 states that accreditation agency should assess whether higher educational institutions enable students, teachers and other stakeholders to provide inputs concerning the quality of education imparted. For this NAAC through its assessment and accreditation process assess whether higher educational institutions sought feedback from stakeholders concerning the quality of education in various forms.

Very important aspect is that the curriculum should be updated from time to time as per feedback received from various stakeholders regarding curriculum design and enrichment in the university. From table 3.2.5 it is deduced that feedback was sought from the students and teachers regarding curriculum design and enrichment. Further, in order to evaluate the competency, efficiency and performance of teachers, there should be some mechanism in form of feedback from students so that on the basis of feedback received, teachers can make improvements and think of new innovative ways of providing learning experiences to the students. In order to evaluate the performance of the teaching faculty, students gave feedback on teacher assessment questionnaire. The student satisfaction surveys concerning the quality of education imparted in the university were initiated. The students were intimate about the results of different surveys and action taken on the basis of the results. The University administration focused on keeping and maintaining a healthy relationship with the students, alumni and parents and as a result, interpersonal relationship between all the stakeholders has improved.

Table 3.2.5 : Alignment of Perceived Outcomes of Accreditation reflecting inputs concerning the quality of education imparted by the Higher Educational Institutions with 3rd Assessment and Accreditation Objective

Indicators (Perceived Outcomes of Accreditation)
Feedback regarding curriculum design and enrichment sought from students and teachers (22)
The performance of teaching faculty is evaluated by students through teacher assessment questionnaire (35)
Student satisfaction surveys concerning the quality of education imparted in university is being initiated (70)
Students active involvement in the form of intimation about the results of different feedback surveys (Student feedback on courses, on programs, on teaching, on overall experience in university)and action taken on the basis of results (71)
University administration focuses on keeping and maintaining healthy relationship with students, alumni and parents (79)
Interpersonal relationship between all stakeholders has improved (80)

Thus table 3.2.5 revealed that feedback was sought from stakeholders of the NAAC accredited universities concerning the quality of education imparted. Thus all this is in tune with 3rd assessment and accreditation objective related to inputs sought from stakeholders concerning the quality of education imparted by the higher educational institutions.

3.2.6 Perceived Outcomes of Accreditation reflecting augmented quality in terms of 4th Assessment and Accreditation Objective

NAAC has framed criteria for assessing higher educational institutions. NAAC's criteria are a quality benchmark pertaining to academic standards for higher educational institutions. On the basis of these criteria, higher educational institutions are accredited. As per one of the guidelines of **RUSA (Rashtriya Uchchatar Shiksha Abhiyan)**, States must ensure that all higher education institutions should adopt NAAC accreditation as the mandatory quality assurance framework and simultaneously seek to upgrade the academic quality by implementing reforms.

NAAC has motivated higher educational institutions to establish their own internal mechanisms for sustenance, assurance and enhancement of the quality culture of education imparted by them. So as per instance of NAAC, all higher education institutions should have Internal Quality Assurance Cell as post accreditation activity.

UGC in his 12th Five Year Plan (2012-2017) has given guidelines for establishment and monitoring of the Internal Quality Assurance Cells in Universities. As per these guidelines, an independent scheme of Internal Quality Assurance is to be implemented in all Universities. Quality Assurance is a consequence of ongoing efforts to elucidate the objectives of an institution, to have a work plan to achieve them and to state the checks and balances the degree to which each of the tasks is fulfilled.

Table 3.2.6 : Alignment of Perceived Outcomes of Accreditation reflecting augmented quality with 4th Assessment and Accreditation Objective

Indicators (Perceived Outcomes of Accreditation)
A Quality cell in the form of IQAC has been formed (77)
Educational Improvement in higher educational institutions (1)
Quality Improvement (2)
Quality culture (3)
Administrative and academic excellence thereby keeping check on quality aspect (78)

Table 3.2.6 revealed that the NAAC accredited Universities have an IQAC which has led to administrative and academic excellence thereby keeping a check on the quality aspect. This indicates that the higher educational institutions were aiming to augment quality as emphasized by NAAC by benchmarking uniform reference points pertaining to academic standards. Stakeholders from the Universities responded that NAAC's assessment is essential for educational improvement in higher educational institutions. The stakeholders also responded that NAAC's process of assessment and accreditation has motivated their University towards quality improvement. NAAC accreditation, mandatory for higher educational institutions has made quality a culture of the institutions.

The NAAC accredited Universities have quality assurance mechanism in the form of IQAC. This was an initiative put forth by NAAC in facilitating the institutions to augment quality, by benchmarking uniform reference points pertaining to academic standards. Thus all this is in tune with 4th assessment and accreditation objective.

3.2.7 Perceived Outcomes of Accreditation reflecting inputs concerning the additional funding and other incentives in terms of 5th Assessment and Accreditation Objective

Table 3.2.7 : Alignment of Perceived Outcomes of Accreditation reflecting inputs concerning the additional funding and other incentives with 5th Assessment and Accreditation Objective

Indicators (Perceived Outcomes of Accreditation)
Funds are provided for successful completion of various research projects (87)
More incentive for research, teaching and publication output (76)

From results of table 3.2.7, it can be stated that the funds were provided for successful completion of various research projects in the Universities. In these Universities after accreditation more incentives for research, teaching and publication were provided. Thus the NAAC accredited universities were putting their best possible efforts to secure additional funding and other incentives from appropriate regulatory and or funding agencies as is even emphasized in one of the objectives set by UGC for accreditation agency.

3.2.8 Perceived Outcomes of Accreditation reflecting collaborations in terms of 6th Assessment and Accreditation Objective

Table 3.2.8 : Alignment of Perceived Outcomes of Accreditation reflecting collaborations with 6th Assessment and Accreditation Objective

Indicators (Perceived Outcomes of Accreditation)
Liaisons and collaboration with national and international institutions for different courses and research related activities (44)
Reasonably international linkages have been established in the university (88)

Table 3.2.8 revealed that the Universities have liaisons and collaboration with national and international institutions for different courses and research related activities. Reasonably international linkages have been established in the university. This clearly reflects that the NAAC accredited universities were in tune with UGC's stated assessment and accreditation objective related to international collaborations.

3.2.9 Perceived Outcomes of Accreditation reflecting learning outcomes appropriate to their course and relevant to their context in terms of 7th Assessment and Accreditation Objective

One of the assessment and accreditation objectives, as set by UGC, states that accreditation agency through its assessment and accreditation process should assess whether higher educational institutions facilitate students achieve learning outcomes appropriate to the course and relevant to the context. Various new quality sustenance and quality enhancement measures were undertaken by the Universities after accreditation as revealed by IQAC members and teachers. As per results of table 3.2.9, there was periodic curriculum revision; an introduction of inter-disciplinary and innovative schemes in thrust areas; a strengthening of interaction with industry/trade/civil society organizations/educational institutions and Choice-Based Credit system was introduced. Employability and innovation have been addressed in the curriculum. The students have freedom to make choices among the available courses as a result of innovation in the curriculum

Table 3.2.9 : Alignment of Perceived Outcomes of Accreditation reflecting learning outcomes appropriate to the course and relevant to the context with 7th Assessment and Accreditation Objective

Indicators (Perceived Outcomes of Accreditation)
Periodic curriculum revision (14)
Introduction of inter-disciplinary and innovative schemes in thrust areas (15)
Strengthening of interaction with industry/trade/civil society organizations / educational institutions (16)
Choice-Based Credit System (17)
Focus on Employability and Innovation in the curriculum (18)

Indicators (Perceived Outcomes of Accreditation)
Freedom to make choices among the available courses as a result of innovation in the curriculum (19)
Balanced Curriculum covering need-based, socially relevant programmes, Indian heritage and values (20)
Flexibility in the time-table and academic plan of the university for providing varied learning experiences both at the institution and on the field (21)
Curriculum is updated as per perceived needs (23)
Provision of remedial and bridge courses for weaker students (26)
Innovative teaching methods being encouraged after NAAC's assessment (29)
Suitable facilities for differently-abled students have been given priority (46)
Adequate facilities of online teaching and learning resources in the institution (50)
Special coaching classes have been introduced (65)
Effective implementation of career guidance and placement cell has been done for all students (67)
Effective implementation of the grievance redressal cell has been done for all students (68)

In the Universities feedback was sought from stakeholders regarding curriculum design and enrichment and curriculum is updated as per perceived needs. The curriculum was balanced covering need-based, socially relevant programmes, Indian heritage and values. NAAC's assessment has positively impacted the teaching-learning process in these Universities. Innovative teaching methods were encouraged. After the NAAC's assessment, there was a special focus on interactive learning through promotion and use of ICT. Various participatory methods were encouraged such as group discussions, industrial visits, project works, seminar presentations, field trips, special lectures, quizzes, problem-solving methodology, practicum and computer-aided teaching. The programs also focussed on experiential learning. Smart classrooms and online learning methods were introduced in some of the courses. Suitable facilities for the differently-abled students have been given priority.

As per NAAC criteria, higher educational institutions should provide necessary assistance to students in form of helping them to acquire meaningful experiences for learning at the campus and to facilitate their holistic progress. For this institution should make available sufficient and well-run support services to their students. Higher educational institutions should have effective mechanism to use student feedback for quality enhancement. Sustainable good practices should be introduced for student support and progression. Results of table 3.2.9 revealed that special coaching classes have been introduced for the students. The Universities were aiming at tapping the talent in the students, encouraging them to appear for competitive examinations and helping them to improve their preparation for the examination. There was effective implementation of the career guidance and placement cell and also the grievance redressal cell.

Thus the NAAC accredited universities through various means were facilitating students to achieve learning outcomes appropriate to the course and relevant to the context. All this is even emphasized in one of the assessment and accreditation objectives set by UGC for accreditation agency to facilitate students achieve learning outcomes appropriate to their course and relevant to their context.

3.2.10 Perceived Outcomes of Accreditation reflecting students' entitlements in terms of 8th Assessment and Accreditation Objective

University Grants Commission has issued guidelines for students' entitlements. These issued guidelines apply to all colleges and universities in the country. All necessary actions must be taken by the colleges and universities to fulfil the entitlements issued by UGC. The guidelines have been issued related to 'Admission', 'Quality of teaching and learning', 'Financial Aid', 'Infrastructure'.

Table 3.2.10 revealed that the accreditation process has positively enhanced publicity and transparency in the admission process. NAAC's assessment has positively impacted the teaching-learning process at the University. Innovative teaching methods were encouraged. After the NAAC's accreditation there was a special focus on interactive learning through promotion and use of ICT. Various participatory methods were encouraged such as group discussions, industrial visits, project works, seminar presentations, field trips, special lectures, quizzes, problem-

solving methodology, practicum and computer-aided teaching. The programmes also focussed on experiential learning. Smart classrooms and online learning methods were introduced in some of the courses. The Universities have a transparent admission policy.

Table 3.2.10 : Alignment of Perceived Outcomes of Accreditation reflecting students' entitlements with 8th Assessment and Accreditation Objective

Indicators (Perceived Outcomes of Accreditation)
Accreditation process has positively enhanced publicity and transparency in the admission process (24)
NAAC's assessment has positively impacted teaching-learning process in the University (28)
Innovative teaching methods being encouraged after NAAC's assessment (29)
ICT as a learning resource is extensively used after NAAC's assessment (89)
Effective implementation of career guidance and placement cell has been done for students (67)
Effective implementation of the grievance redressal cell has been done forstudents (68)
Enhancement of various welfare measures for students in the form of scholarships, freeships, and educational loans (69)
Special coaching classes have been introduced (65)
Various infrastructural facilities in the campus are adequate (45)
Suitable facilities for differently-abled students have been given priority (46)
Proper maintenance of infrastructure (47)
Adequate library resources and supplemented from time to time (48)
Procurement of latest books and number of journals in the university library (49)
Adequate facilities of online teaching and learning resources in the university (50)

NAAC in one of its core values entitled promoting the use of technology stated that higher educational institutions should introduce technological advancements and innovations in educational transactions to keep pace with the changing global scenario successfully with global competencies. Higher educational institutions should enrich the learning experiences of their students by using innovative instructional techniques as traditional methods of teaching-learning are less

motivating to the students. Table 3.2.10 revealed that teachers in the Universities were more oriented towards using latest and innovative pedagogy. All this clearly revealed the culture of quality of a variety of learning experiences which was encouraged by the teachers and was a part and parcel of these NAAC accredited universities. This also reflected the quality of the teachers in the sense that they were providing rich experiences to students.

There was effective implementation of the career guidance and placement cell and the grievance redressal cell. For the welfare of students, various welfare measures have been there in the Universities such as scholarships, freeships and the university's assistance to students in acquiring educational loans. From this, it can be deduced that these universities were strongly supporting the students as far as financial support is concerned.

Special coaching classes were introduced for the students. Majority of the stakeholder's agreement revealed that the Universities were aiming at tapping the talent in the students, encouraging them to appear for competitive examinations and helping them to improve their preparation for the examination.

In order to maintain the quality of academic and other programmes in the higher educational institutions, adequate infrastructure and learning resources are prerequisite conditions. As NAAC through its criterion, "Infrastructure and learning resources" seeks to elicit data on the adequacy and optimal use of the facilities available in the institution in order to maintain the quality of academic and other programmes in higher educational institutions. Various infrastructural facilities on the Campus were adequate. Suitable facilities for the differently-abled students were given priority. There was proper maintenance of infrastructure in the accredited Universities. The library resources were adequate and supplemented from time to time. There was procurement of latest books and number of journals in the University library. The Universities were providing adequate facilities of online teaching and learning resources.

University Grants Commission has issued guidelines for students' entitlements. Thus all necessary actions were taken by the NAAC accredited universities regarding prerequisites of students' entitlements related to 'Admission', 'Quality of teaching and learning', 'Financial Aid', 'Infrastructure' as set by the commission.

3.2.11 Perceived Outcomes of Accreditation reflecting teaching and research standards in terms of 9th Assessment and Accreditation Objective

NAAC through its assessment and accreditation process assess what efforts higher educational institutions are putting to maintain teaching and research standards thereby motivating these institutions to maintain aforesaid standards.

Table 3.2.11 revealed that NAAC's assessment has positively impacted teaching-learning process at the University as innovative teaching methods were encouraged. After the NAAC's accreditation, there was a special focus on interactive learning through promotion and use of ICT. Various participatory methods were encouraged such as group discussions, industrial visits, project works, seminar presentations, field trips, special lectures, quizzes, problem-solving methodology, practicum and computer-aided teaching. The programmes also focussed on experiential learning. Smart classrooms and online learning methods were introduced in some of the courses. Suitable facilities for the differently-abled students have been given priority.

Orientation towards research has increased after accreditation in the Universities for promoting research culture. There were departmental research committees for encouraging and advancing research. Research facilities were encouraging in the accredited universities. The students and teachers were encouraged to publish papers in national and international journals. Best consultancy services were provided by the faculty. Organization of extension activities was enhanced after the NAAC accreditation. The Universities have liaisons and collaboration with national and international institutions for different courses and research related activities.

Table 3.2.11 : Alignment of Perceived Outcomes of Accreditation reflecting teaching and research standards with 9th Assessment and Accreditation Objective

Indicators (Perceived Outcomes of Accreditation)
Provision of remedial and bridge courses for weaker students (26)
Innovative teaching methods being encouraged after NAAC's Assessment (29)
Suitable facilities for differently-abled students have been given priority (46)
Adequate facilities of online teaching and learning resources (50)
Orientation towards has research increased (36)
Formation of departmental research committees for encouraging and advancing research (38)
Encouraging research facilities (37)
Publishing of papers in national and international journals in University is given more impetus after accreditation (39)
Students and teachers are encouraged to publish papers in national and international journals (40)
Some activities organized or managed by the faculty for an external agency (41)
Enhancement of extension activities after NAAC accreditation (42)
Liaisons and collaboration with national and international institutions for different courses and research related activities (44)

All this reveals that the NAAC accredited Universities were putting their best possible efforts for maintaining and raising teaching and research standards by providing adequate facilities.

3.2.12 Perceived Outcomes of Accreditation reflecting effective teaching - learning in terms of 10th Assessment and Accreditation Objective

Accreditation agency through its process of assessment and accreditation as per UGC regulations should facilitate effective teaching-learning and access to quality teaching-learning material permitted by the Higher Educational Institution. The NAAC accredited Universities were putting their best possible efforts for providing effective teaching-learning and access to the quality teaching-learning material.

From the results of table 3.2.12, it is deduced that the NAAC's assessment has positively impacted the teaching-learning process at the accredited Universities. Innovative teaching methods were encouraged.

Table 3.2.12 : Alignment of Perceived Outcomes of Accreditation reflecting effective teaching -learning with 10th Assessment and Accreditation Objective

Indicators (Perceived Outcomes of Accreditation)
NAAC's assessment has positively impacted teaching-learning process in the University (28)
Innovative teaching methods being encouraged after NAAC's assessment (29)
ICT as a learning resource is extensively used after NAAC's assessment (89)
NAAC's accreditation has resulted in inter-departmental collaboration in teaching and research related activities (33)
Adequate library resources and supplemented from time to time(48)
Procurement of latest books and number of journals in university library (49)
Adequate facilities of online teaching and learning resources in the university (50)

After the NAAC's accreditation, there was a special focus on interactive learning through promotion and use of ICT. Various participatory methods were encouraged such as group discussions, industrial visits, project works, seminar presentations, field trips, special lectures, quizzes, problem-solving methodology, practicum and computer-aided teaching. The programmes also focussed on experiential learning. Smart classrooms and online learning methods were introduced in some of the courses.

The Universities were putting their best possible efforts for providing effective teaching-learning and access to the quality teaching-learning material. ICT as a learning resource was extensively used after the NAAC's assessment. The NAAC's accreditation has resulted in the inter-departmental collaboration in teaching and research related activities. The library resources were adequate and supplemented from time to time. There was procurement of latest books and number of journals in the university library. The Universities were providing adequate facilities of online teaching and learning resources.

3.2.13 Perceived Outcomes of Accreditation reflecting effective governance mechanisms in terms of 11th Assessment and Accreditation Objective

One of the assessment and accreditation objectives as per regulations i.e. UGC Regulations, 2012 states that accreditation agency should facilitate higher educational institutions to achieve effective governance mechanisms in their management and administration. For this NAAC through its assessment and accreditation process assess what efforts higher educational institutions are putting for effective governance mechanism in their management and administration thereby further motivating these institutions for this.

Table 3.2.13 : Alignment of Perceived Outcomes of Accreditation reflecting effective governance mechanisms with 11th Assessment and Accreditation Objective

Indicators (Perceived Outcomes of Accreditation)
Increased collaboration in decision making resulting in increased unity of purpose (12)
Sound and good e-Governance in the university (73)
Co-ordination of the academic and administrative planning and implementation(74)
Organizational work is efficiently carried out through various committees(75)
A Quality cell in form of IQAC has been formed(77)
Administrative and academic excellence thereby keeping check on quality aspect(78)
University administration focuses on keeping and maintaining healthy relationship with students, alumni and parents (79)
Interpersonal relationship between all stakeholders has improved (80)
Accounts are audited often (81)
Quality Assurance and Enhancement mechanism in place (83)

The results of table 3.2.13 revealed that after the NAAC accreditation there was increased collaboration in decision making resulting in increased unity of purpose.There was sound and good e-Governance in the accredited Universities. The quality cell in form of IQAC has been formed which has further led to the administrative and the academic excellence thereby keeping a check on the quality

aspect. The organizational work was efficiently carried out through various committees. The University administration focused on keeping and maintaining a healthy relationship with students, alumni and parents and as a result of this, the interpersonal relationship between all the stakeholders has improved. After the NAAC accreditation, the accounts were audited often and the quality assurance and enhancement mechanism was in place

Thus all the aforesaid perceived outcomes of accreditation are a clear indicator of effective governance in the NAAC accredited universities.

3.3 RESULTS PERTAINING TO THE CONTRIBUTION OF QUALITY PROCESSES ADOPTED CONSEQUENT TO NAAC ACCREDITATION TOWARDS QUALITY IMPROVEMENT IN THE NORTH INDIAN UNIVERSITIES IN TERMS OF ANALYSIS OF PEER TEAM SUGGESTIONS AS PER COMPLIANCE BY THE ACCREDITED UNIVERSITIES

3.3.1 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of NAAC Peer Team Suggestions

3.3.2 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Quality Assurance Mechanism

3.3.3 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of External Academic Audit

3.3.4 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Faculty Development Programmes and Faculty Empowerment Strategies

3.3.5 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Campus Wide Networking

3.3.6 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Promotion of Research

3.3.7 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Suitable facilities as per the Needs of the Area

3.3.8 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Autonomous College System

3.3.9 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Infrastructure and Learning Resources

3.3.10 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Teaching-Learning and Use of ICT

3.3.11 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Decentralization of Academic Administration and Choice-Based Credit System

3.3.12 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Examination System

3.3.13 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Review of Programs

3.3.14 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Consultancy Services

3.3.15 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Recruitment of Faculty

3.3.16 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Student Support Services

3.3.17 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Enrollment of Foreign Students

3.3.18 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Innovative Practices

3.3.1 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of NAAC Peer Team Suggestions

Table 3.3.1 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of NAAC Peer Team Suggestions

NAAC Peer Team Suggestions	NAAC Criteria	Domains Improved/ Strengthened for Key Aspects
Quality Assurance Mechanism	Governance, Leadership and Management	Internal Quality Assurance System
External Academic Audit	Governance Leadership and Management	Internal Quality Assurance System
Faculty Development Programmes	Teaching, Learning and Evaluation	Teacher Quality
Faculty Empowerment Strategies	Governance Leadership and Management	Faculty Empowerment Strategies
Campus Wide Networking	Infrastructure and Learning Resources	IT Infrastructure
Promotion of Research	Research, Consultancy and Extension	Promotion of Research, Resource Mobilization for Research, Research Facilities, Research Publications, Collaborations
Suitable Facilities as per the Needs of the Area	Innovations and Best Practices	Best Practices
Autonomous College System	Innovations and Best Practices	Best Practices
Infrastructure and Learning Resources	Infrastructure and Learning Resources	Physical Facilities, Library as a Learning Resource, Maintenance of Campus Facilities
Teaching-Learning and Use of ICT	Teaching-Learning and Evaluation	Teaching-Learning Process, Student Enrolment and Profile

NAAC Peer Team Suggestions	NAAC Criteria	Domains Improved/ Strengthened for Key Aspects
Decentralization of Academic Administration	Governance Leadership and Management	Institutional Vision and Leadership, Strategy Development and Deployment
Choice-Based Credit System	Curricular Aspects	Curriculum Design and Development, Academic Flexibility
Examination System	Teaching-Learning and Evaluation	Evaluation Process and Reforms
Review of Programs	Curricular Aspects	Curriculum Design and Development, Academic Flexibility
Consultancy Services	Research, Consultancy and Extension	Consultancy
Recruitment of Faculty	Teaching, Learning and Evaluation	Teacher Quality
Student Support Services	Student Support and Progression	Student Mentoring and Support, Student Progression, Student Participation and Activities
Enrollment of Foreign Students	Innovations and Best Practices	Best Practices
Innovative Practices	Innovations and Best Practices	Innovations, Environment Consciousness

The results of table 3.3.1 revealed that 8 NAAC Accredited Universities selected for the present study were given NAAC Peer Team suggestions in the context of Quality Assurance Mechanism, External Academic Audit, Faculty Development Programmes, Faculty Empowerment Strategies, Campus Wide Networking, Promotion of Research, Suitable Facilities as per the Needs of the Area, Autonomous College System, Infrastructure and Learning Resources, Teaching-Learning and Use of ICT, Decentralization of Academic Administration, Choice-Based Credit System, Examination System, Review of Programs, Consultancy Services, Recruitment of Faculty, Student Support Services, Enrollment of Foreign Students and Innovative Practices. In the study, all the suggestions were further

mapped with the NAAC criteria. All this, highlighted quality processes, adopted consequent to NAAC Accreditation, by the Universities in the context of NAAC Peer Team suggestions. This further revealed domains improved/strengthened for Key Aspects, reflecting the contribution of quality processes in the Universities.

3.3.2 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Quality Assurance Mechanism

Table 3.3.2 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Quality Assurance Mechanism

Quality Assurance Mechanism		Suggestion given to number of Universities	Number of Universities complied/adopted the suggestion
NAAC Criterion	Domain Improved/Strengthened for Key Aspect		
Governance, Leadership and Management	Internal Quality Assurance System	2	100%

Table 3.3.2 revealed that two Universities were given valuable suggestions by NAAC Peer Team in the context of quality assurance mechanism thereby suggested these universities to strengthen their governance, leadership and management aspect. The suggestion given to University number 1 was stated as,"Strengthening of the existing Internal Quality Assurance Cell by the name, "Directorate of Internal Quality Assurance Cell (DIQA)" as a statutory body of defined powers and functions with IT – Competent infrastructure and manpower to evolve as the Central documentation cell and to facilitate quality sustenance and quality enhancement." The suggestion given to University number 2 was stated as, "IQAC may be formally set up & strengthened to reinforce quality measures to ensure that all the University activities continue to be at the state-of-the-art."

University number 1 in pursuance of the Suggestion has set up the Directorate of Internal Quality Assurance (DIQA) for realizing the goal of quality sustenance and quality enhancement. For realizing the goal of quality sustenance and quality

enhancement, Internal Quality Assurance Cell has been upgraded to Directorate of Internal Quality Assurance. The main quality improvement measures taken place as a result of the implementation of this Suggestion are as follows: DIQA not only worked as the main documentation centre of the institute but also allowed the University to address the significant weak areas effectively. The Directorate of Internal Quality Assurance has developed user-friendly software as DIQA web portal for all the departments and individual faculty members. All departments of the University were associated with the activities of DIQA. As per this new change, each department of the University has elected one of the teachers as a Nodal Officer for consolidation of departmental activities and coordination with DIQA. Some of the faculty members, students and research scholars from the department were also acting as a representative in DIQA.

University number 2 has established Internal Quality Assurance Cell (IQAC) in the year 2013. IQAC cell was functional at the university. It has been set up with the aim to reinforce quality measures and to coordinate all activities of the different departments leading to common aim i.e.to facilitate quality sustenance and quality enhancement. Issues related to academics were observed by the internal members and discussed in detail in meetings and an appropriate decision was taken for the implementation, having prior approval from a statutory body of the institute (i.e. the Senate and the Board of Management).

Thus, Suggestions related to quality assurance mechanism to two Universities and compliance with the suggestion by both the universities has resulted in establishing a strategic quality management system aiming to quality assurance ensuring a continuous reform process. Even UGC has stressed for set up of Quality Assurance Mechanism in the form of an Internal Quality Assurance Cell in higher educational institutions. **UGC in his 12th Five Year Plan (2012-2017)** has given guidelines on establishment and monitoring of the Internal Quality Assurance Cells in Universities. As per these guidelines, an independent scheme for an Internal Quality Assurance is to be implemented in all Universities. One of the major outcomes of the quality assurance mechanism or process would be the internalization and institutionalization of quality assurance so that institution strives to excel in serving its student community. So, Suggestions related to quality assurance mechanism to

two Universities clearly indicate that NAAC is working in tune with UGC's aim of coordination, determination and maintenance of standards in higher educational institutions.

3.3.3 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of External Academic Audit

Table 3.3.3 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of External Academic Audit

External Academic Audit		Suggestion given to number of Universities	Number of Universities complied / adopted the suggestion
NAAC Criterion	Domain Improved / Strengthened for Key Aspect		
Governance, Leadership and Management	Internal Quality Assurance System	2	100%

As per table 3.3.3, two Universities were given valuable Suggestions by NAAC Peer Team, to introduce mechanisms for periodic External Academic Audit for quality improvement. The same Suggestion was given to University number 1 and 2. The Suggestion was stated as, "The University may introduce mechanisms for periodic External Academic Audit for quality improvement." The audit is an essential aspect of quality assurance wherein the effectiveness and efficacy of its implementation are validated. The audit makes the process owners aware of their processes.

University number 1 has an Internal Quality Assurance Cell. The University was suggested to introduce mechanisms for periodic External Academic Audit for quality improvement. As per information sought from the IQAC members, academic audit in the University was based on a process of self-evaluation carried out by the University itself and by involving external evaluators from other higher educational institutions. Thus involving external evaluators helped in the objectivity thereby contributing to better academic and administrative functions.

University number 2 has introduced “Three Tier Audit System” as a best practice to contribute to better academic and administrative functioning. The objective of introducing this three-tier audit system was to ensure effective implementation of processes; identification of opportunities for improvement and ensure sustenance of achieved standards of performance and their continual improvements. The University has set a dedicated Quality Assurance and Enhancement (QAE) Department as a part of an organization. The audit is done in three stages: Institutional Self Audit by IQAC (First Party Audit) Internal Audit by QAE, through the team of IQAC members from other institutions (Second Party Audit). In preparatory (mock) audits conducted by QAE, the system is reinforced and gaps are identified and closed till the action is taken. External Audit is done by an Independent Agency (BSI- British Standards Institution) (Third Party Audit).This rigorous audit makes the process owners aware of their processes.

Thus, the Suggestion, to introduce mechanisms for a periodic external academic audit to two universities, for quality improvement has resulted in implementing a quality assurance strategy, emphasizing on self-reflection and self-improvement rather than compliance with the predetermined standards. This has resulted in evaluating ‘educational quality processes’ through both external quality assurance mechanism and internal quality assurance mechanism thereby focusing on overall quality improvement.

3.3.4 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Faculty Development Programmes and Faculty Empowerment Strategies

The results of given table 3.3.4 revealed that four Universities were given recommendations in the context of faculty development programmes and faculty empowerment strategies. The suggestion given to University number 1 was stated as, “Re – introducing the “Faculty – Talent – Promotion Scheme” for all faculty members to provide exposure and expertise for upgrading knowledge, skill and attitude in teaching – learning, evaluation and research.” The suggestions given to University number 2 were stated as, “Facilitating faculty members to carry out their Ph.D. work in other reputed academic institutions” and “Industrial training to faculty

members as well." The suggestion given to University number 3 was stated as, "Establishment of an University – level faculty-development centre/academic staff college for teachers."The suggestion given to University number 4 was stated as, "Faculty engagement in the decision-making processes be strengthened."

Table 3.3.4 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Faculty Development Programmes and Faculty Empowerment Strategies

Faculty Development Programmes andFaculty Empowerment Strategies		**Suggestions given to number of Universities**	**Number of Universities complied / adopted the suggestions**
NAAC Criteria	**Domain Improved / Strengthened for Key Aspects**		
Teaching, Learning and Evaluation/ Governance, Leadership and Management	Teacher Quality, Faculty Empowerment Strategies	4	100%

University number 1 has established the DIQA to chalk out various plans for quality enhancement. One of the plans were to focus on faculty development programmes with laid emphasis on interaction of faculty in various forms with visiting Professors from national and international level. DIQA has motivated various departments and research centres to organize faculty development programmes for the overall development of faculty. All this has resulted in the organization of various Faculty Development Programmes.

University number 2 was recommended to facilitate faculty members to carry out their Ph.D work in other reputed academic institutions. The University has allowed the faculty to pursue academic and research interest of one's own choice area. Significant emphasis was given on research orientation and the facilities for the same were provided. The University during last four-five years has allowed faculty members to do Ph.D. outside University as this has also been recommended by the NAAC Peer Team. Regarding the recommendation that the faculty member should also do Industrial training, the teachers were encouraged to take up research projects sanctioned by various State and Central government organizations and sponsored by

industry/research organizations. The University has provided partially financed study leaves facility to faculty for pursuing higher studies. Industry engagement of the faculty was also there. The faculty has the facility of availing sabbatical/study leave.

University number 3 has set up the University – level faculty-development centre/academic staff college for teachers. Academic Staff College in the University has planned, organized, implemented, monitored and evaluated orientation courses for college/university lecturers within the jurisdiction of one or more Universities in the State as per UGC guidelines for academic staff colleges.

University number 4 was suggested to seek active participation of the faculty by their involvement in the decision making processes of the University. Faculty in the University is empowered through membership in various academic and professional committees at national and international levels. They have been given representation in a number of committees at the University level such as Anti Ragging Committee; Prevention of Sexual Harassment Committee; Equality Advisory Committee; Student Disciplinary Committee; Placement Cell (Faculty Placement Coordinators) and Alumni Association**.** All this revealed that there was the representation of faculty of the University in development of University.

Thus, NAAC Peer Team recommendations related to faculty development programmes and faculty empowerment strategies are clear indicator of the way NAAC is emphasizing on the development and active participation of faculty in higher educational institutions. On similar note, on the importance of development and active participation of faculty in higher educational institutions, UGC has also launched a specific programme under 'Flagship Programmes of UGC' to enhance the faculty resources of the Universities. This scheme of the UGC consists of two components related to Faculty Development Programme i.e. Faculty Recharge Programme and Enhancing Faculty Resources in Universities. UGC has also issued some guidelines on the scheme for 'Faculty Development programme' under 'Compendium of Schemes' for Colleges for the 12^{th} Five Year Plan (2012-17). The objectives of these guidelines are to provide an opportunity for the college teachers to pursue their academic/research activities, to provide an opportunity to the teachers

to be a part of academic conferences/seminars/workshops and to provide opportunity to young faculty members to spend a short period at institutions of their choice, for a better academic exposure. University Grants Commission has also given some guidelines on academic staff colleges. So, NAAC Peer Team suggestions related to faculty development programmes and faculty empowerment strategies to the four universities clearly indicate that NAAC is working in tune with UGC's aim of coordination, determination and maintenance of standards in higher educational institutions.

3.3.5 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Campus Wide Networking

Table 3.3.5 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Campus Wide Networking

Campus Wide Networking		Suggestion given to number of Universities	Number of Universities complied / adopted the suggestion
NAAC Criterion	Domain Improved / Strengthened for Key Aspect		
Infrastructure and Learning Resources	IT Infrastructure	2	100%

From the results of table 3.3.5 it is explored that two Universities were given recommendations in the context of Campus wide networking thus emphasizing on IT infrastructure. The suggestion given to University number 1 was stated as, "Strengthening of campus wide networking and intranet connectivity to successfully implement e – governance as end to end solution for students, faculty and other stakeholders." The suggestion given to University number 2 was stated as, "Provision of NKN connectivity to the satellite campuses with improved infrastructure."

University number 1 was one of the National Knowledge Network (NKN) connected institutions. The University has availed all the NKN services. For successfully implementing e-governance in the University and for providing necessary support to

other organizations in the e-governance plans, University has set up the Directorate of Information Technology and Support System. Various projects were attached to the Directorate such as e-governed examination of Ministry of Communication and Information Technology, New Delhi; establishment of skill development programme /Centre of State Department of IT and establishment of Centre of Excellence, e-Governance University Administration MC and IT New Delhi. One of such projects as designed by the Directorate was e-governance examination system. This was designed to implement e-Governance in the University examination system. With the implementation of e-governance project many governance issues were addressed electronically. Various services were covered in e-governance in the University such as E-Admissions, File Tracking System, University Android Application, Re-evaluation, Migration form, Registration status for PG Students, Stream Change Status, DIQA, University registration system, E-conduct, E-Award system, Estates section software, E-Tutorials, Online recruitment system and University content management system. The inception of DIQA web portal was also a result of the successful implementation of e-governance and has brought all the departments /faculties / sections /centres under one umbrella to update their information and has acted as an information repository for the University.

University number 2 was recommended to provide NKN connectivity to the satellite campuses. Campus wide networking has been established throughout the campus with Wi-Fi facility. Internet connectivity through NKN was available round the clock. Two satellite campuses were attached to the University and were sharing NKN facility available in the University Campus.

3.3.6 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Promotion of Research

As per results of table 3.3.6, seven Universities were given suggestions to promote research in terms of resource mobilization for research, research facilities, research publications and collaborations. Two suggestions were given to University number 1. First suggestion was stated as, “Multi–dimensional motivational efforts by the University to facilitate all the departments and faculty to apply and secure centres of excellence in research and major research projects under UGC / DST / DBT / CSIR

etc through performance–linked incentive scheme and de –bureaucratisation of research projects administration" and second suggestion was stated as, "Credit transfer facility to enhance collaborative teaching and research among the University departments."

Table 3.3.6 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Promotion of Research

Promotion of Research		Suggestion given to number of Universities	Number of Universities complied/adopted the suggestion
NAAC Criterion	Domains Improved/Strengthened for Key Aspects		
Research, Consultancy and Extension	Promotion of Research, Resource Mobilization for Research, Research Facilities, Research Publications, Collaborations	7	100%

The suggestion given to University number 2 was stated as, "Collaboration among faculty members for quality research and publishing in high impact factor journals." The suggestion given to University number 3 was stated as, "Procedures may be formalized to motivate teaching faculty to seek and take up sponsored research projects from National / international funding agencies." The suggestion given to University number 4 was stated as, "Increase collaborative linkages with other institutes for teaching and research and hold more entrepreneurship and skill development programmes.Initiate interdepartmental linkages in teaching and research." The suggestion given to University number 5 was stated as, "To provide Research starter grant to all newly appointed faculty as University policy." Two suggestions were given to University number 6. First suggestion was stated as, "Generating more funds for sustenance of departments, their research and development by creating a long-term corpus be given focus" and second suggestion was stated as, "The University may increase the number of fellowships and scholarships to its research scholars and masters students, respectively." The

suggestion given to University number 7 was stated as, “Generating more funding for research and development be given focus.”

University number 1 has established DIQA to chalk out various plans for quality enhancement. DIQA has encouraged research and promoted the research climate by providing various facilities to the faculty members and students. It has been regularly organizing research methodology workshops, conferences, academic forums and faculty development programmes to provide an in-house research platform to all the faculty members. The Dean Research has also provided inputs on the various schemes, launched by central government funding agencies and thereby faculties were encouraged to submit proposals for the same. The University has made an attempt to undertake joint research and teaching projects among departments that allowed credit transfers in areas of mutual benefit. University number 2 has encouraged the faculty members from different disciplines to guide UG/PG or Ph.D. thesis jointly via intra-departmental and inter-departmental efforts. The faculty has been regular in publishing in various journals with high impact factor.

University number 3 has implemented the Suggestion by establishing Research and Development Cell in the institution to monitor exploratory research, to assess manpower requirement leading to integrated educational planning, curriculum development and instructional material development in the areas of science and technology. Research work was undertaken by the faculty of the institution in the interdisciplinary areas to deal with the problems of industry and community as a whole. Various research projects in the specialized fields of science and technology have been funded by organizations like MHRD, AICTE, DST, CSIR & ICAR.

University number 4 has made increased collaborative linkages with other institutes for teaching and research activities. The University-IBM Centre for Information Technology; the Department of Chemistry, Mechanical Engineering, Chemical Engineering, Petroleum Engineering, Aerospace Engineering, Earth Sciences etc. were recognized by national and international agencies. As per information sought from the IQAC members, Health, Safety and Environment Department was invited by DST-FIST to propose towards developing HSE lab. Oil Development Board has

considered the proposal to develop a niche Nanotechnology centre of Excellence in Energy and Petroleum.

University number 5 has a provision of granting duty/academic leaves to the teachers as and when required for pursuing higher degree and for participating in conferences/symposia/workshops or for other academic/research purposes in other institutes in India as well as abroad. They were also provided TA/DA for the purpose. Research papers were published by students and faculty members of the department in peer-reviewed/indexed journals. All this revealed that research standards of the department were reasonably good. Due to good research standards, the faculty members of various departments have been sanctioned Major/Minor research projects by the UGC. 12 departments of the University have also been provided with the financial assistance under SAP on the basis of research standards.

A good amount of fund was set aside by the University number 6 to support faculty members in their research and collaborative efforts, including participation in prestigious conferences. The University offered a number of scholarships to students joining the doctoral and masters programmes. All grants to the University students were made on a competitive basis, with due consideration for both means and merit. The scholarship committee was formed there to make a decision on scholarship criteria.

University number 7 has adopted various proactive mechanisms to facilitate the smooth implementation of research schemes/projects. University has earmarked approximately 20% of its budget for research. It has invested money and resources in creating infrastructure and awarding fellowships to brilliant research scholars, procuring various other necessary research related material, annual maintenance charges, patent filing charges etc. The University has encouraged research by providing fellowships to the researchers.

Research is an important component of every higher educational institution. For this, every higher educational institution should provide facilities for helping students to acquire skills of research. Even UGC through its various schemes is promoting research by providing research grants, research funding for major and minor research projects and research fellowships. In order to promote research culture in

all domains of knowledge, the UGC has launched a scheme named as 'Special Assistance Programme'. For promoting teaching and research in Universities, UGC has conferred on them the status of 'Universities with Potential for Excellence'.Such institutions are eligible for enhanced funding to augment their teaching and research infrastructure. Various other schemes are also being initiated by UGC to encourage research such as Basic Scientific Research Programme, major and minor research projects, Colleges with Potential for Excellence.

3.3.7 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Suitable facilities as per the Needs of the Area

Table 3.3.7 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Suitable facilities as per the Needs of the Area

Suitable facilities as per the needs of the area		Suggestion given to number of Universities	Number of Universities complied/adopted the suggestion
NAAC Criterion	Domain Improved / Strengthened for Key Aspect		
Innovations and Best Practices	Best Practices	2	University number 1 complied the suggestion and university number 2 did not comply the suggestion

The results of table 3.3.7 revealed that two Universities were given Suggestions to provide suitable facilities as per the needs of the area. Peer Team has suggested these Universities to make special arrangements so as to facilitate the stakeholders to easily connect with the institution. The Suggestion given to University number 1 was stated as, "The University being located in difficult area needs to have strong linkages with society to ensure societal development. A Centre for University Society Interface could be established towards this goal." The suggestion given to University number 2 was stated as, "Creating in-house facility for early schooling of employees' children will go a long way in attracting and retaining good faculty as there are no good schools within 25 Km area."

University number 1 was suggested to developing a centre for University Society Interface to have strong linkages with society. As per this recommendation, the University with its Directorate of IT and Support System (SS) through its project e-governed examination of Ministry of Communication and Information Technology, New Delhi, has provided appropriate connectivity to all the affiliated government colleges across the area where the University is situated and other connected areas. Thus this initiative of the University indicates the best possible efforts to connect to the people residing in difficult areas.

In response to recommendations of the Peer Team, the University number 2 in SSR (2017) has stated that it does not need to create in-house facilities for early schooling of employees' children as there are good schools within a radius of 3-7 kms.

3.3.8 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Autonomous College System

Table 3.3.8 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Autonomous College System

Autonomous College System		Suggestion given to number of Universities	Number of Universities complied / adopted the suggestion
NAAC Criterion	Domain Improved / Strengthened for Key Aspect		
Innovations and Best Practices	Best Practices	1	100%

Table 3.3.8 revealed that one of the Universities was given recommendation, to make an attempt to institute autonomous college system thereby spreading the culture of autonomous colleges. The recommendation given to the University was stated as, "Attempts to institute autonomous college system in the University providing opportunities for affiliated colleges to become autonomous colleges and also to introduce system in the colleges and P. G courses for eligible colleges." The University has encouraged the Colleges of good standing under their horizon to apply for autonomous status. The University has advanced the application of eligible

Colleges to UGC. Eligibility of the College for autonomous status is determined as per UGC guidelines for Autonomous colleges. The University advances the application of the eligible College to UGC within the stipulated time frame and proposes an academician of eminenence as its nominee in the UGC Expert committee at the time of fresh induction and extension of autonomous status to a college. The University has moved from conventional annual system to semester system. Currently in the Colleges affiliated to the University, semester system has been introduced. In order, to improve the learning processes, to benefit the students University has introduced semester system rather than remaining with the annual system. Various Post Graduate Programmes were offered at Degree Colleges through PG Centres of the University. Various professional programmes were offered at the private Colleges affiliated to the University.

Highlighting the importance of Autonomous Colleges the UGC document on the XI Plan (2007-2012) profile of higher education in India clearly stated that to improve the quality of undergraduate education it is required to delinking most of the Colleges from the affiliating structure. Colleges with academic and operative freedom are doing better and have more credibility. It is proposed to increase the number of Autonomous Colleges and to spread the culture of autonomous colleges.

3.3.9 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Infrastructure and Learning Resources

Table 3.3.9 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Infrastructure and Learning Resources

Infrastructure and Learning Resources		Suggestion given to number of Universities	Number of Universities complied / adopted the suggestion
NAAC Criterion	Domain Improved/Strengthened for Key Aspects		
Infrastructure and Learning Resources	Physical Facilities, Library as a Learning Resource, Maintenance of Campus Facilities	7	100%

NAAC through its assessment and accreditation process encourages higher education institutions to focus on the expansion of infrastructural facilities, to meet future development and also to keep a focus on maintenance of these facilities. UGC has initiated various schemes related to the development of infrastructure under 'compendium of schemes' as the development of sports infrastructure and equipment, setting up of media centres / affiliated media centres and development assistance to colleges for the construction of buildings.

As per table 3.3.9, seven Universities were given recommendations in the context of infrastructure and learning resources. The suggestion given to University number 1 was stated as, "Provision of additional hostels for students in the background of the overcrowded present hostels, hygienic cafeteria at different locations of the University, modern shopping centre, ATM facility and transport facility to the University may be taken up on priority." The suggestion given to University number 2 was stated as, "Library collection / services may be upgraded to meet the growing needs of the teaching faculty / students. Also more journals may be subscribed." 5 Suggestions were given to University number 3. These suggestions were stated as, "The University should build its own campuses at other places also. Housing facilities need to be provided to all faculty and non-teaching staff and hostel facilities for students so that it becomes a fully residential University"; "Modernization of laboratories and library may be fully computerized"; "Infrastructural facilities need further development"; "Each faculty should have independent room" and "Establishing health centres in all the Campuses." The suggestion given to University number 4 was stated as, "University level norms, trained manpower and maintenance support for all the central instrumentation and equipment facilities for optimal use." 4 suggestions were given to University number 5. These suggestions were stated as, "The University should be self-sufficient in terms of space and facilities for teaching and research activities"; "The setting-up of a spacious central library with fully automated facilities be expedited"; "More attention be paid to equip the teaching Laboratories with appropriate hardware and software resources" and "The University may consider developing a fully residential campus" 5 suggestions were given to University number 6. These suggestions were stated as, "Special attention to be focused on academic departments which are not well developed"; "The setting-up of the central library

with fully automated facilities be expedited"; "Departmental libraries need to be strengthened with multiple copies of standard text books"; "More attention be paid to equip the teaching Laboratories/studios with appropriate hardware and software resources" and "Augmentation of the language lab with enhanced access to the university community." Four suggestions were given to University number 7. These suggestions were stated as, "The library should be augmented by subscribing to print and on-line research journals"; "Required infrastructural facilities for research may be create."; "Campus security may be enhanced through modern electronic surveillance systems" and "Facilities for persons with disabilities may be provided."

As per AQAR report (2014) of University number 1, there was shortage of hostel accommodation for students and research scholars, which is mentioned as weakness in SWOC Analysis of the University. But as per AQAR (2015), work on 5 new Girls hostels and research scholar hostels at the main Campus have been completed. Work on double-storied boys' hostel and double-storied girls' hostel has been completed. In the transport facility as per AQAR (2011), there were vehicles for students, employees, guests, vehicles for hospital services, for officers of University, vehicles for waste management, vehicles for field works carried by faculty, vehicles used for inspection of exams centres and colleges, vehicles are also provided for pick and drop of guests from campus to Airport and from Airport to back to campus. Various supportive facilities were provided in the University such as a high–tech gymnasium / Health club, youth hostel, Teachers club, University Post Office, Multi utility shopping centre and University Canteens. Various Banks have established ATM facilities in the university.

University number 2 has well-equipped and well-stocked Central Library. Library has a large number of volumes of technical books as well as a good collection of books on literature, general awareness, management and moral sciences etc. The library has a subscription to a large number of National and International journals. Besides to print subscription the users have access to articles from journals under e-Shodhsindhu Consortium. The library has all the modern facilities. VCD's and CD ROMs were also available in the library. Efforts have been made so that the users may feel comfort and peaceful environment while they study or consult the library material for their study and research purpose.

University number 3 has set up two regional campuses at two different places. The University has modernized laboratories with hi-tech facilities as per requirement of ongoing programmes. The University has various research labs with advanced facilities. Separate IT lab was also available. Under the aegis of Directorate of Student Affairs is covered various aspects such as disciplining the students, redressing their grievances, sports activities, cultural activities, welfare activities, student's health care, maintaining and updating student's database and Alumni activities. The University library has Library Management Software for Library Automation and library housekeeping work. OPAC is the best example of ICT technology in the library. Networked computers were available in the library for library users. On visiting the university campus, it was observed that the University has augmented its infrastructure enormously and has well-equipped classrooms, audio-visual aids, common rooms, well-designed fully computerized library, IT lab with computing facilities, hostel facility, labs, health centre, transport facility, shopping complex, gymnasium, playground and facilities for physically disabled. The University was also working towards augmenting the hostel facilities and residential accommodation to be provided to its faculty and staff. Alumni-institution interaction was there. Each faculty was provided with the spacious workstations to carry out the day to day activities. The University has a well equipped Medical Infirmary for providing First Aid and ambulance facility for evacuation to hospitals in case of emergency under the supervision of qualified doctors and trained attendants.

University number 4 has made its best possible efforts to keep maintenance of infrastructure at the proper time. The University has Technical Services Department with a qualified Manager to take care of all infrastructures. Maintenance of Infrastructure and equipment was under Technical Services.

University number 5 has truly a green campus and has well-furnished classrooms, lecture halls, well-equipped and well-stocked library and an auditorium. The building also has well-equipped laboratories to compliment cutting-edge research at the University along with a well-furnished conference hall. The University library services were offered electronically through a web-enabled integrated digital

information system. Electronic resources were centrally organized and available via a single-window access. Digital Library Services' development was prioritized according to the user needs. The University has laboratories with advanced equipment and facilities to aid and stimulate research. Various laboratories were there in the the university as per course requirements such as Solar Lighting Laboratory; Environmental Monitoring Laboratory; Combustion Laboratory; Geoinformatics Laboratory; Biotechnology Laboratory; Power System Laboratory; Heat Transfer Laboratory, Biofuel and Waste Utilization Laboratory. University has a hostel facility for women. The hostel was spacious and well-furnished, with comfortable single and double rooms with attached bathrooms. The hostel has energy-efficient features installed in the rooms as part of the 'Green Campus'.

University number 6 has conducted a performance audit of various institutions/ departments. Each institution/department has set targets and goals against relevant performance indicators. A Performance audit of the constituent institutions and departments of the University was done biannually through an internal audit. The University has centralized and departmental library committees in order to ensure that learning and research resources were adequately available, updated regularly, utilized optimally and benchmarked periodically. The Central library has sufficient space as per the number of students, scholars and faculty members. The departmental libraries of varying size were also established as per the size of the Department/Institution. The Central and Departmental libraries were Wi-fi enabled and automated using open source software "KOHA". Each library has an adequate number of workstations to facilitate searching/assessing OPAC, e-resources, web browsing and for other academic work. University has installed excellent ICT infrastructure. The libraries were also a member of DELNET. The University libraries have a large number of printed books, back volumes and theses. The Campus was Wi-Fi enabled, the faculty can access internet even during lectures. All the classrooms were equipped with high-speed internet connectivity through wi-fi connection and full multi-media facility. E-learning resources such as sound-proof studios for conducting online lectures were there. Advanced and high-tech Language Lab was there in the University. The lab was equipped with all the required audio-visual aids.

University number 7 has a well-equipped library. Improved facilities at the Central Library have been introduced by renovating it with high-speed internet access. The number of text books, journals, magazines, reference books was available in the library. The library was fully computerized by Libsys software. IQAC has encouraged Deans/Heads to share research thrust areas with staff members, suggest ways to strengthen infrastructure, quality of the publication, doctoral research and has also encouraged faculty members to apply for projects. The IQAC has sought suggestions from the students and staff to improve infrastructure and has shared it with Deans/Heads. The Campus security has been enhanced by adopting modern surveillance system in the form of CCTV cameras. The institution has created special facilities such as ramps, rails and special toilets to suit the special needs of differently-abled persons.

3.3.10 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Teaching-Learning and Use of ICT

Table 3.3.10 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Teaching-Learning and Use of ICT

Teaching-Learning and Use of ICT		Suggestion given to number of Universities	Number of Universities complied/adopted the suggestion
NAAC Criterion	Domains Improved/Strengthened for Key Aspects		
Teaching-Learning and Evaluation	Teaching-Learning Process, Student Enrolment and Profile	2	100%

The results of table 3.3.10 revealed that two Universities were given suggestions in the context of teaching-learning and use of ICT. The suggestion given to University number 1 was stated as, “Maximizing the use of ICT in the regular activities of the departments as interactive teaching–learning methods and by providing virtual classroom facilities and e–learning resources for all programmes of the Department of Open and Distance Learning.” Two suggestions were given to University number 2. These Suggestions were stated as, “Improved pedagogy may be employed in the

classrooms/laboratories and beyond the syllabus learning may be practiced to enhance learning abilities" and "Serious thought may be given to provide admission to students who complete 10+2 and use AIEEE performance for admission to attract meritorious students."

University number 1 was suggested to emphasize more on ICT related activities by maximizing the use of ICT in the regular activities of the departments. The University has changed traditional classrooms to smart classes via multimedia, a combination of various digital media types into an integrated multi-sensory interactive application for presentation to convey information to an audience, enriched by different innovative methods using latest hardware and software techniques. ICT enabled teaching/learning processes were prioritized. Multimedia techniques involving graphics/animations and visuals were used by the faculty of University number 2 has made efforts to make the classroom teaching and learning interesting. Teachers in the University were using multimedia such as print text, film, video, radio, computer and internet. As per the second suggestion, a serious thought may be given to provide admission to students who complete 10+2 and use AIEEE performance for admission to attract meritorious students. For this, the University has a provision of Certificate and Diploma Programmes and Degree programmes after 10+2. Separate arrangements have been made for offering the Certificate / Diploma programmes. The University has formed three different cells. For the degree related matters of various undergraduate courses there was the UG Cell, for dealing with PG and Ph.D. courses there was the PG Cell and for dealing with the matters related to a various certificate, diploma and ICD (Integrated Certificate Diploma Course) courses there was the Diploma Cell. AIEEE score was considered while admitting the students.

3.3.11 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Decentralization of Academic Administration and Choice-Based Credit System

Table 3.3.11 revealed that 5 Universities were given recommendations related to criteria, governance, leadership and management and curricular aspects thereby suggesting these universities to focus on decentralization of academic administration

and to introduce choice-based credit system. The suggestion given to University number 1 was stated as, "Introduction of school system among the departments of the University, Dean's concept for decentralization of academic administration with implementation of choice – based credit system and credit transfer facility to enhance collaborative teaching and research among the University departments." The suggestion given to University number 2 was stated as, "Standardization of process and procedures to enhance the governance of the University may be given due attention."

Table 3.3.11 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Decentralization of Academic Administration and Choice-Based Credit System

Decentralization of Academic Administration and Choice-Based Credit System		**Suggestions given to number of Universities**	**Number of Universities complied/adopted the suggestions**
NAAC Criteria	**Domains Improved/ Strengthened for Key Aspects**		
Governance, Leadership and Management/ Curricular Aspects	Institutional Vision and Leadership, Strategy Development and Deployment, Curriculum Design and Development, Academic Flexibility	5	100%

Two suggestions were given to University number 3. These suggestions were stated as, "Implementation of the ideal choice based credit system in all university departments to promote horizontal mobility of students and to acquire aptitude – based knowledge" and "Effective and objective feed – back system in the university from students and other stakeholders." Two suggestions were given to University number 4. These suggestions were stated as, "Choice Based Credit System may be introduced" and "Decentralization of academic activities and more autonomy to departments are needed." Two suggestions were given to University number 5. These suggestions were stated as, "Choice Based Credit System may be introduced" and "Decentralization of academic activities and more autonomy to institutes coming under different faculties."

University number 1 has introduced the School system among the departments of the University. The University was an association of Schools, Faculties, Departments and Colleges. There were various Schools, each of which constituted an administrative grouping of Faculties and other institutions. Various Schools in the University was such as, School of Arts, Languages and Literature, School of Business Studies, Faculty of Dentistry, Faculty of Medicine, School of Physical and Mathematical Sciences, School of Earth and Environmental Sciences, Faculty of Unani Medicine, School of Social Sciences, School of Education and Behavioural Sciences, School of Law, School of Biological Sciences, School of Applied Sciences and Technology, School of Open Learning and School of Engineering. There was an administrative body of each School- including representatives of its Faculties and Departments. As per Annual Quality Assurance Report (2014), the University has taken a big initiative of introducing Choice Based Credit System (CBCS) from March 2014 for all PG Programmes and the curriculum has been modified altogether to suit the new scheme.

University number 2 was operated through the proper governance, following all the standardized process and procedures. Governing structure of the University was highly efficient. For governance, the University has the following statutory authorities: the Syndicate, the Senate, the Finance committee, the Standing committee for academic affairs, the Faculties, the Boards of Studies and the Planning Board. The Vice-Chancellor was the Ex-officio Chairman of the above statutory bodies. Besides to the above statutory authorities, there were several non-statutory bodies and committees. The in-house officers of the University were the Vice-Chancellor; the Registrar; the Finance Officer and the Controller of Examinations. Another notable characteristic of the university's governance was that there was an exercise of constituting various sub-committees and other non-statutory bodies to consider the issues and their problems in depth and suggest a resolution to pertinent authorities. This allowed a de facto decentralization, involving extensive engagement of the faculty and others in decision making. Thus, the University has the practice of delegation of powers from authorities to their sub-committees and from higher officers to next level officers.

University number 3 has set up IQAC in the campus. IQAC played an active role in internalizing a quality culture within the University. This culture has been maintained and sustained by several initiatives taken by the IQAC. One such initiative taken by IQAC of the University in the year 2014-15 was to conduct meetings to introduce Choice-Based Credit System in different departments of the University. Further, all the departments designed their syllabi as per CBCS for implementation of the same w.e.f. the session 2015-16. Revision and updating of the curriculum were regular exercises to make the curriculum socially relevant, job-oriented and knowledge intensive. The changes in the curriculum were facilitated through the Board of Studies, based on current requirements and feedback is sought from different stakeholders such as the alumni, parents, employers and students. Opinions of the experts from different fields were also sought.

All programmes of University number 4 were aimed at value addition in the ideal area of sustainable development. Care was taken to make sure that this underline matter keeps maintained and also the programmes do have diverse discipline character and skill development. The institution referred to the UGC models while updating the curricula. Almost all the courses were revised so as to incorporate the latest trends. In governance, the University exercised decentralized and participative management strategy in all its pursuits, initiatives and decision making. There was non-bureaucratic functioning, autonomy and freedom was given to employees to take decisions in matters pertaining to academics and research. The various committees were in place to evaluate the progress of various functions and correspondingly take necessary well-timed action for ensuring excellence in respective areas. The culture of participative management was encouraged by the University. The administrative and academic responsibilities were decentralized to impart worthwhile educational leadership for successful implementation and supervision of various policies, regulations and guidelines at various levels.

University number 5 has implemented CBCS and uniform course coding w.e.f. academic session 2014. In the same year, a model framework for the various degree programmes was developed with the course distribution of minimum credit units for the semester for each programme. Functional autonomy in the university was provided to the departments through the process of annual planning and budgeting.

The Deans have the freedom to introduce new programmes, courses and specializations as per the demand of the market, conduct various professional development programmes for the faculty and the staff, organize seminars, conferences, undertake research and consultancy assignments, social activities and industry interaction etc. The Deans further delegated the responsibilities to the faculty members in various capacities such as HODs, Programme Leaders, Research Coordinators, Industry interaction and Placement Heads, Committee/Club Chairperson etc.

3.3.12 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Examination System

Table 3.3.12 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Examination System

Examination System		Suggestion given to number of Universities	Number of Universities complied / adopted the suggestion
NAAC Criterion	Domain Improved/Strengthened for Key Aspect		
Teaching, Learning and Evaluation	Evaluation Process and Reforms	2	100%

Table 3.3.12 revealed that two Universities were given recommendations in the context of examination system. The suggestion given to University number 1 was stated as, "Modernising the examination system to suit the locational and climatic challenges of the State keeping the academic calendar and time schedule of announcement of results intact and incorporating transparency by provision of Photostat copies of answer scripts to students who apply for." The suggestion given to University number 2 was stated as, "There shall be a full-time officer appointed for examination system."

NAAC Peer Team suggested the two Universities to make some constructive changes in the examination system. University number 1 was suggested to work towards modernization of the examination system to suit the locational and climatic

changes of the State thus incorporating the transparency. There was decentralization of evaluation at the PG level for a speedy declaration of results. Photocopy of the answer scripts was provided when demanded by the candidate. The project "e-governed Examination of Ministry of Communication & Information Technology New Delhi" is related to the registration and examination of students. The Directorate of IT and SS through its various e-governance services such as 'Results', 're-evaluation', 'E-conduct' and 'E-Award System' has resulted in modernizing the examination system.

In University number 2, the programme and course outlines for each of the programmes were provided to faculty and students at the beginning of the semester. The evaluation criteria listed in the course outline intelligibly mention quizzes / assignments / weekly-tests / monthly-tests / final-examination / presentation (weighatge) given in the evaluation process. The results were made accessible to the students individually through their personal accounts on the University online portal. For the proper conduction of examination specific duties were assigned to the staff members. The work of examination system was coordinated under the headship of examination officer.

3.3.13 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Review of Programs

Table 3.3.13 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Review of Programs

Review of Programs		Suggestion given to number of Universities	Number of Universities complied/adopted the suggestion
NAAC Criterion	Domain Improved/Strengthened for Key Aspects		
Curricular Aspects	Curriculum Design and Development, Academic Flexibility	7	100%

Universities were suggested to review some of their programmes. Seven NAAC accredited universities were given recommendations related to curricular aspects

thereby to review programs as revealed from results of table 3.3.13. Two suggestions were given to University number 1. These suggestions were stated as, “Attaining excellence in IT related programs on sustained basis, rather than diversifying in general engineering” and “Inclusion of hardware projects in curriculum.” Two suggestions were given to University number 2. These suggestions were stated as “The Certificate and Diploma Programmes may be delinked from the Degree programmes offered by the University. Separate arrangements for offering the Certificate / Diploma programmes may be explored” and “The curricula / syllabi of courses may be oriented to ensure their educational outcomes fulfilling the Vision, Mission, Goals, and Objectives of the University.” The suggestion given to University number 3 was stated as, “Introduce few more courses in innovative/emerging/need-based areas such as Disaster Management, Coastal Engineering, Off-shore structures, Reservoir Engineering, etc.” The suggestion given to University number 4 was stated as, “Curricular reforms to integrate co-curricular and value based education along with employability skills.” Two suggestions were given to University number 5. These suggestions were stated as, “The University may think of introducing twinning and dual degree programmes with overseas universities” and “The University should consolidate the present programmes, before increasing the number of programmes.” The suggestion given to University number 6 was stated as, “The University may think of introducing twinning and dual degree programmes with overseas universities.” Six suggestions were given to University number 7. These suggestions were stated as, “UGC PhD regulations, 2009 be implemented”; “The University may consider starting courses in media studies, mass communication and journalism, commerce, hotel and hospitality management, rehabilitation science and home economics”; “Short term vocational courses without requirement of minimum qualifications”; “The University may offer add-on certificate courses in communication skills and ICT proficiency for all students”; “An inter disciplinary advisory committee may be constituted to reorient women studies to reflect contemporary challenges” and “Effective use of open course-wares may be explored.”

The University number 1 has developed and offered academic programs of high quality in the domains of Bioinformatics, Biotechnology, Civil Engineering,

Computer Science and Engineering, Electronics and Communication Engineering and Information Technology which are crucial to meet the specialized technical manpower need of the industry. The University offered few enrichment courses such as Nano Science and Technology, Optimization Techniques, Entrepreneurship Development, Strategic Management, International Business Management etc. to students as part of the curriculum for the enrichment of skills. The University has made hardware projects a part of B.Tech. curriculum.

Peer Team recommended the University number 2 to delinking the certificate and diploma programmes from the degree programmes thereby making separate arrangements for offering the Certificate/Diploma programmes. The University has delinked the certificate and diploma programmes from the degree programmes thereby making separate arrangements for both. The University has been offering twinning programmes in certificate-Diploma programmes from the year 2014. In effect to the aforesaid recommendation made by NAAC Peer Team, the University has formed three different cells to implement the recommendation. For the degree related matters of various undergraduate courses there was the UG Cell, for dealing with PG and Ph.D. courses there was PG Cell and for dealing with matters related to a various certificate, diploma and ICD (Integrated Certificate Diploma Course) courses there was Diploma Cell. Thus separate arrangements have been made as per the suggestion to delink the certificate and diploma programmes from the Degree programmes. As per second suggestion, a draft related to the revision of curriculum was prepared separately by each department as per their requirement and was presented to the respected Board of Studies. In the Board of Studies, the proposals were put for consideration at Senate and then were placed in Board of Management for ratification and implementation. In University number 3, Choice-Based Credit System was introduced in 2015. The Curriculum was revised for implementing CBCS and it was approved by the Academic Council. Implementation of the course curriculum was done as per CBCS pattern.

University number 4 has been updating curriculum from time to time aiming towards balanced curriculum integrating co-curricular and value-based education along with employability skills. Various curricular reforms have been done such as in the form of introducing Choice-Based Credit System. The University also laid

emphasis on multi-skill development in its programmes by introducing varied contents.

In case of University number 5, twinning programmes with overseas universities have ensured international exposure. The University has cooperation agreements with several financial institutions for creating social capital to pursue higher education programmes. Students and faculty have gained relevant international exposure through international tie-ups with the leading foreign universities, which has helped to develop joint venture projects, academic and scientific activities such as courses, seminars, conferences, lectures, and to exchange staff/students, materials and publications of common interest. The University has signed MoUs with a number of foreign universities. These aimed at collaborative research, faculty and student exchanges as well as partnerships in curriculum development. Foreign visiting faculty and researchers were an important part of university's faculty. University has collaborative Ph.D. Programmes with some of the foreign universities. International Students Cell was there in the University to provide necessary guidance for admission. As per second suggestion, the University should consolidate the present programmes, before increasing the number of programmes. The University offered multidisciplinary programmes, in the interest of introducing students to many different aspects in and out of the classroom.

University number 6 has provision of dual degree programmes in form of UG+ PG Dual Programmes; PG+PG Dual Programmes and Integrated UG+UG Programmes. For twinning programmes, the University has signed MoU in order to facilitate advance entry programmes with leading educational institutions in other countries. University number 7 was following UGC Ph.D. regulations 2016. The University has developed programmes to enhance the student's awareness and abilities in media ethics and to enhance awareness and abilities of social engagement. The University has developed knowledge exchange programmes under the university-industry linkage strategy that has increased interaction with the professionals (journalism, advertising, and academic) by sending the students & the faculty to these industries. The University has updated the curriculum to make it industry relevant. Craft based certificate courses were organized in the evening for students of the entire university. Core curriculum/extension and outreach programmes and diversity of

courses and programmes were there in the university. An interdisciplinary advisory committee was constituted to reorient women studies to reflect contemporary challenges. Various ways are being explored to introduce Open coursewares. This includes lectures, lecture notes, assignments, images, videos, project examples etc.

3.3.14 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Consultancy Services

Table 3.3.14 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Consultancy Services

Consultancy Services		Suggestion given to number of Universities	Number of Universities complied / adopted the suggestion
NAAC Criterion	Domain Improved / Strengthened for Key Aspect		
Research, Consultancy and Extension	Consultancy	3	100%

The results of table 3.3.14 revealed that three Universities were given suggestions to enhance consultancy services by adopting various means to fulfil the aim of University-Industry inter-linkage. The suggestion given to University number 1 was stated as, “Enhancing consultancy activities with industry/other organizations.” The suggestion given to University number 2 was stated as, “To establish a University-industry interaction centre with IPR cell and consultancy rules to promote consultancy services, patents and technology transfer.” The suggestion given to University number 3 was stated as, “There should be a mechanism for supporting in-house incubation and entrepreneurship.”

The University number 1 has worked out a formal consultancy policy and the steps were taken to commence the various consultancy activities. All faculty members of the University were allowed to undertake industrial consultancy work with prior permission of competent authority. The consultancy fee is to be divided between the University and the Consultant involved in the consultancy work.

University number 2 has the University-industry interaction centre with IPR cell and consultancy rules as per UGC guidelines were followed to promote consultancy services, patents and technology transfer. These centres acted as a linkage between the University and Industry. As UGC has launched a scheme of setting up of University-Industry Inter-linkage centres (UIL Centres). The main objective of this scheme is to identify the expertise available in the university which can be used for industry by way of consultancy services, evaluation of R&D activities of the industries, take the help of expertise of industries to improve/redesign the curriculum, help create skilled manpower for industry, help set up Science and Technology Entrepreneur parks, technology business incubators etc.

NIRF data of the University number 3 was sought from the University Website. List of the students, alumni and faculty as an entrepreneur with the list of the company incubated for the purpose of entrepreneurship has been given in NIRF (National Institute Ranking Framework) data of the University. There was proper mechanism for supporting in-house incubation and entrepreneurship through the university-industry linkage.

As today the country faces a dissonance and disconnect between higher education and its relevance to industry. There is need for more skilled workforce as entrepreneurs and managers than the country produces annually. All this is because still most of the higher education institutions remain almost disconnect with requirements of a workplace as they are yet to incorporate the specific requirements of the workplace. There is need to integrate knowledge acquisition and up gradation of skilled human competencies in higher education institutions. NAAC Peer Team recommendations regarding consultancy services to the universities are also an indication to integrate knowledge acquisition and up gradation of skilled human competencies in higher education institutions. Further, as UGC has made an initiative in this direction by issuing guidelines for establishing University-Industry Inter-Linkage Centres in Universities. These centres will create collaborative arrangements between the Higher Education Institutions and Industry. UGC has launched a scheme of Setting up of University-Industry Inter-linkage centres (UIL Centres). The main objective of this scheme is to identify the expertise available in the university which can be used for industry by way of consultancy services,

evaluation of R&D activities of the industries, take the help of expertise of industries to improve/redesign the curriculum, help create skilled manpower for industry, help set up Science and Technology Entrepreneur parks, technology business incubators etc.

3.3.15 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Recruitment of Faculty

Table 3.3.15 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Recruitment of Faculty

Recruitment of Faculty		Suggestion given to number of Universities	Number of Universities complied / adopted the suggestion
NAAC Criterion	Domain Improved / Strengthened for Key Aspect		
Teaching-Learning and Evaluation	Teacher Quality	4	100%

Four universities were given recommendations in the context of recruitment of faculty thus emphasizing on teacher quality as per results of table 3.3.15. The suggestion given to University number 1 was stated as, "Creation of Chair Professor and Adjunct Professor Positions." The suggestion given to University number 2 was stated as, "Vacant faculty positions may be filled at the earliest." The suggestion given to University number 3 was stated as, "Basic Science Departments like physics and chemistry should be strengthened with recruitment in professor's post. Qualification of the faculty members should be as per the norms of UGC/AICTE and their salary should be equivalent to UGC/AICTE stipulated scales. Provision for their career advancement be strictly adhered to." The suggestion given to university number 4 was stated as, "UGC regulations with regard to recruitment of faculty be followed."

University number 1 was recommended to create Chair Professor and adjunct faculty position. As per recommendation, the University was already in the process of creating the Chair Professor and the Adjunct Professor positions as per UGC

guidelines. As the expectations from the higher education system have undergone significant changes in the last few years.

In today's world of globalization, the main thrust is on improving the employability prospects of the graduates and also improving the quality of research. Therefore it becomes important to involve experts, professional and researchers from different field to contribute to the diverse needs of the higher education system. Acute shortage of quality faculty is widely felt in the higher education system. As per UGC guidelines on empanelment of Adjunct Faculty in Universities and Colleges, there is need to develop a viable collaboration between institutions and industry by the involvement of academicians, scholars, practitioners, policymakers and skilled professionals in teaching, training, research and related services on regular basis, to promote interaction of skilled workers with the learners. The current massive expansion of higher education with a lot of programmatic diversity also requires that faculty resources be augmented by utilizing the services of superannuated academics, reputed scientists, engineers, advocates, artists, physicians, civil servants including skilled professionals both serving and retired. It is also necessary to have uniformity and transparency in hiring the adjunct faculty for higher education institutions.

For filling the vacant faculty positions, the administrative department of University number 2, gave the advertisements in various newspapers. This was confirmed from administration section of the University website. In this section, there's been a link entitled 'vacancy' in which various notifications related to the filling of vacant faculty positions were given. All these notifications clearly revealed that the University was putting its best possible efforts in implementing the recommendation as suggested by the NAAC.

University number 3 has done recruitment of the professor's post for strengthening Basic Science Departments like physics and chemistry. Qualification of the faculty members was as per the norms of UGC/AICTE and their salary was equivalent to UGC/AICTE stipulated scales. Provision for their career advancement was strictly adhered to. Various faculty development programmes were organized. Qualified teachers in Law faculty were appointed as per UGC norms. University number 4 has

done the faculty and the staff recruitment as per bylaws of the university and as per UGC regulations. The direct recruitment is done on the basis of merit through All India Advertisement and selections by the duly constituted Selection Committees as per the provisions made under UGC regulations. and as per UGC regulations and reported to the Executive Council.

3.3.16 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Student Support Services

Table 3.3.16 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Student Support Services

Student Support Services		Suggestion given to number of Universities	Number of Universities complied / adopted the suggestion
NAAC Criterion	Domains Improved / Strengthened for Key Aspects		
Student Support and Progression	Student Mentoring and Support, Student Progression, Student Participation and Activities	7	100%

Higher Education Institutions should provide necessary support to students for their overall development thereby providing good campus experiences. As per NAAC's requirement institution should have adequate learning resources and a well-established mechanism to support students in every best possible way. As per table 3.3.16, seven Universities were given recommendations in context to student support and progression. The suggestion given to University number 1 was stated as, "Promoting sports, cultural, NCC and NSS activities." The suggestion given to University number 2 was stated as, "Training & Placement activities and support to students for competitive examinations may be strengthened." Three suggestions were given to University number 3. These suggestions were stated as, "Further enhancement of students' support services"; "Establish close linkage with the Alumni Association" and "The reasons for high failure rate needs to be identified and corrective measures to be taken." Two suggestions were given to University

number 4. These suggestions were stated as, “To institute structured student mentoring system” and “Institutional support for internships and off campus co-curricular learning opportunities for students.” Three suggestions were given to University number 5. These suggestions were stated as, “Alumni association be formed for active participation in the institutional development”; “The University should ensure implementation of mandatory committees like anti-sexual harassment, anti-ragging, etc.” and “University may bring out the talents of students through annual exhibition of their projects/ innovative creations.” The suggestion given to University number 6 was stated as, “Alumni association be formed for active participation in the institutional development.” Four suggestions were given to University number 7. These suggestions were stated as, “Career counseling and placement cell may be set up”; “Training and development centre may be established to prepare students for competitive examinations”; “Formal remedial and bridge courses may be introduced” and “Awareness programmes in the area of reproductive health may be conducted.”

University number 1 has appointed a sports coordinator to coordinate the sports activities. Outdoor and indoor sports activities were promoted in the University. A sports tournament is held every year in the University. For cultural events, a fully equipped auditorium and three lecture theatres were there. Various clubs were attached to each department under which various cultural and tech fests were organized. As a part of the University’s support and strengthening of the neighbourhood community, University has been providing free medical aid, drinking and irrigation water supply etc.

University number 2 has a centralized department of Training and Placement Cell to meet its student’s placement and industrial training requirements. For providing placement opportunities and to impart industrial training to students the department has a strong liaison with reputed industries. In order to meet expectations of the industry, the department has also provided the input on the soft skills, personality development, leadership, motivation and communication skills etc.

University number 3 has an Alumni Executive Committee. Online elections were also conducted for an election of the members of Alumni Association. For this, the

Alumni vote through their registered e-mail ids with the University. Student Support services are enhanced as being emphasized by NAAC. University does have a system for student support and mentoring. The reasons for high failure rate were identified and corrective measures were taken in form of extra classes, routine tests etc.

University number 4 has an effective mechanism to use student feedback for the quality enhancement. The University offers competent academic counselling and placement services to its students. The University promptly attends to the general grievances through committees/well-established centres. Career Counseling and Placement Cell of the University has organized career information talks by specialists and has arranged placement opportunities for the University students. The University-Industry liaison Cell was also there to facilitate and improve the academia-industry interface. This Cell facilitates dissemination of the career-related information and identifies the specific placement needs of the students. One of the innovations introduced in the University as mentioned in AQAR (2014-15) was that the teachers devote their time in personal counselling and encourage the students for various socio-cultural, political and moral activities. The academic enhancement is stressed by arranging extra revisions, remedial classes, educational tours and guest/extension lectures.

The Alumni Association has been set up in the University number 5 with the vision to instill a lifelong commitment to the alumni towards Alma Mater and to promote a strong student-alumni connect and attract the alumni to University services like facilitating scholarship funds to help needy and deserving students of the University, felicitating outstanding project work and research papers and recognizing notable community service. The University has organized Alumni meets. The University has come up with biannual alumni newsletter as a medium of communication between alumni and institute. Producing souvenirs for the Alumni was also a regular feature of the institute. Alumni Executive Committee was there. Alumni Portal was there on the university website. The University has a zero-tolerance policy on ragging. Ragging Prevention Committee is formed every year under the Chairmanship of Vice Chancellor. Internal Complaints Committee was there to handle the complaints related to sexual harassment of women. In order to bring out talents of students

through various innovative activities, various clubs were there in the University such as Dramatics Club, Elocution Club, Eco-Club, Sports Club, Music and Dance Club and Media and Photography Club. The University students take part in a number of debates, case study based and business plan competitions from time to time. There was a provision of remedial and bridge courses for students.

The University number 6 has a large network of Alumni and has an Alumni Portal. The core functions/activities were well planned right from the admission of the students to their final placement and even after completion of their courses as alumni. The University number 7 has a mechanism for guidance and counselling at both department and inter-departmental level and the impact has been very encouraging evident by student satisfaction and achievements. The University provides student support mechanism for coaching for competitive examinations. Coaching is provided for NET, SET, GATE, CAT, State PCS, UPSC and various other competitive exams. Formal remedial and bridge courses have been introduced. University has organized various awareness programmes related to nutrition, health, behavioural problems, community problems, social problems from time to time. The department of Sociology has sensitized women workers of informal women's education centre on the importance of masks as well as provided them First Aid kit with masks.

3.3.17 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Enrollment of Foreign Students

Table 3.3.17 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Enrollment of Foreign Students

Enrollment of Foreign Students		Suggestion given to number of Universities	Number of Universities complied / adopted the suggestion
NAAC Criterion	Domain Improved / Strengthened for Key Aspect		
Innovations and Best Practices	Best Practices	2	100%

The results of table 3.3.17 revealed that two Universities were given recommendations in the context of facilitation process for enrollment of foreign students. Both the universities were given the same suggestion as "Facilitation process for enrollment of foreign students needs to be improved."

University number 1 has the International Students Cell for providing necessary guidance of admission. All the correspondence relating to the international students admission was addressed to the Office of International Relations of the institution. Internationalization was one of the broad-based goals of the University number 2 and mainly aimed at enhancing the number of enrollments of the international students. In the strategic plan 2012-17 various strategic initiatives have been taken to promote internationalization. The University has promoted the internationalization of the curriculum; promoted and supported International student recruitment, retention and alumni services and has expanded international campus and community outreach activities.

3.3.18 Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Innovative Practices

Table 3.3.18 : Analysis of Quality Processes Adopted Consequent to NAAC Accreditation towards Quality Improvement in terms of Innovative Practices

Innovative Practices		Suggestion given to number of Universities	Number of Universities complied/adopted the suggestion
NAAC Criterion	Domain Improved/ Strengthened for Key Aspects		
Innovations and Best Practices	Innovations Environment Consciousness	2	100%

The results of table 3.3.18 revealed that two Universities were given suggestions to adopt environment-friendly practices. University number 1 was given two suggestions. These suggestions were stated as, "The University should establish its own independent eco-friendly campus sufficient for its current needs and future

expansion" and "The University should prepare a document to articulate the concept of sustainability from varying perspectives." The suggestion given to University number 2 was stated as, "Move towards an eco-friendly campus with focus on water harvesting/conservation and tapping solar energy."

The Campus of University number 1 was aesthetically designed with several features of passive solar design, energy efficiency and water and waste management systems. The planning and orientation of the spaces and the building blocks ensure glare-free daylight in all regularly occupied areas. Energy efficiency was further enhanced by insulation of the walls and roof; and use of high-performance window glazing to minimize thermal gain. Various other eco-friendly initiatives have been taken in the university. The Department of Business Sustainability has come up with a biannual newsletter named 'Connect' with the objective to deliberate on a broad spectrum of issues and challenges related to sustainable business. The objective of the newsletter was also to help the MBA students and fraternity to connect to the corporate world with their views on key sustainability challenges of contemporary business.

University number 2 has taken various initiatives to make the campus eco-friendly such as Solar water heating plant has been installed; by protecting and nurturing plants; by strengthening the activities of Gaushala; by the promotion of bicycles, campus transport; insistence on optimal usage of electricity; engaging the staff and the students for several eco-friendly initiatives.

3.4 RESULTS PERTAINING TO CHALLENGES FACED BY THE STAKEHOLDERS DURING THE ACCREDITATION PROCESS

"Be willing to allow your challenges to become motivation"

Various challenges faced during the accreditation process as revealed by IQAC members and teachers of NAAC accredited universities are summarized as follows:

1) 43% of IQAC members and 55% of teachers from the accredited universities responded that added workload was faced as a challenge during the accreditation process. Staff overloaded with work is a bane in institutions. As per response of IQAC members, IQAC core team is on the toes as they need

to prepare reports at every stage. In most of the institutions, no clerical help is provided so right from collating to typing they are pressurized. This is supported by supported by Zeid and Taha, (2014). Findings of their study revealed that during accreditation process institution personnel faced extra workload as a challenge. As Faculty members look at accreditation to be an added workload for which they should be compensated for either monetary compensation or by decreasing teaching load.

2) 45% of teachers from the accredited universities revealed that unrealized impact of the accreditation process was faced as a challenge during the accreditation. The findings of the study are supported by Zeid and Taha (2014), Buetow &Wellingham (2003) and Cerqueria (2006). As per findings of their study, lack of understanding of the benefits of accreditation as a stamp of quality and how the quality culture might improve the educational process acts as a major barrier in getting full support of institution personnel during the accreditation process. Even there are not many studies on the impact of accreditation, which might also be seen as a problem.

3) 58% of teachers from the accredited universities revealed lack of basic knowledge or formal training of the accreditation process as a challenge faced during the accreditation process. Findings of the study conducted by Zeid and Taha (2014) highlighted that lack of understanding of what the accreditation process is, the documents and forms needed, how to prepare needed documents, what are proper evidences and how to prepare and collect them, what is a corrective action and continuous improvement plan and how to prepare them, and how to put accreditation requirements before someone eyes while preparing for their courses was major challenge faced by institution personnel during accreditation process.

4) 31% of IQAC members and 44% of teachers from the accredited universities stated staff inadequacy as a challenge faced during the accreditation process. Findings of the study are supported by Zeid and Taha (2014). As per the findings of their study, understaffing leads to work overload. Due to work overload, the faculty members and staff of the institution cannot completely devote themselves to work on the accreditation requirements.

5) 50% of IQAC members and 53% of teachers from the accredited universities responded lenient attitude of some teachers as a challenge faced during the accreditation process. As entire staff involvement in the report making is limited. As they see accreditation as a work not covered under regular teaching activities and are not serious in providing inputs on their behalf as per accreditation requirement. This is further supported in the light of findings of the study conducted by Zeid and Taha (2014) on challenges faced during the accreditation process. As per their findings lack of commitment of the faculty members and staff to the accreditation process acts as a major barrier in getting full support of institution personnel during the accreditation process.

6) 31% of IQAC members and 50% of teachers from the accredited universities revealed that during accreditation there was lack of teamwork due to communication deficit among faculty members of different departments.

7) 53% of teachers responded that documentation was a big problem as the institutions still not evolved a way of centralizing documents with details of all events on campus.

Thus above results present challenges faced by IQAC members and teachers of the NAAC accredited universities. Lack of basic knowledge or formal training, added workload, the lenient attitude of some teachers and documentation were responded as challenges faced during accreditation by more than 50% of teachers. Added workload was one of the major problems that didn't allow the faculty to give enough time to the accreditation process. Staff inadequacy, unrealized impact of the process, and lack of teamwork were also some of the challenges faced by IQAC members and teachers during the accreditation process.

RECOMMENDATIONS TO COPE UP THE CHALLENGES FACED DURING ACCREDITATION / BEST PRACTICES IN DEALING WITH THE CHALLENGES

1) Staff of the institution going for accreditation should be oriented regarding the whole process and what is to be done for successfully achieving the target of

accreditation process. IQAC cell of the institution should organize orientation sessions for the staff of the institution so as to keep them abreast with all the prerequisites of the accreditation process. The quality and quantity of the work must be specified in a clear terms to staff during their orientation. Staff must be made to understand what is and what is not expected of them. This orientation should include materials that specify how and where to get the information and materials that will help them to perform their work well.

2) Institution with the help of IQAC cell should organize training workshops for faculty and staff to teach them how to prepare needed accreditation documents such as course specifications and course reports. Institution should encourage faculty and staff to attend workshops in order to be conscious of the latest developments going on in the accreditation process or quality assurance mechanism in country or all over the world. Workshops on how to design course assessment tools and how to measure student learning is vital to be provided for faculty. Workshops on mapping course learning outcomes with program objectives, student outcome, class learning activities, and assessment tools are very important to be offered as well.

3) Stakeholders of the institution should be encouraged to work as a team. IQAC core team should conduct timely meetings for staff members of the institution to encourage them to share any concerns regarding accreditation process with them. It should be made sure that everyone involved in the process knows the key issues related to accreditation process.

4) Assign one faculty member in each program/department as the quality officer to facilitate the accreditation process, answer faculty questions related to all phases and requirements of the accreditation, help faculty preparing needed documents, and help program head writing the self study report, SSR. The quality officers can be a member of the IQAC cell that serves as the institution quality centre.

5) Quality culture should be promoted in the institution and to be made a lifestyle to be reflected in each and every activity of the institution. All university or college academic, administrative, and service units should appreciate the

accreditation process going on and have a proactive role in its success. This means that all units should understand accreditation requirements and how they will contribute to fulfill those requirements. They should also understand and believe how quality is a team work and not an individual effort and accreditation process will positively add laurels to the whole university or educational institute. All this will result into public confidence in the educational level they provide students with. Everyone needs to understand that fulfilling all the accreditation requirements will result into improved quality.

6) It should be explained to faculty and supporting staff that how attaining accreditation will increase the public confidence in the program and institution. All this will have positive impact on the number of students, research funds, and industry support to the institution. This will make staff to show more concern for accreditation process and they will work with more enthusiasm.

7) Institution should recognize good work so that staff members work with complete enthusiasm for achieving goal of accreditation in the real sense.

8) Set continuous improvement as a target of the institution. Every department should work in the way that continuous improvement becomes the part of daily activity.

9) Interdepartmental initiatives should be encouraged through sharing of ideas and facilities leading to new synergy. This can be possible through organizing various inter-departmental activities.

10) Institutions should appoint adequate staff so that appropriate duties should be assigned equally to all staff members without extra workload on any other staff member.

11) IQAC Members should encourage staff to attend events organized by the accreditation agency so as to update themselves with the latest in accreditation field.

12) IQAC Members should keep connect with IQAC Members of other institutions so as to adopt good initiatives in quality process.

13) IQAC should do a rigorous 'mock' accreditation with key-point people at least 2-3 months prior to the Peer-Team visit.

14) IQAC should provide a brief of the Peer Team Members to every staff member of the institution who will meet the members so as to make them comfortable during peer team visit and in this sense; it will lessen the load of peer team evaluation.

15) IQAC prior to the visit of peer team in the institution should make everyone in the institution feel that peer team will be there for sharing information, to give valuable suggestions and not just to test the institution.

Positive Changes expected in the institution, on overcoming the challenges faced during the accreditation process:

- The preparation of the self-study report during accreditation will require inputs from all sub-units of the institution and hence it will lead to cooperation. It will act as a promising initiative for improvement in their documentation, especially for teacher appraisal, student progression, alumni profiles and placement services.
- Development of Interdepartmental initiatives will lead to healthy competition among departments.
- Intra-Institutional networking will be there.
- Initiatives that require confidence, self-reliance and potential will bloom and result in enthusiasm among staff members towards achieving the target of accreditation. The institution will be geared up to record and manage data that would improve their performance.
- Individual faculty members will too realize the importance of maintaining regular teaching diaries, documentation of their academic contributions and other scholarly pursuits outside the institution and data on their community-oriented services.
- Recognition of stakeholder expectations will lead to a healthy relationship between stakeholders.

3.5. RESULTS PERTAINING TO THE PROGRESS OF QUALITY IMPROVEMENT MEASURES AFTER THE ACCREDITATION TO THE TIME OF RE-ACCREDITATION IN THE NORTH INDIAN UNIVERSITIES IN TERMS OF IMPLEMENTATION OF PEER TEAM SUGGESTIONS

3.5.1 Case-I Analysis of the Progress of quality improvement measures after the accreditation to the time of re-accreditation

3.5.2 Case-II Analysis of the Progress of quality improvement measures after the accreditation to the time of re-accreditation

3.5.3 Case-III Analysis of the Progress of quality improvement measures after the accreditation to the time of re-accreditation

3.5.4 Case-IV Analysis of the Progress of quality improvement measures after the accreditation to the time of re-accreditation

3.5.5 Case-V Analysis of the Progress of quality improvement measures after the accreditation to the time of re-accreditation

3.5.6 Case-VI Analysis of the Progress of quality improvement measures after the accreditation to the time of re-accreditation

3.5.7 Case-VII Analysis of the Progress of quality improvement measures after the accreditation to the time of re-accreditation

3.5.8 Case-VIII Analysis of the Progress of quality improvement measures after the accreditation to the time of re-accreditation

CASE STUDY -- I

3.5.1 Case-I Analysis of the Progress of quality improvement measures after the accreditation to the time of re-accreditation

Type of Case Study: Individual Case Study (Quality Processes adopted as per the NAAC Peer Team Suggestions)

Conceptual Framework:

The results of table 3.5.1 revealed that the University considered as Case-I was given the suggestions related to six criteria i.e. Governance, Leadership and Management, Infrastructure and Learning Resources, Research, Consultancy and Extension, Innovations and Best Practices, Teaching-Learning and Evaluation, and Curricular Aspects.

Two suggestions were given related to criterion, Governance, Leadership and Management. The University was suggested, to strengthen its quality assurance mechanism i.e. to improving and updating its internal quality assurance mechanism. The second suggestion was given, to introduce decentralization of academic administration thereby providing more autonomy to institutes coming under different faculties. Two suggestions were given related to criterion, Infrastructure and Learning Resources. The University was suggested, to strengthen campus-wide network and intranet connectivity so as to make IT infrastructure work more efficiently; to provide additional hostels, a hygienic cafeteria at different locations of the University, modern shopping centre, ATM facility and transport facility. Two suggestions were given for encouraging research and promoting the research climate in the University by providing various research facilities to faculty members and students; to organize research methodology workshops, conferences, academic forums and faculty development programmes to provide an in-house research platform to all the faculty members. Two suggestions were given related to criterion, Innovations and Best Practices. One suggestion was in context of introducing suitable facilities as per the needs of the area thereby suggesting to adopting some best practices.

Table 3.5.1 : Case-I Analysis of Quality Processes adopted as per the NAAC Peer Team Suggestions

	NAAC PEER TEAM SUGGESTIONS	Cr.1	Cr.2	Cr.3	Cr.4	Cr.5	Cr.6	Cr.7	DOMAIN IMPROVED / STRENGTHENED As for Key Aspects
		Number of Suggestions							
Case-I	Quality Assurance Mechanism	–	–	–	–	–	1	–	IQAS
	Faculty Development Programmes	–	1	–	–	–	–	–	Teacher Quality
	Campus Wide Networking	–	–	–	1	–	–	–	IT Infrastructure
	Promotion of Research	–	–	1	–	–	–	–	Promotion of Research
	Introduction of Suitable Facilities as per the needs of the Area	–	–	–	–	–	–	1	Best Practices
	Autonomous College System	–	–	–	–	–	–	1	Best Practices
	Infrastructure and Learning Resources	–	–	–	1	–	–	–	Physical Facilities
	Teaching-Learning and Use of ICT	–	1	–	–	–	–	–	Teaching-Learning Process
	Decentralization of Academic Administration	–	–	–	–	–	1	–	Institutional Vision and Leadership, Strategy Development and Deployment
	Choice-Based Credit System	1	–	–	–	–	–	–	Curriculum Design & Development Academic Flexibility
	Examination System	–	1	–	–	–	–	–	Evaluation Process and Reforms

Another suggestion was to make an attempt to institute autonomous college system thereby considering it as a best practice of the university. Three suggestions were given related to criterion, Teaching-Learning and Evaluation. The University was suggested to improving teacher quality by introducing more faculty development programmes. The University was suggested to emphasizing more on ICT related activities by maximizing the use of ICT in the regular activities of the departments and by offering courses in ICT proficiency for all students. The University was also suggested to modernizing the examination system to suit the location and climatic changes of the State. One suggestion was given related to criterion, Curricular Aspects. The suggestion was to introduce Choice-Based Credit system and to modify the curriculum altogether to suit this new scheme.

Analysis of Data:

As per the Annual Quality Assurance Report (AQAR, 2014), for realizing the goal of quality sustenance and quality enhancement, the Internal Quality Assurance Cell (IQAC) has been upgraded to the Directorate of Internal Quality Assurance (DIQA). The University has mentioned it as one of the best practices. As per information sought from the IQAC members and as per information availed from the University Website it has come to light that the main quality improvement measures taken place as a result of upgrading of IQAC to DIQA are as follows: DIQA not only worked as the main documentation centre of the institute but has also helped the University to address the significant weak areas effectively. The Directorate of Internal Quality Assurance has developed user-friendly software as DIQA web portal for all the Departments and individual faculty members. All Departments of the University were associated with the activities of DIQA. As per this new change, each Department of the University has elected one of the teachers as the Nodal Officer for consolidation of the departmental activities and coordination with DIQA. Some of the faculty members, students and research scholars from the Departments were also acting as a representative in DIQA. To encourage the fast track mechanism of information, the Nodal Officers have been provided with a unique username and password through which they can submit their Departmental information. In addition, each faculty member was provided one username and password through

which he or she has uploaded their individual academic and research contribution online to DIQA.

In the Quality Assurance Report (2014), it has been mentioned that DIQA has been established in the University to chalk out various plans for quality enhancement. One of the plans were to focus on the faculty development programmes with laid emphasis on the interaction of the faculty in various forms with the visiting Professors from national and international level. DIQA has motivated the various Departments and research centres to organize as much as possible faculty development programmes for the overall development of the faculty. All this has resulted in the organization of various Faculty Development Programmes.

As per the Quality Assurance Report (2014) and information availed from the University Website, it has come to light that for successfully implementing e-governance in the University and for providing necessary support to the other organizations in the e-governance plans, the University has set up the Directorate of Information Technology and Support System. Various projects were attached to the Directorate such as e-governed examination of Ministry of Communication and Information Technology, New Delhi; the establishment of skill development programme/Centre of State Department of IT; the establishment of Centre of Excellence and e-Governance University Administration MC and IT, New Delhi. One of such projects, as designed by the Directorate, was e-governance examination system. This was designed to implement e-Governance in the University examination system.

As per information sought from the IQAC Members and information availed from the University Website, it comes out that with the implementation of e-governance project, many governance issues were addressed electronically. Various services were covered within e-governance in the University such as E-Admissions, File Tracking System, University Android Application, Re-evaluation, Migration form, Registration status for PG Students, Stream Change Status, DIQA, University registration system, E-conduct, E-Award system, Estates section software, E-Tutorials, Online recruitment system and University content management system. The inception of DIQA web portal in the University was a result of successful

implementation of e-governance and has brought all the Departments/faculties/ sections/centres under one umbrella to update their information and hence acted as information repositories for the University.

As per information sought from the IQAC Members, it has come to light that research-oriented environment was there in the University as DIQA has encouraged and put motivational efforts to promote research environment in University. Various research facilities were provided to the faculty and students so as to keep the spirit of research orientation alive in the University. Research methodology workshops, seminars, conferences, academic forums and faculty development programmes were organized to provide an in-house research platform to all the faculty members and the students. As a quality policy, all the regular faculty members were encouraged to undergo for Post Doctorate Fellowship Research Programmes for two years fellowship thus making the research environment at the institute flexible for the faculty to upgrade their research skills. The Dean Research has also provided inputs on the various schemes launched by central government funding agencies and the faculties were encouraged to submit proposals for the same. Some of the University Departments have received funding under DST-FIST programmes. DIQA has encouraged different Departments to organize national level research paper contest annually to promote the students participation in research. DIQA has also encouraged, monitored and guided the students about the Major and Minor Research project which they need to undergo as a part of their curriculum.

As per information sought from the IQAC Members and information availed from the University Website, it comes out that the University's Directorate of Information Technology and Support System through its project e-governed examination of Ministry of Communication and Information Technology, New Delhi has provided appropriate connectivity to all the affiliated government colleges across the area where university is situated. Various online services were covered within the e-governance of the University. With these services, people even staying at their home can connect to the University. Various services covered within the e-Governance were such as E-Admissions, File Tracking System, University Android Application, Re-evaluation, Migration form, Registration status for the PG Students, Stream Change Status, DIQA, the University registration system, E-conduct, E-Award

system, Estates section software, E-Tutorials, Online recruitment system and the University content management system. All this has helped the people staying in far away areas to be in connect with the University.

As per the AQAR (2014) and information sought from the IQAC Members, it has come to light that the University has encouraged the Colleges of good standing under their horizon to apply for autonomous status. The University has advanced the application of the eligible Colleges to UGC. Eligibility of the College for autonomous status was determined as per UGC guidelines on Autonomous colleges. The University advances the application of the eligible College to UGC within the stipulated time frame and proposes an academician of eminence as its nominee in the UGC Expert committee at the time of fresh induction and extension of autonomous status to a college. The University has moved from conventional annual system to semester system. In the Colleges affiliated to the University, semester system has been introduced. In order, to improve the learning processes to benefit the student's, the University has introduced semester system rather than remaining with the annual system. Various Post Graduate Programmes were offered at the Degree Colleges through the PG Centres of the University. Various professional programmes were offered at the private Colleges affiliated to the University.

As per the AQAR report (2014), there was a shortage of hostel accommodation for the students and research scholars, which was mentioned as weakness in SWOC Analysis of the University. But as per the AQAR (2015), work on the 5 new Girls hostels and the research scholar hostels at the main Campus have been completed. Work on the double-storied boys' hostel and the double-storied girls' hostel has been completed. In the transport facility, as per the AQAR (2015), there were vehicles for students, for employees, for guests, for hospital services, for Officers of the University, for waste management, for field works carried by the faculty, for inspection of the exams centres and the colleges. Vehicles were also provided for pick and drop of guests from the campus to Airport and from Airport to back to the campus. Various supportive facilities were provided by the University such as a high –tech gymnasium/Health club, youth hostel, Teachers club, University Post Office, Multi-utility shopping centre and the University Canteens. Various Banks had established ATM facilities in the university. The University has some future plans to

upgrade transport facility of the Campus such as upgradation of transport workshop; organization of workshop for the drivers where the senior drivers will share driving tips and traffic rules with their juniors; organization of the training camps for the mechanical staff working in the transport workshops.

NAAC Peer Team has recommended the University to maximize the use of ICT in regular activities of the Departments thereby using interactive teaching-learning methods and by providing virtual classroom facilities and e-learning resources for all the programmes. As per the Quality Assurance Report (2014), the University in last few years has changed traditional classrooms to smart classes via multimedia, a combination of various digital media types into an integrated multi-sensory interactive application for presentation to convey information to an audience, enriched by different innovative methods using latest hardware and software techniques. The ICT enabled teaching/learning processes were prioritized.

On visiting the Campus, it was observed that the School system was introduced among the departments. The University was an association of Schools, Faculties, Departments and Colleges. There were various Schools, each of which constituted an administrative grouping of the Faculties and the other institutions. Various Schools in the university was such as, School of Arts, Languages and Literature, School of Business Studies, Faculty of Dentistry, Faculty of Medicine, School of Physical and Mathematical Sciences, School of Earth and Environmental Sciences, Faculty of Unani Medicine, School of Social Sciences, School of Education and Behavioural Sciences, School of Law, School of Biological Sciences, School of Applied Sciences and Technology, School of Open Learning and School of Engineering. There was an administrative body of each School- including representatives of its Faculties and Departments. As per the Annual Quality Assurance Report (2014), the University has taken a big initiative of introducing Choice Based Credit System (CBCS) from March 2014 for all PG Programmes and curriculum has been modified altogether to suit the new scheme.

As per the AQAR (2015), information sought from the IQAC Members and information availed from the University Website, it has come to light that the Directorate of IT and SS through its various e-governance services such as ‘Results’,

'Re-evaluation', 'E-conduct', and 'E-Award System' has resulted in modernizing the examination system. The project **"**e-governed Examination of Ministry of Communication & Information Technology, New Delhi" was related to the registration and examination of students. Photocopy of the answer scripts was provided when demanded by the candidate.

Conclusion:

Thus the progress of quality improvement measures has been analyzed in terms of implementation of the NAAC Peer Team suggestions and how this implementation has resulted in quality improvement in various aspects of the University as covered by the NAAC criteria. On analyzing, it was found that maximum suggestions i.e. three suggestions were given related to criterion, Teaching, Learning and Evaluation. Two suggestions per criterion were given related to Governance, Leadership and Management, Infrastructure and Learning Resources and Innovations and Best Practices. Least no. of suggestions i.e. one per criterion was given related to Curricular Aspects and Research, Consultancy and Extension. The University has strengthened criterion, teaching, learning and evaluation by changing traditional classrooms to the smart classes via multimedia thereby prioritizing ICT enabled teaching-learning process; initiating e-governance services for modernizing the evaluation process and motivating the various departments and the research centres to organize as much as possible faculty development programmes for the overall development of faculty. The University has upgraded IQAC to DIQA. The DIQA not only worked as the main documentation centre of the institute but has also helped the University to address the significant weak areas effectively. School system has been introduced among the Departments thus resulting in the decentralization of academic administration. It has resulted in the strengthening of the governance, leadership and management aspect of the university. In order to strengthen IT Infrastructure, the University has availed all the NKN services and has upgraded IQAC to DIQA for successfully implementing e-governance. Provision of adequate physical amenities was there in the University as recommended by the NAAC Peer Team. Adequate hostel facilities were provided in the University. All this has led to quality improvement in the University in an aspect related to infrastructure and learning resources. Various online services were covered within e-

governance of the University. With these services, the people even staying at their home can connect to the University. The University has advanced the application of the eligible Colleges to UGC. Eligibility of the College for autonomous status was determined as per UGC guidelines on Autonomous colleges. The University has taken a big initiative by introducing Choice Base Credit System. The DIQA has encouraged research and promoted research climate in the University by providing various facilities to the faculty members and students. The University has organized research methodology workshops, conferences, academic forums and faculty development programmes, to provide an in-house research platform to all faculty members. All this has resulted in the strengthening of research, consultancy and extension aspect.

CASE STUDY – II

3.5.2 Case-II Analysis of the Progress of quality improvement measures after the accreditation to the time of re-accreditation

Type of Case Study: Individual Case Study (Quality Processes adopted as per the NAAC Peer Team Suggestions)

Conceptual Framework:

As per the results of table 3.5.2, the University considered as Case-II was given the suggestions related to five criteria i.e. Curricular Aspects, Teaching-Learning and Evaluation, Research, Consultancy and Extension, Student Support and Progression and Innovations and Best Practices.

Two suggestions were given related to criterion, Curricular Aspects thereby recommending University, to review their programs by introducing IT-related programs and to include hardware projects as a part of the curriculum. This University was recommended three improvements related to criterion, Teaching-Learning and Evaluation. The University was suggested, to encourage faculty members to carry out their Ph.D. work in other reputed academic institutions; to make provisions for the faculty members to go for industrial training and the one suggestion was given for recruitment of the faculty by Creating Chair Professor and Adjunct Professor Positions.

Table 3.5.2 : Case-II Analysis of Quality Processes adopted as per the NAAC Peer Team Suggestions

	NAAC PEER TEAM SUGGESTIONS	Cr.1	Cr.2	Cr.3	Cr.4	Cr.5	Cr.6	Cr.7	DOMAIN IMPROVED / STRENGTHENED for Key Aspects
		Number of Suggestions							
Case-II	Review of Programs	2	–	–	–	–	–	–	Curriculum Design and Development
	Faculty Development Programmes	–	2	–	–	–	–	–	Teacher Quality
	Promotion of Research	–	–	1	–	–	–	–	Research Publications
	Recruitment of Faculty	–	1	–	–	–	–	–	Teacher Quality
	Consultancy Services	–	–	1	–	–	–	–	Consultancy
	Student Support Services	–	–	–	–	1	–	–	Student Participation and Activities
	Introduction of Suitable Facilities as per the needs of the Area	–	–	–	–	–	–	1	Best Practices

Two suggestions were given related to criterion, Research, Consultancy and Extension. The University was suggested, to promote research culture by encouraging the faculty members to have collaboration for quality research and publishing in high impact factor journals. Another suggestion was given to improve the consultancy services by enhancing these services with industry/other organizations. One suggestion was given related to criterion, Student Support Services for promoting sports, cultural, NCC and NSS activities in the university. One suggestion was in the context of introducing suitable facilities as per the needs of the area thereby suggesting, to adopt some best practices.

Analysis of Data:

As per information sought from the IQAC Members and information availed from the University Website, it has come to light that the University has developed and offered academic programs of high quality in the domains of Bioinformatics, Biotechnology, Civil Engineering, Computer Science and Engineering, Electronics and Communication Engineering and Information Technology which are crucial to meet the specialized technical manpower need of the industry. University offered few enrichment courses such as Nano Science and Technology, Optimization Techniques, Entrepreneurship Development, Strategic Management, International Business Management etc. to students as part of the curriculum for the enrichment of skills. The University has made hardware projects a part of the B.Tech.curriculum as confirmed from the SSR (2017) and IQAC members.

As per the SSR (2017), the University has allowed faculty to pursue academic and research interest of one's own choice area. Significant emphasis was given on research orientation and facilities for the same were provided. The University in last four-five years has allowed faculty members to do Ph.D. outside the University. Regarding the recommendation that the faculty member should also do Industrial training, the teachers were encouraged to take up research projects sanctioned by various State and Central government organizations and sponsored by industry/research organizations.

As per the SSR (2017) and information sought from the IQAC Members, it has come to light that the teachers were encouraged to take up research projects

sanctioned by various State and Central government organizations and sponsored by industry/research organizations. For organizing special talks, all kind of support was extended by the University. The University has a provision of partially financed study leave facility to faculty for pursuing higher studies. The IQAC members stated that many faculty members underwent various staff development programmes during the last four years such as refresher courses, HRD programmes, orientation programmes, staff training conducted by the university, staff training conducted by other institutions, summer/winter schools, workshops etc. Industry engagement of faculty was also there. The University has encouraged faculty members from different disciplines to guide UG/PG or Ph.D. thesis jointly via intra-departmental and inter-departmental efforts. The faculty was regular in publishing in various journals with high impact factor.

As per the SSR (2017), the researchers have visited from institutes/industries of repute, though not as adjunct professors. The University was already in the process of creating the Chair Professor and the Adjunct Professor positions as per UGC guidelines. As per the SSR (2017), the University has worked out a formal consultancy policy and the steps were taken to commence the various consultancy activities. All the faculty members of the University were allowed to undertake industrial consultancy work with the prior permission of the competent authority. The consultancy fee is to be divided between the University and the Consultant involved in the consultancy work.

As per information sought from the IQAC Members, it has come to light that the University has appointed a sports coordinator to coordinate sports activities. Outdoor and indoor sports activities were promoted in the University. A sports tournament is held every year at the University. For cultural events, a fully equipped auditorium and three lecture theatres were there. Various clubs were attached to each department under which various cultural and tech fests were organized. As a part of the University's support and strengthening the neighbourhood community, the University has provided free medical aid; drinking and irrigation water supply etc. The University has organized various health and family welfare camps. The students were involved in organizing these camps. The University has organized Blood Donation Camps along with ROTARACT CLUB. The University has invited school

children from various schools for lab visit and interaction with faculty and Ph.D. scholars so as to apprise them about research activities. From time to time the students and the faculty were involved in arranging medical camps, polio, sanitation and cleanliness drives. The University was also involved in mentoring the students of local schools and solving their issues. The department of Biotechnology and Bioinformatics has taken up the projects to popularize vermin composting and household waste management in the neighbourhood. The students were encouraged to take projects on Alternate Energy Resources which gets well with their theory and hands-on experience.

In response to the recommendations of the Peer Team, the University in SSR (2017) has stated that it does not need to create in-house facilities for early schooling of employees' children as there are good schools within a radius of 3-7 kms.

Conclusion:

Thus the progress of quality improvement measures has been analyzed in terms of implementation of the NAAC Peer Team suggestions and how this implementation has resulted in quality improvement in various aspects of the university as covered by the NAAC criteria. On analyzing, it was found that maximum suggestions i.e. three suggestions were related to criterion, Teaching-Learning and Evaluation. Two suggestions per criterion were related to Curricular Aspects and Research, Consultancy and Extension. Least no. of suggestions i.e. one per criterion was given related to student support and Progression and to Innovations and Best practice. In order to raise the teacher quality, the faculty members were encouraged to pursue academic and research interest of one's own choice area. Significant emphasis on the research orientation was given and the facilities for the research were provided. The teachers were encouraged to take up research projects sanctioned by various State and Central government organizations and sponsored by industry/research organizations and researchers have visited from institutes/industries of repute, though not as adjunct professors. The University was already in the process of creating Chair Professor and Adjunct Professor Positions. The University has developed and offered academic programs of high quality in various domains to students as part of the curriculum for the enrichment of skills. The University has

made hardware projects a part of B.Tech.Curriculum. All these quality improvements have made constructive changes in the curricular aspect of the University. The University has encouraged faculty members from different disciplines to guide UG/PG or Ph.D. thesis jointly via intra-departmental and inter-departmental efforts. The faculty was regular in publishing in various journals with high impact factor. All faculty members of the University were allowed to undertake industrial consultancy work with the prior permission of competent authority. The University has promoted sports, cultural, NCC and NSS activities thereby emphasizing on student support and progression aspect.

CASE STUDY – III

3.5.3 Case-III Analysis of the Progress of quality improvement measures after the accreditation to the time of re-accreditation

Type of Case Study: Individual Case Study (Quality Processes adopted as per the NAAC Peer Team Suggestions)

Conceptual Framework:

The results of table 3.5.3 revealed that the University considered as Case-III was given the suggestions related to six criteria i.e. Curricular Aspects, Teaching, Learning and Evaluation, Infrastructure and Learning Resources, Research, Consultancy and Extension, Governance, Leadership and Management and Student Support and Progression.

Two suggestions were given related to criterion, Curricular Aspects. The University was suggested, to delink certificate and diploma programmes from degree programmes by making separate arrangements for offering Certificate/Diploma programmes. Another suggestion was to frame/orient curricula/syllabi of courses as per the vision, mission, goals, and objectives of the University thereby to review the programs. Three suggestions were given related to criterion, Teaching-Learning and Evaluation. The first suggestion was given for employing improved pedagogy in the classrooms/ laboratories and beyond the syllabus; learning may be practised to enhance learning abilities. Second suggestion was related to the admission process to attract meritorious students.

Table 3.5.3 : Case-III Analysis of Quality Processes adopted as per the NAAC Peer Team Suggestions

	NAAC PEER TEAM SUGGESTIONS	Cr.1	Cr.2	Cr.3	Cr.4	Cr.5	Cr.6	Cr.7	DOMAIN IMPROVED / STRENGTHENED for Key Aspects
		Number of Suggestions							
Case-III	Review of Programs	2	–	–	–	–	–	–	Curriculum Design and Development / Academic Flexibility
	Teaching-Learning and Use of ICT	–	2	–	–	–	–	–	Teaching-Learning Process / Student Enrolment and Profile
	Infrastructure and Learning Resources	–	–	–	1	–	–	–	Library as a Learning Resource
	Promotion of Research	–	–	1	–	–	–	–	Resource Mobilization for Research
	Decentralization of Academic Administration	–	–	–	–	–	1	–	Institutional Vision and Leadership and Strategy Development and Deployment
	Recruitment of Faculty	–	1	–	–	–	–	–	Teacher Quality
	Student Support Services	–	–	–	–	1	–	–	Student Mentoring and Support Student Progression
	Quality Assurance Mechanism	–	–	–	–	–	1	–	Internal Quality Assurance System

The third suggestion was related to recruitment of the faculty to fill the vacant faculty positions at the earliest. One suggestion was given to upgrade the library services to meet the growing needs of the teaching faculty / students thereby suggested to strengthening learning resources. One suggestion was given to promote the research culture by formalizing the procedures to motivate the teaching faculty to seek and take up sponsored research projects from National / International funding agencies. Two suggestions were given related to criterion, Governance, Leadership and Management. It was suggested to formally setting up the IQAC & to strengthen and to reinforce the quality measures. Another suggestion was to introduce the decentralization of academic administration thereby providing more autonomy to the institutes coming under different faculties. One suggestion was given related to training & Placement activities and for providing support to the students for competitive examinations thereby strengthening student mentoring and support aspect.

Analysis of Data:

As per the SSR (2017) and information availed from the University website, it has come to light that the University has delinked the certificate and diploma programmes from degree programmes thereby making separate arrangements for both. The University has been offering twinning programmes in certificate-Diploma programmes from the year 2014. In effect to the aforesaid recommendation made by the NAAC Peer Team, the University has formed three different cells to implement the recommendation. For the degree related matters of the various undergraduate courses there was the UG Cell, for dealing with PG and Ph.D. courses there was the PG Cell and for dealing with the matters related to a various certificate, diploma and ICD (Integrated Certificate Diploma Course) courses there was the Diploma Cell. Thus, the separate arrangements have been made as per the NAAC Peer Team Suggestion to delink the certificate and diploma programmes from the Degree programmes.

As per the SSR (2017), the University has changed traditional classrooms to smart classes via multimedia, a combination of various digital media types into an integrated multi-sensory interactive application for presentation to convey information to an audience, enriched by different innovative methods using latest

hardware and software techniques. The ICT enabled teaching/learning processes were prioritized.

On visiting the Campus, it was observed that there was a well-equipped and well-stocked Central Library. The library has a large number of volumes of technical books as well as a good collection of books on literature, general awareness, management and moral sciences etc. The library has a subscription to a large number of National and International journals. Besides to print subscription the users have access to articles from journals under e-Shodhsindhu Consortium. The library has all the modern facilities. VCD's and CD ROMs were also available in the library. Efforts have been made so that the users may feel comfort and peaceful environment while they study or consult the library material for their study and research purpose.

As per information sought from the IQAC members, it was revealed that the University has established Research and Development Cell to monitor exploratory research, to assess manpower requirement leading to integrated educational planning, curriculum development and instructional material development in the areas of science and technology. Research work was undertaken by faculty of the institution in the interdisciplinary areas to deal with the problems of industry and community as a whole. Various research projects in the specialized fields of science and technology have been funded by organizations like MHRD, AICTE, DST, CSIR and ICAR. As per the information availed from the University Website, it has come to light, that R&D activities were encouraged by the accords with CII FICCI, SIDBI and District Industrial Chamber (DIC). The faculty has won various prestigious national awards/fellowships like Career Award (AICTE), Career Award (UGC) and Best Teacher Award (ISTE), INSA Visiting fellowship. The faculty members have been awarded some International fellowships/teaching assignments from countries like Germany (DAAD), UK (MIT, University of Buffalo), Israel, Italy (INFN fellowship) Malaysia (Multimedia University), South Korea, Japan, Libya, Ireland, Canadian fellowships, GRE (worldwide).

As per the SSR (2017), the University was operated through proper governance, following all the standardized process and procedures. Governing structure of the

University was highly efficient. For governance, the university has the following statutory authorities: the Syndicate, the Senate, the Finance committee, the Standing committee for academic affairs, the Faculties, the Boards of Studies and the Planning Board. The Vice-Chancellor was the Ex-officio Chairman of the above statutory bodies. Besides to the above statutory authorities, there were several non-statutory bodies and committees. The in-house officers of the University were the Vice-Chancellor; the Registrar; the Finance Officer and the Controller of Examinations. Another notable characteristic of the University's governance was that there was an exercise of constituting various sub-committees and other non-statutory bodies to consider the issues and their problems in depth and suggest a resolution to pertinent authorities. This has resulted in the de facto decentralization, involving extensive engagement of the faculty and others in the decision making. Thus, the University has the practice of delegation of powers from the authorities to their sub-committees and from higher officers to next level officers.

For filling the vacant faculty positions, administrative department of the University gave the advertisements in various newspapers. This was confirmed from the administration section of the University website. In this section, there's been a link entitled 'Vacancy' in which the various notifications related to the filling of vacant faculty positions from time to time, were given. All these notifications clearly revealed that the University was putting its best possible effort in implementing the recommendation related to recruitment of the faculty as suggested by the NAAC Peer Team.

As per information sought from the IQAC Members, it was revealed that the University has a provision of Certificate and Diploma Programmes and Degree programmes after 10+2. For the degree related matters of the various undergraduate courses there was the UG Cell, for dealing with PG and Ph.D. courses there was the PG Cell and for dealing with the matters related to a various certificate, diploma and ICD (Integrated Certificate Diploma Course) courses there was the Diploma Cell. The separate arrangements were made for offering the Certificate/Diploma programmes. AIEEE score was considered while admitting the students.

As per the SSR (2017), a draft related to the revision of the curriculum was prepared separately by each department of the University as per their requirement and was

presented to the respected Board of Studies. In the Board of Studies, the proposals were put for consideration at the Senate and then were placed in the Board of Management for ratification and implementation.

On visiting the Campus, it was observed that there was a Centralized Department of Training and Placement Cell to meet its student's placement and industrial training requirements. As per the SSR (2017), the Department has a strong liaison with reputed industries for providing placement opportunities and industrial training to the students. In order to meet the expectations of the industry, the department has also provided the input on the soft skills, personality development, leadership, motivation and communication skills etc.

On visiting the Campus, it was observed that there was an IQAC. As per the SSR (2017), the University has established Internal Quality Assurance Cell (IQAC) in the year 2013. As per information sought from the IQAC Members and information availed from the University Website, it has come to light, that the IQAC was well-structured and well-organised Cell consisting of the various members such as Chairman, Director of the Institute is Chairman of IQAC, 11 members including 4 Deans, 1 Registrar, 5 Professors and 1 TEQIP Coordinator and 3 External Members. Issues related to the academics were observed by the internal members and discussed in the detail meetings and the appropriate decisions were taken for the implementation, having prior approval from the statutory body of the institute (i.e. the Senate and the Board of Management).

Conclusion:

Thus the progress of quality improvement measures has been analyzed in terms of implementation of the NAAC Peer Team suggestions and how this implementation has resulted in quality improvement in various aspects of the University as covered by the NAAC criteria. On analyzing, it was found that maximum suggestions i.e. three suggestions were given related to criterion, Teaching, Learning and Evaluation. Two suggestions per criterion were given related to Curricular Aspects and Governance, Leadership and Management. Least no. of suggestions i.e. one per criterion was given related to Infrastructure and Learning Resources, Research, Consultancy and Extension and Student Support and Progression. The University has changed the traditional classrooms to the smart classes via multimedia, a

combination of various digital media types into an integrated multi-sensory interactive application for presentation to convey information to an audience, enriched by different innovative methods using latest hardware and software techniques. The ICT enabled teaching/learning processes were prioritized. For filling the vacant faculty positions, administrative department of the University gave advertisement in various newspapers. The University provides Certificate and Diploma Programme and Degree programmes after 10+2. The separate arrangements for offering the Certificate / Diploma programmes have been made. AIEEE score was considered while admitting the students. The University has delinked the certificate and diploma programmes from the degree programmes thereby making separate arrangements for both. The University offered twinning programmes in certificate-Diploma programmes from the year 2014. Separate arrangements have been made in the form of different cells i.e. the UG Cell, the PG Cell and the Diploma Cell as per the NAAC Peer Team Suggestion to delink the certificate and diploma programmes from the Degree programmes. A draft related to the revision of the curriculum was prepared separately by each department as per their requirement and was presented to the respected Board of Studies. All this reflects the university's effort in strengthening curricular aspect. Governing structure of the University was highly efficient. For governance, the university has the following statutory authorities: the Syndicate, the Senate, the Finance committee, the Standing committee for academic affairs, the Faculties, the Boards of Studies and the Planning Board. All this led to the decentralization of the academic administration. The University has established Internal Quality Assurance Cell (IQAC). IQAC cell was functional at the university. The University has a well-equipped and well-stocked Central Library. The library has a large number of volumes of technical books as well as a good collection of books on literature, general awareness, management and moral sciences etc. The library has a subscription to a large number of National and International journals. Research and Development Cell was there in the institution to monitor exploratory research; to assess manpower requirement leading to integrated educational planning, curriculum development and instructional material development in the areas of science and technology thereby indicating encouraging research environment in the university. A centralized department of Training and Placement Cell has been established in the University, to meet its student's placement and industrial training requirements.

CASE STUDY – IV

3.5.4 Case-IV Analysis of the Progress of quality improvement measures after the accreditation to the time of re-accreditation

Type of Case Study: Individual Case Study (Quality Processes adopted as per the NAAC Peer Team Suggestions)

Conceptual Framework:

The results of table 3.5.4 revealed that the University considered as Case-IV was given the suggestions related to five criteria i.e. Curricular Aspects, Research, Consultancy and Extension, Teaching-Learning and Evaluation, Infrastructure and Learning Resources and Student Support and Progression.

One suggestion was given related to criterion, Curricular Aspects. The University was suggested to introduce few more courses in innovative/emerging/need-based areas such as Disaster Management, Coastal Engineering, Off-shore structures, Reservoir Engineering, etc. thereby to review the programs. One suggestion was given to promote research culture thereby encouraging the University to increase collaborative linkages with other institutes for teaching and research and hold more entrepreneurship and skill development programmes and to initiate inter-departmental linkages in teaching and research. The two suggestions were given related to criterion, Teaching, Learning and Evaluation. It was suggested to recruiting the faculty as per UGC norms and to fill the vacant faculty positions as per the need of the program. Five suggestions were given related to criterion, Infrastructure and Learning Resources. The University was suggested, to enhance infrastructure facilities as per the needs of the campus. Another suggestion was given related to the modernization of laboratories; further enhancement of students' support services and for computerization of library thereby emphasizing infrastructure and learning resources of the university. Three suggestions were given related to criterion, Student Support and Progression. The University was suggested, to introduce feedback system leading to the transparency of information to all the stakeholders and to make improvements if needed on the basis of the feedback received from the stakeholders.

Table 3.5.4 : Case-IV Analysis of Quality Processes adopted as per the NAAC Peer Team Suggestions

	NAAC PEER TEAM SUGGESTIONS	Cr.1	Cr.2	Cr.3	Cr.4	Cr.5	Cr.6	Cr.7	Domain Improved/Strengthened For Key Aspects
		Number of Suggestions							
Case-IV	Review of Programs	1	–	–	–	–	–	–	Curriculum Design and Development Academic Flexibility
	Promotion of Research	–	–	1	–	–	–	–	Collaborations
	Recruitment of Faculty	–	2	–	–	–	–	–	Teacher Quality
	Infrastructure and Learning Resources	–	–	–	5	–	–	–	Physical Facilities / Library as a Learning Resource
	Student Support Services	–	–	–	–	3	–	–	Student Mentoring and Support Student Progression Student Participation and Activities

Analysis of Data:

As per the information sought from the IQAC Members, it was revealed that Choice-Based Credit System was introduced in the University in 2015. The Curriculum was revised for implementing CBCS and it was approved by the Academic Council. Implementation of the course curriculum was done as per CBCS pattern.

As per the SSR (2012) and information availed from the University Website, it has come to light that the University has made increased collaborative linkages with other institutes for teaching and research activities. The University-IBM Centre for Information Technology; the Department of Chemistry, Mechanical Engineering, Chemical Engineering, Petroleum Engineering, Aerospace Engineering, Earth Sciences etc. were also recognized by national and international agencies. As per the information sought from the IQAC members, it was revealed, that the Department of Health, Safety and Environment was invited by DST-FIST to propose towards developing HSE lab. Oil Development Board has considered the proposal to develop a niche Nanotechnology centre for Excellence in Energy and Petroleum.

As per information sought from the IQAC Members, it was revealed that the University has done recruitment of the Professor's post for strengthening Basic Science Departments like physics and chemistry. Qualification of the faculty members was as per the norms of UGC/AICTE and their salary was equivalent to UGC/AICTE stipulated scales. Various faculty development programmes were organized in the University. Qualified teachers in the Law faculty were appointed as per UGC norms.

On visiting the Campus, it was observed that the campus has modernized laboratories with hi-tech facilities as per requirement of ongoing programmes. The University has various research labs with the advanced facilities. Separate IT lab was also available in the campus. As per the SSR (2012) and the information sought from the IQAC members, it has come to light, that under the aegis of the Directorate of Student Affairs was covered Disciplining the students, redressing their grievances, sports activities, cultural activities, welfare activities, the student's health care, maintaining and updating the student's database and the Alumni

activities. The Alumni Executive Committee was also there. The University library has Library Management Software for Library Automation and library housekeeping work. OPAC is the best example of ICT technology in the library. Networked computers were available in the library for the users.

On visiting the Campus, it was observed that the University has augmented its infrastructure enormously and has well-furnished classrooms, audio-visual aids, common rooms, well-designed fully computerized library, IT lab with computing facilities, various research labs, health centre, hostel facility, transport facility, shopping complex, gymnasium, playground and facilities for physically disabled. The University was working towards augmenting the hostel facilities and residential accommodation to be provided to its faculty and staff. Each faculty was provided with the spacious workstations to carry out the day to day activities.

As per information sought from the IQAC members, it was revealed that the University has good student mentoring system which helps in identifying academically weak students and thereby guiding them from time to time. It was observed that the University has a well equipped Medical Infirmary for providing First Aid and ambulance facility for evacuation to hospitals in case of emergency under the supervision of qualified Doctors and trained attendants.

Conclusion:

Thus the progress of quality improvement measures has been analyzed in terms of implementation of the NAAC Peer Team suggestions and how this implementation has resulted in quality improvement in various aspects of the University as covered by the NAAC criteria. On analyzing, it was found that maximum suggestions i.e. five suggestions were given related to criterion, Infrastructure and Learning Resources. Three suggestions were given related to criterion, Student Support and Progression. Two suggestions were given related to criterion, Teaching, Learning and Evaluation. Least no. of suggestions i.e. one per criterion was given related to Curricular Aspects and Research, Consultancy and Extension. The University has modernized laboratories with hi-tech facilities as per requirement of ongoing programmes. The University library has Library Management Software for Library Automation and library housekeeping work. Each faculty has been provided with the

spacious workstations to carry out the day to day activities as was observed on visiting the university. The University has well-equipped health centres in all the campuses. The University has augmented its infrastructure enormously. The University has good student mentoring system which helps in identifying academically weak students and thereby guiding them from time to time. In order to raise the teacher's quality, qualification of the faculty members was as per the norms of UGC/AICTE. For strengthening the curricular aspect, Choice-Based Credit System was introduced in the university in 2015. The curriculum was revised for implementing CBCS and it was approved by the Academic Council. In order to encourage research, the University has made increased collaborative linkages with other institutes for teaching and research activities.

CASE STUDY – V

3.5.5 Case-V Analysis of the Progress of quality improvement measures after the accreditation to the time of re-accreditation

Type of Case Study: Individual Case Study (Quality Processes adopted as per the NAAC Peer Team Suggestions)

Conceptual Framework:

The results of table 3.5.5 revealed that the University considered as Case-V was given the suggestions related to six criteria i.e. Curricular Aspects, Governance, Leadership and Management, Teaching-Learning and Evaluation, Student Support and Progression, Research, Consultancy and Extension and Infrastructure and Learning Resources.

Two suggestions were given to the University related to key aspect, Curriculum design and development. The University was suggested; to implement the ideal choice based credit system in all the university departments to promote horizontal mobility of students and to acquire aptitude–based knowledge curricular reforms to integrate co-curricular and value-based education along with employability skills. One suggestion was given related to criterion, Governance, Leadership and Management. The University was suggested, to introduce decentralization of academic administration.

Table 3.5.5 – Case-V Analysis of Quality Processes adopted as per the NAAC Peer Team Suggestions

	NAAC PEER TEAM SUGGESTIONS	Cr. 1	Cr.2	Cr.3	Cr.4	Cr.5	Cr.6	Cr.7	Domain Improved/Strengthened For Key Aspects
		Number of Suggestions							
Case-V	Choice Based Credit System	1	–	–	–	–	–	–	Curriculum Design and Development
	Decentralization of Academic Administration	–	–	–	–	–	1	–	Institutional Vision and Leadership and Strategy Development and Deployment
	Faculty Development Programmes	–	1	–	–	–	–	–	Teacher Quality
	Student Support Services	–	–	–	–	2	–	–	Student Mentoring and Support; Student Progression
	Consultancy Services	–	–	1	–	–	–	–	Consultancy
	Infrastructure and Learning Resources	–	–	–	1	–	–	–	Maintenance of Campus Facilities
	Promotion of Research	–	–	1	–	–	–	–	Resource Mobilization for Research
	Review of Programs	1	–	–	–	–	–	–	Curriculum Design and Development
	Campus Wide Networking	–	–	–	1	–	–	–	IT Infrastructure

One suggestion was given related to the establishment of a University–level Faculty-Development Centre/Academic Staff College for teachers. The two suggestions were given related to criterion, Infrastructure and Learning resources. The University was suggested for strengthening campus-wide network and intranet connectivity so as to make IT infrastructure work more efficiently. Another suggestion was to introduce the University level norms, trained manpower and maintenance support for all the central instrumentation and equipment facilities for the optimal use. Two suggestions were given related to criterion, Research, Consultancy and Extension. The University was suggested to promoting research culture by providing research starter grant to all the newly appointed faculties as University policy. Another suggestion was to enhance the consultancy services. Two suggestions were given to the University, to institute structured student mentoring system and to provide institutional support for internships and off-campus co-curricular learning opportunities for the students.

Analysis of Data:

As per the AQAR (2014-15), Choice-Based Credit System was introduced in the same year in different Departments of the University. As a result, all Departments of the University designed curriculum as per CBCS requirement. As per information sought from the IQAC Members, it was revealed, that implementation of the revised curricula was done in 2015-16. This initiative was taken by IQAC of the University.

As per the AQAR (2014-15), the University has been updating the curriculum from time to time aiming to balanced curriculum integrating co-curricular and value-based education along with employability skills. The various curricular reforms have been done such as in the form of introducing Choice-Based Credit System. The University also laid emphasis on multi-skill development in its programmes by introducing varied contents.

As per information sought from the IQAC Members, it was revealed that the University has set up the University – level faculty-development centre/Academic Staff College for the teachers. Academic Staff College in the university has planned, organized, implemented, monitored and evaluated orientation courses for

college/university lecturers within the jurisdiction of one or more universities in a state as per UGC guidelines on academic staff colleges. As per the AQAR (2014), the University has a facility of providing competent academic counseling and placement services to its students. The University has various committees/well-established centres to attend to the general grievances of students. As per the information sought from the IQAC Members, it was revealed, that the call centres with 15 hunting lines have been established to address day-to-day problems of the students and other stakeholders.

As per information sought from the IQAC Members and information availed from the University Website, it has come to light that the University has University-industry interaction centre with IPR cell and consultancy rules as per UGC guidelines were followed to promote consultancy services, patents and technology transfer. These centres have acted as a linkage between the University and Industry. As UGC has launched a scheme of setting up of University-Industry Inter-linkage centres (UIL Centres). The main objective of this scheme is to identify the expertise available in the university which can be used for industry by way of consultancy services, evaluation of R&D activities of the industries, take the help of expertise of industries to improve/redesign the curriculum, help create skilled manpower for industry, help set up Science and Technology Entrepreneur parks, technology business incubators etc.

As per information sought from the IQAC Members, it was revealed that the University has made its best possible efforts to keep maintenance of the infrastructure at the proper time. The University has Technical Services Department with a qualified Manager to take care of all the infrastructures. Maintenance of the Infrastructure and equipment was under Technical Services.

As per the AQAR (2014-15), the University has a provision of granting duty / academic leaves to teachers as and when required for pursuing a higher degree and for participating in conferences/symposia/workshops or for other academic/research purposes in other institutes in India as well as abroad. They were also provided TA/DA for the purpose. Research papers were published by research students and

faculty members of the department in peer-reviewed/indexed journals. All this revealed that research standards of the department were reasonably good. Due to good research standards, the faculty members of various departments have been sanctioned Major/Minor research projects by the UGC. 12 departments of the University have also been provided with financial assistance under SAP on the basis of research standards.

University was recommended to providing NKN connectivity to the satellite campuses. As per the information availed from the University Website, it has come to light, that Campus wide networking has been established throughout the campus with Wi-Fi facility. As per information sought from the IQAC Members, it was revealed, that Internet connectivity through NKN was available round the clock. Two satellite campuses were attached to the university and were sharing NKN facility available in the University campus.

As per information sought from the IQAC Members, it was revealed that the Career Counseling and Placement Cell of the University was actively involved in organizing career information talks by specialists and arranging placement opportunities for the University students. As per the AQAR (2014-15), the University-Industry liaison Cell was also there to facilitate and improve the academia-industry interface. This Cell facilitates dissemination of the career-related information and identifies the specific placement needs of the students. One of the innovations introduced in the University as mentioned in the AQAR (2014-15), was, that teachers devote their time in personal counselling and encourage the students for various socio-cultural, political and moral activities. The academic enhancement was stressed by arranging extra revisions, remedial classes, educational tours and guest/extension lectures.

Conclusion:

Thus the progress of quality improvement measures has been analyzed in terms of implementation of the NAAC Peer Team suggestions and how this implementation has resulted in quality improvement in various aspects of the University as covered

by the NAAC criteria. On analyzing, it was found that two suggestions per criterion were given related to Curricular Aspects, Student Support and Progression and Research, Consultancy and Extension. Least no. of suggestions i.e. one per criterion was related to Teaching-Learning and Evaluation, Infrastructure and Learning Resources and Governance, Leadership and Management. Choice-Based Credit System was introduced in different departments of the University. As a result, all departments of the University designed the curriculum as per CBCS requirement and various curricular reforms have been done to integrate co-curricular and value-based education along with employability skills. The University has a facility of providing competent academic counselling and placement services to its students. The University has various committees/well-established centres to attend to the general grievances of the students. Various initiatives have been taken by the university to encourage research as was revealed from the fact that University-industry interaction centre with IPR cell was there and consultancy rules as per UGC guidelines were followed to promote consultancy services, patents and technology transfer. The University has a provision of granting duty/academic leaves to the teachers as and when required for pursuing a higher degree and for participating in conferences/symposia/workshops or for other academic/research purposes in other institutes in India as well as abroad. The University-level Faculty Development Centre/Academic Staff College was there for carrying out various faculty development programmes thereby emphasizing on raising the teacher quality. The University has Technical Services Department with a qualified Manager to take care of all infrastructures.

CASE STUDY – VI

3.5.6 Case-VI Analysis of the Progress of quality improvement measures after the accreditation to the time of re-accreditation

Type of Case Study: Individual Case Study (Quality Processes adopted as per the NAAC Peer Team Suggestions)

Table 3.5.6 – Case-VI Analysis of Quality Processes adopted as per the NAAC Peer Team Suggestions

	NAAC PEER TEAM SUGGESTIONS	Cr.1	Cr.2	Cr.3	Cr.4	Cr.5	Cr.6	Cr.7	Domain Improved / Strengthened for Key Aspects
		Number of Suggestions							
Case-VI	Innovative Practices	–	–	–	–	–	–	2	Environment Consciousness Innovations
	Infrastructure and Learning Resources	–	–	–	4	–	–	–	Physical Facilities Library as a learning Resource
	Choice-Based Credit System	1	–	–	–	–	–	–	Curriculum Design and Development Academic Flexibility
	Student Support Services	–	–	–	–	3	–	–	Student Mentoring and Support Student Progression Student Participation and Activities
	Review of Programs	2	–	–	–	–	–	–	Curriculum Design and Development
	Enrollment of Foreign Students	–	–	–	–	–	–	1	Best Practices
	External Academic Audit	–	–	–	–	–	1	–	Internal Quality Assurance System
	Decentralization of Academic Administration	–	–	–	–	–	1	–	Institutional Vision and Leadership and Strategy Development and Deployment
	Promotion of Research	–	–	2	–	–	–	–	Resource Mobilization for Research
	Examination System	–	1	–	–	–	–	–	Evaluation Process and Reforms
	Consultancy Services	–	–	1	–	–	–	–	Consultancy
	Faculty Empowerment Strategies	–	–	–	–	–	1	–	Faculty Empowerment Strategies

Conceptual Framework:

The results of table 3.5.6 revealed that the University considered as Case-VI was given the suggestions related to seven criteria i.e. Innovations and Best Practices, Infrastructure and Learning Resources, Curricular Aspects, Student Support and Progression, Governance, Leadership and Management, Research, Consultancy and Extension and Teaching-Learning and Evaluation.

Three suggestions were given related to criterion, Innovations and Best Practices. The University was suggested, to establish its own independent eco-friendly campus sufficient for its current needs and future expansion; to improve facilitation process for the enrollment of foreign students and to prepare a document to articulate the concept of sustainability from varying perspectives. Four suggestions were given related to criterion, Infrastructure and Learning resources. The University was suggested, to enhance infrastructure facilities as per the needs of the campus. Three suggestions were given related to criterion, Curricular Aspects. The University was suggested, to introduce choice-based credit system and to review programs. Three suggestions were given related to criterion, Student Support and Progression i.e. to form an alumni association and to strengthen student mentoring system. Three suggestions were given related to criterion, Governance, Leadership and Management. The University was suggested, to introduce a mechanism for external academic audit; to strengthen faculty empowerment strategies and to implement decentralization of academic administration thereby providing autonomy to departments. Three suggestions were given related to criterion, Research, Consultancy and Extension. The University was suggested, to enhance resource mobilization for research; to encourage research related activities and to enhance consultancy services. One suggestion was to modernizing examination system thereby reforming the evaluation process.

Analysis of Data:

As per the Annual Report (2015), information availed from the University website and observation made on visit to the Campus, it has come to light that the Campus was aesthetically designed with several features of the passive solar design, energy efficiency and water and waste management systems. The planning and orientation

of the spaces and the building blocks ensure glare-free daylight in all the regularly occupied areas. Energy efficiency was further enhanced by insulation of the walls and roof and by use of high-performance window glazing to minimize thermal gain. Various other eco-friendly initiatives have been taken in the university. The Department of Business Sustainability has come up with a biannual newsletter named 'Connect' with the objective to deliberate on a broad spectrum of issues and challenges related to sustainable business. The objective of the newsletter was also to help the MBA students and fraternity to connect to the corporate world with their views on key sustainability challenges of contemporary business.

On visiting the Campus, it was observed that the Campus has well-furnished classrooms, lecture halls, well-equipped and well-stocked library and an auditorium. The building has well-equipped laboratories to compliment cutting-edge research at the University along with a well-furnished conference hall. The University library services were offered electronically through a web-enabled integrated digital information system. The electronic resources were centrally organized and available via a single-window access. The Digital Library Services' development was prioritized according to the user need. The University has laboratories with advanced equipment and facilities to aid and stimulate research. Various laboratories were there in the university as per course requirements such as Solar Lighting Laboratory; Environmental Monitoring Laboratory; Combustion Laboratory; Geoinformatics Laboratory; Biotechnology Laboratory; Power System Laboratory; Heat Transfer Laboratory, Biofuel and Waste Utilization Laboratory. University has a hostel facility for women. The hostel was spacious and well-furnished, with comfortable single and double rooms with attached bathrooms. The hostel has energy-efficient features installed in the rooms as part of the 'Green Campus'.

As per information sought from the IQAC Members, it was revealed that Choice-Based Credit system was introduced in the University after NAAC accreditation. As per the information sought from the IQAC members and the information availed from the University website, it has come to light, that the Alumni Association has been set up in the University with the vision to instill a lifelong commitment to the alumni towards Alma Mater; to promote a strong student-alumni connect and to attract the alumni to the University services like facilitating scholarship funds to

help needy and deserving students of the University; felicitating outstanding project work and research papers and recognizing notable community service. The University has organized Alumni meets. The University has come up with biannual alumni newsletter as a medium of communication between alumni and institute. Producing souvenirs for the Alumni was also a regular feature of the institute. The Alumni Executive Committee was there. Alumni Portal was there on the University Website.

As per information sought from the IQAC Members and information availed from the University website, it has come to light that the University's twinning programmes with overseas Universities have ensured international exposure. The University has the cooperation agreements with several financial institutions for creating social capital to pursue higher education programmes. The students and faculty have gained relevant international exposure through international tie-ups with the leading foreign universities. This has helped to develop joint venture projects, academic and scientific activities such as courses, seminars, conferences, lectures, and to exchange staff/students, materials and publications of common interest. The University has signed MoUs with a number of foreign universities. These aimed at collaborative research, faculty and student exchanges as well as partnerships in the curriculum development. Foreign visiting faculty and researchers were an important part of the University's faculty. The University has collaborative Ph.D. Programmes with some of the foreign universities. International Students Cell was there in the University to provide necessary guidance for admission. As per the suggestion, the University should consolidate the present programmes, before increasing the number of programmes. The University offered multidisciplinary programmes, in the interest of introducing students to many different aspects in and out of the classroom.

As per information sought from the IQAC Members, it was revealed that academic audit in the University was based on the process of self-evaluation carried out by the university itself and by involving external evaluators from other higher education institutions. Thus involving external evaluators helped in the objectivity thereby contributing to the better academic and administrative functions.

As per information sought from the IQAC Members, it was revealed that a good amount of fund was set aside by the University to support faculty members in their research and collaborative efforts, including participation in prestigious conferences. The University has offered a number of scholarships to students joining the doctoral and masters programmes. All grants to the University students were made on a competitive basis, with due consideration for both means and merit. The scholarship committee was formed there to make a decision on the scholarship criteria.

On visiting the University, it was observed that University has a hostel facility for women. The hostel was spacious and well-furnished, with comfortable single and double rooms with attached bathrooms. The hostel has energy-efficient features installed in the rooms as part of the 'Green Campus'.

As per information sought from the IQAC Members, it was revealed that the programme and course outlines for each of the programmes were provided to the faculty and the students at the beginning of the semester. The evaluation criteria listed in the course outline, intelligibly mention quizzes / assignments / weekly-tests / monthly-tests / final-examination / presentation (weightage) given in the evaluation process. The results were made accessible to the students individually through their personal accounts on the University online portal. For the proper conduction of the examination, specific duties were assigned to the staff members. The work of examination system was coordinated under the headship of examination officer.

As per information sought from the IQAC Members and information availed from the University Website, it has come to light that the University has a zero-tolerance policy on ragging. The Ragging Prevention Committee was formed every year under the Chairmanship of the Vice Chancellor. The Internal Complaints Committee was there to handle the complaints related to sexual harassment of women. In order to bring out talents of the students through various innovative activities, various clubs were there in the University such as Dramatics Club, Elocution Club, Eco-Club, Sports Club, Music and Dance Club and Media and Photography Club. The University students take part in a number of debates, case study based and business plan competitions from time to time. There was a provision of remedial and bridge courses for the students. As per the information availed from the University

Website, it has come to light that in accordance with the extraordinary Gazette of India, Part-II, dated April 23, 2013, and UGC guidelines 23 July' 2015 the Vice-Chancellor of the University has constituted the "Internal Complaints Committee" in University to enquire into the complaints of sexual harassment of women.

NIRF data of the University was sought from the University Website. List of the students, alumni and faculty as an entrepreneur with the list of the company incubated for the purpose of entrepreneurship has been given in NIRF (National Institute Ranking Framework) data of the University. There was the proper mechanism for supporting in-house incubation and entrepreneurship through the university-industry linkage. As per information availed from the University Website, it has come to light, that the Department of Business Sustainability has come up with a biannual newsletter named 'Connect' with the objective to deliberate on a broad spectrum of issues and challenges related to sustainable business. The objective of the newsletter was also to help the MBA students and fraternity to connect to the corporate world with their views on key sustainability challenges of contemporary business.

As per information sought from the IQAC Members, it was revealed that faculty in the University is empowered through the membership in various academic and professional committees at national and international levels. They have been given representation in a number of committees at the University level such as Anti Ragging Committee; Prevention of Sexual Harassment Committee; Equality Advisory Committee; Student Disciplinary Committee; Placement Cell (Faculty Placement Coordinators) and Alumni Association**.** All this revealed that there was the representation of the faculty in the development of the University.

Conclusion:

Thus the progress of quality improvement measures has been analyzed in terms of implementation of the NAAC Peer Team suggestions and how this implementation has resulted in quality improvement in various aspects of the university as covered by the NAAC criteria. On analyzing, it was analyzed found that maximum suggestion i.e. four suggestions were given related to criterion, Infrastructure and Learning Resources. Three suggestions per criterion were given related to

Governance, Leadership and Management, Curricular Aspects, Research, Consultancy and Extension and Student Support and Progression and Innovations and Best practices. One suggestion was given related to criterion, Teaching-Learning and Evaluation. The University has made its best possible efforts to enhance infrastructure and learning resources as the University is self-sufficient in terms of space and facilities for teaching and research activities. The University library services were offered electronically through a web-enabled integrated digital information system. The University has laboratories with advanced equipment and facilities to aid and stimulate research and Hostels have energy-efficient features installed in the rooms as part of the 'Green Campus'. In the University functional autonomy was provided to the institutions/departments through the process of annual planning and budgeting thereby introducing the decentralization of academic administration. The faculty was also empowered through membership in the various academic and professional committees. All this indicates the University's effective governance mechanism. Various initiatives have been taken by the University to strengthen the curricular aspect such as CBCS has been introduced; twinning and dual degree programmes have been introduced and the university has introduced the programmes as per need. Various funds were provided for successful completion of the students' research projects thereby reflecting encouraging research environment in the university. The University has offered a number of scholarships to students joining the doctoral and masters programmes and there was a mechanism for supporting in-house incubation and entrepreneurship. The Alumni association was there. The University has various Committees to deal with problems of stakeholders and various activities were conducted to encourage the talent of students. All these initiatives indicate the University's effort in providing every best possible effort for student's support and progression. The Campus was aesthetically designed with several features of passive solar design, energy efficiency and water and waste management systems. Various other eco-friendly initiatives have been taken in the university thereby indicating the university's environmental consciousness. International Students Cell was there in the University to provide necessary guidance of admission for facilitating enrollment of foreign students. The Department of Business Sustainability has come out with a biannual newsletter

named 'Connect' with the objective to deliberate on a broad spectrum of the issues and challenges related to sustainable business.

CASE STUDY – VII

3.5.7 Case-VII Analysis of the Progress of quality improvement measures after the accreditation to the time of re-accreditation

Type of Case Study: Individual Case Study (Quality Processes adopted as per the NAAC Peer Team Suggestions)

Conceptual Framework:

The results of table 3.5.7 revealed that the University considered as Case-VII was given the recommendations related to six criteria i.e. Infrastructure and Learning Resources, Curricular Aspects, Student Support and Progression, Innovations and Best Practices, Governance, Leadership and Management and Research, Consultancy and Extension.

Five suggestions were given related to criterion, Infrastructure and Learning Resources. The University was suggested to create more infrastructural facilities and augmenting library facilities. Two suggestions were given related to key aspect, Curriculum Design and Development. The University was recommended for introducing choice-based credit system and reviewing programs by introducing new programs. The one suggestion was given to form Alumni Association for active participation of the alumni in the institutional development. One Best practice was suggested for improving the facilitation process of enrollment of the foreign students. Two suggestions were given related to criterion, Governance, Leadership and Management. The University was suggested, to introduce a mechanism for external academic audit for strengthening quality assurance mechanism and to implement the decentralization of academic administration for providing complete autonomy to departments. One suggestion was given to promote research culture by enhancing the resources for research.

Table 3.5.7 : Case-VII - Analysis of Quality Processes adopted as per the NAAC Peer Team Suggestions

	NAAC PEER TEAM SUGGESTIONS	Cr.1	Cr.2	Cr.3	Cr.4	Cr.5	Cr.6	Cr.7	Domain Improved/Strengthened for Key Aspects
		Number of Suggestions							
Case-VII	Infrastructure and Learning Resources	–	–	–	5	–	–	–	Physical Facilities Library as a Learning Resource
	Choice Based Credit System	1	–	–	–	–	–	–	Curriculum Design and Development
	Student Support Services	–	–	–	–	1	–	–	Student Participation and Activities
	Review of Programs	1	–	–	–	–	–	–	Curriculum Design and Development
	Enrollment of Foreign Students	–	–	–	–	–	–	1	Best Practices
	External Academic Audit	–	–	–	–	–	1	–	Internal Quality Assurance System
	Decentralization of Academic Administration	–	–	–	–	–	1	–	Institutional Vision and Leadership and Strategy Development and Deployment
	Promotion of Research	–	–	1	–	–	–	–	Resource Mobilization for Research

Analysis of Data:

As per the SSR (2017), the University has conducted a performance audit of various institutions/departments. Each institution/department has set targets and goals against the relevant performance indicators. A Performance Audit of the constituent institutions and departments of the University was done biannually through an internal audit.

As per information sought from the IQAC Members, it was revealed that the University has centralized and departmental library committees in order to ensure that learning and research resources are adequately available, updated regularly, utilized optimally and benchmarked periodically. On visiting the Campus, it was observed, that the Central library has sufficient space as per the number of students, scholars and faculty members. The departmental libraries of varying size were also established as per the size of the Department/Institution. The central and departmental libraries were Wi-fi enabled and automated using open source software "KOHA". Each library has an adequate number of workstations to facilitate searching/assessing OPAC, e-resources, web browsing and for other academic work. The University has installed excellent ICT infrastructure. The libraries were also a member of DELNET. The University libraries have a large number of printed books, back volumes and theses.

On visiting the Campus, it was observed that the Campus was Wi-Fi enabled. All the classrooms were equipped with high-speed internet connectivity through wi-fi connection and full multi-media facility. E-learning resources such as sound-proof studios for conducting online lectures were there. Various equipment for lecture recording was there such as high-quality video recording camera; headphones with Mic for live sessions; wireless collar Mic; various equipment for conducting lectures; video editing tools and equipment such as in hardware were computers of high configuration and in software were Adobe Master Collection, Articulate storyline 2, Camtasia studio 8.6 and data storage equipment were there. The research labs with latest equipment have been established in various domains. All the faculty members were provided with a laptop. HI-fi speed computing facilities were provided in the University for Research. Various software tools were made available

as per requirement of the researchers. Advanced and high-tech Language Lab was there in the university. The lab was equipped with all the required audio-visual aids.

As per the AQAR (2017), the University has been updating curriculum from time to time aiming to balanced curriculum integrating co-curricular and value-based education along with employability skills. The various curricular reforms have been done such as in the form of introducing Choice-Based Credit System. The University has offered Flexi Choice Based Credit System in its academic curriculum, in its endeavour to provide a quality education through a unique model framework. Model framework for program structure for all the program groups included semester-wise credit distribution prescribed at programme level for various course-types and minimum credits.

As per information sought from the IQAC Members and the SSR (2017), it has come to light that one of the broad educational goals of the University was to build a strong industry interaction by way of alumni networks and empanelment of expertise from industry. The alumni were involved in various activities of the university by becoming mentors to the students and members of various committees of the University. Regular alumni meet were conducted at the institution/faculty level. Interaction with alumni was a regular feature of the university. Alumni were involved in various activities and committees of the university. For example IQAC, Area Advisory Board, Admission Boards, Guest Lectures, Seminars, Career Counselling of passing out batches, Convocation, Annual festival, Alumni reunion etc.

As per the SSR (2017) and information availed from the University Website, it has come to light that the University has a provision of dual degree programmes in form of UG+ PG Dual Programmes; PG+PG Dual Programmes and Integrated UG+UG Programmes. For twinning programmes, the University has signed MoU in order to facilitate advance entry programmes with leading educational institutions in other countries.

As per the SSR (2017), various strategic initiatives have been taken by the University to promote internationalization in the strategic plan 2012-17 such as: Increased diversity and numbers of International faculty and students; Encouraged

joint Research Collaborations with reputed international universities and appointed the number of international faculty; Invited number of international delegates and speakers for workshops and conferences; Provided opportunities for global exposure to the students; Increased number of inbound-outbound students through student exchange programme; Increased number of national, international scholarships/ fellowships/ grants etc for the students and faculty. The University has a multi-pronged approach to attract international students including participation and discussion with higher education delegations visiting India. MoUs have been signed with the leading universities overseas for Semester Abroad Programme, student exchange programme, global emersion programme etc. The Faculty and students have participated in education fairs in other countries. International Facilitation Centre has been set up in the University with the objective to facilitate the International/foreign students in regard to FRRO registration, soft landing, their welfare as well as the conduct. All the programmes offered at the University were opened to all international students. PAN African Programme was offered to the students from African countries.

As per the AQAR (2015-16), the periodic audit in the University has helped in removing the gaps and take preventive action accordingly. The University has introduced "Three Tier Audit System" as a best practice to contribute to better academic and administrative functioning. The Audit is done in three stages: The Institutional Self Audit by IQAC (First Party Audit); Internal Audit by QAE, through team of IQAC members from other institutions (Second Party Audit). In preparatory (mock) audits conducted by QAE, the system is reinforced and gaps are identified and closed till the action is taken. External Audit is conducted by an Independent Agency (BSI- British Standards Institution) (Third Party Audit). The good practices are shared and practised throughout. The internal auditors undergo awareness and training workshops which enhance their knowledge and skill in implementing the processes.

As per the SSR (2017), the University has adopted various proactive mechanisms to facilitate the smooth implementation of research schemes/projects. The University has earmarked approximately 20% of its budget for research. The University has invested money and resources in creating infrastructure and awarding fellowships to

brilliant research scholars, procuring various other necessary research related material, annual maintenance charges, patent filing charges etc. The University has encouraged research by providing fellowships to the researchers. The University has well-defined guidelines for promoting faculty/staff member by giving financial benefits like a concessional fee for Ph.D. and other programmes. The University has a policy (G56) for funding research. Seed money is provided to the young and new faculty so that they can start work on a research problem. Simplification of procedures is done related to sanctions/purchases to be made by the investigators. Autonomy is given to the principal investigator/coordinator for utilizing overhead charges. Mandatory Annual Audit was conducted for all the funded projects. The Utilization Certificate along with an audited statement of the expenditure is sent to a funding agency and same is uploaded to the online portal creating for funding agencies. The University has allocated its own resources, in addition to resource generation through funded research projects for various research activities. The University supports student research/design projects at UG and PG level. The students are financially supported for designing innovative models for various competitions at national and international level. The University has encouraged filing patents and has also paid the fee for filing provisional patents as well as a fee for a request for the examination and maintenance of the patent granted.

Conclusion:

Thus the progress of quality improvement measures has been analyzed in terms of implementation of the NAAC Peer Team suggestions and how this implementation has resulted in quality improvement in various aspects of the University as covered by the NAAC criteria. On analyzing, it was found that maximum suggestions i.e. five suggestions were given related to criterion, Infrastructure and Learning Resources. Two suggestions per criterion were given related to Curricular Aspects, Governance, Leadership and Management. Least no. of suggestions i.e. one per criterion was given related to Student Support and Progression, Innovations and Best Practices and Research, Consultancy and Extension. In order to strengthen its infrastructure and learning aspect, the University has taken a number of constructive steps. The University has conducted a performance audit of various institutions / departments. A Performance Audit of the constituent institutions and departments of

the University is done biannually through an internal audit. The University has centralized and departmental library committees in order to ensure that the learning and research resources are adequately available, updated regularly, utilized optimally and benchmarked periodically. CBCS has been introduced in the university and there was a provision of twinning and dual programmes. For effective governance, the university has introduced "Three Tier Audit System" as a best practice to contribute to better academic and administrative functioning. The Functional autonomy was provided to the institutions/departments through the process of annual planning and budgeting. Alumni are involved in various activities and committees of the university. For encouraging research various strategic initiatives have been taken to promote the internationalization. The University has adopted various proactive mechanisms to facilitate the smooth implementation of research schemes/projects. The University has earmarked approximately 20% of its budget for research. The University has invested money and resources in creating infrastructure and awarding fellowships to brilliant research scholars, procuring various other necessary research related material, annual maintenance charges, patent filing charges etc.

CASE STUDY – VIII

3.5.8 Case-VIII Analysis of the Progress of quality improvement measures after the accreditation to the time of re-accreditation

Type of Case Study: Individual Case Study (Quality Processes adopted as per NAAC Peer Team Suggestions)

Conceptual Framework:

The results of table 3.5.8 revealed that the University considered as Case-VIII was given the suggestions related to five criteria i.e. Innovations and Best Practices, Teaching-Learning and Evaluation, Infrastructure and Learning Resources, Curricular Aspects and Students Support and Progression.

The University was suggested, to move towards an eco-friendly campus with a focus on water harvesting/conservation and tapping solar energy. One suggestion was to recruit the faculty as per the requirement of the courses. Four suggestions were

given related to criterion, Infrastructure and Learning Resources. The University was suggested, to enhance infrastructure facilities as per the needs of the campus. Six suggestions were given related to key aspect, Curricular Design and Development. Suggestions were given for reviewing various programs as per the needs of the students. The Four suggestions were given related to criterion, Student Support and Progression to enhance student support services.

Analysis of Data:

As per the AQAR (2012-13), (2013-14) and (2015-16), the University has taken various initiatives to make the campus eco-friendly such as Solar water heating plant has been installed; protecting and nurturing plants; strengthening the activities of Gaushala; promotion of bicycles, emphasis on use of the campus transport; insistence on the optimal usage of electricity; engaging staff and students for several eco-friendly initiatives.

On visiting the Campus, it was observed that the University has a well-equipped library. Improved facilities at the Central Library have been introduced by renovating it with high-speed internet access. A number of textbooks, journals, magazines, reference books were available in the library. The library was fully computerized by Libsys software. The Campus security was enhanced by adopting modern surveillance system in the form of CCTV cameras. The institution has created special facilities such as ramps, rails and special toilets to suit the special needs of differently-abled persons.

As per the AQAR (2015-16) and information sought from the IQAC Members, it has come to light that the IQAC has been advising the Deans/Heads to share research thrust areas with the staff members, suggesting ways to strengthen infrastructure, improve quality of the publication, encourage doctoral research, encouraging faculty members to apply for projects. The IQAC seeks suggestions from the students and staff to improve infrastructure and shares with the Deans/Heads. The University was following UGC Ph.D. Regulation 2016.

Table 3.5.8 : Case-VIII Analysis of Quality Processes adopted as per the NAAC Peer Team Suggestions

	NAAC PEER TEAM SUGGESTIONS	Cr.1	Cr.2	Cr.3	Cr.4	Cr.5	Cr.6	Cr.7	Domain Improved/Strengthened for Key Aspects
		Number of Suggestions							
Case-VIII	Innovative Practices	–	–	–	–	–	–	1	Environment Consciousness
	Recruitment of Faculty	–	1	–	–	–	–	–	Teacher Quality
	Infrastructure and Learning Resources	–	–	–	4	–	–	–	Physical Facilities Library as a Learning Resource
	Review of Programs	6	–	–	–	–	–	–	Curriculum Design and Development Academic Flexibility
	Student Support Services	–	–	–	–	4	–	–	Student Mentoring and Support

As per the AQAR (2012-13) and the AQAR (2015-16), the University has developed programmes to enhance the student's awareness and abilities in media ethics and to enhance awareness and abilities of social engagement. The University has developed knowledge exchange programmes under the university-industry linkage strategy. It has increased interaction with the professionals (journalism, advertising, and academic) by sending the students & the faculty to these industries. The University has updated the curriculum to make it industry relevant.

On visiting the University, it was observed that Craft based certificate courses were organized in the evening for students of the entire university. Core curriculum / extension and outreach programmes and diversity of courses and programmes were there in the university. The interdisciplinary advisory committee was constituted to reorient women studies to reflect on contemporary challenges. Various ways were explored to introduce Open Coursewares. This includes lectures, lecture notes, assignments, images, videos, project examples etc.

As per the AQAR (2015-16), the University has a mechanism for guidance and counselling at both department and inter-departmental level and the impact has been very encouraging evident by student satisfaction and achievements. Many industry personnel were invited on regular basis to create linkage with the industry and for the inputs for further improvement and placements.

As per the AQAR (2012-13) and the AQAR (2015-16), it comes out that the University has provided student support mechanism for coaching of competitive examinations. Coaching was provided for NET, SET, GATE, CAT, State PCS, UPSC and various other competitive exams. Formal remedial and bridge courses were introduced.

As per the AQAR (2012-13) and information sought from the IQAC Members, it has come to light that Core curriculum/extension and outreach programmes and diversity of courses and programmes were there in the university.

As per the AQAR (2015-16) and as per the information sought from the IQAC Members, it was revealed that alumni association was there in the University. Good

support was received in the form of feedback for academic, infrastructure, research and placement improvement.

As per information sought from the IQAC members, it was revealed that an interdisciplinary advisory committee was constituted to reorient women studies to reflect on contemporary challenges. Various ways were explored to introduce Open Coursewares. This includes lectures, lecture notes, assignments, images, videos, project examples etc.

As per information sought from the IQAC members and the AQAR (2012-13), it has come to light that the University has organized various awareness programmes related to nutrition, health, behavioural problems, community problems, social problems from time to time. The Department of Sociology has sensitized women workers of informal women's education centre on the importance of masks as well as provided them First Aid kit with masks.

Conclusion:

Thus the progress of quality improvement measures has been analyzed in terms of implementation of the NAAC Peer Team suggestions and how this implementation has resulted in quality improvement in various aspects of the university as covered by NAAC criteria. On analyzing, it was found that maximum suggestions i.e. six suggestions were given related to criterion, Curricular Aspects. Four suggestions per criterion were given related to Infrastructure and Learning Resources and Student Support and Progression. Least no. of suggestions i.e. one per criterion was given related to Innovations and Best Practices and Teaching, Learning and Evaluation. The university has updated the curriculum to make it industry relevant. Craft based certificate courses were organized in the evening for students of the entire university. Core curriculum/extension and outreach programmes and diversity of courses and programmes were there in University. Interdisciplinary advisory committee was constituted to reorient women studies to reflect on contemporary challenges and to introduce Open Coursewares. The University has made its best possible efforts to enhance infrastructure and learning resources as various initiatives were taken by the university. The Campus security has been enhanced by adopting modern surveillance system in the form of CCTV cameras. The institution

has created special facilities such as ramps, rails and special toilets to suit the special needs of differently-abled persons. The University has a mechanism for guidance and counseling at both department and inter-departmental level. The University has a provision of coaching for competitive examinations and formal remedial and bridge courses were also provided. The University has organized various awareness programmes related to nutrition, health, behavioural problems, community problems, social problems from time to time. The University has taken various initiatives to make the campus eco-friendly. To enhance the teacher quality, faculty and staff recruitment was done as per bylaws of the university and reported to Executive Council. The direct recruitment is done on the basis of merit through All India Advertisement and selections by the duly constituted Selection Committees as per the provisions made under UGC regulations. and as per UGC regulations and reported to the Executive Council.

CHAPTER – IV

CONCLUSIONS, IMPLICATIONS, LIMITATIONS AND SUGGESTIONS

4.1 CONCLUSIONS

In the light of the interpretation of the data, the investigator has to use all the care and caution in formulating the conclusions and generalizations. This is a final step of research that demands critical and logical thinking in summarizing the findings of the study. The investigator should not draw conclusions which are inconsistent among themselves or external realities. Conclusion is the essential part of every study as it provides a finishing touch and reviews the whole of work in critical manner. The objective of the present work was to study the role of NAAC Accreditation in Quality Improvement. In the light of the interpretation, the conclusions of the study are given below:

Conclusions of Objective 1- To identify the perceived outcomes of NAAC accreditation from the perspectives of the stakeholders of North Indian Universities.

1) Educational improvement in higher education institutions, quality improvement, quality culture, tool of SWOC, catalyst for institutional self-improvement, public accountability and enhanced reputation are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers.

2) New sense of direction and identity, quality assurance, quality enhancement and quality maintenance, and clarified roles and responsibilities are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and an average perceived as per the percentage of responses received from teachers.

3) Promotion of intra-institutional interactions, enhanced work environment and increased collaboration in decision making are enlisted as average perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers.

4) Formation of departmental research committees for encouraging and advancing research and liaisons and collaboration with national and international institutions for different courses and research related activities are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members, teachers and students in terms of indicators of quality initiatives as per NAAC criterion, research, consultancy and extension.

5) Various infrastructural facilities in the campus are adequate to contribute towards effective ambience for curricular, extra-curricular and administrative activities and proper maintenance of infrastructure are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members, teachers and students in terms of indicators of quality initiatives as per NAAC criterion, infrastructure and learning resources.

6) Enhancement of various welfare measures for students in the form of scholarships, freeships, and educational loans is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members, teachers and students in terms of indicator of quality initiatives as per NAAC criterion, Student Support and Progression.

7) Freedom to make choices among the available courses as a result of innovation in the curriculum, focus on employability and innovation in the curriculum, flexible time-table and academic plan of the university for providing varied learning experiences both at the institution and on the field and curriculum is updated as per perceived needs are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers and average perceived as per the percentage of responses received from the students. These perceived outcomes of accreditation are in terms of indicators of quality initiatives as per NAAC criterion, curricular aspects and teaching, learning and evaluation.

8) Emphasis on well-administered admission rules, Information on all type of scholarships at the time of admission as per student diversity for welfare of

students and the evaluation of performance of teaching faculty by students through teacher assessment questionnaire are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers and average perceived as per percentage of responses received from the students. These perceived outcomes of accreditation are in terms of indicators of quality initiatives as per NAAC criterion, teaching, learning and evaluation.

9) Innovative teaching methods being encouraged after NAAC's assessment is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members and teachers. Teachers in the university employ innovative methods of teaching are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the students.

10) Orientation towards research increased after NAAC accreditation in the university and encouraging research facilities are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers.

11) Suitable facilities for differently-abled students have been given priority and adequate facilities of online teaching and learning resources are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers and average perceived as the per percentage of responses received from the students. These perceived outcomes of accreditation are in terms of indicators of quality initiatives as per NAAC criterion, infrastructure and learning resources.

12) Special coaching classes being introduced, effective implementation of career guidance and placement cell for students, effective implementation of the grievance redressal cell for students and alumni meets are being conducted from time to time are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers and average perceived as per percentage of responses

received from the students. These perceived outcomes of accreditation are in terms of indicators of quality initiatives as per NAAC criterion, student support and progression.

13) Sound and good e-Governance in the university is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members and teachers and average perceived as per the percentage of responses received from the students.

14) Periodic curriculum revision and choice-based credit system are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and average perceived as per the percentage of responses received from the teachers.

15) Feedback regarding curriculum design and enrichment sought from students and teachers and balanced curriculum covering need-based, socially relevant programs, Indian heritage and values are enlisted as the highly perceived outcomes of accreditation as per the percentage of responses received from the IQAC members and average perceived as per percentage of responses received from the teachers and students. These perceived outcomes of accreditation are in terms of indicators of quality initiatives as per NAAC criterion, curricular aspects.

16) Accreditation process positively enhanced publicity and transparency in the admission process, ICT as a learning resource is extensively used after NAAC's Assessment are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers. Inter-departmental collaboration in teaching and research related activities is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members and average perceived as per the percentage of responses received from the teachers.

17) Publishing of papers in national and international journals in University is given more impetus after accreditation, some activities organized or

managed by the faculty for an external agency, enhancement in the organization of extension activities are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and average perceived as per percentage of responses received from the teachers. These perceived outcomes of accreditation are in terms of indicators of quality initiatives as per NAAC criterion, research, consultancy and extension.

18) Procurement of latest books and number of journals in the university library is enlisted as highly perceived outcome of accreditation as per percentage of responses received from the IQAC members and average perceived as per percentage of responses received from the teachers. This perceived outcome of accreditation is in terms of indicator of quality initiatives as per NAAC criterion, infrastructure and learning resources.

19) NAAC accreditation process led to co-ordination of the academic and administrative planning and implementation, organizational work is efficiently carried out through various committees, more incentive for research, teaching and publication output, interpersonal relationship between all stakeholders has improved and accounts are audited often are enlisted as highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and average perceived as per percentage of responses received from the teachers. These perceived outcomes of accreditation are in terms of indicators of quality initiatives as per NAAC criterion, governance, leadership and management. Various innovative and best practices introduced in the university as a result of NAAC accreditation is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members and average perceived as per percentage of responses received from the teachers.

20) Accreditation process positively impacted teaching-learning process in the University is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members and teachers. Teachers in the university are more oriented towards using latest and

innovative pedagogy is enlisted as the highly perceived outcome of accreditation as per the percentage of responses received from the students. Balanced Curriculum covering need-based, socially relevant programs, Indian heritage and values is enlisted as an average perceived outcome of accreditation as per percentage of responses received from the IQAC members, teachers and students.

21) Sound and good e-Governance in the university is enlisted as an average perceived outcome of accreditation as per percentage of responses received from the students in terms of indicators of quality initiatives as per NAAC criterion, governance, leadership and management.

22) A quality cell in the form of IQAC in the university is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members and teachers.

23) Introduction of inter-disciplinary and innovative schemes in thrust areas is enlisted as an average perceived outcome of accreditation as per percentage of responses received from the IQAC members and least perceived as per the percentage of responses received from the teachers.

Conclusions of Objective 2: To investigate the alignment of perceived outcomes of accreditation by the stakeholders of accredited North Indian Universities with the stated assessment and accreditation objectives as set by UGC.

1) Accreditation agency through its process of assessment and accreditation as per UGC regulations should accord recognition to the quality and excellence of education imparted by Higher Educational Institutions and thereby to advance academic quality. Academic quality refers to the procedures that emphasize students' achievement and high expectations of teaching, learning and research related activities. In the NAAC accredited universities, after accreditation there was periodic curriculum revision, introduction of inter-disciplinary and innovative schemes in thrust areas, strengthening of interaction with industry/trade/civil society organizations/educational institutions and choice-Based Credit System was introduced. There was a

focus on employability and innovation in the curriculum. The Curriculum was updated as per the perceived needs. There was a provision of remedial and bridge courses for the weaker students. The accreditation process has positively impacted teaching-learning process in the university and the teachers were more oriented towards using latest and innovative pedagogy. Innovative teaching methods were encouraged after the NAAC's accreditation. There was a special focus on the interactive learning through promotion and the use of ICT. Orientation towards research has increased after the NAAC's accreditation. Encouraging research facilities were there. Writing and publishing of papers in national and international journals in the University were given more impetus after accreditation. Thus all the above stated perceived outcomes of accreditation revealed advanced academic quality in the NAAC accredited universities as is being emphasized as a prerequisite feature of accredited universities in the Ist assessment and accreditation objective.

2) Accreditation agency's main task is to accredit higher educational institutions on the basis of assessment criteria. By giving accreditation status to higher educational institutions, accreditation agency makes clear the status of these institutions in terms of quality aspect to stakeholders of institutions. All this helps stakeholders to make informed choices with regard to higher educational institutions. NAAC accredited Universities due to their accreditation status has enhanced reputation and public accountability. The Accreditation process in the NAAC Accredited universities has positively enhanced publicity and transparency in the admission process. In these universities, there was an emphasis on well-administered admission rules indicating that fair and non-discriminating policy was followed. All this revealed that the NAAC accredited Universities as a result of recognition of quality accorded to them by accreditation agency have been giving right direction to the stakeholders in making the informed choices with regard to higher educational institutions.

3) One of the assessment and accreditation objectives as per regulations i.e. UGC Regulations, 2012 states that accreditation agency should assess

whether higher educational institutions enable students, teachers and other stakeholders to provide inputs concerning the quality of education imparted. For this NAAC through its assessment and accreditation process assess whether higher educational institutions sought feedback from stakeholders concerning the quality of education in various forms. The student satisfaction surveys concerning the quality of education imparted in the university were initiated. The students were intimate about the results of different surveys and action taken on the basis of results. The University administration focused on keeping and maintaining a healthy relationship with students, alumni and parents and as a result, interpersonal relationship between all the stakeholders has improved. Thus all this is in tune with the 3rd assessment and accreditation objective related to inputs sought from stakeholders concerning the quality of education imparted by the higher educational institutions.

4) Accreditation agency through its process of assessment and accreditation as per UGC regulations should facilitate Higher Educational Institutions to augment quality, by benchmarking uniform reference points pertaining to academic standards. The NAAC accredited universities have IQAC which has further led to administrative and academic excellence thereby keeping a check on quality aspect. Stakeholders from the NAAC accredited universities responded that NAAC assessment is essential for educational improvement in higher education institutions. The stakeholders also responded that NAAC process of assessment and accreditation has motivated their university towards quality improvement. The NAAC accredited Universities have quality assurance mechanism in the form of IQAC. This was an initiative put forth by NAAC in facilitating these institutions to augment quality, by benchmarking uniform reference points pertaining to academic standards. Thus all this is in tune with the 4th assessment and accreditation objective.

5) One of the assessment and accreditation objectives as set by UGC states that accreditation agency through its assessment and accreditation process should facilitate Higher Educational Institutions to secure additional funding and other incentives, if found eligible, from appropriate regulatory and or

funding agencies. Funds were provided for the successful completion of various research projects in the NAAC accredited universities. In these universities after the accreditation more incentives for research, teaching and publication were provided. Thus the NAAC accredited universities were putting their best possible efforts to secure additional funding and other incentives from appropriate regulatory and or funding agencies as is even emphasized in one of the objectives set by UGC for accreditation agency.

6) The NAAC accredited universities have liaisons and collaboration with national and international institutions for different courses and research related activities. Reasonably international linkages have been established in the university. This clearly reflects that the NAAC accredited universities were in tune with UGC's stated assessment and accreditation objective related to international collaborations.

7) One of the assessment and accreditation objectives as set by UGC states that accreditation agency through its assessment and accreditation process should facilitate students achieve learning outcomes appropriate to the course and relevant to the context. For effective development of the curricula after the NAAC accreditation process, various new quality sustenance and quality enhancement measures were undertaken by the universities as revealed from the IQAC member's and the teacher's responses. There was periodic curriculum revision; there was an Introduction of inter-disciplinary and innovative schemes in thrust areas; the strengthening of interaction with industry/trade/civil society organizations/educational institutions and Choice-Based Credit system was introduced. Employability and innovation was addressed in the curriculum. In the NAAC accredited universities feedback was sought from stakeholders regarding curriculum design and enrichment and curriculum is updated as per perceived needs. After the NAAC's accreditation there was special focus on interactive learning through promotion and use of ICT. Suitable facilities for differently-abled students have been given priority. Thus the NAAC accredited universities through various means were facilitating students to achieve learning outcomes appropriate to their course and relevant to their context as is even

emphasized in one of the assessment and accreditation objectives set by UGC for accreditation agency to facilitate students achieve learning outcomes appropriate to their course and relevant to their context.

8) University Grants Commission has issued guidelines for students' entitlements. All necessary actions were taken by the NAAC accredited universities regarding prerequisites of students' entitlements related to 'Admission', 'Quality of teaching and learning', 'Financial Aid', 'Infrastructure' as set by the commission.

9) NAAC through its assessment and accreditation process assess what efforts higher educational institutions are putting to maintain teaching and research standards thereby motivating these institutions to maintain aforesaid standards. After the NAAC's assessment innovative teaching methods were encouraged. The Teachers and the students focused on publication of papers in national and international journals. Best consultancy services were provided by the faculty. Thus majority of the stakeholders responses revealed that the NAAC accredited Universities were putting their best efforts for maintaining and raising teaching and research standards by providing adequate facilities.

10) Accreditation agency through its process of assessment and accreditation as per UGC regulations should facilitate effective teaching-learning and access to quality teaching-learning material permitted by the Higher Educational Institution. The NAAC accredited Universities were putting their best possible efforts for providing effective teaching-learning and access to quality teaching-learning material. As majority of the stakeholders responses affirmed that ICT as a learning resource was extensively used after NAAC's assessment. The library resources were adequate and supplemented from time to time. There was procurement of latest books and number of journals in the university library.

11) One of the assessment and accreditation objectives as per regulations i.e. UGC Regulations, 2012 states that the accreditation agency should facilitate higher educational institutions to achieve effective governance mechanisms

in their management and administration. For this NAAC through its assessment and accreditation process assess what efforts higher educational institutions are putting for effective governance mechanism in their management and administration thereby further motivating these institutions for this. After the NAAC accreditation there was increased collaboration in decision making resulting in increased unity of purpose. There was sound and good e-Governance in the accredited universities. A quality cell in form of the IQAC has been formed which has further led to administrative and academic excellence thereby keeping a check on the quality aspect. The organizational work was efficiently carried out through various committees. The University administration focused on keeping and maintaining a healthy relationship with students, alumni and parents and as a result of this, interpersonal relationship between all stakeholders has improved. After the NAAC accreditation accounts were audited often and quality assurance and enhancement mechanism was in place.

Conclusions of Objective 3: To explore the contribution of quality processes, adopted consequent to NAAC accreditation, towards quality improvement in North Indian Universities.

1) Eight NAAC Accredited Universities selected for the present study were given NAAC Peer Team suggestions in the context of Quality Assurance Mechanism, External Academic Audit, Faculty Development Programmes, Faculty Empowerment Strategies, Campus Wide Networking, Promotion of Research, Suitable Facilities as per the Needs of the Area, Autonomous College System, Infrastructure and Learning Resources, Teaching-Learning and Use of ICT, Decentralization of Academic Administration, Choice-Based Credit System, Examination System, Review of Programs, Consultancy Services, Recruitment of Faculty, Student Support Services, Enrollment of Foreign Students and Innovative Practices. In the study, all the suggestions were further mapped with the NAAC criteria. All this, highlighted quality processes, adopted consequent to NAAC Accreditation, by the Universities in context of NAAC Peer Team suggestions. This further revealed domains improved/strengthened for Key Aspects, reflecting the contribution of quality processes in the Universities.

2) The NAAC Peer Team suggestions regarding internal quality assurance cell to two Universities and compliance of the suggestion by both the universities have resulted in establishing a strategic quality management system aiming towards quality assurance and ensuring a continuous reform process.

3) The NAAC Peer Team's suggestion to introduce mechanisms for periodic external academic audit for quality improvement to two universities has resulted in implementation of a quality assurance strategy emphasizing on self-reflection and self-improvement rather than compliance with predetermined standards. This has helped the universities in evaluating their 'educational quality processes' through both external quality assurance mechanism and internal quality assurance mechanism thereby resulting in overall quality improvement.

4) Four Universities were given recommendations regarding faculty development programs and faculty empowerment strategies. NAAC Peer Team recommendations regarding faculty development programs and faculty empowerment strategies is clear indicator of the way NAAC is emphasizing on the development and active participation of faculty in higher education institutions.

5) Two Universities were given recommendations regarding Campus-wide network thus emphasizing on IT infrastructure. This has resulted in strengthening e-governance in the universities. Emphasizing on NKN connectivity has resulted in high speed data communication network thereby facilitating knowledge sharing and collaborative research in universities.

6) Seven NAAC accredited Universities were given suggestions to promote research in terms of resource mobilization for research, research facilities, research publications and awards and collaborations. On compliance of these suggestions these Universities have adopted various proactive mechanisms to facilitate the smooth implementation of research.

7) One NAAC accredited University was given recommendation to make an attempt to institute autonomous college system. The university has encouraged the colleges of good standing under their horizon to apply for autonomous status. The University has advanced the application of eligible colleges to UGC.

8) Seven NAAC accredited universities were given recommendations related to infrastructure and learning resources. As per compliance of the suggestions these higher education institutions have focused on expansion of infrastructural facilities to meet future development and also to keep focus on maintenance of these facilities.

9) Three NAAC accredited universities were suggested to emphasize more on ICT related activities by maximizing the use of ICT in the regular activities of the departments and by offering courses in ICT proficiency for all students. The Universities have changed traditional classrooms to smart classes via multimedia, a combination of various digital media types into an integrated multi-sensory interactive application for presentation to convey information to an audience. The Universities have enriched teaching-learning process by different innovative methods using latest hardware and software. The ICT enabled teaching/learning processes were prioritized. The faculty uses multimedia techniques involving graphics/animations and visuals to make the class room teaching and learning interesting and attractive.

10) Five NAAC accredited universities were given recommendations related to governance, leadership and management and curricular aspect thereby suggesting these universities to focus on the decentralization of academic administration and introduction of choice-based credit system.

11) The NAAC Peer Team suggested two Universities to make some constructive changes in the examination system. One of the Universities was suggested to work towards modernization of the examination system to suit the locational and climatic changes of the State. The University has done decentralization of evaluation at PG level for speedy declaration of results.

Photocopy of the answer scripts is provided when demanded by the candidate.

12) Seven NAAC accredited Universities were suggested to review some of their programs. Various curricular reforms have been done such as in the the form of introducing Choice-Based Credit System. The Universities have also laid emphasis on multi-skill development in their programs by introducing varied contents.

13) Five NAAC accredited Universities were recommended to augment their laboratory and library facilities. The library collection/services were upgraded to meet the growing needs of the teaching faculty/students. Modernization of the laboratories and further enhancement of the students' support services were encouraged.

(13) Two NAAC accredited Universities were given recommendations regarding facilitation process for enrollment of foreign students. The Universities have the International Students Cell for providing necessary guidance of admission. All the correspondence relating to the international students admission was addressed to the Office of International Relations of the institution.

Conclusions of Objective 4: To identify the challenges faced by the stakeholders during the accreditation process.

1) IQAC members and teachers from the accredited universities responded that added workload was faced as a challenge during the accreditation process. Staff overloaded with work is a bane in institutions. As per response of the IQAC members, IQAC core team is on the toes as they need to prepare reports at every stage. In most of the institutions, no clerical help is provided so right from collating to typing they are pressurized.

2) Teachers from the accredited universities responded unrealized impact of the accreditation process as challenge faced during the accreditation.

3) Teachers from the accredited universities revealed lack of basic knowledge or formal training of the accreditation process as a challenge faced during the accreditation process. Lack of understanding of what the accreditation process is, the documents and forms needed, how to prepare needed documents, what are proper evidences and how to prepare and collect them, what is a corrective action and continuous improvement plan and how to prepare them, and how to put accreditation requirements before someone eyes while preparing for their courses was major challenge faced by the institution personnel during the accreditation process.

4) IQAC members and teachers from the accredited universities stated the staff inadequacy as a challenge faced during the accreditation process. Staff inadequacy leads to work overload. Due to work overload, faculty members and staff of the institution cannot completely devote themselves to work on the accreditation requirements.

5) IQAC members and teachers from the accredited universities responded lenient attitude of some teachers as a challenge faced during the accreditation process. As entire staff involvement in the report making is limited. As they see accreditation as a work not covered under regular teaching activities and are not serious in providing inputs on their behalf as per the accreditation requirement.

6) IQAC members and teachers from the accredited universities mentioned that during the accreditation there was lack of teamwork due to communication deficit among faculty members of different departments.

7) Documentation was a big problem as the institutions still not evolved a way of centralizing documents with details of all events on the campus.

Conclusions of Objective 5: To identify the progress of quality improvement measures after the accreditation to the time of re-accreditation.

1) On analyzing the NAAC Peer Team Suggestions given to the University considered as Case-I, it was found that maximum suggestions i.e. three suggestions were given related to criterion, Teaching, Learning and

Evaluation. Two suggestions per criterion were given related to Governance, Leadership and Management, Infrastructure and Learning Resources and Innovations and Best Practices. Least no. of suggestions i.e. one per criterion was given related to Curricular Aspects and Research, Consultancy and Extension. The University has strengthened its criterion, teaching, learning and evaluation aspect by changing traditional classrooms to smart classes via multimedia thereby prioritizing ICT enabled teaching-learning process; initiating e-governance services for modernizing the evaluation process and motivating various departments and research centres to organize as much as possible faculty development programs for the overall development of faculty. The University has upgraded IQAC to DIQA. The DIQA not only worked as the main documentation centre of the institute but has also helped the University to address the significant weak areas effectively. School system has been introduced among the departments thus resulting in the decentralization of academic administration. It has resulted in the strengthening of the governance, leadership and management aspect of the university. In order to strengthen IT Infrastructure, the University has availed all the NKN services and has upgraded IQAC to DIQA for successfully implementing e-governance.

2) The University considered as Case-II, was given three suggestions related to criterion, Teaching-Learning and Evaluation. Two suggestions per criterion were related to Curricular Aspects and Research, Consultancy and Extension. Least no. of suggestions i.e. one per criterion was given related to student support and Progression and to Innovations and Best practice. In order to raise the teacher quality, the faculty members were encouraged to pursue academic and research interest of one's own choice area. Significant emphasis on research orientation and facilities for the same were provided; the teachers were encouraged to take up research projects sanctioned by various State and Central government organizations and sponsored by industry / research organizations and researchers have visited from institutes / industries of repute, though not as the adjunct professors. The University was already in the process of creating the Chair Professor and the Adjunct

Professor positions. The University has developed and offered academic programs of high quality in various domains to students as part of the curriculum for the enrichment of skills. The University has made hardware projects a part of B.Tech. curriculum. All these quality improvements have made constructive changes in the curricular aspect of the university. The University has encouraged joint guidance of thesis and has encouraged faculty members from different disciplines to guide UG/PG or Ph.D. thesis jointly via intra-departmental and inter-departmental efforts. The faculty has been regular in publishing in various journals with high impact factor. All faculty members of the University were allowed to undertake industrial consultancy work with the prior permission of competent authority thereby indicating progress. The University has promoted sports, cultural, NCC and NSS activities thereby emphasizing on student support and progression aspect.

3) On analyzing the NAAC Peer Team Suggestions given to the University considered as Case-III, it was found that three suggestions were given related to criterion, Teaching, Learning and Evaluation. Two suggestions per criterion were given related to Curricular Aspects and Governance, Leadership and Management. Least no. of suggestions i.e. one per criterion was given related to Infrastructure and Learning Resources, Research, Consultancy and Extension and Student Support and Progression. The University has changed traditional classrooms to smart classes via multimedia, a combination of various digital media types of an integrated multi-sensory interactive application for presentation to convey information to an audience, enriched by different innovative methods using latest hardware and software techniques. The ICT enabled teaching/learning processes were prioritized. For filling the vacant faculty positions, administrative department of the University gave advertisements in various newspapers. The University provides Certificate and Diploma Programs and Degree programs after 10+2. The separate arrangements for offering the Certificate / Diploma programs have been made. AIEEE score was considered while admitting students as per the IQAC Members. The

University has delinked the certificate and diploma programs from the degree programs thereby making separate arrangements for both. The University offers twinning programs in certificate-Diploma programs from the year 2014. Separate arrangements have been made in form of different cells i.e. the UG Cell, the PG Cell and the Diploma Cell as per the NAAC Peer Team Suggestion to delink the certificate and diploma programs from the Degree programs as offered by the university. A draft related to the revision of curriculum was prepared separately by each department as per their requirement and was presented to the respected Board of Studies. All this reflects the university's effort in strengthening the curricular aspect. Governing structure of the University was highly efficient. For governance, the university has the following statutory authorities: the Syndicate, the Senate, the Finance committee, the Standing committee for academic affairs, the Faculties, the Boards of Studies and the Planning Board. All this led to the decentralization of academic administration. The University has established Internal Quality Assurance Cell (IQAC). IQAC cell was functional in the university.

4) On analyzing the NAAC Peer Team Suggestions given to the University considered as Case-IV, it was found that maximum suggestions i.e. five suggestions were given related to criterion, Infrastructure and Learning Resources which means university in future should also concentrate on strengthening this criterion. Three suggestions were given related to criterion, Student Support and Progression. Two suggestions were given related to criterion, Teaching, Learning and Evaluation. Least no. of suggestions i.e. one per criterion was given related to Curricular Aspects and Research, Consultancy and Extension. The University has modernized laboratories with hi-tech facilities as per requirement of ongoing programmes. The University library has Library Management Software for Library Automation and library housekeeping work. Each faculty has been provided with the spacious workstations to carry out the day to day activities as being observed on visiting the university. The University has well-equipped health centres in all the campuses. The University has augmented

its infrastructure enormously. The University has good student mentoring system which helps in identifying academically weak students and thereby guiding them from time to time. In order to raise the teacher's quality, qualification of the faculty members is as per the norms of UGC/AICTE. For strengthening curricular aspect, Choice-Based Credit System was introduced in university in 2015. The Curriculum was revised for implementing CBCS and it was approved by the Academic Council. In order to encourage research, the University has made increased collaborative linkages with other institutes for teaching and research activities.

5) The progress of quality improvement measures has been analyzed in terms of implementation of the NAAC Peer Team suggestions and how this implementation has resulted in quality improvement in various aspects of the University as covered by the NAAC criteria. On analyzing the NAAC Peer Team Suggestions given to the University considered as Case-V, it was found that two suggestions per criterion were given related to Curricular Aspects, Student Support and Progression and Research, Consultancy and Extension. Least no. of suggestions i.e. one per criterion was related to Teaching-Learning and Evaluation, Infrastructure and Learning Resources and Governance, Leadership and Management. Choice-Based Credit System was introduced in different departments of the University. As a result, all the departments of the University designed curriculum as per CBCS requirement and various curricular reforms have been done to integrate co-curricular and value-based education along with employability skills. The University has a facility of providing competent academic counseling and placement services to its students. The University has various committees/well-established centres to attend to the general grievances of students. Various initiatives have been taken by the university to encourage research as was revealed from the fact that University-industry interaction centre with IPR cell was there and consultancy rules as per UGC guidelines were followed to promote consultancy services, patents and technology transfer. The University has a provision of granting duty / academic leaves to the teachers as and when required for pursuing a higher degree and for participating in conferences /

symposia / workshops or for other academic/research purposes in other institutes in India as well as abroad. The University-level Faculty Development Centre / Academic Staff College was there for carrying out various faculty development programmes thereby emphasizing on raising the teacher quality. The University has Technical Services Department with a qualified Manager to take care of all infrastructures.

6) The University considered as Case-VI was given the suggestions related to seven criteria i.e. Innovations and Best Practices, Infrastructure and Learning Resources, Curricular Aspects, Student Support and Progression, Governance, Leadership and Management, Research, Consultancy and Extension and Teaching-Learning and Evaluation. On analyzing the NAAC Peer Team Suggestions it was analyzed that maximum suggestion i.e. four suggestions were given related to criterion, Infrastructure and Learning Resources. Three suggestions per criterion were given related to Governance, Leadership and Management, Curricular Aspects, Research, Consultancy and Extension and Student Support and Progression and Innovations and Best practices. One suggestion was given related to criterion, Teaching-Learning and Evaluation. The University has made its best possible efforts to enhance infrastructure and learning resources as the university is self-sufficient in terms of space and facilities for teaching and research activities. The University library services are offered electronically through a web-enabled integrated digital information system. The University has laboratories with advanced equipment and facilities to aid and stimulate research and Hostel have energy-efficient features installed in the rooms as part of the 'Green Campus'. In the University functional autonomy was provided to the institutions/departments through the process of annual planning and budgeting thereby introducing the decentralization of academic administration.

7) On analyzing the NAAC Peer Team Suggestions given to the University considered as Case-VII, it was found that maximum suggestions i.e. five suggestions were given related to criterion, Infrastructure and Learning Resources. Two suggestions per criterion were given related to Curricular

Aspects, Governance, Leadership and Management. Least no. of suggestions i.e. one per criterion was given related to Student Support and Progression, Innovations and Best Practices and Research, Consultancy and Extension. In order to strengthen its infrastructure and learning aspect, the University has taken a number of constructive steps. The University has conducted a performance audit of various institutions/departments. A Performance Audit of the constituent institutions and departments of the University is done biannually through an internal audit. The University has centralized and departmental library committees in order to ensure that the learning and research resources are adequately available, updated regularly, utilized optimally and benchmarked periodically. CBCS has been introduced in the university and there was a provision of twinning and dual programmes. For effective governance, the university has introduced "Three Tier Audit System" as a best practice to contribute to better academic and administrative functioning. Functional autonomy is provided to the institutions/departments through the process of annual planning and budgeting. Alumni are involved in various activities and committees of the the university. For encouraging research various strategic initiatives have been taken to promote internationalization. The University has adopted various proactive mechanisms to facilitate the smooth implementation of research schemes/projects. The University has earmarked approximately 20% of its budget for research. The University has invested money and resources in creating infrastructure and awarding fellowships to brilliant research scholars, procuring various other necessary research related material, annual maintenance charges, patent filing charges etc.

8) On analyzing the NAAC Peer Team Suggestions given to the University considered as Case-VIII, it was found that maximum suggestions i.e. six suggestions were given related to criterion, Curricular Aspects. Four suggestions per criterion were given related to Infrastructure and Learning Resources and Student Support and Progression. Least no. of suggestions i.e. one per criterion was given related to Innovations and Best Practices and Teaching, Learning and Evaluation. Curricular aspect in the University was

strengthened as University was following UGC Ph.D. Regulation 2016; University has updated the curriculum to make it industry relevant; Craft based certificate courses were organized in the evening for students of entire university; core curriculum/extension and outreach programmes and diversity of courses and programmes were there in the University; interdisciplinary advisory committee was constituted to reorient women studies to reflect on contemporary challenges and to introduce Open Coursewares. The University has made its best possible efforts to enhance infrastructure and learning resources as various initiatives were taken by the university. The Campus security has been enhanced by adopting modern surveillance system in the form of CCTV cameras. The institution has created special facilities such as ramps, rails and special toilets to suit the special needs of differently-abled persons.

4.2 EDUCATIONAL IMPLICATIONS

The present study has made several important contributions in terms of perceived outcomes of accreditation from the perspectives of the stakeholders; best practices to cope up with the challenges faced during the accreditation process and analysis of the quality processes adopted by the accredited universities.

- The present study will be helpful in creating awareness in the higher education institutions regarding various benefits of being accredited institution. Results of the present study have revealed the various perceived outcomes of accreditation which are clear indicators of benefits of accreditation to the higher education institutions. Results revealed that, NAAC assessment and accreditation is essential for educational improvement in higher education institutions; motivates institutions towards quality improvement; has made quality a culture of higher education institutions; acts as a tool of SWOC i.e. help higher education institutions in identifying their strengths, weaknesses, opportunities and constraints; gives a new sense of direction and identity to the institutions; promotes intra-institutional interactions in the institution; acts as a catalyst

for institutional self-improvement; help institutions in various domains of quality such as quality assurance, quality enhancement and quality maintenance in totality; results in public accountability of the institution; as award of status enhances the reputation of higher education institutions; enhances the work environment in the universities. As per findings of the study, accreditation results in increased collaboration in decision making resulting in increased unity of purpose. As a result of, assessment and accreditation every member of university becomes clearer about his role and responsibilities.

- The results of the present study related to the perceived outcomes of accreditation in terms of indicators of quality initiatives as per NAAC Criteria i.e. Curricular Aspects, Teaching-Learning and Evaluation, Research, Consultancy and Extension, Infrastructure and Learning Resources, Student Support and Progression, Governance, Leadership and Management and Innovations and Best practices will be helpful for administrators, IQAC, staff, students, parents and other society members. They will become aware of the benefits they can avail as per their needs and requirements, of being a part of NAAC accredited higher education institutions.

- The present study will be helpful for the society as the results indicate that how accredited universities have adopted various measures related to all aspects of the quality parameters as set by the NAAC and how these are in tune with the stated assessment and accreditation objectives as set by UGC. This awareness will help parents and students to make wise decisions while opting for admission to the higher education institutions.

- The results of the study will also be beneficial for non-accredited higher education institutions. The present study has highlighted various quality processes adopted as a result of compliance with the NAAC Peer Team Suggestions by the 8 NAAC Accredited Universities taken as a sample. As before going for accreditation, non-accredited higher education institutions

can take suitable measures related to adequate quality processes, of which they might not be aware.

- The present study has highlighted various challenges faced during the accreditation process and best practices to coping up with these challenges. All this will be helpful for administrators, IQAC members and staff of higher education institutions. Beforehand knowledge of challenges and if they exist, what strategies to be adapted to cope with these challenges, will help to conduct accreditation smoothly in higher education institutions.

- Positive changes expected in the institution, on overcoming the challenges faced during the accreditation process have also been highlighted. The knowledge of this will motivate administrators, IQAC members and staff of higher education institutions to actively participate in accreditation process of their institution.

4.3 LIMITATIONS AND RECOMMENDATIONS

4.3.1 Limitations

- The wide geographical area of the study made data collection challenging.
- The data collection from different stakeholders was not easy. Given the time constraints, getting fair accurate responses from the stakeholders was difficult.

4.3.2 Recommendations

1) Staff of the institution going for accreditation should be oriented regarding the whole process and what is to be done for successfully achieving the target of accreditation process. IQAC cell of the institution should organize orientation sessions for the staff of the institution so as to keep them abreast with all the prerequisites of the accreditation process. The quality and quantity of the work must be specified in a clear terms to staff during their orientation. Staff must be made to understand what is and what is not expected of them. This orientation should include materials that specify how and where to get the information and materials that will help them to perform their work well.

2) Institution with the help of IQAC cell should organize training workshops for faculty and staff to teach them how to prepare needed accreditation documents such as course specifications and course reports. Institution should encourage faculty and staff to attend workshops in order to be conscious of the latest developments going on in the accreditation process or quality assurance mechanism in country or all over the world. Workshops on how to design course assessment tools and how to measure student learning is vital to be provided for faculty. Workshops on mapping course learning outcomes with program objectives, student outcome, class learning activities, and assessment tools are very important to be offered as well.

3) Stakeholders of the institution should be encouraged to work as a team. IQAC core team should conduct timely meetings for staff members of the institution to encourage them to share any concerns regarding accreditation process with them. It should be made sure that everyone involved in the process knows the key issues related to accreditation process.

4) Assign one faculty member in each program/department as the quality officer to facilitate the accreditation process, answer faculty questions related to all phases and requirements of the accreditation, help faculty preparing needed documents, and help program head writing the self study report, SSR. The quality officers can be a member of the IQAC cell that serves as the institution quality centre.

5) Quality culture should be promoted in the institution and to be made a lifestyle to be reflected in each and every activity of the institution. All university or college academic, administrative, and service units should appreciate the accreditation process going on and have a proactive role in its success. This means that all units should understand accreditation requirements and how they will contribute to fulfill those requirements. They should also understand and believe how quality is a team work and not an individual effort and accreditation process will positively add laurels to the whole university or educational institute. All this will result into public confidence in the educational level they provide students with. Everyone

needs to understand that fulfilling all the accreditation requirements will result into improved quality.

6) It should be explained to faculty and supporting staff that how attaining accreditation will increase the public confidence in the program and institution. All this will have positive impact on the number of students, research funds, and industry support to the institution. This will make staff to show more concern for accreditation process and they will work with more enthusiasm.

7) Institution should recognize good work so that staff members work with complete enthusiasm for achieving goal of accreditation in the real sense.

8) Set continuous improvement as a target of the institution. Every department should work in the way that continuous improvement becomes the part of daily activity.

9) Interdepartmental initiatives should be encouraged through sharing of ideas and facilities leading to new synergy. This can be possible through organizing various inter-departmental activities.

10) Institutions should appoint adequate staff so that appropriate duties should be assigned equally to all staff members without extra workload on any other staff member.

11) IQAC Members should encourage staff to attend events organized by the accreditation agency so as to update themselves with the latest in accreditation field.

12) IQAC Members should keep connect with IQAC Members of other institutions so as to adopt good initiatives in quality process.

13) IQAC should do a rigorous ‘mock’ accreditation with key-point people at least 2-3 months prior to the Peer-Team visit.

14) IQAC should provide a brief of the Peer Team Members to every staff member of the institution who will meet the members so as to make them comfortable

during peer team visit and in this sense; it will lessen the load of peer team evaluation.

15) IQAC prior to the visit of peer team in the institution should make everyone in the institution feel that peer team will be there for sharing information, to give valuable suggestions and not just to test the institution.

4.4 SUGGESTIONS FOR FURTHER STUDIES

In the light of findings of the study, the investigator suggests the following points for further research:

- As present study is conducted on NAAC accredited universities of North India. Further study can be conducted on other States also.
- A comparative study can be conducted on accredited higher education institutions of different states.
- A comparative study can be conducted between accredited and non-accredited higher education institutions.
- Study can be conducted on role of program accreditation agency i.e. National Board of Accreditation in quality improvement.
- As in the present study data was collected from three stakeholders i.e. IQAC members, teachers and students. Other stakeholders of universities can also be considered as subjects such as Chancellor, Vice-chancellor, Deans, HOD's.
- Qualitative study related to accreditation processes of different countries can also be studied.
- A comparative study on accreditation agencies of different countries can also be considered for research work.
- Study can be conducted at college level also.
- A comparative study can be conducted on higher education institutions accredited at different levels i.e. grade wise.

SUMMARY

Education is a process of human illumination and authorization for the achievement of a superior and eminent quality of life by which a nation transforms from what is into what it hopes to be. It is this social instrument through which policymakers and citizens can guide nation's destiny and shape its future. UNESCO (I972) has visualized the fundamental aim of education as the "Physical, intellectual, emotional and ethical integration of the individual into a complete man". Education is the only instrument for welfare and security of the people. Education has been a dominant mechanism to serve societal needs since civilizations. In the present highly competitive scenario, quality has become the keyword in education. The growing concern of educationists is focused to bring quality in education. In the context of education, merit or worth refers to the characteristics of education which has to content the wants of the society, parents and students at large by developing suitable skills and knowledge. Educational quality refers to the accessibility of efficient teachers, an ideal student-teacher ratio, suitable infrastructure facilities and the like.

Economic growth and scientific and technological development of a nation are very much concerned to the higher education system. Developments in hi-tech technology, industry development, agriculture production are feasible as a result of our world-class higher education. The Kothari Commission (1964-66) highlighted the roles of universities to seek and cultivate new knowledge; to help understand old knowledge in the reference of new needs; to make available the society with competent humans trained in various fields; to continuously strive for continuous improvement and to minimize cultural and social dissimilarities through education. The report named "Learning The Treasure Within" stressed that education has 4 pillars: the first one is learning to know, the second one is learning to do, the third one is learning to live together and the fourth one is learning to be. The report emphasized that the higher education main functions are to make students ready for research related and teaching related activities; to make available exclusive courses for training which are suitable to the requirements of social life & economic life; to boost international collaboration through internationalization of technology, research and networking.

Characteristics of the New Paradigms in Higher Education

The new paradigms are characterized by the following major changes:

- Shift in the objective of higher education from transfer of knowledge to skill and competency building.
- Change in curricular transaction from a teacher-centered approach to a student-oriented approach.
- Moving away from rigid curricula to a flexible curricular structure.
- Growth in the non-traditional modes of educational provisions.
- Introduction of new forms of delivery of education.
- Replacing the traditional academic proficiency by computer-fortified skills.
- Moving away from career specific qualifications towards more general training.
- Increasing leaning towards private providers and private sources of funding.
- Shift from a non-competitive ambience of higher education to a competitive environment.
- Shift from national focus to international orientation.

Due to the science and technology impact, most of the changes are necessitated by the demand for value-added human resources in a variety of settings that have proliferated. The higher education systems in various areas have been reacting to these modifying perspectives variably. The different ways to be accepted to meet the new areas, though they cover various aspects of the educational system, are not collectively exclusive. Coordination among the different functionaries of the education system as a whole is required for the successful implementation of the strategies. The teachers, institutions and the governments have to share the obligation of bringing the required modifications.

SIGNIFICANCE OF THE STUDY

In India, promoting quality in education has been the focus of all the committees constituted at different stages of the development of the Indian Higher Education system. Among the various national consultations, discussions and recommendations that gave a direction and focus to our developmental strategies

after independence, was National Policy on Education 1986. One of the strategic plans to focus on the quality of higher education was the establishment of an independent council to promote assessment, which later culminated in the establishment of the National Assessment and Accreditation Council (NAAC) as an autonomous institution of the University Grants Commission (UGC) for primarily assessing and accrediting institutions of higher learning in India. The tremendous impact has been made in the market as well as in the student community due to expansion and globalization of Higher Education. Diversification of Higher Education has resulted in the growing need for certification and recognition of quality. Higher education should be such that it should cater to the needs of the most important stakeholder i.e. student by way of access, relevance, availability and utility. But all these are appropriate only in the arena of quality education which is the sole responsibility of higher education institutions. Higher education institutions should also cater to the needs of other stakeholders in quality assurance developments. Thus due to cut-throat competition at higher education level higher education institutions prerequisite condition is to be accountable to all the stakeholders and work towards providing quality in all aspects. Everyone associated with the higher education sector – higher education institutions, parents, students, employers, funding bodies and the governments - is interested in quality of the higher education sector. The stakeholders have various interests such as students first and foremost interest is for choice of institution; parents first and foremost interest is for worth of personal investment in the education of their children; governments interest is for accountability & policy-making; funding agencies interest is related to funding decisions; society's main interest is for value of taxpayers' money; industry is mainly concerned with institution-industry partnership; and employers are concerned mainly with recruitment. All these stakeholders are important in one or other sense so higher education system should be careful to appropriately balance the roles of the various stakeholders. Till now talks about the role of NAAC accreditation in quality improvement of higher education have been taken place in policy formulations or different articles are written on it. So far only one research study at a Doctoral level has been conducted in India on NAAC accreditation but the area of study is narrow as it has been conducted only on one State and it is quantitative study.

The area of the present study is broad as seven States and one NCT in North India have been covered. Mixed method research approach is used in the present study i.e. both quantitative and qualitative approaches are used. Thus the current study utilized both quantitative and qualitative methods. Such type of work has not been conducted so far anywhere. The findings of the present study can be useful in the sense that the result will provide details on the role of NAAC accreditation in quality improvement in higher education. The present study will be helpful in creating awareness in the higher education institutions regarding various benefits of being accredited institution as revealed in terms of perceived outcomes of accreditation.

The results of the present study related to perceived outcomes of accreditation in terms of indicators of NAAC criteria will be helpful for administrators, IQAC, staff, students, parents and other society members. As they will be aware of the benefits that they can avail as per their needs and requirements, of being a part of NAAC accredited higher education institutions.

STATEMENT OF THE PROBLEM

"ROLE OF NAAC ACCREDITATION IN QUALITY IMPROVEMENT: AN EVALUATIVE STUDY OF NORTH INDIAN UNIVERSITIES".

OPERATIONAL DEFINITIONS OF THE TERMS USED

Accreditation:

Accreditation is a process which focuses on educational quality and institutional integrity leading to the concept of accountability. It is the process of awarding certification of competency, authority, or credibility to higher education institutions that maintain suitable standards. Accreditation body awards certificate to higher education institutions.

NAAC:

The National Assessment and Accreditation Council (NAAC) is an organization that assesses and accredits institutions of higher education in India. It is an autonomous body funded by University Grants Commission of Government of India headquartered in Bangalore.

Quality Improvement

Quality improvement is anything which causes a beneficial change in quality performance. It is the actions taken to increase the effectiveness of activities and processes to provide added benefits to both the organization and its customers.

OBJECTIVES OF THE STUDY

1) To identify the perceived outcomes of NAAC accreditation from the perspectives of the stakeholders of North Indian Universities.
2) To investigate the alignment of perceived outcomes of accreditation by the stakeholders of accredited North Indian Universities with the stated assessment and accreditation objectives as set by UGC.
3) To explore the contribution of quality processes, adopted consequent to NAAC accreditation, towards quality improvement in North Indian Universities.
4) To identify the challenges faced by the stakeholders during the accreditation process.
5) To identify the progress of quality improvement measures after the accreditation to the time of re-accreditation.

RESEARCH QUESTIONS

1) What are the perceived outcomes of NAAC accreditation from the perspectives of stakeholders of North Indian Universities?
2) Up to what extent the perceived outcomes of accreditation by the stakeholders of accredited North Indian Universities align with the stated assessment and accreditation objectives as set by UGC to assure higher education quality and improvement in higher education?
3) What is the contribution of quality processes, adopted consequent to NAAC accreditation, towards quality improvement in North Indian Universities?

4) What are the different challenges faced by the stakeholders during the accreditation process?

5) What progress of quality improvement measures are being taken by North Indian Universities for seeking re-accreditation?

DELIMITATIONS OF THE STUDY

1) The study was delimited to North India.

2) 8 NAAC accredited Universities were selected from North India. 7 Universities were selected from 7 States i.e. Haryana, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Rajasthan, Punjab and Jammu & Kashmir and 1 University was selected from NCT, Delhi.

3) Data was collected from students, teachers and IQAC members of Universities as stakeholders.

4) Students of final year (excluding one year program) of different UG and PG academic programs from Arts & Humanities, Science & Engineering and Commerce & Management of accredited Universities were selected.

5) Teachers, at least five years of employment at the university were selected.

6) Few having significant involvement in the accreditation process and sufficient institutional knowledge i.e. IQAC members were selected to constitute the sample.

7) The Accreditation Assessment Report prepared by NAAC Peer Team during their visit to the institution specifying observations and suggestions is considered as a confidential document meant only for that specific institution. NAAC office has provided these reports to the researcher only for the research purpose. Hence, name and identity of the universities were not disclosed during analysis.

MIXED RESEARCH APPROACH TO THE PRESENT STUDY

Mixed research approach was used in the present study i.e. both quantitative and qualitative approaches were used. Thus the current study utilized both quantitative and qualitative methods.

SAMPLING TECHNIQUE

This study involved two layers of sampling—one at the institutional level and other at the subject level within each participating institution. A criterion sampling method has been employed at each level. Criterion sampling involves the study of cases that "meet some predetermined criterion of importance".

¬ Site selection for this study involved consideration of following main factor:

- The main factor under consideration was institutional memory or the time elapsed since the accreditation period or universities on the verge of completion of their accreditation period i.e. with valid accreditation period.

¬ Reasons for setting above factor/criteria for selection of Universities are as follows:

- Some separation allows for meaningful reflection on the process, leading to more nuanced perspectives. Too much temporal distance may result in less detailed perspectives on the outcomes of the process and risks related to employee turnover. The researcher started by identifying such universities that have just completed their accreditation period or are about to complete their accreditation period i.e with valid accreditation period.

- The researcher identified eight NAAC Accredited Universities of North India from the updated list of Accredited Institutions from NAAC Website.

- Eight NAAC accredited Universities of North India were selected.

¬ Criterion sampling method also informed the subject selection process.

Reasons for setting criteria for selection of SUBJECTS (Students, Teachers and IQAC members) are as follows:

- In order to provide meaningful data on perceived outcomes of accreditation, participants must have sufficient tenure at their institutions to adequately reflect on institutional characteristics prior to, during, and following the accreditation process.

- The criterion related in selection of students from universities was association tenure with the institution. In order to adequately reflect on institutional characteristics, students of final year (excluding one year program) of different UG and PG academic programs from Arts & Humanities, Science & Engineering and Commerce & Management of accredited Universities were selected.

- Similarly teachers, at least five years of employment at the university were selected.

- Additionally, few having significant involvement in the accreditation process and sufficient institutional knowledge i.e. IQAC members were selected to constitute the sample.

SAMPLING FRAME

To conduct the present study, a sample of 816 respondents was selected from NAAC accredited Universities of North India. 8 NAAC accredited Universities were selected from North India.7 Universities were selected from 7 States i.e. Haryana, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Rajasthan, Punjab and Jammu & Kashmir and 1 University was selected from NCT, Delhi. The sample consisted of different stakeholders from the Universities selected for the study. Stakeholders selected were IQAC members, Teachers and Students.

COLLECTION OF DATA

The selection of tools for a study either for the collection of primary or secondary data depends on the objectives framed for the study by the investigator i.e. as per requirements of the study. Tools constructed for the study should be in the context of the study.

Following sources were used for the collection of primary and secondary data in the context of the objectives framed for the study and as per the requirement of the study:

(1) Primary Data

For collection of primary data following tools were constructed and used:

- Interview Schedule for IQAC Members
- Questionnaire for Teachers
- Questionnaire for Students

(2) Secondary Data

The secondary data from the sources mentioned below has been pooled up and analyzed:

- NAAC Peer Team Reports.
- AQAR (Annual Quality Assurance Report) and SSR (Self-Study Report) prepared by the Universities for submission to NAAC.
- AQR (Annual Quality Report)
- NAAC Website (NAAC Annual Reports, Books, Newsletters, Manuals, Seminars and Conference Proceedings).
- University Websites
- UGC and MHRD Websites (XI and XII Five Year Plans, UGC documents and Publications).

STATISTICAL TECHNIQUES

The analysis of the quantitative data was done using statistical techniques such as frequency and percentage.

ANALYSIS OF QUALITATIVE SECONDARY DATA

The technique most commonly used in the analysis of qualitative secondary data is content analysis.

"Content Analysis is a procedure for systematically examining textual or visual materials to extract information bearing on the message or messages they communicate."-

McTavish, D.G. & Loether, H.J. (2011, p.214)

Krippendroff (1980) has given three different levels of units for content analysis. - McTavish, D.G. & Loether, H.J. (2011, p.214)

CASE STUDY

A case study is a detailed examination of one setting, or a single object, a single depository of documents, or one particular event.

The Rationale for Case Study Research:

Case studies are used in social science research for several reasons. For e.g. a case study is appropriate when there is only one or a very few cases available to study, perhaps because a phenomenon occurs very rarely (e.g. the study of impact of a particular program etc.)Case studies help provide insight into meanings people give to the reality around them.

DATA COLLECTION METHODS:

The most commonly employed research methods in the Case Study are-

- Interviews (Formal and Informal Conversations)
- Documentary Analysis &
- Observation

With the balance between them being largely determined by the resources available and the disciplinary and professional tradition in which the case study is being conducted.

- Thus interviews offer an insight into respondents' memories and explanations of why things have come to be what they are, as well as descriptions of current problems and aspirations.
- Documents can be examined for immediate content, changing content over time and the values that such changing content manifests.

Observations can offer an insight into the sedimented, enduring verities.

► **Case study method was used in the present study for identifying the progress of quality improvement measures after the accreditation to the time of re-accreditation.**

Following research methods were employed for data collection in the case study:

- Interviews (Formal-Informal Conversations with IQAC Members)
- Observation
- Documentary Analysis (AQAR, SSR, AQR, Website Content of the University)

Conclusions of Objective 1 – To identify the perceived outcomes of NAAC accreditation from the perspectives of the stakeholders of North Indian Universities.

1) Educational improvement in higher education institutions, quality improvement, quality culture, tool of SWOC, catalyst for institutional self-improvement, public accountability and enhanced reputation are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers.
2) New sense of direction and identity, quality assurance, quality enhancement and quality maintenance, and clarified roles and responsibilities are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and an average perceived as per the percentage of responses received from teachers.

3) Promotion of intra-institutional interactions, enhanced work environment and increased collaboration in decision making are enlisted as average perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers.

4) Formation of departmental research committees for encouraging and advancing research and liaisons and collaboration with national and international institutions for different courses and research related activities are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members, teachers and students in terms of indicators of quality initiatives as per NAAC criterion, research, consultancy and extension.

5) Various infrastructural facilities in the campus are adequate to contribute towards effective ambience for curricular, extra-curricular and administrative activities and proper maintenance of infrastructure are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members, teachers and students in terms of indicators of quality initiatives as per NAAC criterion, infrastructure and learning resources.

6) Enhancement of various welfare measures for students in the form of scholarships, freeships, and educational loans is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members, teachers and students in terms of indicator of quality initiatives as per NAAC criterion, Student Support and Progression.

7) Freedom to make choices among the available courses as a result of innovation in the curriculum, focus on employability and innovation in the curriculum, flexible time-table and academic plan of the university for providing varied learning experiences both at the institution and on the field and curriculum is updated as per perceived needs are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers and average perceived as per the percentage of responses received from the students. These perceived outcomes of accreditation are in terms of indicators of quality initiatives as per NAAC criterion, curricular aspects and teaching, learning and evaluation.

8) Emphasis on well-administered admission rules, Information on all type of scholarships at the time of admission as per student diversity for welfare of students and the evaluation of performance of teaching faculty by students through teacher assessment questionnaire are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers and average perceived as per percentage of responses received from the students. These perceived outcomes of accreditation are in terms of indicators of quality initiatives as per NAAC criterion, teaching, learning and evaluation.

9) Innovative teaching methods being encouraged after NAAC's assessment is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members and teachers. Teachers in the university employ innovative methods of teaching are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the students.

10) Orientation towards research increased after NAAC accreditation in the university and encouraging research facilities are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers.

11) Suitable facilities for differently-abled students have been given priority and adequate facilities of online teaching and learning resources are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers and average perceived as the per percentage of responses received from the students. These perceived outcomes of accreditation are in terms of indicators of quality initiatives as per NAAC criterion, infrastructure and learning resources.

12) Special coaching classes being introduced, effective implementation of career guidance and placement cell for students, effective implementation of the grievance redressal cell for students and alumni meets are being conducted from time to time are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers and average perceived as per percentage of responses

received from the students. These perceived outcomes of accreditation are in terms of indicators of quality initiatives as per NAAC criterion, student support and progression.

13) Sound and good e-Governance in the university is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members and teachers and average perceived as per the percentage of responses received from the students.

14) Periodic curriculum revision and choice-based credit system are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and average perceived as per the percentage of responses received from the teachers.

15) Feedback regarding curriculum design and enrichment sought from students and teachers and balanced curriculum covering need-based, socially relevant programs, Indian heritage and values are enlisted as the highly perceived outcomes of accreditation as per the percentage of responses received from the IQAC members and average perceived as per percentage of responses received from the teachers and students. These perceived outcomes of accreditation are in terms of indicators of quality initiatives as per NAAC criterion, curricular aspects.

16) Accreditation process positively enhanced publicity and transparency in the admission process, ICT as a learning resource is extensively used after NAAC's Assessment are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and teachers. Inter-departmental collaboration in teaching and research related activities is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members and average perceived as per the percentage of responses received from the teachers.

17) Publishing of papers in national and international journals in University is given more impetus after accreditation, some activities organized or managed by the faculty for an external agency, enhancement in the organization of extension activities are enlisted as the highly perceived outcomes of accreditation as per percentage of responses received from the

IQAC members and average perceived as per percentage of responses received from the teachers. These perceived outcomes of accreditation are in terms of indicators of quality initiatives as per NAAC criterion, research, consultancy and extension.

18) Procurement of latest books and number of journals in the university library is enlisted as highly perceived outcome of accreditation as per percentage of responses received from the IQAC members and average perceived as per percentage of responses received from the teachers. This perceived outcome of accreditation is in terms of indicator of quality initiatives as per NAAC criterion, infrastructure and learning resources.

19) NAAC accreditation process led to co-ordination of the academic and administrative planning and implementation, organizational work is efficiently carried out through various committees, more incentive for research, teaching and publication output, interpersonal relationship between all stakeholders has improved and accounts are audited often are enlisted as highly perceived outcomes of accreditation as per percentage of responses received from the IQAC members and average perceived as per percentage of responses received from the teachers. These perceived outcomes of accreditation are in terms of indicators of quality initiatives as per NAAC criterion, governance, leadership and management. Various innovative and best practices introduced in the university as a result of NAAC accreditation is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members and average perceived as per percentage of responses received from the teachers.

20) Accreditation process positively impacted teaching-learning process in the University is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members and teachers. Teachers in the university are more oriented towards using latest and innovative pedagogy is enlisted as the highly perceived outcome of accreditation as per the percentage of responses received from the students. Balanced Curriculum covering need-based, socially relevant programs, Indian heritage and values is enlisted as an average perceived outcome of

accreditation as per percentage of responses received from the IQAC members, teachers and students.

21) Sound and good e-Governance in the university is enlisted as an average perceived outcome of accreditation as per percentage of responses received from the students in terms of indicators of quality initiatives as per NAAC criterion, governance, leadership and management.

22) A quality cell in the form of IQAC in the university is enlisted as the highly perceived outcome of accreditation as per percentage of responses received from the IQAC members and teachers.

23) Introduction of inter-disciplinary and innovative schemes in thrust areas is enlisted as an average perceived outcome of accreditation as per percentage of responses received from the IQAC members and least perceived as per the percentage of responses received from the teachers.

Conclusions of Objective 2: To investigate the alignment of perceived outcomes of accreditation by the stakeholders of accredited North Indian Universities with the stated assessment and accreditation objectives as set by UGC.

1) Accreditation agency through its process of assessment and accreditation as per UGC regulations should accord recognition to the quality and excellence of education imparted by Higher Educational Institutions and thereby to advance academic quality. Academic quality refers to the procedures that emphasize students' achievement and high expectations of teaching, learning and research related activities. In the NAAC accredited universities, after accreditation there was periodic curriculum revision, introduction of inter-disciplinary and innovative schemes in thrust areas, strengthening of interaction with industry/trade/civil society organizations/educational institutions and choice-Based Credit System was introduced. There was a focus on employability and innovation in the curriculum. The Curriculum was updated as per the perceived needs. There was a provision of remedial and bridge courses for the weaker students. The accreditation process has positively impacted teaching-learning process in the university and the teachers were more oriented towards using latest and innovative pedagogy. Innovative teaching methods were encouraged after the NAAC's

accreditation. There was a special focus on the interactive learning through promotion and the use of ICT. Orientation towards research has increased after the NAAC's accreditation. Encouraging research facilities were there. Writing and publishing of papers in national and international journals in the University were given more impetus after accreditation. Thus all the above stated perceived outcomes of accreditation revealed advanced academic quality in the NAAC accredited universities as is being emphasized as a prerequisite feature of accredited universities in the Ist assessment and accreditation objective.

2) Accreditation agency's main task is to accredit higher educational institutions on the basis of assessment criteria. By giving accreditation status to higher educational institutions, accreditation agency makes clear the status of these institutions in terms of quality aspect to stakeholders of institutions. All this helps stakeholders to make informed choices with regard to higher educational institutions. NAAC accredited Universities due to their accreditation status has enhanced reputation and public accountability. The Accreditation process in the NAAC Accredited universities has positively enhanced publicity and transparency in the admission process. In these universities, there was an emphasis on well-administered admission rules indicating that fair and non-discriminating policy was followed. All this revealed that the NAAC accredited Universities as a result of recognition of quality accorded to them by accreditation agency have been giving right direction to the stakeholders in making the informed choices with regard to higher educational institutions.

3) One of the assessment and accreditation objectives as per regulations i.e. UGC Regulations, 2012 states that accreditation agency should assess whether higher educational institutions enable students, teachers and other stakeholders to provide inputs concerning the quality of education imparted. For this NAAC through its assessment and accreditation process assess whether higher educational institutions sought feedback from stakeholders concerning the quality of education in various forms. The student satisfaction surveys concerning the quality of education imparted in the university were initiated. The students were intimate about the results of different surveys

and action taken on the basis of results. The University administration focused on keeping and maintaining a healthy relationship with students, alumni and parents and as a result, interpersonal relationship between all the stakeholders has improved. Thus all this is in tune with the 3rd assessment and accreditation objective related to inputs sought from stakeholders concerning the quality of education imparted by the higher educational institutions.

4) Accreditation agency through its process of assessment and accreditation as per UGC regulations should facilitate Higher Educational Institutions to augment quality, by benchmarking uniform reference points pertaining to academic standards. The NAAC accredited universities have IQAC which has further led to administrative and academic excellence thereby keeping a check on quality aspect. Stakeholders from the NAAC accredited universities responded that NAAC assessment is essential for educational improvement in higher education institutions. The stakeholders also responded that NAAC process of assessment and accreditation has motivated their university towards quality improvement. The NAAC accredited Universities have quality assurance mechanism in the form of IQAC. This was an initiative put forth by NAAC in facilitating these institutions to augment quality, by benchmarking uniform reference points pertaining to academic standards. Thus all this is in tune with the 4th assessment and accreditation objective.

5) One of the assessment and accreditation objectives as set by UGC states that accreditation agency through its assessment and accreditation process should facilitate Higher Educational Institutions to secure additional funding and other incentives, if found eligible, from appropriate regulatory and or funding agencies. Funds were provided for the successful completion of various research projects in the NAAC accredited universities. In these universities after the accreditation more incentives for research, teaching and publication were provided. Thus the NAAC accredited universities were putting their best possible efforts to secure additional funding and other incentives from appropriate regulatory and or funding agencies as is even emphasized in one of the objectives set by UGC for accreditation agency.

6) The NAAC accredited universities have liaisons and collaboration with national and international institutions for different courses and research related activities. Reasonably international linkages have been established in the university. This clearly reflects that the NAAC accredited universities were in tune with UGC's stated assessment and accreditation objective related to international collaborations.

7) One of the assessment and accreditation objectives as set by UGC states that accreditation agency through its assessment and accreditation process should facilitate students achieve learning outcomes appropriate to the course and relevant to the context. For effective development of the curricula after the NAAC accreditation process, various new quality sustenance and quality enhancement measures were undertaken by the universities as revealed from the IQAC member's and the teacher's responses. There was periodic curriculum revision; there was an Introduction of inter-disciplinary and innovative schemes in thrust areas; the strengthening of interaction with industry/trade/civil society organizations/educational institutions and Choice-Based Credit system was introduced. Employability and innovation was addressed in the curriculum. In the NAAC accredited universities feedback was sought from stakeholders regarding curriculum design and enrichment and curriculum is updated as per perceived needs. After the NAAC's accreditation there was special focus on interactive learning through promotion and use of ICT. Suitable facilities for differently-abled students have been given priority. Thus the NAAC accredited universities through various means were facilitating students to achieve learning outcomes appropriate to their course and relevant to their context as is even emphasized in one of the assessment and accreditation objectives set by UGC for accreditation agency to facilitate students achieve learning outcomes appropriate to their course and relevant to their context.

8) University Grants Commission has issued guidelines for students' entitlements. All necessary actions were taken by the NAAC accredited universities regarding prerequisites of students' entitlements related to 'Admission', 'Quality of teaching and learning', 'Financial Aid', 'Infrastructure' as set by the commission.

9) NAAC through its assessment and accreditation process assess what efforts higher educational institutions are putting to maintain teaching and research standards thereby motivating these institutions to maintain aforesaid standards. After the NAAC's assessment innovative teaching methods were encouraged. The Teachers and the students focused on publication of papers in national and international journals. Best consultancy services were provided by the faculty. Thus majority of the stakeholders responses revealed that the NAAC accredited Universities were putting their best efforts for maintaining and raising teaching and research standards by providing adequate facilities.

10) Accreditation agency through its process of assessment and accreditation as per UGC regulations should facilitate effective teaching-learning and access to quality teaching-learning material permitted by the Higher Educational Institution. The NAAC accredited Universities were putting their best possible efforts for providing effective teaching-learning and access to quality teaching-learning material. As majority of the stakeholders responses affirmed that ICT as a learning resource was extensively used after NAAC's assessment. The library resources were adequate and supplemented from time to time. There was procurement of latest books and number of journals in the university library.

11) One of the assessment and accreditation objectives as per regulations i.e. UGC Regulations, 2012 states that the accreditation agency should facilitate higher educational institutions to achieve effective governance mechanisms in their management and administration. For this NAAC through its assessment and accreditation process assess what efforts higher educational institutions are putting for effective governance mechanism in their management and administration thereby further motivating these institutions for this. After the NAAC accreditation there was increased collaboration in decision making resulting in increased unity of purpose. There was sound and good e-Governance in the accredited universities. A quality cell in form of the IQAC has been formed which has further led to administrative and academic excellence thereby keeping a check on the quality aspect. The organizational work was efficiently carried out through various committees.

The University administration focused on keeping and maintaining a healthy relationship with students, alumni and parents and as a result of this, interpersonal relationship between all stakeholders has improved. After the NAAC accreditation accounts were audited often and quality assurance and enhancement mechanism was in place.

Conclusions of Objective 3: To explore the contribution of quality processes, adopted consequent to NAAC accreditation, towards quality

1) 8 NAAC Accredited Universities selected for the present study were given NAAC Peer Team suggestions in the context of Quality Assurance Mechanism, External Academic Audit, Faculty Development Programmes, Faculty Empowerment Strategies, Campus Wide Networking, Promotion of Research, Suitable Facilities as per the Needs of the Area, Autonomous College System, Infrastructure and Learning Resources, Teaching-Learning and Use of ICT, Decentralization of Academic Administration, Choice-Based Credit System, Examination System, Review of Programs, Consultancy Services, Recruitment of Faculty, Student Support Services, Enrollment of Foreign Students and Innovative Practices. In the study, all the suggestions were further mapped with the NAAC criteria. All this, highlighted quality processes, adopted consequent to NAAC Accreditation, by the Universities in context of NAAC Peer Team suggestions. This further revealed domains improved/strengthened for Key Aspects, reflecting the contribution of quality processes in the Universities.

2) The NAAC Peer Team suggestions regarding internal quality assurance cell to two Universities and compliance of the suggestion by both the universities have resulted in establishing a strategic quality management system aiming towards quality assurance and ensuring a continuous reform process.

3) The NAAC Peer Team's suggestion to introduce mechanisms for periodic external academic audit for quality improvement to two universities has resulted in implementation of a quality assurance strategy emphasizing on self-reflection and self-improvement rather than compliance with

predetermined standards. This has helped the universities in evaluating their 'educational quality processes' through both external quality assurance mechanism and internal quality assurance mechanism thereby resulting in overall quality improvement.

4) Four Universities were given recommendations regarding faculty development programs and faculty empowerment strategies. NAAC Peer Team recommendations regarding faculty development programs and faculty empowerment strategies is clear indicator of the way NAAC is emphasizing on the development and active participation of faculty in higher education institutions.

5) Two Universities were given recommendations regarding Campus-wide network thus emphasizing on IT infrastructure. This has resulted in strengthening e-governance in the universities. Emphasizing on NKN connectivity has resulted in high speed data communication network thereby facilitating knowledge sharing and collaborative research in universities.

6) Seven NAAC accredited Universities were given suggestions to promote research in terms of resource mobilization for research, research facilities, research publications and awards and collaborations. On compliance of these suggestions these Universities have adopted various proactive mechanisms to facilitate the smooth implementation of research.

7) One NAAC accredited University was given recommendation to make an attempt to institute autonomous college system. The university has encouraged the colleges of good standing under their horizon to apply for autonomous status. The University has advanced the application of eligible colleges to UGC.

8) Seven NAAC accredited universities were given recommendations related to infrastructure and learning resources. As per compliance of the suggestions these higher education institutions have focused on expansion of infrastructural facilities to meet future development and also to keep focus on maintenance of these facilities.

9) Three NAAC accredited universities were suggested to emphasize more on ICT related activities by maximizing the use of ICT in the regular activities of the departments and by offering courses in ICT proficiency for all students. The Universities have changed traditional classrooms to smart classes via multimedia, a combination of various digital media types into an integrated multi-sensory interactive application for presentation to convey information to an audience. The Universities have enriched teaching-learning process by different innovative methods using latest hardware and software. The ICT enabled teaching/learning processes were prioritized. The faculty uses multimedia techniques involving graphics/animations and visuals to make the class room teaching and learning interesting and attractive.

10) Five NAAC accredited universities were given recommendations related to governance, leadership and management and curricular aspect thereby suggesting these universities to focus on the decentralization of academic administration and introduction of choice-based credit system.

11) The NAAC Peer Team suggested two Universities to make some constructive changes in the examination system. One of the Universities was suggested to work towards modernization of the examination system to suit the locational and climatic changes of the State. The University has done decentralization of evaluation at PG level for speedy declaration of results. Photocopy of the answer scripts is provided when demanded by the candidate. The project "e-governed Examination of Ministry of Communication & Information Technology, New Delhi" is related to the registration and examination of students. The second University has adopted modernized examination system. The results were made accessible to the students individually through their personal accounts on the university online portal. For proper conduction of the examination specific duties were assigned to the staff members. The work of the examination system was coordinated under the headship of the examination officer.

12) Seven NAAC accredited Universities were suggested to review some of their programs. Various curricular reforms have been done such as in the the form of introducing Choice-Based Credit System. The Universities have also laid

emphasis on multi-skill development in their programs by introducing varied contents.

13) Five NAAC accredited Universities were recommended to augment their laboratory and library facilities. The library collection/services were upgraded to meet the growing needs of the teaching faculty/students. Modernization of the laboratories and further enhancement of the students' support services were encouraged.

14) Two NAAC accredited Universities were given recommendations regarding facilitation process for enrollment of foreign students. The Universities have the International Students Cell for providing necessary guidance of admission. All the correspondence relating to the international students admission was addressed to the Office of International Relations of the institution. improvement in North Indian Universities.

Conclusions of Objective 4: To identify the challenges faced by the stakeholders during the accreditation process.

1) IQAC members and teachers from the accredited universities responded that added workload was faced as a challenge during the accreditation process. Staff overloaded with work is a bane in institutions. As per response of the IQAC members, IQAC core team is on the toes as they need to prepare reports at every stage. In most of the institutions, no clerical help is provided so right from collating to typing they are pressurized.

2) Teachers from the accredited universities responded unrealized impact of the accreditation process as challenge faced during the accreditation.

3) Teachers from the accredited universities revealed lack of basic knowledge or formal training of the accreditation process as a challenge faced during the accreditation process. Lack of understanding of what the accreditation process is, the documents and forms needed, how to prepare needed documents, what are proper evidences and how to prepare and collect them, what is a corrective action and continuous improvement plan and how to prepare them, and how to put accreditation requirements before someone

eyes while preparing for their courses was major challenge faced by the institution personnel during the accreditation process.

4) IQAC members and teachers from the accredited universities stated the staff inadequacy as a challenge faced during the accreditation process. Staff inadequacy leads to work overload. Due to work overload, faculty members and staff of the institution cannot completely devote themselves to work on the accreditation requirements.

5) IQAC members and teachers from the accredited universities responded lenient attitude of some teachers as a challenge faced during the accreditation process. As entire staff involvement in the report making is limited. As they see accreditation as a work not covered under regular teaching activities and are not serious in providing inputs on their behalf as per the accreditation requirement.

6) IQAC members and teachers from the accredited universities mentioned that during the accreditation there the lack of teamwork due to communication deficit among faculty members of different departments.

7) Documentation was a big problem as the institutions still not evolved a way of centralizing documents with details of all events on the campus.

Conclusions of Objective 5: To identify the progress of quality improvement measures after the accreditation to the time of re-accreditation.

1) On analyzing the NAAC Peer Team Suggestions given to the University considered as Case-I, it was found that maximum suggestions i.e. three suggestions were given related to criterion, Teaching, Learning and Evaluation. Two suggestions per criterion were given related to Governance, Leadership and Management, Infrastructure and Learning Resources and Innovations and Best Practices. Least no. of suggestions i.e. one per criterion was given related to Curricular Aspects and Research, Consultancy and Extension. The University has strengthened its criterion, teaching, learning and evaluation aspect by changing traditional classrooms to smart classes via multimedia thereby prioritizing ICT enabled teaching-learning process;

initiating e-governance services for modernizing the evaluation process and motivating various departments and research centres to organize as much as possible faculty development programs for the overall development of faculty. The University has upgraded IQAC to DIQA. The DIQA not only worked as the main documentation centre of the institute but has also helped the University to address the significant weak areas effectively. School system has been introduced among the departments thus resulting in the decentralization of academic administration. It has resulted in the strengthening of the governance, leadership and management aspect of the university. In order to strengthen IT Infrastructure, the University has availed all the NKN services and has upgraded IQAC to DIQA for successfully implementing e-governance.

2) The University considered as Case-II, was given three suggestions related to criterion, Teaching-Learning and Evaluation. Two suggestions per criterion were related to Curricular Aspects and Research, Consultancy and Extension. Least no. of suggestions i.e. one per criterion was given related to student support and Progression and to Innovations and Best practice. In order to raise the teacher quality, the faculty members were encouraged to pursue academic and research interest of one's own choice area. Significant emphasis on research orientation and facilities for the same were provided; the teachers were encouraged to take up research projects sanctioned by various State and Central government organizations and sponsored by industry/research organizations and researchers have visited from institutes/industries of repute, though not as the adjunct professors. The University was already in the process of creating the Chair Professor and the Adjunct Professor positions. The University has developed and offered academic programs of high quality in various domains to students as part of the curriculum for the enrichment of skills. The University has made hardware projects a part of B.Tech. curriculum. All these quality improvements have made constructive changes in the curricular aspect of the university. The University has encouraged joint guidance of thesis and has encouraged faculty members from different disciplines to guide UG/PG or

Ph.D. thesis jointly via intra-departmental and inter-departmental efforts. The faculty has been regular in publishing in various journals with high impact factor. All faculty members of the University were allowed to undertake industrial consultancy work with the prior permission of competent authority thereby indicating progress. The University has promoted sports, cultural, NCC and NSS activities thereby emphasizing on student support and progression aspect.

3) On analyzing the NAAC Peer Team Suggestions given to the University considered as Case-III, it was found that three suggestions were given related to criterion, Teaching, Learning and Evaluation. Two suggestions per criterion were given related to Curricular Aspects and Governance, Leadership and Management. Least no. of suggestions i.e. one per criterion was given related to Infrastructure and Learning Resources, Research, Consultancy and Extension and Student Support and Progression. The University has changed traditional classrooms to smart classes via multimedia, a combination of various digital media types of an integrated multi-sensory interactive application for presentation to convey information to an audience, enriched by different innovative methods using latest hardware and software techniques. The ICT enabled teaching/learning processes were prioritized. For filling the vacant faculty positions, administrative department of the University gave advertisements in various newspapers. The University provides Certificate and Diploma Programs and Degree programs after 10+2. The separate arrangements for offering the Certificate / Diploma programs have been made. AIEEE score was considered while admitting students as per the IQAC Members. The University has delinked the certificate and diploma programs from the degree programs thereby making separate arrangements for both. The University offers twinning programs in certificate-Diploma programs from the year 2014. Separate arrangements have been made in form of different cells i.e. the UG Cell, the PG Cell and the Diploma Cell as per the NAAC Peer Team Suggestion to delink the certificate and diploma programs from the Degree programs as offered by the university. A draft related to the

revision of curriculum was prepared separately by each department as per their requirement and was presented to the respected Board of Studies. All this reflects the university's effort in strengthening the curricular aspect. Governing structure of the University was highly efficient. For governance, the university has the following statutory authorities: the Syndicate, the Senate, the Finance committee, the Standing committee for academic affairs, the Faculties, the Boards of Studies and the Planning Board. All this led to the decentralization of academic administration. The University has established Internal Quality Assurance Cell (IQAC). IQAC cell was functional in the university.

4) On analyzing the NAAC Peer Team Suggestions given to the University considered as Case-IV, it was found that maximum suggestions i.e. five suggestions were given related to criterion, Infrastructure and Learning Resources which means university in future should also concentrate on strengthening this criterion. Three suggestions were given related to criterion, Student Support and Progression. Two suggestions were given related to criterion, Teaching, Learning and Evaluation. Least no. of suggestions i.e. one per criterion was given related to Curricular Aspects and Research, Consultancy and Extension. The University has modernized laboratories with hi-tech facilities as per requirement of ongoing programmes. The University library has Library Management Software for Library Automation and library housekeeping work. Each faculty has been provided with the spacious workstations to carry out the day to day activities as being observed on visiting the university. The University has well-equipped health centres in all the campuses. The University has augmented its infrastructure enormously. The University has good student mentoring system which helps in identifying academically weak students and thereby guiding them from time to time. In order to raise the teacher's quality, qualification of the faculty members is as per the norms of UGC/AICTE. For strengthening curricular aspect, Choice-Based Credit System was introduced in university in 2015. The Curriculum was revised for implementing CBCS and it was approved by the Academic Council. In order to encourage

research, the University has made increased collaborative linkages with other institutes for teaching and research activities.

5) The progress of quality improvement measures has been analyzed in terms of implementation of the NAAC Peer Team suggestions and how this implementation has resulted in quality improvement in various aspects of the University as covered by the NAAC criteria. On analyzing the NAAC Peer Team Suggestions given to the University considered as Case-V, it was found that two suggestions per criterion were given related to Curricular Aspects, Student Support and Progression and Research, Consultancy and Extension. Least no. of suggestions i.e. one per criterion was related to Teaching-Learning and Evaluation, Infrastructure and Learning Resources and Governance, Leadership and Management. Choice-Based Credit System was introduced in different departments of the University. As a result, all the departments of the University designed curriculum as per CBCS requirement and various curricular reforms have been done to integrate co-curricular and value-based education along with employability skills. The University has a facility of providing competent academic counseling and placement services to its students. The University has various committees/well-established centres to attend to the general grievances of students. Various initiatives have been taken by the university to encourage research as was revealed from the fact that University-industry interaction centre with IPR cell was there and consultancy rules as per UGC guidelines were followed to promote consultancy services, patents and technology transfer. The University has a provision of granting duty / academic leaves to the teachers as and when required for pursuing a higher degree and for participating in conferences / symposia / workshops or for other academic/research purposes in other institutes in India as well as abroad. The University-level Faculty Development Centre / Academic Staff College was there for carrying out various faculty development programmes thereby emphasizing on raising the teacher quality. The University has Technical Services Department with a qualified Manager to take care of all infrastructures.

6) The University considered as Case-VI was given the suggestions related to seven criteria i.e. Innovations and Best Practices, Infrastructure and Learning Resources, Curricular Aspects, Student Support and Progression, Governance, Leadership and Management, Research, Consultancy and Extension and Teaching-Learning and Evaluation. On analyzing the NAAC Peer Team Suggestions it was analyzed that maximum suggestion i.e. four suggestions were given related to criterion, Infrastructure and Learning Resources. Three suggestions per criterion were given related to Governance, Leadership and Management, Curricular Aspects, Research, Consultancy and Extension and Student Support and Progression and Innovations and Best practices. One suggestion was given related to criterion, Teaching-Learning and Evaluation. The University has made its best possible efforts to enhance infrastructure and learning resources as the university is self-sufficient in terms of space and facilities for teaching and research activities. The University library services are offered electronically through a web-enabled integrated digital information system. The University has laboratories with advanced equipment and facilities to aid and stimulate research and Hostel have energy-efficient features installed in the rooms as part of the 'Green Campus'. In the University functional autonomy was provided to the institutions/departments through the process of annual planning and budgeting thereby introducing the decentralization of academic administration.

7) On analyzing the NAAC Peer Team Suggestions given to the University considered as Case-VII, it was found that maximum suggestions i.e. five suggestions were given related to criterion, Infrastructure and Learning Resources. Two suggestions per criterion were given related to Curricular Aspects, Governance, Leadership and Management. Least no. of suggestions i.e. one per criterion was given related to Student Support and Progression, Innovations and Best Practices and Research, Consultancy and Extension. In order to strengthen its infrastructure and learning aspect, the University has taken a number of constructive steps. The University has conducted a performance audit of various institutions/departments. A

Performance Audit of the constituent institutions and departments of the University is done biannually through an internal audit. The University has centralized and departmental library committees in order to ensure that the learning and research resources are adequately available, updated regularly, utilized optimally and benchmarked periodically. CBCS has been introduced in the university and there was a provision of twinning and dual programmes. For effective governance, the university has introduced "Three Tier Audit System" as a best practice to contribute to better academic and administrative functioning. Functional autonomy is provided to the institutions/departments through the process of annual planning and budgeting. Alumni are involved in various activities and committees of the the university. For encouraging research various strategic initiatives have been taken to promote internationalization. The University has adopted various proactive mechanisms to facilitate the smooth implementation of research schemes/projects. The University has earmarked approximately 20% of its budget for research. The University has invested money and resources in creating infrastructure and awarding fellowships to brilliant research scholars, procuring various other necessary research related material, annual maintenance charges, patent filing charges etc.

8) On analyzing the NAAC Peer Team Suggestions given to the University considered as Case-VIII, it was found that maximum suggestions i.e. six suggestions were given related to criterion, Curricular Aspects. Four suggestions per criterion were given related to Infrastructure and Learning Resources and Student Support and Progression. Least no. of suggestions i.e. one per criterion was given related to Innovations and Best Practices and Teaching, Learning and Evaluation. Curricular aspect in the University was strengthened as University was following UGC Ph.D. Regulation 2016; University has updated the curriculum to make it industry relevant; Craft based certificate courses were organized in the evening for students of entire university; core curriculum/extension and outreach programmes and diversity of courses and programmes were there in the University; interdisciplinary advisory committee was constituted to reorient women

studies to reflect on contemporary challenges and to introduce Open Coursewares. The University has made its best possible efforts to enhance infrastructure and learning resources as various initiatives were taken by the university. The Campus security has been enhanced by adopting modern surveillance system in the form of CCTV cameras. The institution has created special facilities such as ramps, rails and special toilets to suit the special needs of differently-abled persons.

EDUCATIONAL IMPLICATIONS

The present study has made several important contributions in terms of perceived outcomes of accreditation from the perspectives of the stakeholders; best practices to cope up with the challenges faced during the accreditation process and analysis of the quality processes adopted by the accredited universities.

- The present study will be helpful in creating awareness in the higher education institutions regarding various benefits of being accredited institution. Results of the present study have revealed the various perceived outcomes of accreditation which are clear indicators of benefits of accreditation to the higher education institutions. Results revealed that, NAAC assessment and accreditation is essential for educational improvement in higher education institutions; motivates institutions towards quality improvement; has made quality a culture of higher education institutions; acts as a tool of SWOC i.e. help higher education institutions in identifying their strengths, weaknesses, opportunities and constraints; gives a new sense of direction and identity to the institutions; promotes intra-institutional interactions in the institution; acts as a catalyst for institutional self-improvement; help institutions in various domains of quality such as quality assurance, quality enhancement and quality maintenance in totality; results in public accountability of the institution; as award of status enhances the reputation of higher education institutions; enhances the work environment in the universities. As per findings of the study, accreditation results in increased collaboration in decision making

resulting in increased unity of purpose. As a result of, assessment and accreditation every member of university becomes clearer about his role and responsibilities.

- The results of the present study related to the perceived outcomes of accreditation in terms of indicators of quality initiatives as per NAAC Criteria i.e. Curricular Aspects, Teaching-Learning and Evaluation, Research, Consultancy and Extension, Infrastructure and Learning Resources, Student Support and Progression, Governance, Leadership and Management and Innovations and Best practices will be helpful for administrators, IQAC, staff, students, parents and other society members. They will become aware of the benefits they can avail as per their needs and requirements, of being a part of NAAC accredited higher education institutions.

- The present study will be helpful for the society as the results indicate that how accredited universities have adopted various measures related to all aspects of the quality parameters as set by the NAAC and how these are in tune with the stated assessment and accreditation objectives as set by UGC. This awareness will help parents and students to make wise decisions while opting for admission to the higher education institutions.

- The results of the study will also be beneficial for non-accredited higher education institutions. The present study has highlighted various quality processes adopted as a result of compliance with the NAAC Peer Team Suggestions by the 8 NAAC Accredited Universities taken as a sample. As before going for accreditation, non-accredited higher education institutions can take suitable measures related to adequate quality processes, of which they might not be aware.

- The present study has highlighted various challenges faced during the accreditation process and best practices to coping up with these challenges. All this will be helpful for administrators, IQAC members and staff of higher education institutions. Beforehand knowledge of challenges and if

they exist, what strategies to be adapted to cope with these challenges, will help to conduct accreditation smoothly in higher education institutions.

- Various positive changes expected in the institution, on overcoming the challenges, faced during the accreditation process have also been highlighted. The knowledge of this will motivate administrators, IQAC members and staff of higher education institutions to actively participate in accreditation process of their institution.

LIMITATIONS AND RECOMMENDATIONS

Limitations

- The wide geographical area of the study made data collection challenging.
- The data collection from different stakeholders was not easy. Given the time constraints, getting fair accurate responses from the stakeholders was difficult.

Recommendations

- Staff of the institution going for accreditation should be oriented regarding the whole process and what is to be done for successfully achieving the target of accreditation process. IQAC cell of the institution should organize orientation sessions for the staff of the institution so as to keep them abreast with all the prerequisites of the accreditation process. The quality and quantity of the work must be specified in a clear terms to staff during their orientation. Staff must be made to understand what is and what is not expected of them. This orientation should include materials that specify how and where to get the information and materials that will help them to perform their work well.
- Institution with the help of IQAC cell should organize training workshops for faculty and staff to teach them how to prepare needed accreditation documents such as course specifications and course reports. Institution should encourage faculty and staff to attend workshops in order to be conscious of the latest developments going on in the accreditation process or quality assurance mechanism in country or all over the world. Workshops on how to design

course assessment tools and how to measure student learning is vital to be provided for faculty. Workshops on mapping course learning outcomes with program objectives, student outcome, class learning activities, and assessment tools are very important to be offered as well.

- Stakeholders of the institution should be encouraged to work as a team. IQAC core team should conduct timely meetings for staff members of the institution to encourage them to share any concerns regarding accreditation process with them. It should be made sure that everyone involved in the process knows the key issues related to accreditation process.

- Assign one faculty member in each program/department as the quality officer to facilitate the accreditation process, answer faculty questions related to all phases and requirements of the accreditation, help faculty preparing needed documents, and help program head writing the self study report, SSR. The quality officers can be a member of the IQAC cell that serves as the institution quality centre.

- Quality culture should be promoted in the institution and to be made a lifestyle to be reflected in each and every activity of the institution. All university or college academic, administrative, and service units should appreciate the accreditation process going on and have a proactive role in its success. This means that all units should understand accreditation requirements and how they will contribute to fulfill those requirements. They should also understand and believe how quality is a team work and not an individual effort and accreditation process will positively add laurels to the whole university or educational institute. All this will result into public confidence in the educational level they provide students with. Everyone needs to understand that fulfilling all the accreditation requirements will result into improved quality.

- It should be explained to faculty and supporting staff that how attaining accreditation will increase the public confidence in the program and institution. All this will have positive impact on the number of students, research funds, and industry support to the institution. This will make staff

to show more concern for accreditation process and they will work with more enthusiasm.

- Institution should recognize good work so that staff members work with complete enthusiasm for achieving goal of accreditation in the real sense.
- Set continuous improvement as a target of the institution. Every department should work in the way that continuous improvement becomes the part of daily activity.
- Interdepartmental initiatives should be encouraged through sharing of ideas and facilities leading to new synergy. This can be possible through organizing various inter-departmental activities.
- Institutions should appoint adequate staff so that appropriate duties should be assigned equally to all staff members without extra workload on any other staff member.
- IQAC Members should encourage staff to attend events organized by the accreditation agency so as to update themselves with the latest in accreditation field.
- IQAC Members should keep connect with IQAC Members of other institutions so as to adopt good initiatives in quality process.
- IQAC should do a rigorous 'mock' accreditation with key-point people at least 2-3 months prior to the Peer-Team visit.
- IQAC should provide a brief of the Peer Team Members to every staff member of the institution who will meet the members so as to make them comfortable during peer team visit and in this sense; it will lessen the load of peer team evaluation.
- IQAC prior to the visit of peer team in the institution should make everyone in the institution feel that peer team will be there for sharing information, to give valuable suggestions and not just to test the institution.

SUGGESTIONS FOR FURTHER STUDIES

In the light of findings of the study, the investigator suggests the following points for further research:

- As present study is conducted on NAAC accredited universities of North India. Further study can be conducted on other States also.
- A comparative study can be conducted on accredited higher education institutions of different states.
- A comparative study can be conducted between accredited and non-accredited higher education institutions.
- Study can be conducted on role of program accreditation agency i.e. National Board of Accreditation in quality improvement.
- As in the present study data was collected from three stakeholders i.e. IQAC members, teachers and students. Other stakeholders of universities can also be considered as subjects such as Chancellor, Vice-chancellor, Deans, HOD's.
- Qualitative study related to accreditation processes of different countries can also be studied.
- A comparative study on accreditation agencies of different countries can also be considered for research work.
- Study can be conducted at college level also.
- A comparative study can be conducted on higher education institutions accredited at different levels i.e. grade wise.

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- http://www.thehindu.com/news/national/karnataka/new-naac-guidelines-draw-attention-of-colleges-to-hitherto-neglected-areas/article4624025.ece
- http://www.goidirectory.gov.in/state.php
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- https://www.ugc.ac.in/pdfnews/AutonomousColleges.pdf
- http://www.naac.gov.in/docs/Revised%20Accreditation%20Framework%20for%20Website%2027%20July%20%202017.pdf

INTERVIEW- SCHEDULE FOR IQAC MEMBERS

Name: _____ Gender: _____

University: _____ Qualification: _____

Designation: _____ Working in the current university since_____

Instructions: Please follow the instructions and give your response accordingly. Response to closed-ended questions is to be given by putting check-mark to one of the three options i.e. 'Yes', 'Not Sure' and 'No'. Response to questions with multiple options is to be given by putting check-mark to the options with which respondent feels satisfied. You are free to express your views on open-ended questions. Information provided by you will be used for research purpose only and will be kept confidential.

This research tool is framed to collect information from IQAC Members of NAAC Accredited Universities. (NAAC: National Assessment and Accreditation Council). The purpose is to collect information related to quality initiatives in NAAC accredited universities.

INTERVIEW SCHEDULE

1.	Do you believe that NAAC's assessment is essential for the educational improvement in higher education institutions?	Yes	Not Sure	No
2.	Do you think that the NAAC process has motivated your university towards quality improvement?	Yes	Not Sure	No
3.	Do you think that NAAC accreditation being mandatory for higher education institutions has made quality a culture of these institutions?	Yes	Not Sure	No
4.	Has NAAC assessment acted as a tool of SWOC (Strengths, Weaknesses, Opportunities and Constraints) for your university?	Yes	Not Sure	No
5.	Has NAAC accreditation given a new sense of direction and identity to your university?	Yes	Not Sure	No
6.	Has accreditation promoted intra-institutional interactions in your university?	Yes	Not Sure	No
7.	Do you feel that NAAC assessment has acted as a catalyst for institutional self-improvement?	Yes	Not Sure	No
8.	Do you agree that the NAAC assessment/accreditation process helps institutions in various domains of quality such as quality assurance, quality enhancement and quality maintenance in totality?	Yes	Not Sure	No
9.	Has NAAC accreditation resulted in public accountability of your university?	Yes	Not Sure	No
10.	Has NAAC accreditation as award of status enhanced reputation of your university?	Yes	Not Sure	No
11.	Has NAAC accreditation enhanced the work environment in the university?	Yes	Not Sure	No
12.	Do you think that after NAAC accreditation there is increased collaboration in decision making resulting in increased unity of purpose in the university?	Yes	Not Sure	No

13. Is every member of your university now more clear about his role and responsibilities? | Yes | Not Sure | No |

14. Are the new quality sustenance and quality enhancement measures undertaken by the university, ensuring the effective development of the curricula after NAAC accreditation process? | Yes | Not Sure | No |

If, Yes then please specify-

- Periodic curriculum revision ☐
- Introduction of inter-disciplinary and innovative schemes in thrust areas ☐
- Strengthening of interaction with industry / trade / civil society organizations/educational institutions ☐
- Choice-Based Credit System was introduced ☐

Any other_____

15. Has employability and innovation been addressed in the curriculum? | Yes | Not Sure | No |

16. Has innovation in the curriculum given students more freedom in making choices among the available courses? | Yes | Not Sure | No |

17. Is the curriculum balanced covering need- based, socially relevant programmes, Indian heritage and values? | Yes | Not Sure | No |

18. Has flexibility in the time-table and academic plan of the university being made for providing varied learning experiences both at the institution and on the field? | Yes | Not Sure | No |

19. Is feedback regarding curriculum design and enrichment sought from students and teachers? | Yes | Not Sure | No |

20. Is curriculum updated as per perceived needs? | Yes | Not Sure | No |

21. Has the accreditation process positively enhanced publicity and transparency in the admission process? | Yes | Not Sure | No |

22.	Does the university have well-administered admission rules?	Yes	Not Sure	No
23.	Is there provision of remedial and bridge courses for weaker students?	Yes	Not Sure	No
24.	Does the university provide information on all types of scholarships at the time of admission?	Yes	Not Sure	No
25.	Do you think that NAAC's assessment has positively impacted teaching-learning process at the University?	Yes	Not Sure	No
26.	Are innovative teaching methods being encouraged after NAAC's assessment? If yes, then please specify-	Yes	Not Sure	No
27.	Is ICT as a learning resource being extensively used after NAAC's assessment?	Yes	Not Sure	No
28.	Has NAAC's accreditation resulted in inter-departmental collaboration in teaching and research?	Yes	Not Sure	No
29.	Is teacher assessment questionnaire being used for evaluating the performance of the teaching faculty by students in university?	Yes	Not Sure	No
30.	Has the orientation towards research increased after NAAC accreditation in the university?	Yes	Not Sure	No
31.	Are research facilities encouraging in the university?	Yes	Not Sure	No
32.	Are there departmental research committees for encouraging and advancing research and to monitor and address issues related to research?	Yes	Not Sure	No
33.	Is publishing of papers in national and international journals in University given more impetus after accreditation?	Yes	Not Sure	No
34.	Are there some activities organized or managed by the faculty for an external agency?	Yes	Not Sure	No

35. Do you feel any change in the organization of extension activities after accreditation? If yes, then please specify

Yes	Not Sure	No

_____

36. How has university promoted the participation of the faculty and students in well-appreciated extension activities and social work? Please specify-

- NSS (National Service Scheme) ☐
- NCC (National Cadet Corps) ☐
- Community programmes (awareness/campaigns on social issues) by interaction with local NGOs (Non-Governmental Organizations) ☐

Any other_____

37. Does the university have liaisons and collaboration with national and international institutions for different courses and research related activities?

Yes	Not Sure	No

38. Are various infrastructural facilities in the campus adequate to contribute to effective ambience of curricular, extra-curricular and administrative activities?

Yes	Not Sure	No

39. Has the university given priority to appropriate/suitable facilities for differently-abled students?

Yes	Not Sure	No

40. Is there proper maintenance of infrastructure?

Yes	Not Sure	No

41. Are library resources adequate and supplemented from time to time?

Yes	Not Sure	No

42. Is there procurement of latest books and number of journals in university library?

Yes	Not Sure	No

43. What initiatives have the institution taken after NAAC accreditation to make improvement in the library services? Please specify-

_____
_____
_____

44. Are there adequate facilities of online teaching and learning resources in the university? | Yes | Not Sure | No |

45. Have supportive facilities for students enhanced at the university after NAAC's assessment. If yes, then please specify---------- | Yes | Not Sure | No |

46. Have special coaching classes introduced for various competitive examinations in the University? | Yes | Not Sure | No |

47. What are the various activities being conducted in the university for the personal and professional development of students? Please specify-

- Seminars ☐
- Guest lectures ☐
- Conferences ☐
- Workshops ☐
- Sensitization programmes (Awareness programmes on various social issues) ☐
- Any other_____ ☐

48. Has effective implementation of the career guidance and placement cell been done for students? | Yes | Not Sure | No |

49. Has effective implementation of the grievance redressal cell been done for students? | Yes | Not Sure | No |

50. What are the various welfare measures available for students in the University? Please indicate-

- Scholarships ☐
- Freeships ☐
- Educational loans ☐

Any other_____

51. Are student satisfaction surveys concerning the quality of education imparted in the university being initiated? | Yes | Not Sure | No |

52. Are students intimated about the results of different survey (Student feedback on courses, on programs, on teaching, on overall experience in university) and actions taken on the basis of results?

Yes	Not Sure	No

53. Are alumni meets being conducted from time to time in the university?

Yes	Not Sure	No

54. Is there sound and good e-Governance in the university?

Yes	Not Sure	No

55. What changes are made in various administrative and academic units as a result of NAAC accreditation process?

- Led to co-ordination of the academic and administrative planning and implementation ☐
- Organizational work is efficiently carried out through various committees ☐
- More incentive for research, teaching and publication output ☐
- A Quality cell in form of IQAC has been formed ☐
- Led to administrative and academic excellence thereby keeping check on quality aspect. ☐
- University administration focuses on keeping and maintaining healthy relationship with students, alumni and parents. ☐
- Interpersonal relationship between all stakeholders has improved. ☐
- Accounts are audited often ☐

Any other_____

56. Have some innovative and best practices been introduced in your university as a result of NAAC accreditation? If yes then please specify-

Yes	Not Sure	No

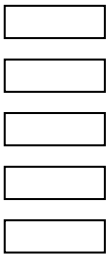
_____

_____

57. What challenges were faced during the accreditation process? Please indicate-

- Added workload
- Unrealized impact of the process
- Lack of basic knowledge or formal training
- Staff inadequacy
- Lenient attitude of some teachers

Any other_____



QUESTIONNAIRE FOR TEACHERS

Name: _____ Gender: _____

University: _____ Qualification: _____

Subject Expertise: _____

Working in the current university since_____

Instructions: Please follow the instructions and give your response accordingly. Response to closed-ended questions is to be given by putting check-mark to one of the three options i.e. 'Yes', 'Not Sure' and 'No'. Response to questions with multiple options is to be given by putting check-mark to the options with which respondent feels satisfied. You are free to express your views on open-ended questions. Information provided by you will be used for the research purpose only and will be kept confidential.

This research tool is framed to collect information from teachers of NAAC Accredited Universities. (NAAC: National Assessment and Accreditation Council). The purpose is to collect information related to quality initiatives in NAAC accredited universities.

QUESTIONNAIRE FOR TEACHERS

1.	Do you believe that NAAC's assessment is essential for the educational improvement in higher education institutions?	Yes	Not Sure	No
2.	Do you think that the NAAC process has motivated your university towards quality improvement?	Yes	Not Sure	No
3.	Do you think that NAAC accreditation being mandatory for higher education institutions has made quality a culture of these institutions?	Yes	Not Sure	No
4.	Has NAAC assessment acted as a tool of SWOC (Strengths, Weaknesses, Opportunities and Constraints) for your university?	Yes	Not Sure	No
5.	Has NAAC accreditation given a new sense of direction and identity to your university?	Yes	Not Sure	No
6.	Has accreditation promoted intra-institutional interactions in your university?	Yes	Not Sure	No
7.	Do you feel that NAAC assessment has acted as a catalyst for institutional self-improvement?	Yes	Not Sure	No
8.	Do you agree that the NAAC assessment/accreditation process helps institutions in various domains of quality such as quality assurance, quality enhancement and quality maintenance in totality?	Yes	Not Sure	No
9.	Has NAAC accreditation resulted in public accountability of your university?	Yes	Not Sure	No
10.	Has NAAC accreditation as award of status enhanced reputation of your university?	Yes	Not Sure	No
11.	Has NAAC accreditation enhanced the work environment in the university?	Yes	Not Sure	No
12.	Do you think that after NAAC accreditation there is increased collaboration in decision making resulting in increased unity of purpose in the university?	Yes	Not Sure	No

13. Is every member of your university now more clear about his role and responsibilities? | Yes | Not Sure | No |

14. Are the new quality sustenance and quality enhancement measures undertaken by the university, ensuring the effective development of the curricula after NAAC accreditation process? | Yes | Not Sure | No |

If, Yes then please specify-

- Periodic curriculum revision ☐
- Introduction of inter-disciplinary and innovative schemes in thrust areas ☐
- Strengthening of interaction with industry / trade / civil society organizations / educational institutions ☐
- Choice-Based Credit System was introduced ☐

Any other_____

15. Has employability and innovation been addressed in the curriculum? | Yes | Not Sure | No |

16. Has innovation in the curriculum given students more freedom in making choices among the available courses? | Yes | Not Sure | No |

17. Is the curriculum balanced covering need- based, socially relevant programmes, Indian heritage and values? | Yes | Not Sure | No |

18. For providing varied learning experiences, students are made to interact with

- Industry ☐
- Trade/Commerce ☐
- Civil society organizations ☐
- Educational Institutions ☐
- Any other_____

19. Has flexibility in the time-table and academic plan of the university being made for providing varied learning experiences both at the institution and on the field? | Yes | Not Sure | No |

20. Is feedback regarding curriculum design and enrichment sought from students and teachers? | Yes | Not Sure | No |

21. Is the curriculum updated as per perceived needs? | Yes | Not Sure | No |

22. Has the accreditation process positively enhanced publicity and transparency in the admission process? | Yes | Not Sure | No |

23. Does the university have well-administered admission rules? | Yes | Not Sure | No |

24. Is there provision of remedial and bridge courses for weaker students? | Yes | Not Sure | No |

25. Does the university provide information on all types of scholarships at the time of admission? | Yes | Not Sure | No |

26. Do you think that NAAC's assessment has positively impacted teaching-learning process at the University? | Yes | Not Sure | No |

27. Are innovative teaching methods being encouraged after NAAC's assessment? If yes, then Please specify | Yes | Not Sure | No |

28. For effective teaching-learning, various interactive instructional techniques are being used in the university such as

- Focused Group Discussions ☐
- Debates ☐
- Projects ☐
- Presentations ☐
- Experiments ☐
- Practicum ☐
- Application of ICT resources ☐

Any other_____

29. Teachers provide a variety of learning experiences in the form of

- Individual learning ☐
- Collaborative learning ☐
- Interactive and participatory approach ☐

- Constructive teaching-learning ☐
- Field experiences ☐
- Any other_____

30. Is ICT as a learning resource is extensively used after NAAC's assessment? Yes | Not Sure | No

31. Has NAAC's accreditation resulted in inter-departmental collaboration in teaching and research? Yes | Not Sure | No

32. Is the teacher assessment questionnaire being used for evaluating the performance of the teaching faculty by students in university? Yes | Not Sure | No

33. Evaluation process in the university has become more skill-oriented as various types of assessment techniques are used such as

- Objective-type tests ☐
- Group discussions ☐
- Oral presentations ☐
- Field-based experiences ☐
- Assignments
- Any other_____

34. Has the orientation towards research increased after NAAC accreditation in the university? Yes | Not Sure | No

35. Are research facilities encouraging in the university? Yes | Not Sure | No

36. Are there departmental research committees for encouraging and advancing research and to monitor and address issues related to research? Yes | Not Sure | No

37. What changes are made regarding different research facilities in the university to encourage research?

- Research labs ☐
- Research and Development Cell ☐

- Wi-Fi connectivity ☐
- Access to online journals ☐
- Availability of various journals, magazines, dissertations and books in library ☐
- Provision of number of scholarships for research scholars ☐
- Funds are provided for successful completion of various research projects ☐
- Any other_____

38. What programmes are emphasized by university to promote a research culture?

- Seminars ☐
- Conferences ☐
- Workshops ☐

Any other_____

39. Is publishing of papers in national and international journals in University given more impetus after accreditation? ☐ Yes ☐ Not Sure ☐ No

40. Are there some activities organized or managed by the faculty for an external agency? ☐ Yes ☐ Not Sure ☐ No

41. Do you feel any change in the organization of extension activities after accreditation? If yes, then please specify ☐ Yes ☐ Not Sure ☐ No

_____

42. The university has promoted the participation of the faculty and students in well-appreciated extension activities and social work through

- NSS (National Service Scheme) ☐
- NCC (National Cadet Corps) ☐
- Community programmes (awareness/campaigns on social issues) by interaction with NGOs (Non-Governmental Organizations) ☐

Any other_____

43. Does the university have liaisons and collaboration with national and international institutions for different courses and research related activities? | Yes | Not Sure | No |

44. Various infrastructural facilities in the campus are adequate to contribute to effective ambience of curricular, extra-curricular and administrative activities. | Yes | Not Sure | No |

45. What are the various infrastructural facilities provided in the university? Please specify-

- Library ☐
- Laboratory ☐
- Auditorium ☐
- Conference Hall ☐
- Hostel Facility ☐
- Health Centre ☐
- Gymnasium/Fitness Centre ☐
- Playground ☐
- Indoor Stadium ☐
- Common Room ☐
- Computer Centre ☐
- Cafeteria ☐
- Guest House ☐
- Any other_____

46. Has the university given priority to appropriate/suitable facilities for differently-abled students? | Yes | Not Sure | No |

47. Is there proper maintenance of infrastructure? | Yes | Not Sure | No |

48. Are library resources adequate and supplemented from time to time? | Yes | Not Sure | No |

49. Is there procurement of latest books and number of journals in university library? | Yes | Not Sure | No |

50. What initiatives have the institution taken after NAAC accreditation to make improvement in the library services? Please specify- _____ _____

51. There are adequate facilities of online teaching and learning resources in the university. | Yes | Not Sure | No |

52. Various supportive facilities for students have been enhanced in the university after NAAC's assessment. If yes, then please specify---------- | Yes | Not Sure | No |

53. In the university special coaching classes being introduced for various competitive examinations. | Yes | Not Sure | No |

54. Various activities are being conducted in the university for the personal and professional development of students

- Seminars ☐
- Guest lectures ☐
- Conferences ☐
- Workshops ☐
- Sensitization programmes (Awareness programmes on various social issues) ☐
- Any other_____

55. Has effective implementation of the career guidance and placement cell been done for students? | Yes | Not Sure | No |

56. Has effective implementation of the grievance redressal cell been done for students? | Yes | Not Sure | No |

57. What are the various welfare measures available for students in the university? Please indicate-

- Scholarships ☐
- Freeships ☐
- Educational loans ☐
- Any other_____

58. Are student satisfaction surveys concerning the quality of education imparted in the university being initiated? | Yes | Not Sure | No |

59. Are students intimated about the results of different surveys (Student feedback on courses, on programs, on teaching, on overall experience in university) and actions taken on the basis of results? | Yes | Not Sure | No |

60. Are alumni meets being conducted from time to time in the university? | Yes | Not Sure | No |

61. Is there sound and good e-Governance in the university? | Yes | Not Sure | No |

62. What changes are made in various administrative and academic units after NAAC accreditation?

- Led to co-ordination of the academic and administrative planning and implementation ☐
- Organizational work is efficiently carried out through various committees ☐
- More incentive for research, teaching and publication output ☐
- A Quality cell in form of IQAC has been formed ☐
- Led to administrative and academic excellence thereby keeping check on quality aspect. ☐
- University administration focuses on keeping and maintaining healthy relationship with students, alumni and parents. ☐
- Interpersonal relationship between all stakeholders has improved. ☐
- Accounts are audited often ☐

Any other_____

63. Have there been some innovative and best practices introduced in your university as a result of NAAC accreditation? If yes, then please specify- | Yes | Not Sure | No |

_____

64. What challenges were faced during the accreditation process? Please indicate-

- Added workload ☐
- Unrealized impact of the process ☐
- Lack of basic knowledge or formal training ☐
- Staff inadequacy ☐
- Lenient attitude of some teachers ☐

Any other_____

QUESTIONNAIRE FOR STUDENTS

Name: _____ Gender: _____

Age: _____ University: _____

Program of study: _____

Year of study: _____

Instructions: Please follow the instructions and give your responses accordingly. Response to closed-ended questions is to be given by putting check-mark to one of the three options i.e. 'Yes', 'Not Sure' and 'No'. Response to questions with multiple options is to be given by putting check-mark to the options with which respondent feels satisfied. Information provided by you will be used for the research purpose only and will be kept confidential.

This research tool is framed to collect information from students of NAAC Accredited Universities. The purpose is to collect information related to quality initiatives in NAAC Accredited Universities.

QUESTIONNAIRE FOR STUDENTS

1.	Employability and Innovation have been addressed in the curriculum.	Yes	Not Sure	No
2.	We have the freedom to make choices among the available courses as a result of innovation in curriculum.	Yes	Not Sure	No
3.	Curriculum is balanced covering need- based, socially relevant programmes, Indian heritage and values.	Yes	Not Sure	No
4.	For providing varied learning experiences, we are made to interact with			
	○ Industry	☐		
	○ Trade/Commerce	☐		
	○ Civil society organizations	☐		
	○ Educational Institutions	☐		
	○ Any other_____			
5.	For providing varied learning experiences both at the institution and on the field, flexibility in the time-table and academic plan of the university is made.	Yes	Not Sure	No
6.	Feedback from students is also sought regarding curriculum design and enrichment.	Yes	Not Sure	No
7.	Curriculum is updated as per perceived needs	Yes	Not Sure	No
8.	The university has a transparent admission policy.	Yes	Not Sure	No
9.	The university has a well administered admission rules.	Yes	Not Sure	No
10.	There is provision of remedial and bridge courses for weaker students.	Yes	Not Sure	No
11.	The university provides information on all types of scholarships at the time of admission.	Yes	Not Sure	No

12. Teachers in university employ innovative methods of teaching. | Yes | Not Sure | No |

13. For effective teaching-learning, various interactive instructional techniques are being used in the university such as

- Focused Group Discussions ☐
- Debates ☐
- Projects ☐
- Presentations ☐
- Experiments ☐
- Practicum ☐
- Application of ICT resources ☐
- Any other_____

14. Teachers provide a variety of learning experiences in the form of

- Individual learning ☐
- Collaborative learning ☐
- Interactive and participatory approach ☐
- Constructive teaching-learning ☐
- Field experiences ☐
- Any other_____

15. Teachers in the university are more oriented towards using latest and innovative pedagogy. | Yes | Not Sure | No |

16. Teacher assessment questionnaire is used for evaluating the performance of the teaching faculty by students in the university | Yes | Not Sure | No |

17. Evaluation process in the university has become more skill-oriented as various types of assessment techniques are used such as

- Objective-type tests ☐

- Group discussions ☐
- Oral presentations ☐
- Field-based experiences ☐
- Assignments ☐
- Any other_____

18. Research facilities are encouraging in the university — Yes | Not Sure | No

19. Departmental research committees are there for encouraging and advancing research and to monitor and address issues related to research. — Yes | Not Sure | No

20. In the university, students are provided with various research facilities such as

- Research labs ☐
- Research and Development Cell ☐
- Wi-Fi connectivity ☐
- Access to online journals ☐
- Availability of various journals, magazines, dissertations and books in library ☐
- Provision of number of scholarships for research scholars ☐
- Funds are provided for successful completion of various research projects ☐
- Any other_____

21. University is now emphasizing more on programmes to promote a research culture such as

- Seminars ☐
- Conferences ☐
- Workshops ☐
- Any other_____

22. Students and teachers are encouraged to publish papers in national and international journals. — Yes | Not Sure | No

23. The university has promoted the participation of the faculty and students in well-appreciated extension activities and social work through

- NSS (National Service Scheme) ☐
- NCC (National Cadet Corps) ☐
- Community programmes (awareness/campaigns on social issues) by interaction with local NGOs (Non-Governmental Organizations) ☐
- Any other_____

24. The university has liaisons and collaboration with national and international institutions for different courses and research related activities. ☐ Yes ☐ Not Sure ☐ No

25. Various infrastructural facilities in the campus are adequate to contribute to effective ambience of curricular, extra-curricular and administrative activities. ☐ Yes ☐ Not Sure ☐ No

26. What are the various infrastructural facilities provided in the university? Please specify-

- Library ☐
- Laboratory ☐
- Auditorium ☐
- Conference Hall ☐
- Hostel Facility ☐
- Health Centre ☐
- Gymnasium/Fitness Centre ☐
- Playground ☐
- Indoor Stadium ☐
- Common Room ☐
- Computer Centre ☐
- Cafeteria ☐
- Guest House ☐
- Any other_____

27. I believe that in the university appropriate/suitable facilities for differently-abled students have been given priority. ☐ Yes ☐ Not Sure ☐ No

28. There is proper maintenance of infrastructure. | Yes | Not Sure | No |

29. I feel library resources are adequate and supplemented from time to time. | Yes | Not Sure | No |

30. There is procurement of latest books and number of journals in university library. | Yes | Not Sure | No |

31. There are adequate facilities of online teaching and learning resources in the institution. | Yes | Not Sure | No |

32. In the university special coaching classes being introduced for various competitive examinations. | Yes | Not Sure | No |

33. Various activities are being conducted in the university for the personal and professional development of students

- Seminars ☐
- Guest lectures ☐
- Conferences ☐
- Workshops ☐
- Sensitization programmes (Awareness programmes on various social issues) ☐

Any other_____

34. Effective implementation of the career guidance and placement cell has been done for students. | Yes | Not Sure | No |

35. Effective implementation of the grievance redressal cell has been done for students. | Yes | Not Sure | No |

36. Various welfare measures have been there for us

- Scholarships ☐
- Freeships ☐
- Educational loans ☐
- Any other_____

37. Student satisfaction surveys concerning the quality of education imparted in the university are being initiated. | Yes | Not Sure | No |

38.	Students are intimated about the results of different feedback surveys (Student feedback on courses, on programs, on teaching, on overall experience in university) and actions taken on the basis of results.	Yes	Not Sure	No
39.	Alumni meets are being conducted from time to time in the university.	Yes	Not Sure	No
40.	There is sound and good e-Governance in the university.	Yes	Not Sure	No

List of NAAC Accredited Universities selected for Data Collection as per updated list of Accredited Institutions on NAAC website

S.No.	NAAC Accredited Universities	States/UT
1	Teri School of Advanced Studies	Delhi
2	Maharishi Dayanand University, Rohtak	Haryana
3	University of Petroleum and Energy Studies, Dehradun	Uttarakhand
4	Amity University, Noida	Uttar Pradesh
5	Jaypee University of Information Technology, Solan	Himachal Pradesh
6	Banasthali Vidyapith, Banasthali	Rajasthan
7	Sant Longowal Institute of Engineering and Technology, Sangrur	Punjab
8	University of Kashmir, Kashmir	Jammu and Kashmir