



“STUDENTS’ PERSPECTIVE OF MOST TO LEAST PREFERRED PARAMETERS AFFECTING THE QUALITY OF EDUCATION IN AN AFFILIATED UNDERGRADUATE ENGINEERING INSTITUTION IN HARYANA”

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ABSTRACT

The objective of the study is to find out the students’ perspective of most and least preferred parameters affecting the quality of education in an affiliated undergraduate engineering institution in Haryana, India. It is a descriptive research. The data has been collected with the help of Questionnaire Based Survey. The sample size for the study is 500. The respondents are the students pursuing B.Tech who were selected randomly from the above said geographical area. For data analysis and conclusion of the results of the survey, statistical tool like factor analysis was performed in SPSS. The most preferred aspects of the institution by the students are: enough opportunities for Industry Institute Interaction, entrepreneurship cell conduct sufficient activities, Industry Institute Partnership Cell (IIPC) is active and efficient, sufficient clubs and societies providing developmental activities, adequate activities for enhancement of soft and life skills, good hands - on skills are imparted during the workshop practices, students are encouraged to participate in co-curricular & extra-curricular activities, atmosphere is conducive for the development of the requisite competencies, etc. The least preferred aspects of the institution by the students are: students follow the rules and regulations of the institute, a secured Wi-Fi facility for the students, and fresher party, farewell party, techno fests etc are well organized under disciplined environment.

Keywords: Affiliated, Higher education, Quality education, Technical institution, Undergraduate.

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1. INTRODUCTION

Education is vital to the human resources development and empowerment in the stages of growth of a nation. In any education system, higher education encompassing Management,

Engineering, Medicines etc., plays a major role in imparting knowledge, values, and developing skills and, in the process, increase the growth and productivity of the nation. While the Government of India is committed to provide primary education and a few facilities/subsidies for higher education. As a higher cost is involved in the establishment of higher education institutes, we are witnessing the entry of private sector to run educational institutions.

The higher education system in today's scenario is faced with many challenges like competitiveness, management, financing and reorientation of program by laying equal emphasis on quality of higher education, ethics and values together with the assessment of educational institutions and their accreditation. In the 21st century, the higher education can be used as a powerful tool to build knowledge based society.

Higher education should be viewed as a long-term social investment for the promotion of social cohesion, cultural development, economic growth, equity and justice. Indian higher education system can address itself to the global challenges through maintaining the right balance between the need and the demand and channelizing teaching, research and extension activities. It is thus required to bring quality of highest standards in every sphere of work. The needs and expectations of the society are changing at a fast pace and hence the quality of higher education needs to be enhanced at a commensurate level. Quality would depend on the quality of all the parameters and stakeholders, be it the students, faculty, staff, infrastructure etc. For attaining quality in these regards, all the processes, systems and policies have to be clearly directed towards making improvements in all the relevant dimensions in a sustained manner. We need to study and evaluate thoroughly the models of education being implemented in other parts of the world and work out strategies to adopt the best models in our education system. If we wish to compete globally in the 21st century, our education system should improve its instruction models and administrative procedures by adopting certain benchmarking techniques. Benchmarking would provide benefits to Indian education system in terms of setting right objectives, reengineering etc. We should aim at establishing world class research facilities, recruit competent and profound academicians in colleges / universities to lead in economic development. It is important to transform the younger workforce into productive ones and this can be done by providing quality education in all parts of the country. In order to have a cutting edge over the competitors in the globalised world, Indian higher education system should focus on the use of technology for effective learning by the students.

2. LITERATURE REVIEW

Bairagi and Shrivastava (2013) the objective of the study was to facilitate the creation of a right framework which may be used to evaluate all existing policies, schemes and judicial decisions. It was an evaluative study which was based on the secondary sources of the data. The study concluded that starting from the period around the freedom struggle, there has been a consistent demand for FCE. However, in order to maintain uniform standards across India and to create a 'common language', it is imperative to enact skeletal Central-level legislation in such a manner that it allows room for local need based innovations.

Gafoor and Khabeer (2013) the study focuses on the first two criterions identified by NAAC to serve as the basis for its assessment procedure: Curricular Aspects Criterion, Teaching Learning and Evaluation. The procedure of the study uses the techniques of research and development with the following steps: (i) development of ICT model (ii) analysis of the model impact on the performance of the affiliated colleges. The study concluded that the ICT is the need of the hour for quality assurance in Higher Education as it fastens the process of assessment and audit with greater transparency. It is a model that can be used in assessing the quality of education in Colleges of the University. Sindhwani and Kumar (2013) the study highlights need and importance of values in higher education. It was an evaluative study which was based on the secondary sources of the data. The study concluded that people across the globe are looking towards the system of education to infuse human values among the students so that the world remains as a place of peace, security and prosperity.

Simantini (2012) the study emphasis that the Indian state has sought to manage the costs of reform by using the policy arena of education reform as a site of patronage and social management. The study concluded that in the context of Indian politics in the post reform period, it may be fruitfully employed in studying phenomena such as the rise of vernacular elites, judicialization of politics and emerging forms of identity politics. By incorporating policy as the theoretical as well as empirical basis of comparative research, future studies may find more effective means of tracing important linkages between developments in non-electoral and electoral spheres of democratic competition.

Vincent and Lancrin (2006) Using cross-border education to build capacity could be an effective strategy, especially when it is accompanied by appropriate policies and regulatory frameworks. Once an overall strategy for capacity building in education is in place, as part of a national capacity building strategy, countries should examine how tertiary education fits into this. The study concluded that cross-border education has the potential to be an effective capacity development tool for developing countries, both for their tertiary education systems but also for the economy as a whole. Richard (2006) tertiary education institutions are increasingly recognized for their catalytic role in national innovation systems, as well as for stimulating social and economic change. Healthy and agile tertiary education institutions are therefore essential drivers of the knowledge economy not only as producers of knowledge, but also as significant societal structures delivering public goods through multiple externalities. The study concluded that even with warnings and sanctions QA processes can move a system toward one that embraces the virtuous cycle of quality improvement as long as initial actions are paired with clear guidance for improvements and technical assistance to help move the program or institution toward improvement.

Singla *et al.* (2005) the study describes the growing necessity to define relevant competencies as guidelines for curriculum development in technical and vocational studies. The study concluded that case studies are particularly suitable to provide students with a learning situation, which closely resembles the organizational context and the professional requirements. Case studies therefore are the cornerstones of competency-oriented learning.

3. RESEARCH METHODOLOGY

Objective of the study: To study the students' perspective of most and least preferred parameters affecting the quality of education in an affiliated undergraduate engineering institution in Haryana, India.

Sampling: The research is a descriptive type of research in nature. The data has been collected with the help of Questionnaire Based Survey. The sample size for the study is 500 comprising of the students respondents. The sample has been taken on the random (Probability) basis and the questionnaire was filled by the students (pursuing B.Tech) chosen on the random basis from an affiliated undergraduate engineering institution in Haryana, India.

Database collection: The primary data was collected with the help of questionnaire and personal interview method from the technical institute chosen randomly. And the secondary data was gathered through the study of studies and research work carried out in the past.

Scope of the study: The area for the study is National Capital Region (NCR), Haryana and the institution to be studied is an affiliated undergraduate engineering institution in Haryana, India. The respondents are the students pursuing B.Tech who were selected randomly from the above said geographical area.

Statistical tools to be used: For data analysis and conclusion of the results of the survey, statistical tool like factor analysis was performed with the help of high quality software; SPSS.

4. DATA ANALYSIS AND INTERPRETATIONS

4.1. Factor Analysis

Principal Component Analysis with varimax rotation was performed through SPSS on the 84 items. Six factors were extracted. The total variance accounted for by the six factors was 40.54%.

KAISER-MEYER-OLKIN (KMO) AND BARTLETT'S TEST

Table-1. Showing KMO and Bartlett's Test for students' sample

	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.923
Bartlett's Test of Sphericity	Approx. Chi-Square	19882.267
	df	3486
	Sig.	.000

Interpretations: Bartlett's test of sphericity is an indication of the strength of the relationship among variables.

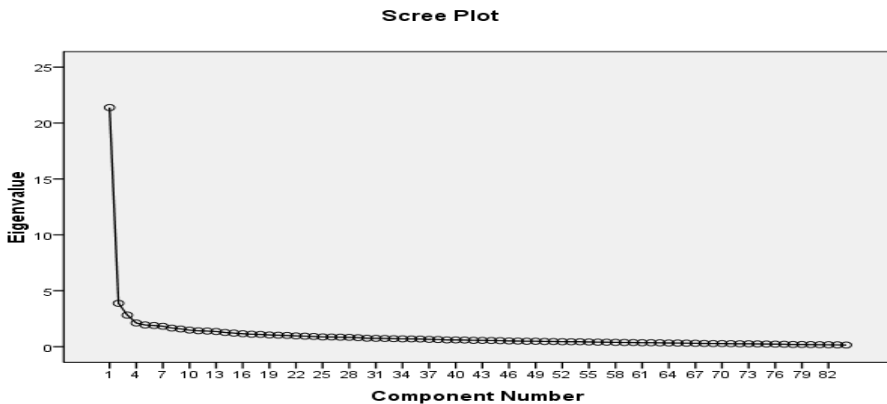
This tests the null hypothesis that the correlation matrix is an identity matrix. An identity matrix is matrix in which all of the diagonal elements are 1 and all off diagonal elements are 0. Bartlett's test of sphericity is significant if the associated probability is less than 0.05. For this data the probability is 0.00 . In such case the null hypothesis is rejected. This means that correlation matrix is not an identity matrix. Thus from the perspective of Bartlett's test, factor analysis is feasible.

As Bartlett's test is almost always significant, a more discriminating index of factor analyzability is the KMO.

Kaiser-Meyer-Olkin: The Kaiser-Meyer-Olkin measure of sampling adequacy tests is 0.923, which is very large, so the KMO also supports factor analysis.

4.2. Factor Extraction

Figure -1. Showing scree plot for students' sample



Interpretations: It can be seen that the curve begins to flatten between components 4 and 5. If we go by scree plot method, we should retain four components only. This is a very low number taking into consideration the number of variables we have in our data. So, we would now consider eigen value method for calculating the number of factors to be extracted.

Fixed number of factors: Here the number of factors to be extracted has been fixed to six. Also the eigen values for the first six principal components is greater than 1, so these components with eigen values of 21.386, 3.883, 2.823, 2.118, 1.945 and 1.901 were retained.

4.3. Total Variance Explained

Only the first six items are extracted for analysis because, under the Extraction options, SPSS was told to extract only factors with eigen values of 1.0 or higher.

Table-2. Showing Total Variance Explained for students' sample

Compo nent	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	21.386	25.459	25.459	10.061	11.977	11.977
2	3.883	4.623	30.082	6.335	7.542	19.518
3	2.823	3.360	33.442	5.937	7.068	26.586
4	2.118	2.522	35.964	4.606	5.483	32.069
5	1.945	2.315	38.279	4.191	4.990	37.059
6	1.901	2.263	40.542	2.926	3.483	40.542

Extraction Method: Principal Component Analysis.

Interpretations: The SPSS output gives the variance explained by each component after the rotation. The variance explained is equal to the sum of squared loadings (SSL) across variables. The first component accounts for 25.459% of the variance, the second 4.623%, the third 3.360%, the fourth 2.522%, the fifth 2.315% and the sixth 2.263%. After the rotation, the six components together account for 40.54% of the total variance.

4.4. Rotated Component (Factor) Matrix

Acronym:

SQ_i are the questions pertaining to Selection Process

AQ_i are the questions pertaining to Academic Excellence

IQ_i are the questions pertaining to Infrastructure

PDQ_i are the questions pertaining to Personality Development & Industry Exposure

PQ_i are the questions pertaining to Placements

MQ_i are the questions pertaining to Management & Administration

Table -3. Showing Rotated Component Matrix^a for students' sample

Component	Component					
	1	2	3	4	5	6
SQ1	.295	.267	.077	.142	.373	-.087
SQ2	.210	.203	.006	.281	.319	-.060
SQ3	.192	.105	.107	.210	.572	.094
SQ4	.102	.221	.186	.326	.470	-.013
SQ5	.246	.050	-.116	.148	.439	.221
SQ6	-.052	-.017	.116	.062	.514	.199
AQ1	.263	.126	.014	.046	.362	-.113
AQ2	.144	.046	.173	.076	.579	-.032
AQ3	.289	.047	.098	.278	.397	-.109
AQ4	.179	.061	.233	.487	.383	.027
AQ5	.173	.014	.128	.496	.475	.083
AQ6	.150	.134	.074	.562	.361	.070
AQ7	.146	.010	.173	.500	.243	.068
AQ8	.317	.182	-.015	.576	.118	-.086
AQ9	.167	.147	.271	.620	.043	.050
AQ10	.131	.047	.181	.488	-.017	.263
AQ11	.335	.165	.029	.529	.043	.187
AQ12	.041	.198	.131	.440	.238	.164
AQ13	.191	.336	.238	.392	.214	-.117
AQ14	.213	.382	.152	.347	.178	-.209
AQ15	.379	.288	.033	.385	.061	.086
IQ1	.095	.155	.201	.012	.215	.253
IQ2	.256	.442	.205	.027	.347	.162

IQ3	.342	.475	.058	-.016	.155	.214
IQ4	.305	.368	.033	.012	.369	.132
IQ5	.124	.252	.436	.018	.382	-.115
IQ6	.230	.415	.279	.186	.165	.174
IQ7	.118	.281	.395	.214	.106	.150
IQ8	.192	.385	.146	.079	-.042	.380
IQ9	.207	.435	.068	.011	-.072	.400
IQ10	.076	.355	.435	-.020	.174	.207
IQ11	.142	.481	.232	.237	.195	.197
IQ12	.032	.358	.395	.063	.311	-.010
IQ13	.201	.558	-.054	.114	.161	.170
IQ14	.177	.309	.411	.003	.199	.076
IQ15	.098	.355	.091	.008	.039	.541
IQ16	.185	.459	.331	.190	.089	.126
IQ17	.014	.139	.580	.137	.086	.237
IQ18	.156	.288	.588	.064	.236	-.112
IQ19	.090	.062	.731	.105	.050	.101
IQ20	.182	.379	.516	.127	.055	-.058
IQ21	.135	.242	.399	.344	-.019	.098
IQ22	.246	.381	.457	.288	.052	-.053
IQ23	.073	.223	.567	.251	.009	.177
IQ24	.323	.310	.423	.095	.088	.008
IQ25	.353	.422	.205	.102	.056	.218
IQ26	.194	.551	.085	.224	.079	.098
IQ27	.087	.501	.364	.153	-.040	.089
IQ28	.181	.542	.241	.104	.134	-.134
IQ29	.183	.518	.245	.041	.143	-.008
IQ30	.266	.509	.259	.048	.068	.080
IQ31	.087	.477	.298	.257	-.082	.064
IQ32	.248	.301	.288	.225	.008	.073
PDQ1	.586	.175	-.154	.145	.179	.119
PDQ2	.614	.211	.054	.167	.092	.020
PDQ3	.626	.259	.044	.173	.096	.021
PDQ4	.450	.265	.217	.097	.073	-.117
PDQ5	.437	.084	.344	-.032	.298	.194
PDQ6	.433	.149	.223	.106	.156	.090
PDQ7	.409	.068	.189	.107	.220	.190
PDQ8	.418	.064	.343	.057	.213	.212
PDQ9	.541	.014	.105	.025	.288	.108
PDQ10	.565	.071	.129	.128	.018	.228
PDQ11	.588	.163	.022	.116	.142	.188
PDQ12	.586	.230	-.011	.112	.143	.138

PDQ13	.456	.205	.084	.143	.215	.197
PDQ14	.318	.056	-.038	.200	.100	.533
PQ1	.467	.125	.109	.091	.160	.249
PQ2	.535	.076	.130	.174	.095	.374
PQ3	.341	.029	.309	.208	.019	.210
PQ4	.458	.040	.053	.225	-.065	.398
PQ5	.493	.090	.207	.141	.117	.395
PQ6	.420	.086	.148	.132	.238	.391
MQ1	.666	.117	.102	.199	-.051	-.129
MQ2	.492	.076	.328	-.030	.095	-.025
MQ3	.462	.118	.148	.107	.153	.038
MQ4	.531	.294	.078	.195	.007	-.003
MQ5	.572	.248	.083	.072	.061	.107
MQ6	.562	.224	.224	.107	.048	-.011
MQ7	.572	.131	.107	.066	.203	-.055
MQ8	.519	.059	.159	.138	.199	-.010
MQ9	.252	-.044	.589	.236	.112	-.183
MQ10	.521	.136	.145	.188	-.043	.119
MQ11	.427	.162	.399	.041	.134	.057

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 11 iterations.

4.5. Acronym

SQ_i are the questions pertaining to Selection Process

AQ_i are the questions pertaining to Academic Excellence

IQ_i are the questions pertaining to Infrastructure

PDQ_i are the questions pertaining to Personality Development & Industry Exposure

PQ_i are the questions pertaining to Placements

MQ_i are the questions pertaining to Management & Administration

Table-4. Showing grouping of the items as per the factor loadings for students' sample

Factor Name	Items	Factor Loadings	
Factor 1	PDQ1	Enough opportunities for Industry Institute Interaction	0.586
	PDQ2	Entrepreneurship cell conduct sufficient activities	0.614
	PDQ3	Industry Institute Partnership Cell (IIPC) is active and efficient	0.626
	PDQ4	Sufficient clubs and societies providing developmental activities	0.45
	PDQ5	Adequate activities for enhancement of soft and life skills	0.437
	PDQ6	Good hands - on skills are imparted during the workshop practices	0.433
	PDQ7	Students are encouraged to participate in co-curricular & extra-curricular activities	0.409

	PDQ8	Atmosphere is conducive for the development of the requisite competencies	0.418
	PDQ9	Students take interest in all the activities	0.541
	PDQ10	Eminent professors, senior industry executives are invited for guest lectures	0.565
	PDQ11	Student exchange programmes are beneficial	0.588
	PDQ12	Proper guidance is provided in the live projects for research	0.586
	PDQ13	Finishing Schools are timely organized	0.456
	PQ1	Training and placement cell is able to arrange summer training and campus interviews in an adequate number	0.467
	PQ2	Student service centre exists to provide efficient academic, financial, administrative services	0.535
	PQ3	Project work and summer training is attached due importance	0.341
	PQ4	A good number of the students are placed at the completion of final semester	0.458
	PQ5	A good number of recruiters visit the campus	0.493
	PQ6	Reputed companies visit the campus for the recruitment	0.42
	MQ1	A well defined Academic Policy is in place	0.666
	MQ2	The Director/Head of Departments / Officers have the academic, financial and administrative freedom	0.492
	MQ3	Decisions are taken by the duly constituted BOG / BOS /BOF assisted by committees and represented by faculty and experts	0.462
	MQ4	Transparency in working of the institution	0.531
	MQ5	Communication flow between the management and students is easier	0.572
	MQ6	Hierarchy is maintained while taking major decisions	0.562
	MQ7	Student grievances' are timely addressed by the authority	0.572
	MQ8	Efficient Grievance Redressal Committee	0.519
	MQ10	Insurance plans for the safety and security of the students	0.521
	MQ11	Display of Courses and approved Intake in the Institute at the entrance of the Institute is done in a proper way	0.427
	AQ14	Fair & transparent evaluation system	0.382
	IQ2	Laboratories are well equipped	0.442
	IQ3	Facilities of sports are sufficient	0.475
	IQ6	Library is well equipped	0.415
	IQ8	Reading and internet facilities are available in the hostel	0.385
	IQ9	Mess food is hygienic and homely	0.435
	IQ11	Boys & girls common rooms are in adequate number	0.481
	IQ13	First aid cum sick room with required facilities	0.558
	IQ16	Institute's website is well developed with Mandatory Disclosure	0.459
	IQ25	Proper use of public announcement system for general announcements	0.422
Factor 2			

	IQ26	Enterprise Resource Planning (ERP) Software for Student-Institution-Parent interaction is well developed	0.551
	IQ27	Transport facility from remote areas	0.501
	IQ28	Post, Banking Facility / ATM is located in a centralized location	0.542
	IQ29	CCTV Security System covers vital areas of the institute	0.518
	IQ30	LCD projectors equipped classrooms are adequate in number	0.509
	IQ31	Recreational facilities are satisfactory for the students	0.477
	IQ32	Institute is located at a convenient and safe location	0.301
Factor 3	IQ5	Class rooms are in sufficient number	0.436
	IQ7	Students can visit the library whenever they find time	0.395
	IQ10	Toilets for the students are in adequate number	0.435
	IQ12	Stationary store and reprography facility in centralized location	0.395
	IQ14	Auditorium / Amphitheater is well equipped	0.411
	IQ17	Potable water supply and outlets for drinking water at strategic locations	0.58
	IQ18	Back up electric supply is available when required	0.588
	IQ19	Facility for sewage disposal is sufficient and appropriate	0.731
	IQ20	Parking facility for the students' vehicle is spacious	0.516
	IQ21	A barrier free well built environment for disabled and elderly persons	0.399
	IQ22	Adequate safety provisions for calamities	0.457
	IQ23	Road is suitable for the use by Motor vehicle	0.567
	IQ24	General Notice Board and Departmental Notice Boards are placed in strategic locations	0.423
	MQ9	Institute focuses on the prevention and prohibition of ragging	0.589
	Factor 4	AQ4	Teachers are committed, sincere and dedicated
AQ5		Faculty is qualified and competent	0.496
AQ6		Effective teaching-learning process	0.562
AQ7		Students' doubts are cleared through tutorials	0.5
AQ8		Flexible teaching methods	0.576
AQ9		Faculty is easily available to students	0.62
AQ10		Senior students guide their juniors	0.488
AQ11		Presence of guidance, counseling and mentoring activities	0.529
AQ12		Emphasis given on the non formal education	0.44
AQ13		Question papers follow a fixed structure	0.392
Factor 5	AQ15	Travel Grant (TG) for the students	0.385
	SQ1	Uniform criteria followed at the time of giving admission	0.373
	SQ2	Entrance examination helps in the selection process	0.319
	SQ3	The students admitted have required basic knowledge	0.572
	SQ4	Well structured Induction program	0.47

	SQ5	Fee structure helps in the selection process	0.439
	SQ6	Students deposit their dues timely	0.514
	AQ1	Students do not forego the academic activities	0.362
	AQ2	Students are keen to improve their performance	0.579
	AQ3	Students come prepared for classes	0.397
	IQ4	Communication laboratory is modernized and well equipped	0.369
	IQ1	Students follow the rules and regulations of the institute	0.253
Factor 6	IQ15	A secured Wi-Fi facility for the students	0.541
	PDQ14	Fresher party, farewell party, techno fests etc are well organized under disciplined environment	0.533

Interpretations: Looking at the table, it can be seen that PDQ1, PDQ2, PDQ3, PDQ4, PDQ5, PDQ6, PDQ7, PDQ8, PDQ9, PDQ10, PDQ11, PDQ12, PDQ13, PQ1, PQ2, PQ3, PQ4, PQ5, PQ6, MQ1, MQ2, MQ3, MQ4, MQ5, MQ6, MQ7, MQ8, MQ10 and MQ11 are substantially loaded on Factor 1, AQ14, IQ2, IQ3, IQ6, IQ8, IQ9, IQ11, IQ13, IQ16, IQ25, IQ26, IQ27, IQ28, IQ29, IQ30, IQ31 and IQ32 are substantially loaded on Factor 2, IQ5, IQ7, IQ10, IQ12, IQ14, IQ17, IQ18, IQ19, IQ20, IQ21, IQ22, IQ23, IQ24 and MQ9 are substantially loaded on Factor 3, AQ4, AQ5, AQ6, AQ7, AQ8, AQ9, AQ10, AQ11, AQ12, AQ13 and AQ15 are substantially loaded on Factor 4, SQ1, SQ2, SQ3, SQ4, SQ5, SQ6, AQ1, AQ2, AQ3 and IQ4 are substantially loaded on Factor 5, while IQ1, IQ15 and PDQ14 are substantially loaded on Factor 6.

Factor analysis for each set of student respondents is done based on the factor loadings. In all six factors have been extracted through Principal Component Analysis. Each factor represents the group of similar and coherent aspects for which response is sought through questionnaire. Following is the range of each of the six factors with the list of the aspects which the individual factors include:

Factor –1. The factor loadings ranged between 0.341 – 0.666. The aspects included namely:

- a) Enough opportunities for Industry Institute Interaction
- b) Entrepreneurship cell conduct sufficient activities
- c) Industry Institute Partnership Cell (IIPC) is active and efficient
- d) Sufficient clubs and societies providing developmental activities
- e) Adequate activities for enhancement of soft and life skills
- f) Good hands - on skills are imparted during the workshop practices
- g) Students are encouraged to participate in co-curricular & extra-curricular activities
- h) Atmosphere is conducive for the development of the requisite competencies
- i) Students take interest in all the activities
- j) Eminent professors, senior industry executives are invited for guest lectures
- k) Student exchange programmes are beneficial
- l) Proper guidance is provided in the live projects for research
- m) Finishing Schools are timely organized

- n) Training and placement cell is able to arrange summer training and campus interviews in an adequate number
- o) Student service centre exists to provide efficient academic, financial, administrative services
- p) Project work and summer training are attached due importance
- q) A good number of the students are placed at the completion of final semester
- r) A good number of recruiters visit the campus
- s) Reputed companies visit the campus for the recruitment
- t) A well defined Academic Policy is in place
- u) The Director/Head of Departments / Officers have the academic, financial and administrative freedom
- v) Decisions are taken by the duly constituted BOG / BOS /BOF assisted by committees and represented by faculty and experts
- w) Transparency in working of the institution
- x) Communication flow between the management and students is easier
- y) Hierarchy is maintained while taking major decisions
- z) Student grievances' are timely addressed by the authority
- aa) Efficient Grievance Redressal Committee
- bb) Insurance plans for the safety and security of the students
- cc) Display of Courses and approved Intake in the Institute at the entrance of the Institute is done in a proper way

Factor –2. The factor loadings ranged between 0.301 – 0.558. The aspects included namely:

- a) Fair & transparent evaluation system
- b) Laboratories are well equipped
- c) Facilities of sports are sufficient
- d) Library is well equipped
- e) Reading and internet facilities are available in the hostel
- f) Mess food is hygienic and homely
- g) Boys & girls common rooms are in adequate number
- h) First aid cum sick room with required facilities
- i) Institute's website is well developed with Mandatory Disclosure
- j) Proper use of public announcement system for general announcements
- k) Enterprise Resource Planning (ERP) Software for Student-Institution-Parent interaction is well developed
- l) Transport facility from remote areas
- m) Post, Banking Facility / ATM is located in a centralized location
- n) CCTV Security System covers vital areas of the institute
- o) LCD projectors equipped classrooms are adequate in number
- p) Recreational facilities are satisfactory for the students

- q) Institute is located at a convenient and safe location

Factor –3. The factor loadings ranged between 0.395 – 0.731. The aspects included namely:

- a) Class rooms are in sufficient number
- b) Students can visit the library whenever they find time
- c) Toilets for the students are in adequate number
- d) Stationary store and reprography facility in centralized location
- e) Auditorium / Amphitheater is well equipped
- f) Potable water supply and outlets for drinking water at strategic locations
- g) Back up electric supply is available when required
- h) Facility for sewage disposal is sufficient and appropriate
- i) Parking facility for the students' vehicle is spacious
- j) A barrier free well built environment for disabled and elderly persons
- k) Adequate safety provisions for calamities
- l) Road is suitable for the use by Motor vehicle
- m) General Notice Board and Departmental Notice Boards are placed in strategic locations
- n) Institute focuses on the prevention and prohibition of ragging

Factor –4. The factor loadings ranged between 0.385 – 0.620. The aspects included namely:

- a) Teachers are committed, sincere and dedicated
- b) Faculty is qualified and competent
- c) Effective teaching-learning process
- d) Students' doubts are cleared through tutorials
- e) Flexible teaching methods
- f) Faculty is easily available to students
- g) Senior students guide their juniors
- h) Presence of guidance, counseling and mentoring activities
- i) Emphasis given on the non formal education
- j) Question papers follow a fixed structure
- k) Travel Grant (TG) for the students

Factor –5. The factor loadings ranged between 0.319 – 0.579. The aspects included namely:

- a) Uniform criteria followed at the time of giving admission
- b) Entrance examination helps in the Selection Process
- c) The students admitted have required basic knowledge
- d) Well structured Induction program
- e) Fee structure helps in the Selection Process
- f) Students deposit their dues timely
- g) Students do not forego the academic activities

- h) Students are keen to improve their performance
- i) Students come prepared for classes
- j) Communication laboratory is modernized and well equipped

Factor –6. The factor loadings ranged between 0.253 – 0.541. The aspects included namely:

- a) Students follow the rules and regulations of the institute
- b) A secured Wi-Fi facility for the students
- C) Fresher party, farewell party, techno fests etc are well organized under disciplined environment

5. CONCLUSIONS

The most preferred aspects of the institution by the students are: enough opportunities for Industry Institute Interaction, entrepreneurship cell conduct sufficient activities, Industry Institute Partnership Cell (IIPC) is active and efficient, sufficient clubs and societies providing developmental activities, adequate activities for enhancement of soft and life skills, good hands - on skills are imparted during the workshop practices, students are encouraged to participate in co-curricular & extra-curricular activities, atmosphere is conducive for the development of the requisite competencies, students take interest in all the activities, eminent professors, senior industry executives are invited for guest lectures, student exchange programmes are beneficial, proper guidance is provided in the live projects for research, finishing Schools are timely organized, training and placement cell is able to arrange summer training and campus interviews in an adequate number, student service centre exists to provide efficient academic, financial, administrative services, project work and summer training is attached due importance, a good number of the students are placed at the completion of final semester, a good number of recruiters visit the campus, reputed companies visit the campus for the recruitment, a well defined Academic Policy is in place, the Director/Head of Departments / Officers have the academic, financial and administrative freedom, decisions are taken by the duly constituted BOG / BOS /BOF assisted by committees and represented by faculty and experts, transparency in working of the institution, communication flow between the management and students is easier, hierarchy is maintained while taking major decisions, student grievances' are timely addressed by the authority, efficient Grievance Redressal Committee, insurance plans for the safety and security of the students, and display of Courses and approved Intake in the Institute at the entrance of the Institute is done in a proper way. The least preferred aspects of the institution by the students are: students follow the rules and regulations of the institute, a secured Wi-Fi facility for the students, and fresher party, farewell party, techno fests etc are well organized under disciplined environment.

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