

Satisfaction of Students towards Quality in Higher Education- A Study of Higher Education Sector Punjab (India)

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Abstract

Education plays a very important role in the growth and prosperity of any nation. Punjab, a well known state of north India, is a leader in providing education. The Punjab education system has witnessed a significant expansion in the recent years, both in terms of number of institutions as well as students enrolment. But, the quality of education still remains poor. The present study aims to evaluate the effectiveness of the higher educational institutions in providing quality education, from the view-point of students in Punjab. The study covers three districts of Punjab i.e. Amritsar, Jalandhar and Ludhiana. Primary data has been collected to achieve the objectives of the study. A well structured questionnaire containing 32 items has been used for the purpose of the study. The respondents have been asked to rate the quality of education, using a five point likert scale. Descriptive and Exploratory Factor analysis have been used to analyze the data. Percentages, graphs and diagrams also have been used for analysis of the study. The factor analysis has resulted in eight factors showing the satisfaction of students regarding the quality of education in their institution. As per the results, the availability of infrastructure facilities as an important factor followed by placement services, education environment, extracurricular activities, knowledge up gradation, academic facilities, student support services and academic staff.

Keywords: Education, Punjab, Quality, Satisfaction, Students

Introduction

Education is becoming much more of a “product” with varying customers and stakeholders, and what the latter now demand is satisfaction and value for money (Sanhey et.al, 2008). It is education that develop expertise, excellence and knowledge that leads to the overall development of any economy (Tanmay,2011). Higher education is the backbone of any society. It is the quality of higher education that decides the quality of human resources in a country (Mishra,). Quality has become the defining element of education in the 21st century in the context of new social realities (NAAC). But, the quality of Indian higher education system lags behind. The overall quality scenario of higher education in India does not match with the global quality standards. The quality measures play a vital role in the education provided by higher educational institutions. In higher education and institutions must design its basic goals and objectives to

satisfy customers by offering market drive academic and career programs by providing quality teaching and learning environment, and by providing adequate student support services (Ibekwe; 2006, Kaur; 2010). Quality could be determined by their internal as well as external resources viz; students experience, faculty experience, infrastructure facilities, learning resources etc. In the present paper an attempt has been made to examine the quality of higher education in Punjab from the viewpoint of students.

Higher Education in Punjab

Higher education department, government of Punjab provided education for undergraduate and post graduate level in various discipline under the supervision and guidance of the education minister and principal secretary higher education, government of Punjab. The state has been also ranked 7th amongst the all Indian states in terms of education.

Number of Higher Educational Institutions in Punjab

Universities	12
Government colleges	46
Government aided colleges	136
Private colleges	303

Source: Directorate of Public Instruction, Punjab

In general development of higher education in Punjab is seen to be relatively superior but higher education suffers from several deficiencies. Lack of infrastructure facilities, excessive tuitions fees, excessive and discriminatory system of Admissions, financial constraints, quota system, political interference, lack of autonomy and poor quality research are some problems in higher education. The quality standards in higher education are low and declining.

Review of Literature

Quality management in education is a priority issue today for research and analysis. Various studies have been conducted on examining the quality indicators in higher education. Bagalkoti **et al. (2006)** investigated the perception of students regarding quality in higher education. Study was conducted at Karnataka University in India. A random sample of 90 students was selected. Ratio analysis was used for analyzing the data. Researcher found the following dimensions of quality management; 1) mode of entry into the courses; 2) nature of curriculum; 3) quality of teaching; 4) evaluation process; 5) infrastructure for higher education. Researcher recommended that multidisciplinary curriculum should be developed to fulfill the expectations of learner, teachers, parents, employers and society; 2) interactive teaching learning process should be adopted; 3) appropriate and effective feedback mechanism should be established. **Butt and Rehman (2010)** investigated the determinants of students' satisfaction in higher education in Pakistan and their impact on the level of satisfaction. The sample size comprised of 350 students from different private and public sector universities. Study focused on the factors like; 1) teachers' expertise; 2) course offered; 3) learning environment and; 4) classroom facilities. The results of regression analysis revealed that all factors have significant

and positive impact on student's satisfaction in higher education. **Jenssen et al. (2010)** examined the overall satisfaction of students towards students learning experience. The analysis revealed that the academic and pedagogic quality of teaching were crucial determinant of students satisfaction. **Khosravi et al. (2013)** focused on the determination of factors affecting student satisfaction of Islamic university of Iran. Sample size was included 324 undergraduate and 60 graduate students from 10 colleges of Islamic Azad University. Seven factors were extracted by applying factor analysis. Academic advising effectiveness as a most important aspect of students' educational experience followed by campus support services, campus life, responsiveness to diverse population, safety and security, campus climate and financial aid effectiveness.

Need of the Study

Global competitiveness has necessitated for education industry. With the expansion of higher educational institutions there is a need to develop quality assurance measures to improve quality in higher education. In general development of education in Punjab is seen to be relatively superior but lack of infrastructure facilities, excessive tuitions fees, excessive and discriminatory system of Admissions, financial constraints, quota system, political interference, lack of autonomy and poor quality research are some problems in higher education. An education set up characteristics a large number of interested parties such as students, faculty, supporting staff, administration, parents of the students. (Mahapatra and Khan, 2007). Students are the primary customer and their satisfaction is vital for determining quality dimensions of higher education. So, the objective of the study is to measure the satisfaction of students towards quality in higher education in Punjab.

Research Methodology

Primary data has been collected to achieve the objectives of the study. The study covered three districts of Punjab i.e. Amritsar, Jalandhar and Ludhiana. A well structured self administered questionnaire has been used for the purpose of the study. Data have been collected from various colleges of Punjab through purposive sampling. A total of 210 questionnaires have been distributed and 189 questionnaires have been received. Out of 189 questionnaires 21 questionnaires were found to be incomplete so, finally 162 questionnaires have been considered for further analysis which represents 77.14% of the response rate.

Tools of Analysis

Exploratory Factor analysis and descriptive have been used to analyze the data. Exploratory Factor analysis is a data reduction tool and represents correlated variables with a smaller set of derived variables. Appropriateness of the data to apply factor analysis has been checked with the help of following measures (Kaur, 2010).

Kaiser-Meyer-Olkin Measure of Sampling Adequacy: KMO measure the sampling adequacy. This measure varies between 0 and 1, and values closer to 1 are better. A value of .6 is a suggested minimum

Bartlett's test of sphericity: Bartlett's test of sphericity is a test statistics used to examine the hypothesis that the variables are uncorrelated in the population.

Communalities: communalities are the amount of variance a variable shares with all the other variables.

Eigenvalue: The Eigenvalue represent the total variance explained by each factor.

Factor Loadings: Factor loadings are the simple correlation between the variables and factors.

Development of Research Instrument

The literature review (Kwan and Ng, 1999; Gruber et al., 2010; Tsiniidou et al., 2010; Annamdevula and bellamkonda, 2012; Uche, 2012; Jain et al., 2013; Ahmad and Masud, 2014) provided the basis for generating questionnaire. Questionnaire divided into three parts. Part A containing 53 statements related to perception of students towards quality of higher education. The respondents have been asked to rate the quality of higher education, using a five point likert scale ranging from "strongly agree" as 5 to "strongly disagree" as 1. Initial scale was consisting of 53 items. Exploratory factor analysis has been run to improve the survey questionnaire. Factor loading more than .45 retained and 32 items retained for further analysis. Part B contained 3 questions including one open ended question on suggestion about the quality in higher education. Part C contained demographic profile of the students.

Data Analysis and Interpretation

This section shows the details about the descriptive statistics and the results of the students' rating. Tables and graphs have been used to make the data more understandable. It also gives the details of the factor analysis.

Descriptive Statistics

Description	Percentages
Gender:	
Male	34%
Female	66%
Total	100
Age:	
Below 18	1.9
18-20	27.8
20-22	51.9
Above 22	18.5
Total	100
Courses	
BA	7.1%
B.Com	24.1%
BBA	4.9%
B.sc	9.9%
MA	8.6%
M.com	30.2%
Total	100

The results showed that as greater (66%) were female than male (34%). Respondents were aged below 18 (1.9%) followed by 18-20 (27.8%), 20-22 (51.9%) and above 22 (18.5%). In terms of educational background (7.4 %) students had a background of BA, (24.1%) B.Com, (4.9%) BBA, (9.9%) B.Sc, (8.6%) MA and (30.2%) M.Com.

Students Rating for Overall Quality of the Higher Education

The questions asked to students' rate the overall quality of higher education in the scale of 1-10, where increasing order indicates good quality. The scale has been given 5 options "1-2 (very poor), 2-4 (poor), 4-6 (average), 6-8 (good), and 8-10 (very good)". The figure 1 shows the percentage of students rated the overall quality of higher education.

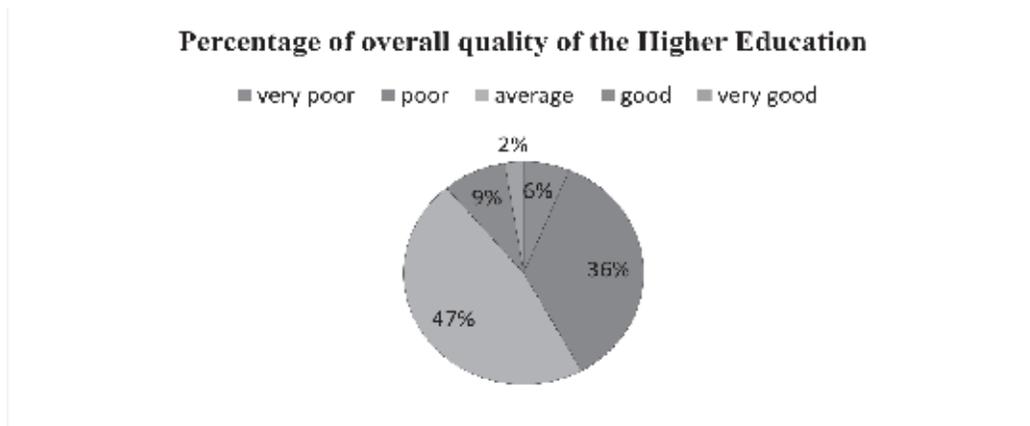


Figure 1

Optimum Utilization of Resources

Students were asked about the efficient utilization of resources by the higher educational institution. Figure 2

exhibits that majority of students responded that higher educational institution not using its resources optimally.

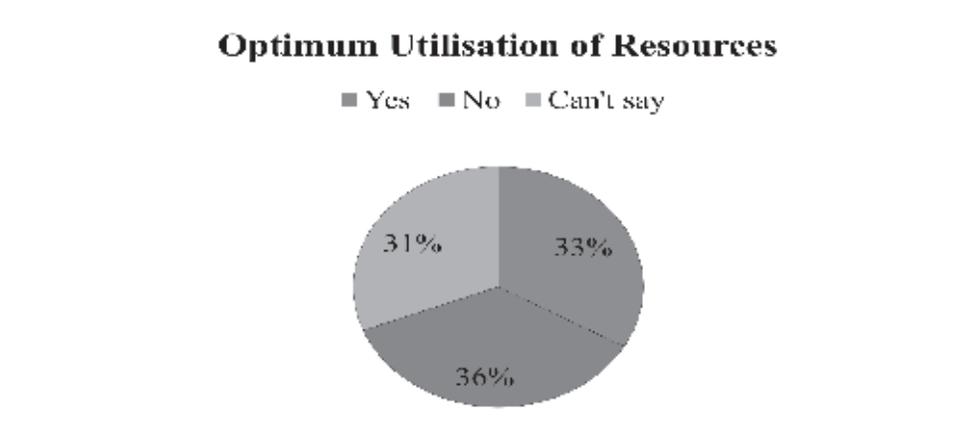


Figure 2

Exploratory Factor Analysis

Factor analysis has been run using principal component matrix and varimax rotation to examine the validity and reliability of the statements. Thirty two statements loaded more than .45 is kept under 8 factors using SPSS 17. In table 1 the null hypothesis is that the variables are uncorrelated in the population rejected by Bartlett's test of sphericity. The

approximate chi square statistics is 2934.554 (very large value) with 496 degree of freedom, which is significant at the 0.05 level. The value of KMO statistics (.863) is also large (.6). Thus factor analysis may be considered an appropriate technique for analyzing the perception of students towards quality in higher education.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.863
Bartlett's Test of Sphericity	Approx. Chi-Square
	df
	Sig.
	2934.554
	496
	.000

Table 2 states that there are 8 factors which have Eigen value of 1 or more than 1. Eight factors extracted together account for 70.03% of total variance. With only 8 factors, reducing

the 32 we have lost only 29.97% of the information content while 70.03% is retained by the 8 factors extracted out of the 32 original factors.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.726	30.395	30.395	9.726	30.395	30.395	4.033	12.602	12.602
2	2.874	8.981	39.376	2.874	8.981	39.376	3.479	10.873	23.475
3	2.772	8.663	48.039	2.772	8.663	48.039	3.118	9.743	33.218
4	1.875	5.859	53.898	1.875	5.859	53.898	2.952	9.224	42.442
5	1.547	4.835	58.737	1.547	4.835	58.737	2.383	7.448	49.890
6	1.331	4.159	62.891	1.331	4.159	62.891	2.267	7.083	56.973
7	1.232	3.850	66.741	1.232	3.850	66.741	2.126	6.643	63.615
8	1.055	3.297	70.039	1.055	3.297	70.039	2.056	6.424	70.039
9	.885	2.766	72.805						
10	.792	2.476	75.281						
11	.753	2.354	77.635						
12	.703	2.198	79.833						
13	.637	1.990	81.823						
14	.564	1.764	83.586						
15	.501	1.565	85.151						
16	.466	1.456	86.608						
17	.438	1.369	87.977						
18	.389	1.216	89.193						
19	.371	1.161	90.354						
20	.362	1.131	91.485						
21	.351	1.096	92.581						
22	.300	.939	93.520						
23	.294	.920	94.440						
24	.271	.848	95.288						
25	.249	.777	96.065						
26	.244	.764	96.829						
27	.224	.701	97.530						
28	.196	.613	98.143						
29	.168	.526	98.669						
30	.155	.484	99.153						
31	.143	.447	99.600						
32	.128	.400	100.000						

Extraction Method: Principal Component Analysis.

Factor Analysis Results (Rotated)

Factors	Statements	Factor Loadings	Mean Score	S.D.
Factor 1	Infrastructure Facilities			
1	There is enough space for parking in the college.	.814	3.57	1.02
2	Sufficient playgrounds are available.	.789	3.61	1.08
3	Adequate sports material is available.	.770	3.52	1.03
4	Sufficient first aid medical facilities are available.	.759	3.33	1.05
5	Fresh drinking water is available.	.690	3.62	1.07
6	Classrooms are well equipped.	.547	3.27	1.08
7	College has well maintained study rooms.	.483	3.27	1.08
	Cronbach's Alfa=.90 Percentage of variance=12.602			
Factor 2	Placement Services			
1	Number of campus placement is good.	.865	2.97	1.32
2	Placement services are provided by the college.	.831	3.06	1.32
3	Career counseling sessions are conducted at regular interval	.830	2.77	1.22
4	Students get good salary packages.	.829	2.88	1.17
	Cronbach's Alfa=.91 Percentage of variance=10.873			
Factor 3	Education Environment			
1	There is a congenial environment for study.	.854	3.83	.882
	Students respect teachers.	.701	4.03	.824
3	Teachers in the college are innovative.	.676	3.69	.880
4	Teachers in the college give proper attention to students.	.650	3.77	.941
5	Teacher taught ratio is as per norms.	.645	3.65	.888
	Cronbach's Alfa=.824 Percentage of variance=9.743			
Factor 4	Extracurricular activities			
1	College has a NCC unit.	.801	4.01	.956
2	Students participate in NCC activities.	.800	3.96	.955
3	Students actively participate in extracurricular activities.	.764	3.87	1.022
4	Extracurricular activities are organized by the college.	.745	4.02	.878
	Cronbach's Alfa=.827 Percentage of variance=9.224			

Factor 5	Knowledge Up gradation			
1	Guest lectures are arranged.	.819	3.19	1.04
2	students actively participate in guest lectures	.757	3.36	1.10
3	Educational visits are organized for students	.733	3.10	1.27
	Cronbach's Alfa=.81 Percentage of variance=7.448			
Factor 6	Academic facilities			
1	Sufficient computers are available in my college.	.781	3.44	1.29
2	Students are informed regularly about updated library collection.	.675	2.91	1.28
3	Libraries are rich and updated with material related to subjects.	.536	3.48	1.04
	Cronbach's Alfa=.714 Percentage of variance=7.083			
Factor 7	Student support services			
1	The college has students' grievances redressal cell	.823	3.13	1.14
2	Grievances are redressed effectively.	.783	3.11	1.05
3	The teachers pay considerable attention to the personality development of students.	.544	3.32	1.18
	Cronbach's Alfa=.784 Percentage of variance=6.643			
Factor 8	Academic staff			
1	Teachers inspire students for study	.777	3.96	.806
2	Teachers are easily accessible	.703	3.72	.927
3	Teachers share a cordial relationship with students.	.676	3.87	.842
	Cronbach's Alfa=.707 Percentage of variance=6.424			

Percentage of total variance has found to be 70.03%. The reliability for each factor were tested by Cronbach's alpha (α). The value of α for each dimension was .90, .91, .82, .83, .81, .71, .78, .70 respectively. The overall reliability coefficient (α) of .924 is far above the thumb rule i.e. 0.6.

In the rotated factor matrix **factor 1** has high coefficient for statement (There is enough space for parking in the college, Sufficient playgrounds are available, Adequate sports material is available, Sufficient first aid medical facilities are available, Fresh drinking water is available, Classrooms are well equipped and College has well maintained study rooms). This factor has been labeled as infrastructure facilities and it accounts for 12.602% of variance. This factor is given average rating. Students responded neutral for statements related to infrastructure facilities.

Factor 2 has high coefficient for statements (Number of campus placement is good, Placement services are provided by the college, Career counseling sessions are conducted at regular interval and Students get good salary packages). So, this factor labeled as placement services accounted for 10.873% of variance. Students were disagree with statements related to placement services.

Factor 3 has high factor loadings for statements (There is a congenial environment for study, Students respect teachers, Teachers in the college are innovative, Teachers in the college give proper attention to students, Teacher-taught ratio as per norms). This factor may be labeled as education environment with 9.743% of variance and attitude of students were positive towards education environment.

Factor 4 has high coefficient for statement (College has a NCC unit, Students actively participate in NCC activities, Students participate in extracurricular activities, Extracurricular activities are organized by the college). Therefore this factor may be labeled as extracurricular activities with 9.224% of variance. Students respond positively for statements related to extracurricular activities.

Factor 5 named as knowledge up gradation accounted for 7.448 % of variance whereas item loadings ranged from .733 to .819. Students were agreed with these statements.

Academic facilities being **factor 6** have recorded with 7.083% variance. And item loadings ranged from .536 to .781. Students responded disagree for statements related to academic facilities.

Factor 7 has high coefficient for statements (The college has students grievances redressal cell, Grievances are redressed effectively, The teachers pay considerable attention to the personality development of students). This factor may be labeled as student support services and accounted for 6.643% of variance. Positive respond was found for all

statements.

Factor 8 has high factor loadings for statements (Teachers inspire students for study, Teachers are easily accessible, Teachers share a cordial relationship with students) and this factor may be labeled as academic staff with 6.424% of variance. Positive respond was found for all statements.

One open ended question has been asked to students to give suggestions for the improvement of quality in higher education. Majority of the students suggested and demanded for good placement services by the higher educational institutions, improvement in infrastructure, provision of more practical training and focus on the skill development, proper parking facilities, hostel facilities and transportation facilities for rural area students.

Conclusion and Implications

The question of quality in higher education is directly related to the quality of teachers, students and infrastructure facilities provided by the educational institutes (ullah et al, 2011). The study showed that students view infrastructure facilities as an important factor followed by placement services, education environment, extracurricular activities, knowledge up gradation, academic facilities, student support services and academic staff. So, higher educational institutions should try to engage themselves in the campus placement activities. Infrastructure of the institutions should be improved. The students should be provided with up-to date equipment and learning material.

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