



ON STUDENTS' PERSPECTIVE OF QUALITY IN HIGHER EDUCATION

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Purpose:

In the developing countries, Higher Education Institutions (HEIs) are facing new challenges in managing quality of education. They not only have to fulfill the requirements of local employers regarding advanced skills, provide up to date knowledge and instill right attitude in university graduates but also to broaden the scope of the graduates globally. The university administrators are striving to improve overall quality within limited resources and pushing faculty to broaden their research competences to incorporate it in the post graduate programs. In past, the students in Pakistani academia have not frequently been consulted for their input in various stages of educational design, implementation, assessment and improvement. This work aims at exploring students' perspective about quality in higher education. Empirical information from various groups of university students has been used to identify the dimensions of quality, their hierarchy, and implication on educational management.

Design of Methodology:

The adopted and modified version of the instrument, from literature (reference), was used to collect data from Pakistani students about their perspective of higher education. These students are pursuing higher education (MS, MPhil, PhDs) in technologically advanced countries. The link of online web survey was sent to target population rendering about 300 respondents. The items of the scale were subjected to factor analysis using SPSS 16, in which principal components analysis (PCA) with varimax rotation was used to obtain the initial solution. Before applying PCA, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed most of the values to be 0.3 and above. The Kaiser-Meyer-Olkin value exceeded the recommended minimum value and the Bartlett's Test of Sphericity reached statistical significance, supporting the factorability of scale. An exploratory factor analysis was carried out to assess the factor structure of the underlying constructs. Cronbach's alpha ($\alpha > 0.7$) was used to test the reliability of the scale, which was established.

Findings:

We have proposed eight dimensions of quality in higher education, giving an insight in the areas of quality management. These dimensions include: Design; Delivery and Assessment;

Academic Facilities; Non-academic Facilities; Recognition; Guidance; Student Representation; Study Opportunities and Group Size. It is important to remember the limitation of the findings, i.e., quality has been seen only from the students' perspective; this means that the dimensions identified do not present a complete picture of HEIs but only the viewpoint of students.

Relevance and Contribution:

The present study has focused on the student's perception of service quality. Further research should explore other perspectives that of government, industries, society, faculty etc. A comprehensive study would help HEIs improve their quality.

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INTRODUCTION

We find many stakeholders for whom the quality of higher education is very important, including providers (funding bodies and the community at large), students, staff and employers of graduates (Srikanthan and Dalrymple, 2003). The students and their parents must have the knowledge about the quality of education the students are getting but ironically we ignore these questions. In recent years, numerous studies in the field of service quality have been carried out; however, relatively few studies have addressed the specific context of higher education (Lagrosen et al., 2004).

In the area of higher education, the concept of what constitutes quality has not been thoroughly addressed, although some interesting studies exist (Green, 1994; Harvey and Green, 1993; Srikanthan and Dalrymple, 2003). Mustafa and Chiang (2006) in their paper have referred to the study conducted by Babbar (1995) which concluded that commitment, openness and high ethics are essential prerequisites for teachers to adopt the Total Quality Management (TQM) philosophy in their classes. Widrick et al. (2002) found that several universities have used Quality Management (QM) as a means to gain competitive advantage (Montano and Utter, 1999; Swift, 1996) or to improve organizational performance (Kanji and Tambi, 1998; Koch and Fisher, 1998; Muse and Burkhalter, 1998).

This establishes our viewpoint that there is a dire need to know the student's perspective about higher education which means understanding quality from the customers' viewpoint is crucial (Lagrosen, 2001).

Quality and Higher Education

Worthen and Berry(2002) argue that there are important, even fundamental, differences in the definitions of "quality" in higher education, just as there are fundamental differences

between classes in society as a whole. Three major goals of higher education are generally conceded as: the development of students; the advancement of knowledge; and contribution to society (Gilber and Evers,1989).

Quality of education is becoming more important as human resources play an ever-increasing key role in a world competitive environment (Tofte, 1993; Green, 1993); this is certainly apparent in higher education, where the products of the system, whether they be animate, e.g. graduates, or inanimate, e.g. research, can have a direct impact on the quality of both commercial and public organizations (Owlia and Aspinwall, 1996). In the area of higher education the adoption of quality control has been superficial and being hampered by lack of shared vision and lack of a match between quality management and educational processes (Srikanthan and Dalrymple, 2003). Education policy makers in developing countries continue to express concern about the poor state of higher education (Birdsall, 1996).

Lack of local capacity to carry out research may be one explanation for the failure of many developing countries to exploit fully existing technologies in such fields as agriculture and health--what scientists in developing countries have referred to as the "knowledge gap" and as "intellectual dependency"(Birdsall, 1996). Srikanthan and Dalrymple (2003) present the four main stakeholders and relate the interpretations of quality by Harvey and Green (1993) to them in the following manner:

- Providers (funding bodies and community at large). Quality is interpreted as “value for money”, as funding authorities are looking for a good return on investments.
- Users of products (e.g. current and prospective students). The interpretation here is one of excellence, as the students want to ensure a relative advantage in career prospects.
- Users of outputs (e.g. the employers). The interpretation of quality is “fitness for purpose”, as employers look for competencies matching the functions.
- The employees of the sector (academics and administrators). Quality is interpreted as perfection (or consistency), where the behavioral norms are met and the core ethos is upheld in order that job satisfaction can be achieved.

Mustafa et al. (2006) suggest that an accessible and quality education can be delivered by a student development approach to higher education. Worthen and Berry (2002) define quality in higher education as: measures of graduation rates and totals; rates of student placement in employment and pay rates; rates of student placement in further education; scores on standardized tests; efficient use of resources; timely reporting and written accountability; accessibility of education to all those who can benefit from it; class size and faculty-student ratios; evaluations based on teaching; development of student abilities to apply new learning in practice (outside the classroom); encouragement and facilitation of life-long pursuit of learning; professional development opportunities for faculty; usefulness of learning to the students; development of skills and habits of active citizenship; development of critical consciousness; creation of a collective, respectful and reciprocal learning environment among students and teachers; and security of academic freedom of

discussion for both students and faculty. While together these combine into a portrait of ideal "quality" higher education, in practice some measures receive priority over others.

Social Benefits of Investments in Higher Education

Yeh, S S. (2008) discusses in his paper that in an effort to define teacher quality, the Organization for Economic Co-operation and Development (OECD), through its Centre for Educational Research and Innovation (CERI), undertook a comparative study across ten countries regarding policies aimed at improving teacher quality (OECD, 1994); the study concluded that teacher quality involves multiple characteristics: a commitment to keep searching for more effective instructional methods, communication of warmth, use of humour, patience, perseverance, and efforts to develop pupils' self-esteem, even when confronted by negative student attitudes and behaviour (Hopkins and Stern, 1996).

Even if the social benefits of higher education in most developing countries are not high today, there is ample scope for reforms of financing and governance that would raise quality and improve internal efficiency, thus greatly raising social benefits (Birdsall, 1996). Martens and Prosser (1998) emphasize the importance of quality learning, which should be focused on meaning and not on reproduction. In order to further investigate the meaning of quality in higher education, an empirical study was carried out.

METHODOLOGY

The study consists of two parts: the first part explores possible components of quality in higher education. The literature review encompassing the domains of quality education, consumer behaviour, and marketing was conducted. This helped in forming the questionnaire, which was sent to the experts including the professor and PhD students of the relevant discipline. Finally the questionnaire designed was consisting of 38 items partially adapted from Gatfield et al., (1999). Initially the items were measured on 7 point likert scale from "not at all important=1" to "extremely important=7". A pre-test of the instrument helped to improve the scale by reducing the 7 point likert scale to 5 point likert scale from "unimportant=1" to "very important =5".

In the second part of the study an online web survey was carried out. Data collection techniques vary from country to country, Lee et al. (2003) pointed out that web-based surveys have great potential for the inclusion of multimedia functions that may be useful in soliciting opinions on a variety of topics (Johnson, 2002); also, with the availability and advancement of technology the adoption rate of the internet is quickly becoming a replacement technology for telephone surveys, just as telephone surveys replaced personal interviews in the 1970s (Manfreda et al., 2002). The web-based surveys minimize the costs of both data collection and analysis; this benefit is increasing its usage in research. When we want to collect data from a large sample, it's time effective and cost effective via the web and results can be available much quicker than traditional survey techniques (Johnson, 2002). As the studies' focus were current and prospective students of higher education so the link to web survey was sent to these students rendering 297 respondents. Out of this, 17

invalid responses containing atypical cases, repeated or incomplete responses were eliminated, finally obtaining 280 valid responses. Out of 280 respondents, 224(80%) were male and 56(20%) were female. The details of demographic characteristics are reported in appendix-I.

RESULTS

The 38 items of the scale of quality in higher education were subjected to factor analysis, using SPSS 16, in which principal components analysis (PCA) with varimax rotation was used to obtain the initial solution. Before applying PCA, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. The Kaiser-Meyer-Olkin value was 0.901, exceeding the recommended minimum value of .6 and the Bartlett's Test of Sphericity reached statistical significance (.00), supporting the factorability of scale. The evaluations of the items started with an exploratory assessment of the reliability and dimensionality of each construct, using the item-to-total correlation, Cronbach's alpha and exploratory factor analysis. The criteria's of item-to-total correlation above .30 (Nurosis, 1993); Cronbach's alpha above .70 (Nunnally, 1978) and factors loading exceeding .50 (Hair et al., 1999) were met. After elimination of eight items having low low communalities or factor loading less the remaining 30 items extracted eight factors. These eight factors explained 68.43% of the total variance in the data. The final factor structure is reported in Table-I along with reliability coefficients i-e cronbach's alpha.

Table-I: Factor Analysis with varimax rotation

Dimension	Cronbach's Alpha	Items	Factors								Communalities	
			1	2	3	4	5	6	7	8		
Design, Delivery and Assessment	0.844	Course Revisions and Update	.754									.664
		Teaching Methodology	.688									.552
		Course Contents	.675									.589
		Student Participation	.673									.548
		Group Work	.605									.511
		Fairness of Assessment and Grading	.577									.480
		Research Experience of Resource Persons	.542									.441
		Professional Experience of Resource Persons	.539									.461
Academic Facilities	0.861	Internet Facilities		.838								.780
		Computer Laboratories		.749								.741
		Seminars and Conferences		.696								.657
		Library and Related Learning Resources		.669								.584
		Training and Research Laboratories		.629								.600
Non-academic Facilities	0.857	Campus Housing			.755							.746
		Campus Safety			.689							.695
		Buildings, Gardens, and Built Environment			.686							.642
		Foods and Canteens			.670							.715
		Sports Facilities			.621							.674
Recognition	0.871	University Recognition from Firm				.835						.846
		University Recognition from Employers				.817						.787
		University Recognition From Government				.776						.741
Guidance	0.841	Career Guidance					.788					.794
		University Handbook					.748					.817
		International Student Office					.701					.739
Student Representation	0.794	Students Unions						.850				.841
		Elections of Students Represents							.847			
Study Opportunities	0.724	Student Exchange Programs							.835			.849
		Educational Opportunities Abroad							.713			
Group Size and Time Table	0.710	Class Size								.800		.760
		Class Timing								.750		
Eigen values			33.64	6.91	5.99	4.69	4.89	4.21	3.97	4.13	68.43	
Percentage of Variance Extracted			10.09	2.07	1.80	1.41	1.47	1.26	1.19	1.24		
Coefficient of KMO			0.901									
Significant of Bartlett			0.000									

The labels of the dimensions of quality in higher education along with mean and standard deviation are reported in Table-II.

Table-II: Means and Standard deviation of Quality Dimensions

Dimensions	Mean	Std. Deviation
Design, Delivery and Assessment	4.4634	0.5057
Academic Facilities	4.2300	0.6508
Non-academic Facilities	3.6950	0.7910
Recognition	4.3107	0.7619
Guidance	3.3512	0.8695
Student Representation	2.6857	1.1874
Study Opportunities	3.5911	0.8086

The above table shows that the students perceive “Design, Delivery and Assessment” as the most important dimension for higher education and “Student Representation” is the least important to them. The table also shows that the “Recognition” ‘i.e., the recognition of the university by the government, industry and prospective employer is of utmost important as well.

In order to see whether the differences between perceptions of quality in higher education for gender exist, ANOVA have been applied. Figure-I shows the mean importance rating for male and female in each of the eight factors. It is interesting to note that females have given more importance to all the quality dimensions as compared to the males.

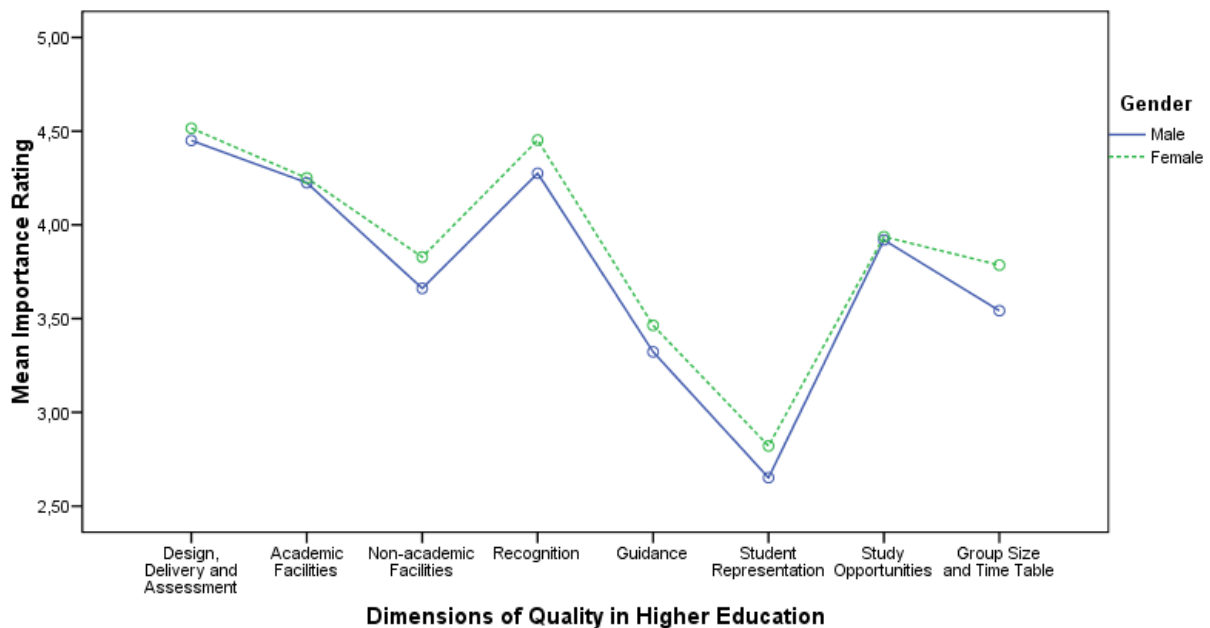


Figure-I: Plot of mean importance rating between ‘gender’ and ‘quality dimensions’

Figure-II shows discipline-wise mean importance ratings of the respondents in each of the eight factors.

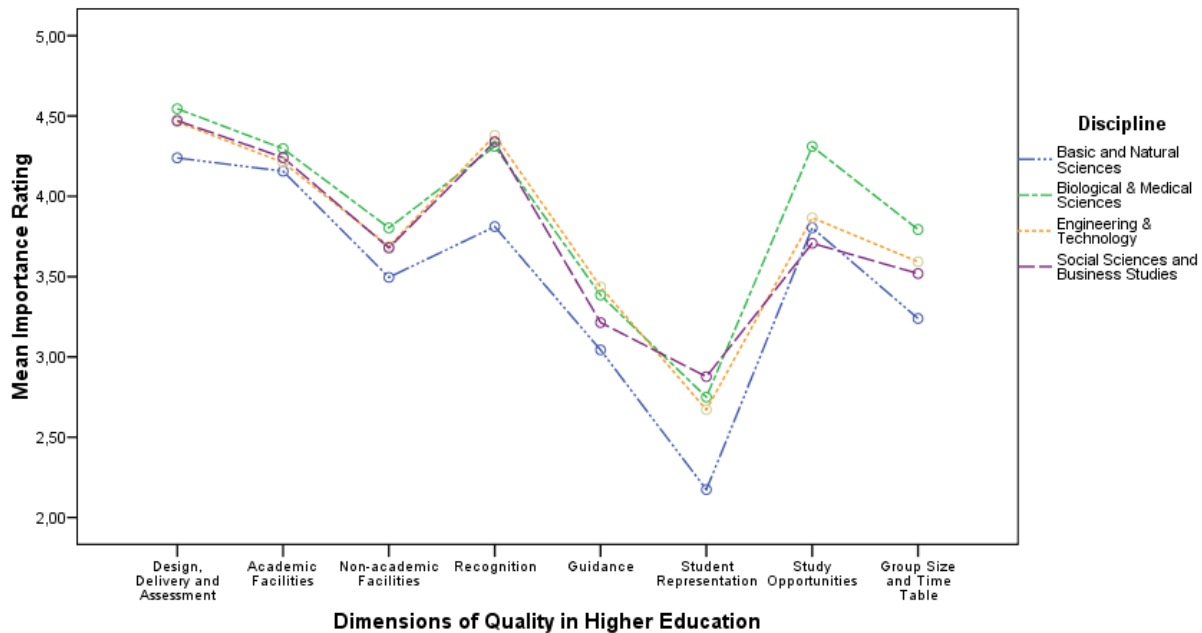


Figure-II: Plot of mean importance rating between 'discipline' and 'quality dimensions'

It is obvious from the above figure that the perceptions of the students regarding dimensions of higher education vary across different disciplines. The students of "Biological and Medical Sciences" have assigned much importance to all the dimensions; to them the most important dimension is "Design, Delivery and Assessment" while the least important is "Student representation", while on the other hand, the students of "Basic and natural Sciences" have given least importance to all the dimensions.

DISCUSSION AND CONCLUSION

We have proposed eight dimensions of quality in higher education, giving an insight in the areas of quality management. These eight dimensions related to the students' perceptions of higher education quality include: Design, Delivery and Assessment, Academic Facilities, Non-academic Facilities, Recognition, Guidance, Student Representation and Study Opportunities. In higher education, where customers' needs vary distinctly, the process of satisfying them bears difficulties. To identify the processes and their corresponding characteristics, having an impact on quality improvement, is not so apparent in HEIs. Accessible and quality education can be delivered by a student development approach to higher education (Gilbert and Evers, 1989). It's interesting to note that the HEIs try to ensure high-quality education through highly selective admission policies, although they can ensure quality enhancement by improving the skills, abilities and talents of students keeping in mind students' perceptions of quality as proposed by this study.

'Delighting the customer' is the core message of the total quality approach (Owlia and Aspinwall, 1996). The quality dimensions identified in this study should be valuable for managers of HEIs. If they want to satisfy their (customers) students, they need to work on and improve those dimensions. The dimensions depict how to make development for education. Moreover, the results from the factor analysis would be interesting for the institutions that want to segment the market and find a suitable position. In the light of the quality dimensions identified in the study the managers can improve the quality of their HEIs.

It is important to remember the limitation that has been made that quality is seen only from the students' perspective. This means that the dimensions identified do not present a complete picture of HEIs but only the viewpoint of students. For a complete picture other important aspects should be included. The perspective of the students shows their desires which need to be understood and fulfilled to as high an extent as possible. HEIs need to balance these dimensions with other aims and goals based on the needs of other stakeholders.

Web-based surveys may be suffering from coverage error arising from the fact that not everyone in the target population has an access to the web, but this does not affect our research as our respondents had access to internet. Another problem inherent in web-based data collection, can be multiple responses from a single individual, this was controlled by the software by restricting the respondent to respond only once.

The present study has focused on the student's perception of service quality. Further research should complement this study with studies from other perspectives than the students' like (government, industries, society, faculty etc.). A comprehensive study would help HEIs improve their quality.

Comparison between the perspective of students from different disciplines (e.g., Accounting versus Marketing, Business versus Engineering, graduate versus undergraduate) regarding the dimensions would obviously be valuable. Further investigation can be made about the gap between students' perceptions and expectations for quality in HEIs.

The results of this study are exploratory with ample empirical evidences which reveal that "Design, Delivery and Assessment", "Academic Facilities", "Recognition" and "Study Opportunities" are the most important dimensions from student's perspective. It has long been understood in organizations that measurement is an integral part of continuous improvement so in HEIs there should be continuous measurement with the aim to perform necessary modification to raise the quality. It is perhaps irrefutable that the development of quality in university teaching and research requires time so we should not be disappointed by the current quality in HEIs.

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Appendix-I: Demographic characteristics of the sample

Characteristics	Frequency	Percentage
Gender		
Male	224	80
Female	56	20
Age		
Less than 25 yrs	43	15.4
25-34 yrs	212	75.7
35-44 yrs	21	7.5
45 years and above	4	1.4
Are you a student now?		
Yes	217	77.5
No	63	22.5
Highest degree obtained from Pakistan		
Undergraduate	77	27.5
Masters	175	62.5
PhD	28	10
Highest degree obtained from Abroad		
Undergraduate	115	41.1
Masters	109	38.9
PhD	56	20.0
Discipline		
Basic and Natural Sciences	23	8.2
Biological and Medical Sciences	58	20.7
Engineering and Technology	146	52.1
Social Sciences and Business Studies	53	18.9
Work experience in Pakistani education sector		
None	129	46.1
1 Year	30	10.7
2 Years	24	8.6
3 Years	26	9.3
4 Years	31	11.1
5 Years and above	40	14.3
Work experience in corporate sector		
None	132	47.1
1 Year	38	13.6
2 Years	28	10.0
3 Years	28	10.0
4 Years	17	6.1
5 Years and above	37	13.2