

Evidence Based on Areas of Change and its Effects in Higher Education Institutions

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Abstract - The most important characteristic of the evaluation of higher education services is its' multidimensionality and the difficulty of weighting indicators/dimensions according to the various needs of different users/beneficiaries. Different categories of stakeholders need specific information to enable informed decision-making processes. Prospective students and their parents might be interested in the global performance of universities in education, employability of graduates from a particular field of study, study conditions etc., thus aiming at choosing a specific supplier for educational services. In order to raise quality and relevance of higher education, an analysis was developed to see the extent to which the acquired knowledge allows the graduates to be employed on the labour market, to develop their own business or to continue higher education studies at the next level. The paper estimate validity of individual constructs forming part of EduQUAL structured questionnaire for its primary data collection. The significant coefficient is Assurance and the remaining 6 predictors are non-significant. The non-significance variable exceeds 0.05, and do not contribute much to the regression model. This means that the Assurance dimension is the main predictor for overall satisfaction of students.

Keywords: Higher education, Decision making, EduQUAL, predictor, Perception.

I. INTRODUCTION

Higher education is not a commodity that users can evaluate a priori (for example based on competitive prices). Higher education is an 'experiential' service (Nelson 1970): users can evaluate the quality of the service provided only after they have 'experienced' it, but this type of 'experience' is an ex-post knowledge. Other authors consider that not even the learning experience is sufficient for a correct evaluation of the service provided. Dulleck and Kerschbamer (2006) consider that the value of the service provided becomes clear only after graduation (or even long after) depending on how the gained competences improved the graduates work and social status. However the most important characteristic of the evaluation of higher education services is its' multidimensionality and the difficulty of weighting indicators/dimensions according to the various needs of different users/beneficiaries. Different categories of stakeholders need specific information to enable informed decision-making processes. Prospective

students and their parents might be interested in the global performance of universities in education, employability of graduates from a particular field of study, study conditions etc., thus aiming at choosing a specific supplier for educational services. In order to raise quality and relevance of higher education, an analysis was developed to see the extent to which the acquired knowledge allows the graduates to be employed on the labour market, to develop their own business or to continue higher education studies at the next level. As well as identifying 'net effects', other relevant distinctions which are addressed by the questions posed by Pascarella and Terenzini in their latest volume are: how far changes are differentially related to the kind of institution attended ('between-college' effects), how far changes are related to differences in the student experience within any given institution ('within-college' effects), whether changes are differentially shaped by individual student characteristics ('conditional' effects), and whether the effects of higher education are durable ('long-term' effects). These are important distinctions that need to be made in discussions about the impacts of higher education. Below we provide some more information on Pascarella and Terenzini's conclusions about the 'net effects' of higher education, i.e. those changes in students which can actually be attributed to the influence of higher education. "variations in the extent and quality of the available evidence across areas of inquiry rather than significant differences in the actual impact of exposure to college". (ibid) Bearing in mind the above reservations, we can note Pascarella and Terenzini's conclusions about the net effects of higher education in five areas.

(i) Learning and cognitive changes

This was a major area where research supported a significant impact of higher education rather than a maturationnal effect or other relationship. The following qualities were all enhanced by the experience of higher education: general verbal and quantitative skills, oral and written communication, critical thinking, use of reason and evidence in addressing ill-structured problems, and intellectual flexibility. The changes recorded in these

dimensions could not be explained by rival hypotheses related to academic ability, sex, race or maturation.

(ii) Psychosocial changes

Here, conclusions are more mixed, depending on the particular psychosocial changes being considered. The following are the areas of change where there existed good evidence that they represented 'net effects' of higher education: growth in leadership skills, sense of control over academic performance, and declines in student authoritarianism, dogmatism and ethnocentrism. On the other hand, some reported psychosocial changes were either very small or could not be clearly distinguished from maturational effects or the influences of students' family backgrounds. These included changes in self-esteem, sense of control and identity.

(iii) Attitudes and values

The recent evidence of higher education's impact on students' attitudes and values indicated some changes in the extent of the impacts from those which had been reported in earlier studies. Whereas the earlier reviews had found consistent evidence that students acquired more 'open, liberal, and tolerant attitudes and values' (ibid, p581) as a result of their higher education experiences, more recent research found few changes in attitudes and values additional to those occurring in society more generally. There were two exceptions. There was evidence that higher education increased student civic and Things we know and don't know about the Wider Benefits of Higher Education community involvement and that it promoted racial understanding and openness to diversity.

(iv) Moral reasoning

American research has consistently reported a statistically significant and positive effect of higher education on growth in the use of 'principled reasoning in addressing moral problems' although the authors point out that principled reasoning alone is not necessarily sufficient to ensure principled behavior.

(v) Career and economic impacts

The review reports that attaining a bachelor's degree, compared with a high school diploma and controlling for an individual's background and other confounding influences, conferred 'about a 34 percentile point advantage in occupational status or prestige, a 20 to 40% advantage in earnings and a private rate of return between 9.3 and 10.9%' (ibid, p447). The advantages were evident both for 'first jobs' after graduation and over the occupational life span and further advantages were recorded for years of further study beyond the bachelor's degree. Recent research confirmed that higher education conferred benefits in terms of occupational status, workforce participation (i.e. occupational stability) and earnings. Evidence about the

effects on job satisfaction was more mixed and quite complex. On the one hand, higher education had a positive impact on job satisfaction because of its impact on things such as job prestige, earnings, autonomy and non-routine work. On the other hand, net of such factors the effect of having a degree on job satisfaction tended to be negative, possibly relating to a disjunction between raised expectations and actual work experience. It is also interesting to note that the review uncovered very little research evidence on the influence of higher education on job performance. 'evidence' on the impact of higher education. A central point is that a lot of research is effectively just reporting averages. In other words, the many advantages to be attained from acquiring a college degree are not attained equally by everyone. And this is where the 'between college' effects, 'within college' effects and 'conditional effects' become important. These are discussed extensively in the most recent volume. Evidence is not always available to determine elements in the causal chain. But there is much of interest and of potential relevance to UK debates and policies. One example concerned 'quality differences' where quality was most often defined in terms of institutional selectivity or reputation. Institutional quality so defined appeared to have relatively little impact on 'learning, cognitive development, values, and psychosocial change' but had rather more impact on 'socioeconomic outcomes such as educational attainment, occupational status, career mobility, and the like' (ibid, p593). The growing differentiation of higher education is a feature of many higher education systems, although its extent and nature do differ considerably between nations. The analyses over time presented by this series of US synthesising reports reveal both changes and continuities in the impacts and beneficiaries of higher education. While the answers may well be different, the questions addressed in the US research literature are highly pertinent to higher education in the UK. analyse educational concepts, theories and issues of policy in a systematic way identify and reflect on potential connections and discontinuities between each of the aspects of subject knowledge and their application in educational policies and contexts accommodate new principles and understandings select a range of relevant primary and secondary sources, including theoretical and research based evidence, to extend their knowledge and understanding use a range of evidence to formulate appropriate and justified ways forward and potential changes in practice. Teixeira et al. (2012, p. 350) similarly concluded that 'although competition is a powerful force in stimulating institutional behaviour, its effects may be modulated by other factors such as student demand and regulatory effectiveness' and that, therefore, there is a hybrid relation between government and market forces in Portuguese higher education. Jongbloed (2003, pp. 131-134) found that Dutch higher education is explained not by a shift between the forces of Clark's (1983) 'triangle of coordination' of state authority, the market and the academic oligarchy but by their dynamic interaction.

II. OBJECTIVES OF THE STUDY

1. To scrutinize the impact of demographic factors of customers (students') in the Higher education institutions with special reference to Southern Tamil Nadu.
2. To determine service gap between the perception and expectation level of customers in the Higher education institutions regarding student attitudinal change.
3. To examine the impact of service quality dimensions of service sectors which influences on overall service quality leads to satisfaction and loyalty of customers.
4. To determine the conceptual linkages among constructs of areas of change of the customers.
5. To suggest ways for the improvement of service offered by the service provider (Higher education institutions) to their prospective customers.

III. DATA ANALYSIS AND INTERPRETATION

TABLE I GENDER WISE CLASSIFICATION

Gender	Frequency	Percent
Male	117	33.2
Female	235	66.8
Total	352	100.0

From the above table it is identified that, out of 352 respondents, 235 respondents are Female (66.8%) and the remaining 117 respondents are Male (33.2%).

TABLE II AGE GROUPWISE CLASSIFICATION

Age Group	Frequency	Percent
18 to 20 Years	205	58.2
20 to 25 Years	142	40.3
25 to 30 Years	5	1.4
Total	352	100.0

From the above table it is evidenced that, out of 63 respondents, 205 respondents are in the age group of 18 to 20 years (58.2), 142 respondents are in the age group of 20 to 25 years (40.3), and the remaining 5 respondents are in the age group between 25 to 30 years (1.4).

TABLE III MARITAL STATUS OF RESPONDENTS

Occupation	Frequency	Percent
Single	341	96.9
Married	11	3.1
Total	352	100.0

From the above table it is determined that, 341 respondents are single (96.9), and the remaining 11 respondents are Married (3.1).

TABLE IV ANNUAL INCOME OF CUSTOMERS

Annual Income	Frequency	Percent
0	1	0.3
Below Rs.20000	222	63.1
Rs.20001-40000	85	24.1
Rs.40001-60000	23	6.5
Rs.60001to Rs.80000	13	3.7
Above Rs.80000	8	2.3
Total	352	100.0

From the above table it is explained that, most of the respondents (222) are having the Annual Income of below Rs.20000. 85 respondents are having the Annual income of Rs.20001 to Rs.40000. 23 respondents are having the Annual income of Rs.40001 to Rs.60000. 13 respondents

are having the Annual income of Rs.60001 to Rs.80000. 8 respondents are having the Annual income of above Rs. 60000, and the remaining Only one respondent is having the Annual Income of Less than Rs.0.

Chi-square test for the classification of gender and marital statuses of the respondents:

H₀: There is no association between gender wise classification of respondents and marital statuses of the respondents.

H₁: There is an association between gender wise classification of respondents and marital statuses of the respondents.

TABLE V CROSS TABULATION FOR CLASSIFICATION OF GENDER AND MARITAL STATUS OF THE RESPONDENTS

		Genderwise classification		Total
		Male	Female	
Marital Status Classification	Single	117	224	341
	Married	0	11	11
Total		117	235	352

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.653 ^a	1	.017
Likelihood Ratio	9.065	1	.003

The above table shows that, 341 respondents are Single and the remaining 11 respondents are Married. The maximum gender of the respondents is female with 167 respondents. The Chi – square table shows that chi square value is 5.653 and it has a significant p value of 0.017. Since this level of significance is greater than 0.05, null hypothesis (H₁₁) is accepted with high degree of confidence. Hence, it can be revealed from the above results that there is no

association between marital status of the respondents with regard to the Genderwise Classification.

Chi-square test for the classification of income and age wise classification of the respondents:

H₀: There is no association between age wise classification and the income level of respondents.

H₁: There is an association between age wise classification and the income level of respondents.

TABLE VI CROSS TABULATION FOR CLASSIFICATION OF AGE AND THE INCOME LEVEL OF RESPONDENTS

		Age wise classification			Total
		18-20	20-25	25-30	
Income-wise classification	0	0	1	0	1
	Below Rs.20000	128	91	3	222
	Rs.20001-40000	58	27	0	85
	Rs.40001-60000	13	10	0	23
	Rs.60001 to Rs.80000	3	9	1	13
	Above Rs.80000	3	4	1	8
Total		205	142	5	352

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22.871 ^a	10	.011
Likelihood Ratio	19.020	10	.040

The above table shows that, 205 respondents are coming under the age group between 18-20 years. The maximum respondents are earning their monthly income as below Rs, 20000. The Chi – square table shows that chi square value is 22.871 and it has a significant p value of 0.011. Since this

level of significance is lesser than 0.05, null hypothesis (H₁₁) is rejected with high degree of confidence. Hence, it can be revealed from the above results that there is association between income and age wise classification of the respondents.

Chi-square test for the classification of overall satisfaction and age wise classification of the respondents

Ho: There is no association between age wise classification and the overall satisfaction of the respondents.

H_r: There is an association between age wise classification and the overall satisfaction of the respondents.

TABLE VII CROSS TABULATION FOR CLASSIFICATION OF AGE AND THE OVERALL SATISFACTION OF THE RESPONDENTS

		Age-wise classification			Total
		18-20	20-25	25-30	
Overall satisfaction	Extremely dissatisfied	5	0	0	5
	Highly dissatisfied	6	1	0	7
	Dissatisfied	22	29	0	51
	Neither satisfied nor dissatisfied	36	9	0	45
	Satisfied	44	26	0	70
	Highly satisfied	32	22	0	54
	Extremely satisfied	60	55	5	120
Total		205	142	5	352

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	31.730 ^a	12	.002
Likelihood Ratio	35.365	12	.000

The above table shows that, 120 respondents are extremely satisfied their overall satisfaction. The maximum numbers of respondents are coming under the age group between 18-20 years. The Chi – square table shows that chi square value is 31.730^a and it has a significant p value of 0.002. Since this level of significance is lesser than 0.05, null hypothesis (H₁₁) is rejected with high degree of confidence. Hence, it can be revealed from the above results

that there is association between overall satisfaction and age wise classification of the respondents.

Chi-square test for the classification of overall service offered by the respondents and age wise classification

Ho: There is no association between age wise classification and the overall service offered by the respondents.

H_r: There is an association between age wise classification and the overall service offered by the respondents.

TABLE VIII CROSS TABULATION FOR CLASSIFICATION OF AGE AND THE OVERALL SERVICE OFFERED BY THE RESPONDENTS

		Age-wise classification			Total
		18-20	20-25	25-30	
Overall service offered by the respondents	Dissatisfied	28	26	0	54
	Neither satisfied nor dissatisfied	29	13	0	42
	Satisfied	36	17	0	53
	Highly satisfied	34	21	0	55
	Extremely satisfied	78	65	5	148
Total		205	142	5	352

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.031 ^a	8	.111
Likelihood Ratio	14.839	8	.062

The above table shows that, the maximum 148 respondents are extremely satisfied by over all services. The maximum respondents are coming under the age group between 18 to 20 years. The Chi – square table shows that chi square value is 13.031^a and it has a significant p value of 0.111. Since

this level of significance is greater than 0.05, null hypothesis (H_{11}) is accepted with high degree of confidence. Hence, it can be revealed from the above results that there is no association between age wise classification and overall service offered by the respondents.

TABLE IX SERVICE QUALITY GAP

Factors of Service Quality	No. of Items	Perception Mean	Expectation Mean	Service Quality Gap (P-E)	Priority Rank
Reliability	6	5.26	5.34	-0.08	4
Assurance	5	5.39	5.45	-0.06	1
Tangibility	7	5.28	5.34	-0.06	1
Empathy	5	5.44	5.53	-0.09	5
Responsiveness	4	5.48	5.54	-0.06	1

The unweighted SERVQUAL score is the average perception minus average expectation score of the five SQ dimensions is shown in the table 4.3. By applying the gap analysis, it shows that lowest service gap is occurred in “Assurance”, “Tangibility” and “Responsiveness” dimensions and the bigger service gap in occurred in the Empathy dimension.

IV.CONCLUSION

Evidence based decision making in HEI's, it shows that lowest service gap is occurred in “Assurance”, “Tangibility” and “Responsiveness” dimensions and the bigger service gap in occurred in the Empathy dimension in their attitudinal change. In this regard HEI's service provider can identify easily voice of customer in three modes and its effects through identify students expectation, student solution and student complaint through one provider improve their potential quality service offering. This paper contribute in this way to identify all through this study of service quality gap analysis. This empirical based paper help HEI's policy maker will benefit at the time of taking decision regarding quality service related initiatives. This suggestive ways for the improvement of service offered by the service provider (Higher education institutions) to their prospective customers is easily identified through the empirical analysis of this paper. Through society will get quality student for strength and quality service provider in HEI's. The coefficient table shows seven predictors in the regression model. The significant coefficient is Assurance and the remaining 6 predictors are non-significant. The non-significance variable exceeds 0.05, and do not contribute much to the regression model. This means that the Assurance dimension is the main predictor for overall satisfaction of students.

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