

Quality of Services and the Impact on Students' Satisfaction in Universities

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This paper examined whether the quality of services in educational institutions affects the students' satisfaction. This study hypothesised that the quality of services measured through the five independent variables of: teaching methods, learning environments, core curriculum, assessment practices, and infrastructure, have an impact on students' satisfaction. The study randomly surveyed the chosen sample of 316 undergraduate students in ten Saudi universities using a questionnaire. The results disclose that the quality of services in teaching methods, learning environment, and core curriculum had a significant impact on students' satisfaction but not the quality of services in student assessment practices and infrastructure. These views of students are also significantly correlated. However, their views are positive towards the quality of services in all the study variables. Further research on services of universities like student research fellowships for higher studies, training of students for employability skills, career guidance, and campus placements may prompt more insights into this study topic.

Key words: *Campus Placements, Curriculum, Higher Education Institutions, Learning Environment, Quality of Services, Quality Standards, Students' Expectations, Students' Satisfaction, Teaching Methods.*

Introduction

Quality of services in educational institutions affects students' satisfaction (Malik et al., 2010). However, students' expectations are often met by the sub-standard quality of services provided by the educational institutions (Farahmandian, 2013). Indeed, educational institutions are trying to meet the expectations of students by offering unique services (Cheng, 2016; Keskin & Korkutata 2018) however, reforms in the education sector across the world necessitated higher educational institutions to adopt a strategic approach to manage the expectations of students by offering the best or high-quality services (Ahmed and Mehedi

Masud, 2014; Pavlin, 2018). Further to this, this pervasiveness of a quality consciousness benefitted educational institutions by obtaining excellence in offering superior services to students (Lemaitre, 2014; Newton, 2014).

However, higher education institutions are not only substantiating their quality standards by offering world-class services but also regularly improving services to meet the increasing expectations of students (Choudhary and Paharia, 2018; Voss et al., 2007). Primarily, this kind of exercise in educational institutions has aimed to find the gap between the expectations of students and quality of services offered to the students (Young-Geun, 2014; Zineldin et al., 2011). Fundamentally, students perceive the quality of services in various dimensions because of their exposure to different quality standards that are being promised by the higher educational institutions (Lagrosen et al., 2004). Thus, service quality in the education sector is defined as the combination of services available to the students and the quality standards that are being maintained by the educational institutions (Boyadjieva and Ilieva-Trichkova, 2018).

However, prior to enrolment in educational institutions, students can inquire about the quality of the infrastructure, nature of the curriculum, teaching quality, student assessment practices, co-curricular activities, student motivation activities, and training for personality development (Brown and Mazzarol, 2008; Diep et al., 2017; Khan, Uddin & Shathi 2018). These kinds of inquiries encourage educational institutions to measure the quality of services and the students' satisfaction levels (Lodesso et al., 2019; Köse, 2018; Prasad and Jha, 2013). In this context, this paper examined the impact of the quality of services on students' satisfaction in universities.

Literature Review

This section details the literature available on: i) service quality and its impact on students' satisfaction in higher education institutions; and, ii) the quality of services in teaching, learning, curriculum, assessment, and infrastructure and their impact on students' satisfaction.

Teaching

Arar et al (2016) specify that teaching quality and student-teacher ratios are influencing students' performances as well as satisfaction. Chiu et al. (2018) hypothesise that teaching methods with effective lecturing have an impact on students' satisfaction. Phoocharoensil (2018) highlighted how innovative methods in teaching influence the students' satisfaction. Coskun (2014) comments that students are highly satisfied by practical teaching, but they are not satisfied with other amenities like the landscape of the campus, accessibility to the infrastructure facilities, and issues related to college management. Tezcan-Unal et al (2018) admit that students are satisfied by the abilities and competencies of their teachers during the

lectures, but they did not compare other factors like sports and recreational facilities that also satisfied them. Bligh (1993) discloses that students expect innovative teaching methods that create a student-centered learning environment.

Learning

Mansor et al. (2012) and Kubat & Dedebali (2018) interpret that students are satisfied by the learning environment and boarding facilities of the college. Hussain (2012) describes that students are improving their learning skills and feel more responsible for achieving their learning goals because of their engagement in a highly motivated learning environment. It finds that students are happy, and they are enjoying learning in a collaborative environment because of the friendly and co-operative learning environment. Strayhorn (2015) portrays that essential services like: creating a learning environment for more involvement of the students in course work, organising events for active participation of students in the extra-curricular activities and preparing the students to go outside of the college campus for community services all have an impact on students' satisfaction. However, Lo (2012) justifies that the role of the student in a learning environment is essential for the appraisal of students' satisfaction. Elsharnouby (2015) indicates that students' participation and citizenship behavior will determine the reputation of the learning environment of the universities.

Curriculum

Palli and Mamilla (2012) identify that career-oriented curriculum influences students' satisfaction over the encouragement of students in academic and co-curricular activities. Lim Kok Seng and Pei Ling (2013) ascertain that curriculum with more importance on student engagement activities has a significant impact on students' satisfaction. Islam et al (2011) describe that extra-curricular activities subsidise the increasing levels of students' satisfaction. The majority of students express that course curriculum should not be restricted to only classroom activities but also be experiential. Johnson (2014) insists that regular modifications in the core curriculum result in higher students' satisfaction. It claims that students are more satisfied because of keeping exceptional standards in the curriculum. However, it mentions that students focus on the courses that help them get employment.

Assessment

Dicker et al. (2018) recognise that students perceive the quality of services in higher education institutions from the perspective of assessment practices that are being followed by the teaching staff. It clinches that students are satisfied due to friendly classroom assessment practices and flexible feedback systems on their performances but not with bouncy workloads and having to go through rigorous assessments. Holliman et al. (2018) discern that academic motivation of students has a significant relationship with the adaptability of course workloads and assessment practices. It discerns that stringent assessment practices influence students' academic achievement. Islam et al (2014) disclose that assessment practices are one of the

critical factors in providing high-quality education in universities. Hauptman Komotar (2018) states that appropriate changes in student assessment practices will improve student satisfaction. Jereb et al. (2018) denote that student assessment practices not only improve the performance of students but also increase the skills of teachers in adopting proper assessment practices. Weerasinghe and Fernando (2018) signify that among the several critical factors that have an influence on students' satisfaction, formative and summative assessment practices are highly rated. It refers to the fact that students' satisfaction is dependent upon their achievement in classroom assessment practices.

Infrastructure

Ahmad (2014) distinguishes that infrastructure in classrooms, sports, and recreational facilities have an impact on students' satisfaction. Furthermore, this research emphasises that students are highly satisfied with the provisions in classrooms like electronic blackboards, overhead projectors, seating arrangements, and classroom ventilation. Yusoff et al. (2015) extricate that classroom environment, college fee structure, student-teacher relationship, and student feedback systems affect students' satisfaction. It reveals that the accessibility of learning resources and the appearance of college buildings have less influence on students' satisfaction. The findings indicate that students are satisfied by the library services, and they positively perceive the arrangements in the college for student counseling, student personality development, and training activities for career advancement. Haslinda and Raghavan (2018) reveal that students' satisfaction is affirmative because of state-of-the-art computer laboratories, availability of high-end sports and fitness equipment, and more extensive recreation facilities. Memon et al (2014) reveal that students are not expecting high-quality services in the parking places and cafeterias. Mukhtar et al (2015) admit that quality transportation and facilities like large sports field are expected by the students, but they did not have any significant impact on students' satisfaction.

Methodology

This study aims to determine the impact of the quality of services on students' satisfaction. By reviewing the literature on the quality of services in teaching, learning, curriculum, assessment, and infrastructure, this study identifies the relationship between these five variables and students' satisfaction. The objective of this study is to test whether the quality of services offered in the universities has a significant impact on students' satisfaction.

Hypotheses

This study assumes that the quality of services in universities has no significant impact on students' satisfaction. Alternative hypotheses are:

H1: There is a significant impact of teaching methods on the satisfaction of students.

H2: There is a significant impact of learning environment on the satisfaction of students.

H3: There is a significant impact of the core curriculum on the satisfaction of students.

H4: There is a significant impact of assessment practices on the satisfaction of students.

H5: There is a significant impact of infrastructure on the satisfaction of students.

Study Design

A sample of 450 students was purposefully chosen using random sampling method at ten universities in Saudi Arabia. Students of various faculties participated in this study. A well-structured questionnaire prepared on the quality of services was offered in the universities identifying five variables such as teaching methods, learning environment, course curriculum, assessment practices, and infrastructure facilities. Total items in each variable are as shown in Table 1, and the items appended to this paper. The questionnaire was tested with a sample of 25 students and after a few changes in the items, the final form of the questionnaire was distributed to the sample. Responses of the items obtained on five-point Likert's scale of strongly agree (5) to strongly disagree (1). A total of 316 fully completed questionnaires were returned, and the response rate was 70%. The alpha value for each variable was found reliable at the 95% significance level. The study results were analyzed by using descriptive statistics, correlation, and regression.

Study Results

Table 1 shows the descriptive statistics of this study. The correlation values between the five variables and the students' satisfaction are in the last row of the table. The mean values in five variables are more than 3.000, which indicate students are positive towards the quality of services in the universities. Standard deviations are between 0.6 and 0.7. Skewness values are close to zero. Kurtosis values are positive and statistically acceptable. A significant positive correlation exists between the students' satisfaction and the three variables such as teaching methods, learning environment and core curriculum ($r > 0.5$, $p < 0.05$). The low positive correlation intervened between students' satisfaction with the two variables, such as assessment practices and infrastructure ($r < 0.5$, $p < 0.05$).

Table 1: Descriptive statistics of the study.

<i>Measures</i>	<i>Variables</i>					
	<i>Teaching methods</i>	<i>Learning environment</i>	<i>Core curriculum</i>	<i>Assessment practices</i>	<i>Infrastructure</i>	<i>Students' satisfaction</i>
<i>No. of items in the questionnaire</i>	8	8	9	5	5	5
<i>Alpha</i>	0.983	0.988	0.989	0.986	0.971	0.986
<i>Mean</i>	3.738	3.631	3.867	3.943	3.469	3.543
<i>Std. Deviation</i>	0.716	0.619	0.672	0.798	0.604	0.794
<i>Skewness</i>	-0.330	-0.828	-0.693	-0.392	-0.310	-0.697
<i>Kurtosis</i>	1.043	0.422	0.666	0.935	1.079	0.533
<i>Correlation to Students' Satisfaction*</i>	0.539*	0.576*	0.519*	0.492	0.491	--

* *Correlation (r) is significant at 1% (2-tailed).*

Table 2 shows the results of the stepwise regressions of students' satisfaction with five independent variables. By using backward elimination process up to 1% significance level, the regression results in model 1 have a variance of 49.1% where three variables remained statistically significant ($p < 0.01$) such as teaching methods ($p = 0.008$), learning environment ($p = 0.000$), and core curriculum ($p = 0.004$). The remaining two variables, i.e., assessment practices and infrastructure, are dropped to proceed with the next model of regression.

Model 2 has variance of 48.2% and the three variables determine the statistically significant ($p < 0.01$) impact on students' satisfaction [teaching methods ($p = 0.014$), learning environment ($p = 0.000$), core curriculum ($p = 0.007$)]. Therefore, Model 2 is appropriate for this study, and *f*-values designate a positive relationship between the three variables. Comparatively, the learning environment ($\beta = .484$) has a more significant impact on students' satisfaction than core curriculum ($\beta = .358$) and teaching methods ($\beta = .274$).

Table 2: Regression results in predicting students' satisfaction.

Model	Independent Variables	Beta	t value	Sig.	R square	F value	Sig.
1	Teaching methods	0.294	2.762	0.008	0.491	30.711	0.000 ^a
	Learning environment	0.492	4.930	0.000			
	Core curriculum	0.384	3.490	0.004			
	Assessment practices	-0.218	-2.396	0.137			
	Infrastructure	-0.196	-2.354	0.129			
2	Teaching methods	0.274	2.585	0.014	0.482	37.537	0.000 ^b
	Learning environment	0.484	4.838	0.000			
	Core curriculum	0.358	3.284	0.007			

* Correlation (r) is significant at 1% (2-tailed).

Hypotheses results are shown in Table 3. H1, H2, and H3 are accepted, whereas H4 and H5 rejected.

Table 3: Results of the hypothesis.

Hypotheses	Results
H1: Teaching methods have a significant impact on students' satisfaction.	Accepted
H2: The learning environment has a significant impact on students' satisfaction.	Accepted
H3: The core curriculum has a significant impact on students' satisfaction.	Accepted
H4: Assessment practices have a significant impact on students' satisfaction.	Rejected
H5: Infrastructure has a significant impact on students' satisfaction.	Rejected

Findings

Students in universities positively perceived the quality of services in all five variables. However, the results conclude that that quality of services in teaching methods, learning environment, and core curriculum have a significant impact on students' satisfaction but not the quality of services in assessment practices and infrastructure. The regression results in study model 2 (table 2) revealed that the learning environment has more impact on student satisfaction, followed by core curriculum and teaching methods. This study hypothesis failed (table 3) to predict the quality of services in student assessment practices, as well as quality infrastructure, and these have a significant impact on students' satisfaction (table 2, model 1, -ve beta values). Furthermore, the results of multiple regressions (table 2, model 1) have limited the quality of services in infrastructure (beta = - 0.196) and assessment practices (beta = - 0.218) to having the least influence the students' satisfaction. Indeed, the correlations of these two variables with the students' satisfaction (table 1) also lagged in showing a significant positive correlation.

Conclusion

This study examined whether the quality of services in universities has an impact on students' satisfaction. The sample of 316 students from ten universities in Saudi Arabia positively perceived the quality of services in the universities. The quality of services in teaching, learning, and curriculum have a significant positive impact on students' satisfaction. However, the quality of assessment practices and infrastructure facilities in the universities has no significant impact on students' satisfaction. Students' satisfaction is considered highly significant by the quality of the learning environment in the universities followed by core curriculum and teaching methods that are being adopted and implemented by the universities. In the end, these findings resembled the outcomes of earlier investigations in higher education institutions across the world.

Limitations

This study has some limitations to generalise the impact of the quality of services on students' satisfaction in the universities of Saudi Arabia. Firstly, because this study only discussed the opinions of a sample of students representing ten universities, and this sample might not reflect the entire satisfaction of students regarding the quality of services offered by the universities in Saudi Arabia. Secondly, the quality of services implicit in this study might not represent the nature of services being offered by all the universities in Saudi Arabia or the universities elsewhere (Hanaysha et al., 2011; Kim, & Han 2018). Thirdly, some of the services that did not attract in this study might attribute to the related services like sponsorship of students for higher learning, facilities for students' research activities, and students' training and placements in the curriculum. Finally, in the Arab world, the perceptions of students on service quality have its transformation because of the commonness of the Islamic culture in educational institutions (Al-Atiqi and Alharbi, 2009; Parahoo and Tamim, 2012; Malarvizhi, Nahar & Manzoor 2018). Perhaps, social philosophies in the teaching and learning environment of universities may influence the students' perspectives of service quality. More research on services of universities like student research fellowships for higher studies, training of students for employability skills, career guidance, and campus placements may prompt more insights into the topic of students' satisfaction.

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Appendix: Scale Items in the Students Questionnaire

<i>Item No.</i>	<i>Items in the questionnaire</i>
<i>1. Teaching Methods</i>	
1.1:	Teaching methods focus on learning outcomes of the program.
1.2:	Teaching methods help to broaden our conceptual knowledge and understanding.
1.3:	Teaching methods encourage our critical questioning of theories and concepts.
1.4:	Teaching methods inspire us to discuss the different views on course-related topics.
1.5:	Teaching methods use different instructional strategies suitable for our different learning capabilities.
1.6:	Teaching methods increase our decision-making abilities.
1.7:	Teaching methods allows us to revise the scope of our knowledge on course-related topics.
1.8:	Teaching methods provoke us also to refer to the various online resources and e-books.
<i>2. Learning Environment</i>	
2.1:	Learning environment facilitate the interaction between faculty and students.
2.2:	Learning environment improve our talents and skills through active learning.
2.3:	Learning environment prompt feedback on our knowledge and competence.
2.4:	Learning environment create interest to access the library and laboratory facilities.
2.5:	Learning environment provide access to course-related materials and resources for our complete learning.
2.6:	Learning environment facilitate group discussions for improving our communication skills.
2.7:	Learning environment develop our research skills.
2.8:	Learning environment generate the right attitude of our learning.
<i>3. Core Curriculum</i>	
3.1:	Curriculum has the flexibility to practice different approaches in teaching and learning.
3.2:	Curriculum has innovativeness to fulfill our aspirations and expectations.
3.3:	Curriculum encourages updating our knowledge by using information and communication technologies.
3.4:	Curriculum has a close partnership with community and institutions to share the experiences and expertise.
3.5:	Curriculum provides opportunities for extended learning by field studies and industrial visits.
3.6:	Curriculum raises our spirit to pursue further education and academic research degrees.
3.7:	Curriculum has a balance of workload to manage the time and efforts to complete the course related works.
3.8:	Curriculum has the quality of global education standards of higher education institutions.
3.9:	Curriculum has a comprehensive approach to improving our employability skills.



<i>4. Assessment Practices</i>
4.1: Assessment practices are suitable to evaluate our academic performance.
4.2: Assessment practices are reliable and valid to improve our learning abilities.
4.3: Assessment practices are fair and narrative to guide us towards active learning.
4.4: Assessment practices are an evidence-centered for making inferences on our academic performance.
4.5: Assessment practices have clear guidelines of rubrics to rate our performance.
<i>5. Infrastructure</i>
5.1: Infrastructure facilities are available with high-quality buildings, rooms, furniture, and laboratories.
5.2: Infrastructure is available with proper ventilation, lighting, green fields, and space for movement.
5.3: Infrastructure is available at the optimum level in the library, sports, and fitness areas.
5.4: Infrastructure sufficiently planned at parking places, cafeterias, and medical aids.
5.5: Infrastructure has enough space for meeting halls and auditoriums.
<i>Dependent Variable: Students' Satisfaction</i>
6.1: I am satisfied with the teaching methods of the university.
6.2: I am satisfied with the learning environment of the university.
6.3: I am satisfied with the core curriculum of the university.
6.4: I am satisfied with the assessment practices of the university.
6.5: I am satisfied with the infrastructure of the university.