

# HARNESSING THE POWER OF SERVICE QUALITY TO ATTRACT AND RETAIN STUDENTS: AN OUM EXPERIENCE

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## Abstract

*The increase in the number of open and distance learning (ODL) providers in Malaysia has provided potential students with bigger opportunities to access tertiary education. However, the challenge faced by the providers is that they have to compete with each other to capture the largest number of students. Getting a good intake is a necessity, retaining the existing students is equally critical as these two factors determine the financial sustainability of the institution. As in any service industry, service quality is key to the success of any higher education including ODL institution. Past studies have proposed that satisfaction is one of the key competitive advantages for a HEI as it will lead to profitability and customer loyalty. In this light, this study examines the relationship between service quality and satisfaction of Open University Malaysia (OUM) students. A performance-based instrument called SERVPERF developed by Cronin and Taylor (1992) was used as a guide for this study, some modifications were made to suit the context of OUM. The instrument consists of two sections, one of which contains 15 demographic questions and the other 65 questions measured on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Out of 22,000 active students population, 4062 (18.5%) responded and 3290 completed questionnaires were used. Data were analysed using descriptive statistics, correlation and multiple regression. The results indicated that 'programme', 'teaching & learning', 'assurance', 'responsiveness', 'empathy' and 'reliability' explained 77.9% of the variation in student satisfaction. 'Empathy' and 'responsiveness' have the greatest impact on satisfaction in the students' perception of service quality rendered by OUM. The overall satisfaction level measured falls at 77.0% with a mean score of 3.85 on a 5 point Likert scale.*

**Key words:** ODL, service quality, satisfaction, higher education, OUM

## Introduction

With the increasing importance given to the educational institutions in the service sector, many open and distance learning (ODL) universities have placed emphasis on service quality, satisfaction and loyalty of their students. A review by Sinclair (2011) on the Sloan Report indicated that a total of over 4.6 million students have enrolled in at least one online course in year 2008. Furthermore, the paper also indicated that student satisfaction was the most important determinant to continuing learning because satisfaction is strictly associated with retention. Despite the interventions done by ODL institutions and research papers written on this area, ODL institutions still suffer from retention. Previous studies have highlighted the evidences in their discussions. Dropout rates of open and learning institutions are much higher than conventional institutions (Anagnostopoulou et al., 2015; Oblender, 2002) The literature of Ibrahim (2014) discussed reasons that contribute to students dissatisfaction and according to him, among the factors pointed in that paper were 1) level of service quality, 2) quality of teachers and 3) quality of learning resources, which did not meet students' expectations. Researchers, management and policy makers from the academia are still looking into some of the best practises to harness the power of service quality to improve students' satisfaction and retention in Malaysian Private Higher Education Institutions (Shanti & Garnesh, 2015).

## Research Objectives

The purpose of this study is to determine the dimensions influencing the quality of services and their relation to overall satisfaction of OUM students. The specific objectives of the study are as follows:

- a) To determine how satisfied are OUM students in the quality of services they experienced from the University
- b) To determine the service quality (SQ) constructs that has significant impact on student satisfaction
- c) To examine the areas where the University could further improve in the service delivery so as to provide greatest impact to students' overall satisfaction

## Review of Focal Literature

The application of the service quality concept in OUM started when a study based on SERVQUAL (Parasuraman et al. 1988) was conducted by Zabid & Latifah (2006). In that study, 8 dimensions of service quality which accounted for 65.6% of the variances was found. The 8 dimensions were interpreted as: (i) programme issues; (ii) student services; (iii) tutors and pedagogy; (iv) physical facilities; (v) ICT services; (vi) mode of learning; (vii) modules and (viii) costs/ time. When the 8 service quality variables were regressed with satisfaction, only 3 of the service quality variables: *student services*, *physical facilities*, and *mode of learning*, were significantly and positively associated with students satisfaction. The regression equation explained 15.6% of the variance in student satisfaction. The item *student services* was found to be the most influential factor in determining students' satisfaction, followed by mode of learning and physical facilities. Later in 2009, another study was conducted using the conceptual framework developed by Abdullah, F. (2006), i.e., an instrument called Higher Education Performance (HEdPERF). The exploratory research came up with a new service quality measurement model called ODLPERF, wherein the 29 items in the questionnaire were subjected to a factor analysis utilizing the principal components procedure, followed by a varimax rotation. It resulted in a 4-factor model of ODLPERF consisting of tangibility, reliability, assurance and empathy, which was considered valid and reliable (Ramli et. al., 2009).

The relationship between customers' satisfaction and service quality has been the subject of keen interest both by researches as well as owners of businesses. More and more organisations emphasise on service quality due to its strategic role in enhancing competitiveness especially in the context of attracting new customers and enhancing relationship with existing customers (Hanaysha et al. 2001; Ugboma et al. 2007). In the context of ensuring sustainability of higher learning, institutions require

them to continuously strive towards meeting and exceeding students' expectations (Hanaysha et al. 2001; Anderson et al. 1994). It has been found that positive perceptions of service quality has a significant influence on student satisfaction and thus satisfied student would attract more students through word of mouth communications (Hanaysha et al. 2001; Alves & Raposo, 2010). Even more so the digital media era has the power to magnify customers' experience whether positive or negative, makes this an even more compelling topic to explore. As mentioned by Shashi (2012), the opportunity provided by social media for customers to connect and interact in rich and complex ways with other customers and non customers gives them the ability to influence others in their social networks. As a private university OUM relies on students' fees as the main source of revenue to sustain its operations. In this regard retention of students is one of the strategic areas of focus. According to Abu Hassan et al. (2008); Aldridge & Rawley (2001), the key factor for students' withdrawal is due to an expectation that cannot be fulfilled by the institutions.

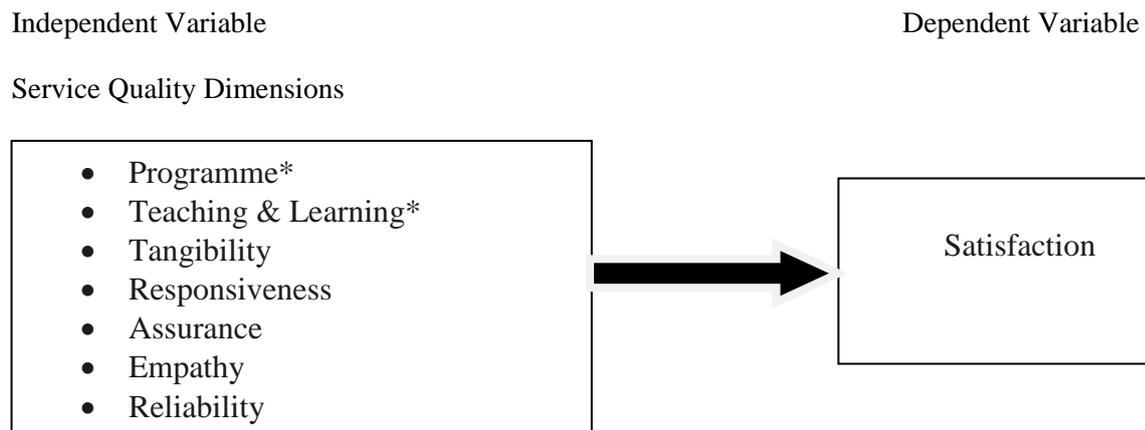
### **Service Quality and Students' Satisfaction**

Service quality is a judgment defined by the consumer over a phase of time. This area has received attention from previous researchers (Parasuraman et al., 1988; Cronin & Taylor, 1992; Abdullah, F. 2006) in these two decades of research. The development of SERVQUAL was primarily done by Parasuraman et al. (1988) extended by Cronin & Taylor (1992). Cronin & Taylor (1992) named their instrument as SERVPERF when measuring service quality. Many papers have been based on these two instruments. Nevertheless, attempts by local researcher like Abdullah, F. (2006) has also provided methodological contribution by developing HEdPERF instrument to measure service quality in higher education. The current paper will establish and validate the measurement on the basis of referring to these previous researchers. Two new variables (programme; teaching and learning) have been added to the testing of model and this could be considered as a novel methodological contribution to this area of study. This could be observed from Figure 1 and Table 1. Future researchers are welcomed to use the instrument of this study. More information on the instrument is given in the appendix of this paper. According to Fares et al. (2013) and Chou et al. (2011), service quality is the discrepancy between consumers' perceptions of services offered by a particular firm and their expectations about the firms offering such services. The construct of quality as conceptualised in the services literature is based on perceived quality. Perceived quality is defined as the consumer's judgement about an entity's overall experience or superiority (Zeithaml, 1987; Zammuto et al., 1996; Abu Hassan et al., 2008). Various approaches in the measurement of service quality have been discussed over the last 30 years. One of the more established service quality satisfaction analysis tool is the one developed by Parasuraman et al. (1988) which they identified 10 dimensions of service quality; tangibles, reliability, responsiveness, competency, courtesy, communication, credibility, security, access and understanding as reviewed by Hanaysha et al. (2001). These factors were eventually collapsed into five items as follows: tangibles, reliability, responsiveness, assurance and empathy. There have been some modifications to the instrument by other researchers such as Cronin & Taylor (1992) and Abdullah, F. (2006) which differs from the original SERVQUAL where the measurement is based only on performance. Service Quality is commonly noted as a critical prerequisite for establishing and sustaining satisfying relationship with value customers. Hence the association between service quality and customer satisfaction has emerged as a topic of significant and strategic concern (Abu Hassan et al., 2008; Cronin & Taylor, 1992). It was found that the overall service quality have a significant relationship with satisfaction (Abu Hassan et al., 2008; Bigne et al., 2003). This was confirmed by Abu Hassan et al. (2008) and Ham & Haduk (2003) that even in the higher educational settings there is positive correlation between perception of service quality and student satisfaction.

### **Conceptual Framework**

The study is based on the dimensions of the SERVQUAL TOOL by Parasuraman et al. (1988) and adapting it to incorporate additional dimensions for analysis, as illustrated in the figure below:

**Figure 1: Conceptual Framework of the Study**



The dependent variable in this study is overall student satisfaction. The independent variable is service quality in various dimensions as follows;

**Table 1: Service quality dimensions (Parasuraman et al., 1988)**

Dimensions	Definition
Programme	The programme of study offered gives added value to students
Teaching & Learning	The methods of delivery, learning materials, tutors the ability to help students learning
Tangibility	Physical facilities, equipment, and appearance of personnel
Reliability	Ability to perform the promised service dependably
Assurance	Knowledge and courtesy of employees and their ability to inspire trust and confidence
Empathy	Caring, individualised attention the university provides its customers
Responsiveness	willingness to help students and provide prompt service

## Methodology

The researchers used survey questionnaire as a medium to collect data. Quantitative design is selected for this study because this study is interested to fulfil the research objectives and to provide contributions to the literature.

## Research Hypothesis

From the literature review, relationships exist between programmes of study, teaching and learning, physical facilities, reliability, responsiveness, assurance and empathy and student satisfaction. This study expects that the seven dimensions of education service quality affect student satisfaction of OUM. Thus, these assumptions lead to the following alternative-hypotheses:

H1: Programmes of study has significant effect on student satisfaction

H2: Teaching and learning has significant effect on student satisfaction

H3: Physical facilities has significant effect on student satisfaction

H4: Reliability has significant effect on student satisfaction

H5: Responsiveness has significant effect on student satisfaction

H6: Assurance has significant effect on student satisfaction

H7: Empathy has significant effect on student satisfaction

## Sample

The questionnaire was conducted online via the Survey Monkey and an announcement was made to all active students of the May2016 semester via the OUM's LMS, myInspire. Out of a total of 22,000 active students, 4062 responded and only 3290 completed questionnaires were used for this study.

## Instrument

The survey questionnaire consisted of two sections: Section A contains 15 demographic questions and Section B contains 65 questions, distributed in 7 service quality constructs. Programme of study and teaching and learning are two additional constructs which will be tested in addition to the original five constructs proposed by Parasuraman et al. (1988). The development of a new model and simply applying a new set of data with new constructs to investigate a phenomenon is a major contribution to knowledge in the area of service quality. In the later sections of this paper, more information will be given on pre-test and content validity of the measurement. In addition, data analysis such as correlations, regression analysis, and reliability analysis were conducted using SPSS version 22 to ensure robust and valid results. The draft list of items were selected from the following references, and based on this draft, the experts were called in to deliberate on the relevant items to be used in the questionnaire. Elements of subjectivity cannot be avoided because qualitative methodology has its advantages. Therefore, the instrument went through content validity phase whereby experts were interviewed in a focus discussion. Validity means the construct must measure what it is supposed to measure. In the content validity exercise, experts from OUM went through the items in the measurement and gave their opinions on the feasibility and understandability of the items. The instrument was then amended after this pre-test exercise before it was distributed to the mass respondents

**Table 2: Sources of reference used for the instrument**

Authors	Title	Constructs	References
Ramli,B, Latifah A.L., San, N.M.	ODLPERF: an instrument for measuring service quality in an open and distance learning (ODL) institution	Key dimensions of SQ: Tangibles, reliability, assurance and empathy	23rd AAOU Annual Conference 3-5 November, Tehran, Iran. 2009.
Fazelina Sahul Hamid	An Empirical Study on the Effect of Service Quality on Student Satisfaction in Malaysian Distance Education Institutions	SERVQUAL: Assurance; Empathy; Responsiveness; Reliability Facility; P.Service Quality (DV) and Satisfaction (DV)	Global Journal of Business and Social Science Review, 4(1), 413-424. 2015

Ashim Kayastha	A study of graduate student satisfaction towards service quality of universities in Thailand,  Thesis: Master Business Administration. Webster Univ, April 2011	SQ dimensions: Non-academic aspects; academic aspects; design, delivery and assessment; group size; programme issues; reputation and access.  Developed based on Abdullah, F. (2005) and Afzal (2010)	1) Abdullah, F., A. (2005). The development of HEdPERF: a new measuring instrument of service quality of higher education sector. Paper presented at the Third Annual Discourse Power Resistance Conference: <i>Global Issues Local Solutions</i> , 5-7.  2) Afzal, W., Akram A., Akram M.S. & Ijaz A. (2010). On students' perspective of quality in higher education. 3rd International Conference. <i>Assessing Quality in Higher Education</i> , 417-418, 422.
Jeetesh Kumar & Chiao Ling Yang	Service quality and loyalty of international students studying in the field of hospitality and tourism	SQ Constructs: Reputation; Career Prospects; Programme Issues; Access; Tangibles; Administrative Aspects and Academic Aspects	Malaysian Online Journal of Educational Management, 2(3), 97 – 118, 2014
Parves Sultan & Tasmaha Tarafder	A Model for Quality Assessment in Higher Education: Implications for ODL Universities	PHED model: Perceived Service Quality (PSQ) is determined by: dependability, effectiveness, capability, efficiency, competencies, assurance, unusual situation management, and semester-syllabus-grading (SSG)	Malaysian Journal of Distance Education 9(2), 125–143 (2007)

## Results and Discussion

### Demographic profile of respondents

As shown in Table 3, the male to female ratio of 38:62 is almost the same as that as the population ratio of 37:63, thus the respondents can be considered representative of the student population. The highest percentage (41.2) of the respondents is in the 26-35 age range, followed by the 36-45 and 18-25 age groups. A small percentage make up the 46-55 and >55 age groups. Out of the total respondent intake, 22% came in via the flexible entry route. Most of the students (47%) who entered OUM were Diploma holders, followed by 25% SPM holders, 21% Bachelor degree holders and a small percentage (3%) with a Masters degree. A majority of them (67%) work full-time while 19% work on a part-time basis. In terms of their engagement, 43% of the respondents spend 1-2.5 hours, 25% spend 3-4.5 hours, 14.3% spend less than an hour per week on myInspire, and the university's learning management system (LMS). There are students who spend more than 5 hours (15%) and even up to 11 hours (2%) on myInspire per week.

**Table 3: Demographic Profile**

<b>Profile of Respondents</b>		<b>%</b>
Gender	Male	38
	Female	62
Age	18 - 25 years	21.5
	26 - 35 years	41.2
	36 - 45 years	25.6
	46 - 55 years	8.9
	More than 55 years	2.9
Entry Qualification	SPM	25.3
	Diploma / STPM (or HSC) / Matriculation or equivalent	47.4
	Bachelor Degree	21.4
	Masters Degree	3.6
	Others	2.3
Mode of entry	Normal entry	78
	Flexible entry	22
Employment status	Self-Employed	7.9
	Full Time	67.1
	Part Time	19.0
	Not Employed	4.9
	Retired	1.2
Average time spent in myInspire per week	Less than 1 hour	14.3
	1 - 2.5 hours	43.4
	3 - 4.5 hours	25.2
	5 - 6.5 hours	9.2
	7 - 8.5 hours	3.8
	9 - 10.5 hours	1.9
	More than 11 hours	2.1

**Descriptive Statistics**

Table 4 reports the results of the descriptive statistics. The mean values for all the dimensions vary from the lowest 3.599 to the highest 4.045 on a scale of 1-5. The skewness and kurtosis values were within acceptable range. Data normality were justified though Kurtosis (below 3.00) and Skewness (between -2 to +2).

**Table 4: Descriptive statistics**

<b>Constructs</b>	<b>N</b>		<b>Mean</b>	<b>Median</b>	<b>Std. Deviation</b>	<b>Variance</b>	<b>Alpha</b>
	<b>Item Code</b>	<b>No of Items</b>					
Programme	A1-A7	7	3.977	4.000	0.611	0.373	0.92
Assurance	F1-F8	8	3.896	4.000	0.646	0.417	0.93
Empathy	G1-G4	4	3.896	4.000	0.762	0.581	0.93
Satisfaction	I1-I5	5	3.848	4.000	0.713	0.508	0.92
Responsiveness	H1-H7	7	3.826	4.000	0.717	0.514	0.94
Teaching and Learning	B1-B14	14	3.809	3.857	0.626	0.392	0.94

Reliability	E1-E7	7	3.765	3.857	0.682	0.466	0.90
Tangibility	D1-D9	9	3.599	3.667	0.696	0.484	0.90

'Programme' was accorded the highest mean, followed by 'assurance' 'empathy' and 'satisfaction', and the lowest mean was in 'tangibility'. It is interesting to note that all the four dimensions of 'programme', 'assurance', 'empathy' and 'responsiveness' were rated higher in performance than the 'teaching and learning' dimension. This implies that 'knowledge and courtesy of staff and their ability to convey trust and confidence' (assurance); 'caring, individualized attention the institution provides its students' (empathy) and 'willingness to help students and provide prompt service' (responsiveness) and are far more important than the 'teaching and learning' itself in shaping their experience, whether they have had a satisfying or a non-satisfying one. In this case 'programme' is given highest performance rating, which is indeed gratifying to note. In the context of this study, the good academic programmes represent OUM's strength, and this will be the main attraction to potential students. However on the relatively negative side, physical facilities (tangibility) which was rated lowest in terms of its performance calls for some serious interventions. In essence, OUM needs to improve its physical infrastructure and show greater reliability in order to satisfy its students even better.

The items below were selected based on the cut-off point of 80%; any items above 80% are considered high performance items. This is an arbitrary number; it can be increased in the next study, provided the same items are used. This is done in the context of continual improvement; whereby the performance rating in the next round of survey can be set at a value greater than 80%.

Looking at the individual items, the five items rated highest in performance include:

1. *The courses in my programme are relevant (4.07, 81.4%)*
2. *OUM offers quality programmes (4.07, 81.3%);*
3. *Face-to-face tutorials help me to achieve the expected learning outcomes (4.07, 81.3%);*
4. *OUM offers a wide range of programmes with various specializations (4.04, 80.7%);*
5. *I would consider short courses offered by OUM for my continuous professional development (4.01, 80.1%)*

As for the items that are not rated so favourably, 75% was used as the cut-off point. This figure could be reduced to a lower figure in the next round of a similar survey. The items which fall below the 75% cut-off point are a cause for concern and they are:

1. *Wi-Fi access in my learning centre is good (mean=3.25, 65.1%)*
2. *Parking facilities are adequate (3.39, 67.8%)*
3. *Computer lab facilities are up to date (3.46, 69.1%)*
4. *Access to food and refreshment is available nearby (3.51, 70.3%);*
5. *The university provides counselling service (3.54, 70.9%).*
6. *The physical library facility is useful (3.61, 72.3%);*
7. *My tutorial classes are conducted as scheduled without any postponement in the last 2 semesters (3.62, 72.5%);*
8. *I receive my assignment marks and feedbacks in a timely manner (3.64, 72.7%);*
9. *The grading of assignment by the e-graders is fair (3.68, 73.6%);*
10. *e-Tutors are able to answer my questions relating to the course content (3.69, 73.8%);*
11. *When I encounter a problem with MyVLE / myINSPIRE, I always get immediate support (3.71, 74.2%);*
12. *e-Forums help me to achieve the expected learning outcomes (3.71, 74.2%);*
13. *e-Tutors are knowledgeable in facilitating the online forum (3.72, 74.3%);*
14. *e-Modules help me to achieve the expected learning outcomes, (3.73, 74.6%);*
15. *Enquiries / complaints from eCRM are responded in a timely manner (3.73, 74.7%)*

As can be seen above, the courses and programmes appeal to students; OUM has done well in this aspect. It is interesting to note that while OUM is vigorously working towards putting more courses and even its programmes fully online, the face-to-face mode remains the preferred choice, as indicated by 81% of respondents who claimed that the face-to-face tutorials help them achieve the expected learning outcomes. It is gratifying to note that students would consider OUM's short courses for continuous professional development, and indeed this is in support of lifelong learning; one of OUM's mission.

While the programmes serve as OUM's selling point, some of the items under tangibility – physical facilities, need to be further improved. Top of the list is the Wi-Fi accessibility in the learning centers. All of OUM learning centers throughout the country are equipped with computer labs and Wi-Fi access for students and staff usage. The university has heavily invested and use ICT supported systems to manage and monitor students' information, and to provide easy access of educational materials to both students and tutors. Moodle is used as the online learning management system to deliver course content and host online learning activities. Students interact with peers and instructors through this platform. The advantage with Moodle is that it has a mobile version, so, students can access course materials using their smart phones or tablets. Lack of Wi-Fi access will cripple the learning activities, particularly among students who are on the online mode. Yes, in the blended mode, students have the opportunity to see their tutors face-to-face, but the learning space needs to be extended to the online environment to enable students to achieve the educational learning outcomes such as creative and critical thinking skills, collaboration and interpersonal skills, problem solving and communication skills; the well known 21st century skills which are critical for the present day students. While we assume that students can study anywhere, anytime; it cannot be assumed that ALL of them are able to do just that. Some of them need to go to the learning centers to carry out their learning activities, because they do not have good Wi-Fi and personal computers at home. Besides the Wi-Fi and computer labs, availability of parking space is also crucial to them.

Another important item that needs to be looked into is the counselling services. ODL students face a number of challenges and most of these challenges emanate from the fact that they are separated from the institution in terms of space and time. If quality is to be attained then counselling must be put at the centre of student services. This is because counselling affects and influences student performance thereby influencing the quality of their educational experiences.

As for the teaching and learning construct, items 8-14 shown above, which incidentally are carried out virtually, their performance was rated relatively lower. A successful implementation of online courses would definitely require all of the above items be improved in ensuring an enriching and engaging learning experience. If OUM's direction is towards fully online courses, we will have to ensure that the lack of face-to-face interaction will have to be compensated by efficient and effective online support services. Stable Wi-Fi access and up to date computer lab facilities are critical. It is crucial to have well trained e-tutors who are competent and most of all responsive to students, especially in providing the much needed feedback for effective learning. They must be interacting actively in the online forum, as learning is considered to take place in a social environment, such as in the forum. The e-modules will have to be made easily accessible to all.

In OUM, students use the electronic Customer Relationship Management (e-CRM) suite as a platform to channel their queries and complaints and the institution's promise is that all queries would be answered with one week. Tremendous amount of work has been put into simplifying the processes involved in tracking and managing the queries and complaints forwarded by students, and to this end, it has been a very useful communication platform between the institution and students. A further improvement will definitely lead to greater student satisfaction.

### **Correlation of the Variables**

A correlation analysis was carried out since correlation analysis involves measuring the closeness of the relationship between two or more variables; it considers the joint variation of two measures. The result in Table 5 indicates that all dimensions had positive correlation greater than 0.5 that was

statistically significant at  $p < 0.05$ . When the correlation coefficients matrix between the variables is examined, no correlation coefficient is equal to 0.90 or above. This examination provides support for the discriminant validity, which means that all the constructs are different (Amick & Walberg, 1975). All seven dimensions of service quality are correlated positively with student satisfaction (programme  $r=0.741$ ; teaching & learning  $r=.781$ ; tangibility  $r = .725$ , reliability  $r = .773$ ; assurance  $=.832$ , empathy  $r=.817$ ; responsiveness  $r=.830$ ; all  $p = < .05$ ). The strongest correlation was found between satisfaction and assurance followed by responsiveness and empathy. The weakest correlation is with the construct of tangibility. The results from correlation test preliminarily support the proposed hypothesis that all dimensions of service quality have a relationship with satisfaction.

**Table 5: Correlation Analysis (Pearson Correlation)**

	Programme	Teaching and Learning	Tangibility	Reliability	Assurance	Empathy	Responsiveness	Satisfaction
Programme	1							
Teaching and Learning	.800**	1						
Tangibility	.683**	.788**	1					
Reliability	.702**	.793**	.789**	1				
Assurance	.745**	.798**	.775**	.856**	1			
Empathy	.674**	.722**	.702**	.754**	.867**	1		
Responsiveness	.691**	.756**	.743**	.800**	.873**	.883**	1	
Satisfaction	.741**	.781**	.725**	.773*	.832**	.817**	.830**	1

#### Regression Analysis and Hypothesis Testing

A multiple regression analysis was performed to determine the effect of independent variables, which are the service quality dimensions on student satisfaction. The model (Table 6) shows that the value of  $R^2$  is 0.779. Out of the 7 constructs, 6 showed statistical significance to student satisfaction, and they are: programme, teaching and learning, reliability, assurance, empathy, and responsiveness. The model is considered excellent as the six constructs explain 77.9% of the variation in student satisfaction. Based on the Beta values, responsiveness and empathy have the greatest impact on student satisfaction, followed by programme, teaching and learning and assurance and the least impact are due to reliability and tangibility.

Table 6a: The Regression Model					
Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.883 <sup>a</sup>	.779	.779	.33533	1.959
a. Predictors: (Constant), responsiveness, programme, tangibility responsiveness, teaching and learning, empathy, and reliability					
b. Dependent Variable: satisfaction					

Table 6b: The Regression Model	
ANOVA	

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1303.244	7	186.178	1655.731	.000
	Residual	369.043	3282	.112		
	Total	1672.287	3289			
a. Dependent Variable: satisfaction						
b. Predictors: (Constant), responsiveness, programme, tangibility responsiveness, teaching and learning, empathy, and reliability						

Table 6c: The Regression Model								
Coefficients								
Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.105	.040		-2.598	.009		
	Programme	.181	.017	.155	10.844	.000	.329	3.044
	Teaching & Learning	.169	.020	.148	8.453	.000	.219	4.561
	Tangibility	.023	.016	.023	1.512	.131	.293	3.410
	Reliability	.065	.019	.062	3.511	.000	.212	4.709
	Assurance	.143	.025	.130	5.762	.000	.132	7.566
	Empathy	.210	.018	.225	11.616	.000	.180	5.561
	Responsiveness	.230	.020	.232	11.370	.000	.162	6.178
a. Dependent Variable: satisfaction								

Based on the regression results, the results of the hypothesis testing are as shown in Table 7.

**Table 7: Hypothesis Testing**

No	Hypotheses	p-value	Results
H1	There is a relationship between programme and satisfaction	0.001	Accepted
H2	There is a relationship between teaching and learning and satisfaction	0.001	Accepted
H3	There is a relationship between tangibility and satisfaction	0.131	Not Accepted
H4	There is a relationship between reliability and satisfaction	0.001	Accepted
H5	There is a relationship between assurance and satisfaction	0.001	Accepted
H6	There is a relationship between empathy and satisfaction	0.001	Accepted
H7	There is a relationship between responsiveness and satisfaction	0.001	Accepted

## Conclusion

The results of this study revealed that student satisfaction is a multidimensional construct, and four out of the five constructs of SERVPERF used by Cronin and Taylor, which include: responsiveness, reliability, assurance and empathy were found to have significant influence on satisfaction. Tangibility was found to be non-significant. Programme of study and teaching and learning were also found to be significant in influencing satisfaction and thus added to the list of four original constructs to give an overall 6 constructs of service quality. Therefore the service quality constructs for OUM specifically include: *Programme of Study, Teaching & Learning, Assurance, Reliability, Responsiveness, and Empathy*. It is interesting to note that tangibility is not a significant construct, and this appears to be logical in that in an ODL environment, students need not be dependable on the physical facilities as most of the academic and administrative processes can all be done virtually. However, this is the institution's assumption; there may be a significant number of students who require nothing less than up-to-date computer labs and good and stable Wi-Fi facilities for their study purposes.

Item-wise, besides Wi-Fi accessibility and up-to-date computer labs, provision of counselling to students is highlighted in this study. A huge majority of OUM students are employed and have family demands to balance in addition to the demands that ODL studies place on them. This makes the provision of counselling services an essential component of the students support services.

It is also found that responsiveness and empathy are the two constructs that have the greatest impact on satisfaction; and this observation is similar to the results of studies carried out by Wei & Ramalu (2011) and Ali Yassin S.A, & Abdirisq I. M, (2014). In the case of OUM, the impact of both these constructs far outweighs the impact of programme and teaching and learning on student satisfaction. Being an ODL institution serving the working adults, staff has constantly been reminded to serve students with utmost care, concern and understanding. Staffs need to understand and feel what the students are experiencing from within the students' frame of reference and be able to place themselves in the students' position. This is empathy. Another is being responsive. Being able to react quickly means a great deal to ODL students; resolving their complaints and problems in quick time makes them feel happy and satisfied. Besides these two intangible constructs, it is expected that students' satisfaction be influenced by the programme and teaching and learning. The teaching and learning will need to be tip-top as this is the core business of OUM. OUM's management has done well in paying very close attention to its staff by offering appropriate and stimulating work environments which leads to an increase in the levels of their performance, and, therefore, increase student satisfaction. The overall satisfaction level measured falls at 77.0% with a mean score of 3.85 on a 5 point scale.

## Limitations and Future Research

This particular study is a broad, comprehensive overview of students' experiences that provides gross indicators of how well OUM is performing in the eyes of the students. The questions posted in the survey do not provide us with data on how to improve our services and/or what aspect of an area students expressed either satisfaction or dissatisfaction. Further studies are required to provide greater depth and meaning to the survey findings. In addition, some questions are written based on the needs of the institution. Finally, inherent to survey research are limitations of imprecision, such as bias associated with the wording and ordering of questions and with sampling error. Because the survey was conducted online, certain groups may be slightly over or under represented in the sample when compared to the population.

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