Pacific International Journal, Vol. 2(1), 19-26; 2019
ISSN (Print) 2663-8991, ISSN (Online) 2616-4825
DOI: 10.55014/pij.v2i1.66
https://rclss.com/index.php/pij

The Impact of Higher Education Quality on Student's Satisfaction: Empirical Evidence from P.R. China

Muhammad Imran, Qu Shao Wei. Abdul Waheed

Department of Humanity and Social Sciences University of Science and Technology, Beijing, China, 100083

*Correspondence: i_13121010711@outlook.com

The objective of this paper is to evaluate the students' satisfaction with higher education quality with respect to the environment and services of Chinese institutions. Satisfied students can be the axis of innovation and growth of the country. This study is based on data collected by 587 questionnaires and analyzed through SPSS. By using multiple regression analysis, results guide to know which factor is playing how much role in the prediction of students' satisfaction. This work revealed the helpful findings and showed that there is a positive relationship between higher education quality and students' satisfaction .It can be used to know how to improve the higher education quality so that the students of these institutions can play well in the market.
Keywords: Higher Education Quality, Environment, Services, Students Satisfaction, P.R. China

Introduction

Research is being done continuously on satisfaction in academic areas. Data collected from academic environment benefit colleges and universities to make educational programs more successful according to the needs of the dynamic market [1][2]. Many research workers have conducted studies about the student's satisfaction (SS) issues [3][4][5][6] and nearly all of them are agreed that satisfied students can be the example of successful students.Satisfaction is a significant institutive action for the reason that numerous researches have illustrated that those who are satisfied prove more productive than unsatisfied ones [7] [8].

Different researchers visualized SS in various ways. For instance,satisfaction with college experience[9][10][11] satisfaction with quality of instruction [12] satisfaction with advising [13][14][15][16] satisfaction with online courses [17][18][19] satisfaction with assessment [20] satisfaction campus-wide [21] and satisfaction with an academic department[13]. These studies show that there is much literature about SS.

The motive power for organizations is consumer service and quality. For higher educational institutions, there is a need for observations about the performance of academic policies and its applications by evaluating the quality and condition of academic serviceability [22].Upgrading the service quality (SQ) is one of the most valuable moves for a service institution to make a distinction from others [23]. The range to which students' requirements and anticipation are satisfied, decide the quality of education. Educational value, status,and quality are often evaluated by SS where the key weight is mostly given to the qualification of addressing vital demands [24].

SS can be measured by different ways like an evaluation of educational plan that fits students' requirements, the staff, supplies, arrangements,and other aspects together to influence that plan, carrying- out the wanted results. If every move adjoining worth and working well within the organization from start to the targeted point, it can assure the quality growth [25].

There are ten elements of SQ, i.e., tangibles, reliability, courtesy, competence, credibility, responsiveness, security, communication, access, and considering the consumer [26]. It is appropriate to use SQ in higher education institutions (HEIs). Many researchers have used this technique in their studies. E.g. SQ in higher education institutions [27] [28][29]. Different studies have different outcomes of the various dimension of SQ. This study focuses on some elements of SQ likereliability, competence, credibility, communication,and understanding.The other factors like the academic staff, administrative services, library services, curriculum structure,career prospects, location,and infrastructurehave also been focused in this study.

This work aims at giving a description to quality from the students' point of view.It explores the satisfaction level of students regarding the quality ofthe environment and services of ChineseHEIs. In the coming portions, the literature review has been presented. Afterward, there is a description ofthe findings. In the end, the conclusion, limitations of the study and future work suggestionsare given.

[Received 11 Dec 2018; Accepted 15 Jan 2019; Published (online) 31 March 2019]
Publisher's Note: RCLSS stays neutral regard to jurisdictional claims published maps
Attribution 4.0 International (CC BY 4.0)

Literature Review

In academic areas, satisfaction has been addressed both as dependent and independent variable. For example, satisfaction describes college results as GPA, retention rate and graduation rates as an independent variable [30][31][32][6]. Similarly, satisfaction is also described by different aspects as a dependent variable such as counseling, quality of education, and class size; [16] and this satisfaction can be affected by different elements. e.g.Corts et al [13] described five elements which have an effect on satisfaction along with academic area. Elliot and Healy (2001) analyzed eleven elements which have an effect on satisfaction with academic knowledge [9]. In this research, SS has been taken as dependent variable affected by various eleven factors of environment and SQ in HEIs.

There are three ways to measure the students' expectations.e.g. grades, course contents, and academic staff[33]. The study shows that it is common practice not to see the relation between grades and students' learning. In different ways, we can measure the students' satisfactionwith the quality of education e.g. the administration system,registrar, library, faculty office, rector office, dormitory, sports,andhealthcare center services are examples of administration service [34]. Such types of educational services exist but it is difficult to measure them. These can be seen in the individual or society in the form of character, knowledge and their behavior. So, saying something about the definition of quality is not as simple [35].

If we want to assess the quality to know what is quality then the easy way is to set some certain assessable standards and conclude by comparing these yardsticks with the work done in the organization. Parri (2006) [35] studiedthat higher education quality (HEQ) and measuring of quality are easy. What is more, it becomes much complex when a set of quality elements which are being measured and their respective value is not sustained but deviates in the opinion of different participants. There have been published a lot of books and journal articles about the quality, getting to go from the early 1980s to date. But still, the scholars often misconstrue and misconceive the notion of quality [36].Various definitionsof quality in higher education represent a different view which includes exceptional, perfection, as fitness for purpose, value for money [37], the contributor perspective of quality [38] thedegree to which the previous set of objectives are met [39].In written works, there are many definitions about the SQ conception.The center of attention for these definitions is consumer's wants and demands[40].

The Bologna Treaty (1999) has the aim to carry out the objective of preparing students for life as a vital subject in a people-centered community, entitling them to uniqueness, producing and carrying on comprehensive and modern knowledge foundation and firing them with the enthusiasm of research and innovation [41]. In the study of Marsh and Roche (1997), it is stated that students' evaluation of teaching is fail-safe [42]. Similarly, the kingpins of Wiklund andWiklund (1999) study are students as well as their satisfaction and learning [43].

The main objective of this study is to measure the HEQ in Chinafrom the perspective of SS.In the context of China, mostly, the students want to go to the USA, Britain or other developed countries[44]. According to Austin and Shen (2016), the reason may be the freedom of expression and liberty of making arguments. A large number of Chinese students want to get away from the burden of the test-orientated education system[45].Numerous Chinse Students hold the opinion about America that the USA is the site of creativity and skills[46]. This is because of the USA institutions' attitude towards students and this also because of realizing the importance ofproductivity, efficiency, effectiveness, innovation and continuous improvement.

The services of manufacturing industry and educational institutions are totally different. One is tangle and the other is intangible respectively. The service provided by education to students cannot be assessed without undergoing the consumer through it. Just as Parasuraman, Zeithamal, and Berry stated that the SQis different from the quality of products and should be evaluated differently [26].There are ten determinants of SQ which include reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/ knowing the customer and tangibles. These determinants can be the best standards to study the SQwith higher education (HE) they get. These elements of service quality also applicable in educational institutions and many studies have used it. For example, SQ in higher education institutions [27][28][29].The study of Maria Tsinidou, Gerogiannis, and Fitsilis, (2010) shows that there are six factors by which we can measure the HEQ[47]. These areacademic staff, administration services, library services, curriculum structure, career prospects, location,and infrastructure.According to Mai (2005), there are many indicators of SQwithHE. E.g. quality of education, teacher skill and knowledge and quality of IT services etc [48].

The environment of students has an influence on their behavior and their learning. The environment which has students centered learning, cooperative learning, sharing ideas, group discussion, learning from mistakes, open communication etc. can make students active doer rather than the passive listener. There isarelationship between the quality of the environment (QE) and SQ and its impacts onSS. Satisfaction is necessary because it leads toquality of life. According to Bryant(2006) and Özgüngör (2010), satisfied people can be more productive as compared to the unsatisfied ones [7] [8]. Satisfaction can be determined by various factors. For example, the services and the environment where these services are being provided. But the most significant point is the QE and SQ. Hayes (1987) studied that the progress of a nation relies not only upon the production of goods but also on their quality [49]. This generally will start the quality life of

society. Based on the above discussion, we have proposed following hypotheses.

H_1:Theenvironment quality of HE hasa positive impact on SS.

H_2:The service quality of HE has apositive impact on SS.

Methodologies

Sampling and Data Collection Procedure

The HEQfrom the perspective of Chinese students is the context of this study. The reason for this research is to know the impact of HEQ on SS and improvement of the HEQ.

A research methodology is a comprehensive sketch to lead a study towards its goal[50]. The data for this study were collected randomly and through a culturally adapted questionnaire.The best way of finding out the facts for conducting research is questionnaire method[51]. To make this kind of research approach more suitable for social topics, the participants can be assured obscurity[52] [51]. The absence of eye to eye communication takes any kind of hesitation off to disclose private practices and perception [53].Online questionnaires were distributed in 600 students by visiting various universities and students who were studying in Beijing Universities,were requested to scan the QR code to fill thequestionnaire and587 questionnaires were analyzed and 13 were removed because of incompleteand wrong data. The students were selected from this city because Beijing is the capital city of China and almost students from all areas of China are studying here. The results of questionnaires were evaluated thoroughly.

Measures of Constructs

All the applied items were adapted from the previous researches and some decisive adjustments were made before distributing the questionnaire. The items from the QE and the SQ in higher education were presented in one questionnaire to evaluate theSS.The five-point Likert Type scale (From 1=strongly Disagree to 5=Strongly Agree) was used to know the degree of participants satisfaction. Statistical Package for Social Sciences (SPSS 21.0) is used to analyze and statistical processing of data.

To evaluate HEQ, six selected criteria-i.e. Academic staff, AdministrativeServices, Library Services, Curriculum structure,Career prospects, Location,andInfrastructure havebeen taken from the study of Tsinidou et al. (2010) [47].Similarly,SQ in HE is measured by taking reliability, competence, credibility, communication,and understanding as dimensions from the study of Zeithaml et al. (1990)[26].We used two types of variables in this research. The QE and SQhave been taken as the independent variable (IV) and the SS as the dependent variable (DV).

To keep clear of the partiality, all the measuring dimensions were culturally adapted and tested using a reliabilitytest. Cronbach alpha values were used to access the outcomes of the reliability test.In case of a big sample size, to organize a preliminary study is indispensable [54]. After Cronbach's alpha,the result value should be >.7 to make sure of the reliability [55]. The values of Cronbach Alpha for this study are higher than the recommended standard where the QE, SQ,andSS have .921, .919 and .928 respectively.

For the analysis of data, three approaches were used. i.e. descriptive analysis approach, Pearson's correlation,and multiple regression analysis. In the beginning, a descriptive analysis was done to know about participants' demographic data. The descriptive data enable the research workers to plan the explanation of statistics thoroughly[56]. Next, Pearson's correlation was applied between the IV and DV.Taylor (1990) said that the value of correlation analysis should be between -1 and +1 [57]. The positive value of 'r' shows the strong relationship and the negative value demonstrates the negative relation of variables [58].Next, after second, multiple regression analysis was used to know about the sophistication of relationship among various variables. It analyses how a particular set of variablesis playing its role to predict some certain dimension and identify the best variable in the prediction of results[59].

Results and Findings

The demographic data of the participantsinclude age, gender,andthe level of study.The outcome detail of dataisgiven in Table 1.

Table 1 Demographic Data

Characteristics		Frequency	Percentage %
Age	15-20	208	35.4
	21-25	343	58.4
	26-30	32	5.5
	>30	4	.7
Gender	Male	246	41.9
	Female	341	58.1
Level of study	Bachelor	378	64.4
	Master	134	22.8
	Ph.D.	12	2.0
	Others	63	10.7

Table 2. Mean, Standard deviation and Correlation Matrix

	Mean	SD	QE	SQ	SS
QE	3.8569	.58459	1		
SQ	3.8404	.54492	.949	1	
SS	3.8167	.55062	.955	.989	1

n =587; the Five-point Likert scale was used

Abbreviations: QE= Quality of Environment;SQ= Services Quality; SS= Students' Satisfaction; SD= Standard Deviation

The above Table 2shows the bivariate correlations, means, and standard deviations of the variables. Mean values show a central tendency, SD values express disperse tendency, and correlation matric values stand for interaction among variables[60] [55] [57]. As it is mentioned before, values of such analysis should be between -1 and +1 [57].Inthe above table, the correlation valuesare(+1) and these values are indicating that there is a positive relationship among variables. The more

quality the higher institutions have, the more satisfied the students are.

Table 3. Multiple Regression Analysis

Model	Standardized Coefficients	Sig.	Part Correlation Coefficients	Collinearity Statistics	
	Beta			Tolerance	VIF
(Constant)		.965			
Academic Staff	.150	.000	.067	.197	5.084
Administrative Services	-.030	.006	-.014	.228	4.379
Library Services	-.020	.008	-.014	.490	2.041
Curriculum Structure	-.008	.180	-.007	.730	1.370
Location and Infrastructure	-.012	.212	-.006	.290	3.443
Career Prospects	.004	.633	.002	.495	2.022
Reliability	.231	.000	.105	.206	4.854
Competence	.197	.000	.120	.375	2.670
Credibility	.135	.000	.059	.191	5.227
Communication	.195	.000	.090	.211	4.736
Understanding	.284	.000	.169	.352	2.842

Dependent Variable: Students' Satisfaction

The above Table 3 demonstrates which IV is contributing how much in the prediction of SS (DV). The values of beta in the Beta column under standardized coefficient show the contribution of IVs.To explain the values of multiple regression analysis outcomes, research workers mostly incline to depend confidently on beta values [61] [62]. The study reveals that beta values particularly support to determine the significance of variables [63] [61] [62]. Each beta value shows the overall impact of the IV[64].By ignoring the negative sign, the variable with the largest value shows that it is playing a unique role in the explanation of SS. In the column of 'Sig.', those variables which have the values less than .05, show that they have much impact in the prediction of SS. Those ones which have greater values than .05 demonstrates that they are playing less role in the prediction of DV.

In the above Table of multiple regression analysis, the tolerance values for every variable is not less than .10, it meansthat we are not violating the multicollinearity assumption. Similarly, in the case of VIF (variance inflation factor), the value should not be considered good above 10. Here in the above table, the values of all the variables are less than 10.

Table 4. Multiple Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.992[a]	.985	.984	.06915

a. Predictors: (Constant), Understanding, Curriculum Structure, Library Services, Career Prospects, Competence, Location and Infrastructure, Credibility, Administrative Services, Communication, Reliability, Academic Staff
b. Dependent Variable: Students Satisfaction

In the table of the model summary (Table 4), the value of R square demonstrates how much of the variance in the DV (SS) can be explained by the IVs[59]. In the above case, the value is**.**985**.** if we change toa percentage, then
.985×100= 98.5 %
So, SS can be explained 98.5 percent by the IVs of the model.

Table 5. Multiple Regression ANOVA Results

	Model	Sum of Squares	df	MeanSquare	F	Sig.
1	Regression	174.912	11	15.901	3325.424	.000[b]
	Residual	2.749	575	.005		
	Total	177.662	586			

a. Dependent Variable: Students Satisfaction
b. Predictors: (Constant), Understanding, Curriculum Structure, Library Services, Career Prospects, Competence, Location N Infrastructure, Credibility, Administrative Services, Communication, Reliability, Academic Staff

If we want to know the statistical importance of the outcomes, then we look at the ANOVA table[59]. The sig. value is .000 which clears that p< .05**.**

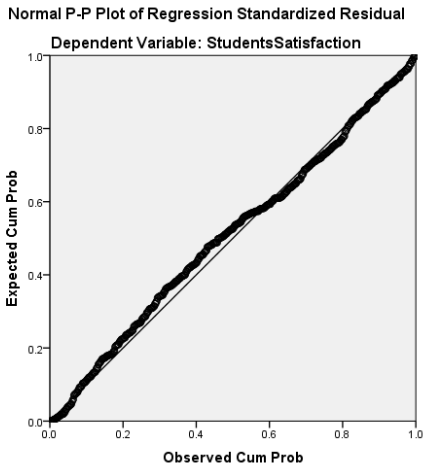

Figure 1. P-P Plot Graph

P-P plots are an influential graphical mechanism [65].In the Normal Probability Plot (P-P) of the regression Standardised residual, we anticipate having a straight diagonal line from bottom left to top right[59]. If this is the case, it means that there are no major deviations from the normality. So, there is no violation of assumption, because,in the above graph, the line almost goes straight from bottom to top right.

Discussion

This study came up with two hypotheses and analyzed themusing correlation analysis and multiple regression analysis. In the first hypothesis, it was suggested that theenvironment quality of HE has a positive impact on SS and this study brought it out into open that there is a positive relationship between environment and SS. Consequently, the hypothesis oneis approved. Moreover, these results are also in line with the previous study results of Aldridge and Rowley (1998) where it is mentioned in the perspective of students that there is a much hope of learning in the environment of good quality education and students' learning outcomes depend on the degree of their satisfaction and dissatisfaction [66]. In the second hypothesis, it was proposed that the SQ of HE has a positive impact on SS. The findings of the present study show the positive relationship between SQ and SS.Accordingly, the second hypothesis is supported.The study of Mwiya, Bwalya, Siachinji, Sikombe, Chanda, Chawala, (2017) and Dalati, (2017) also declared that there is a positive relationship between SS and each aspect of SQ [67] [68]. In Table 3, the values of the beta of every IV are explaining which dimension is playing how much role in SS.

The present research enrichesthe academic literature in this way that QE and SQhave an important effect on SS and this satisfaction can lead the society towards quality life.The progress of a nation relies not only upon the production of goods but also on their quality. This generally will start the quality life of society [49].

It is fairly stated that gaininghigher quality and excellence in the progress is the intrinsic trait of a human being [69].There have been happened much vital progress and innovation in the field of science and technology as well as in education. Because of these changes, new ways of learning and teaching are being introduced [70]. The instructors who think both physical and social areas have impacts on SS, can deliver education as service[71]. It should be the moral duty of all the universities to play their role in making social, intellectual, cultural and economic background better of the members of the society. In this way, they can produce productive and qualitative individuals in every field ofsociety[72].According to Alzamel (2014), SS has a great impact on student motivation, enrollment, exertion and retention [73]. Loyalty can also be predicted by SS[74]. This study shows that the QE and SQ has apositive impact on SS. The degree of Satisfaction has a direct impact on students'performance [75]. The present study outcomes also have cohering relation with Elliot（2002）research results where the quality of education is a vital determinant of SS [76, 77].

Conclusion

Students are a basic pillar for the development of any country or society. They are going to turn into the future. Satisfied students can be more productive. If students will not be satisfied then they cannot make full use of their skills, ideas and many innovative abilities. Such dissatisfaction will block their mental abilities. So, the most important thing is that we should provide such qualitative environment and services to our future (students) where they can learn values, apply values, learn patient, discuss, share their ideas, innovate, and continuously improve where they don't have of fear of doing wrongs, where they can make mistakes and learn from those mistakes. In such an environment, wonders will happen. The QE and SQalso can be seen in individual and society in the form of character, knowledge and their behavior.

Although almost every aspect of quality has its own role on SS, which one is more vitalin the prediction ofSS, this study examines it. (Table 4.) so, the policymakers and the authorities can take help to improve the HEQ and create the quality living environment for the society.

This research also has some limitations. One of them is that we just collected data from students, we didn't include the staff'sperspective. Future work could also include the staff'sperspective to know about the HEQ. The other limitation is the low number of participants.The study might collect data from a large number of participants to assure the effectiveness of outcomes. This research examined just a few aspects of SQ.It can also be regarded as the limitation of this research. Future research might be done by taking all the aspects of SQ.

References

[1] Eyck, R., Tews, M., &Ballester, J. M. (2009). Improved Medical Student Satisfaction and Test Performance with a

Simulation-Based Emergency Medicine Curriculum: A Randomized Controlled Trial. Paper presented at the ACEP 2008 Research Forum, October 2008, Chicago, IL.
[2] Witowski, L. (2008). The relationship between instructional delivery methods and students learning preferences: What contributes to students' satisfaction in an online learning environment? Ph.D. Dissertation. Retrieved from http://gradworks.umi.com/3310726.pdf
[3] Astin, A. W. (1977). Four critical years. San Francisco: Jossey-Bass.
[4] Bryant, J. L. (2009). Linking Student Satisfaction and Retention. Retrieved from https://www.noellevitz.com/NR/rdonlyres/A22786EF-65FF-4053-A15A CBE145B0C708/0/LinkingStudentSatis0809.pdf
[5] DeShields, O. W., Kara, A., &Kaynak, E. (2005). Determinants of business student satisfaction and retention in higher education: Applying Herzberg's two-factor theory. International Journal of Educational Management, 19(2), 128-139.
[6] Pascarella, E. T., &Terenzini, P. T. (2005). How college affects students: A third decade of research, Vol. 2. San Francisco: John Wiley & Sons.
[7] Bryant, J. L. (2006). Assessing expectations and perceptions of the campus experience: The Noel-Levitz Student Satisfaction Inventory. New Directions for Community Colleges, 134. San Francisco: Jossey-Bass.
[8] Özgüngör, S. (2010). Identifying Dimensions of students' ratings that best predict students' self-efficacy, course value, and satisfaction. Eurasian Journal of Educational Research, 38, 146-163.
[9] Elliot, K. M., & Healy M. A. (2001). Key factors influencing student satisfaction related to recruitment and retention. Journal of Marketing for Higher Education, 10, 1-11.
[10] Peters, T. J. (1988). Individual attention: The key to keeping students in school. ACU-1 Bulletin, 4-8.
[11] Billups, F. D. (2008). Measuring College Student Satisfaction: A Multi-Year Study of the actors Leading to Persistence. Paper presented at the 39th annual meeting of the Northeastern Educational Research Association, October 23, 2008, Rocky Hill, CT.
[12] Aman, R. R. (2009). Improving student satisfaction and retention with online instruction through systematic faculty peer review of courses. An unpublished doctoral dissertation. Oregon State University. AAT 3376735.
[13] Corts, D. P., Lounsbury, J. W. Saudargas, R. A., Tatum, H. E. (2000). Assessing Undergraduate Satisfaction with An Academic Department: A Method and Case Study. College Student Journal, 34 (3), 399-410.
[14] Elliott, K. M. (2003). Key determinants of student satisfaction. Journal of College Student Retention, 4(3): 271-279.
[15] Olson, J. S. (2008). Career Development, the Undergraduate, and the Academic Adviser. The Mentor: An Academic Advising Journal. Retrieved from: http://dus.psu.edu/mentor/081015jo.htm
[16] Peterson, M., Wagner, J. A., & Lamb, C. W. (2001). The role of advising in nonreturning students' perceptions of their university. Journal of Marketing for Higher Education, 10(3).
[17] Banks, A. C. &Faul, A. C. (2007). Reduction of face-to-face contact hours in foundation research courses: Impact on student knowledge gained and course satisfaction. Social Work Education, 26(8), 780-793.
[18] Heiman, T. (2008). The effects of e-mail messages in a distance learning university on perceived academic and social support, academic satisfaction, and coping. Quarterly Review of Distance Education, 9(3), 237-248.
[19] Beqiri, M. S., Chase, N. M., &Bishka, A. (2010). Online course delivery: An empirical investigation of factors affecting student satisfaction. Journal of Education for Business, 85(2), 95-100.
[20] Ross, R. K., Batzer, L., and Bennington, E. (2002) "Quality assurance for distance education: A faculty peer review process. Tech Trends, 46(5): 48-54.
[21] Benjamin, M. & Hollings, A. (1997). Student satisfaction: Test of an ecological model. Journal of College Student Development, 38(3), 213-229.
[22] Tan, K. C. &Kek, S. W. (2004), Service Quality in Higher Education Using an Enhanced SERVQUAL Approach, Quality in Higher Education, 10(1), 17-24
[23] Kotler, P. ve Armstrong, G. (2005). Principles Of Marketing. 11. Baskı, Prentice Hal
[24] Cheng, Y.C., (1990), Conception of school effectiveness and models of school evaluation: a dynamic perspective, Education Journal, 18(1), 47–62.
[25] Chaffee, E. E. &Sherr, L. A., (1992), Quality: Transforming Postsecondary Education. ERIC Digest. ED350972.
[26] Zeithaml, V. A., Parasuraman, A, and Berry, L. L. (1990). Delivering Quality Service: Balancing Customer Perceptions and Expectations, The Free Press, New York.
[27] Cuthbert, P. F. (1996). Managing service quality in HE: is SERVQUAL the answer? Part 2. Managing Service Quality, 6(3), 31-35.
[28] Soutar, G. & McNeil, M. (1996). measuring service quality in a tertiary institution. Journal of Educational Administration, 34(1), 72-82.
[29] Saaditul Ibrahim, Shamsinar Md SIdin& Wong Chee Meng (2000). Customer satisfaction towards service quality of higher education in Malaysia. Seminar FEP 2000 Pulau Pinang, 20 - 23 October 2000. Retrieved November 9th, 2004, From http://www.econ.upm.edu.my/ repport/mgm11b.html.

[30] Jamelske, xx (2009). Measuring the impact of a university first-year experience program on student GPA and retention. Higher Education, 57(3): 373-391.
[31] Borden, V. M. H. (1995). Segmenting student markets with a student satisfaction and priorities survey. Research in Higher Education, 36(1): 73-88.
[32] Noel, L. (1978). Reducing the drop-out rate. San Francisco: Jossey-Bass.
[33] Walker, P. (2008). What Do students think they (should) learn at college? student perceptions of essential learning outcomes. Journal of the Scholarship of Teaching and Learning, 8(1), 45–60.
[34] Nadiri, H., Kandampully, J., & Hussain, K. (2009). Students' perceptions of service quality in higher education. Total Quality Management, 20(5), 523–535.
[35] Parri, J. (2006), "Quality in higher education", Vadyba/Management, Vol. 2 No. 11, pp. 107-11.
[36] Doherty, G. (2008), "On quality in education", Quality Assurance in Education, Vol. 16 No. 3, pp. 255-65.
[37] Harvey, L. and Green, D. (1993), "Defining quality", Assessment and Evaluation in Higher Education, Vol. 18 No. 1, pp. 9-34.
[38] Middlehurst, R. (1992), "Quality: an organising principle for higher education", Higher Education Quarterly, Vol. 46 No. 1, pp. 20-38.
[39] Vroeijenstijn, T. (1992), "External quality assessment, servant of two masters? The Netherlands university perspective", in Craft, A. (Ed.), Quality Assurance in Higher Education: Proceedings of International Conference, Hong Kong 1991, The Falmer Press, London, pp. 109-31.
[40] Lewis, B.R., Orledge, J. and Mitchell, V.W. (1994), "Service quality: students' assessment of banks and building societies", International Journal of Bank Marketing, Vol. 12 No. 4, pp. 3-12.
[41] Commission of the European Communities (CEC) (2000), Presidency Conclusions, Lisbon European Council, 23 and 24 March 2000, Brussels: EC.
[42] Marsh, H.W. and Roche, L. (1997), "Making students' evaluations of teaching effectiveness effective", American Psychologist, Vol. 52 No. 11, pp. 1187-97.
[43] Wiklund, P.S., and Wiklund, H. (1999), "Student-focused design and improvement of university courses", Managing Service Quality, Vol. 9 No. 6, pp. 434-43.
[44] Austin, L. & Shen, L. (2016). Factors Influencing Chinese Students' Decisions to Study in the United States. Journal of International Students, 6(3): 722-732.
[45] Zhao, Y., Zhou, X., & Huang, L. (2008). Chinese students' knowledge and thinking about America and China. Social Studies, 99(1), 13-22.
[46] Tang, D. (2014, November 3). Chinese seek freedom, edge at U.S. high schools. The Seattle Times. Retrieved from http://seattletimes.com/html/nationworld/2024313609_chinesehighschoolx ml.html
[47] Maria Tsinidou, M., Gerogiannis, V., and Fitsilis, P., (2010), Evaluation of the factors that determine quality in higher education: an empirical study, Quality Assurance in Education,18(3), 227-244.
[48] Mai, L. (2005), "A Comparative Study between UK and US: The Student Satisfaction in Higher Education and its Influential Factors, Journal of Marketing Management, 21, 859-878.
[49] Hayes, I. D. (1987). The crisis of education in Pakistan. Lahore, Pakistan: Vanguard Books.
[50] Aaker, D.A., Kumar, V., Day, D.s., and Leone, R.P. (2011) Marketing Research (10th Ed). John Wiley and Sons.
[51] Rea L. and Parker R. (1992) Designing and Conducting Survey Research: A Comprehensive Guide Jossey Bass Inc Publishers: San Francisco
[52] Bailey K. (1982) Methods of Social Research (2nd Ed.) The Free Press: New York
[53] Proctor T. (2003) Essentials of Marketing Research Prentice Hall: New York
[54] Van Teijlingen, E. R., & Hundley, V. (2001). The importance of pilot studies.Social Research Update.Retrieved from http://aura.abdn.ac.uk/handle/2164/157
[55] Hair Jr, J. F., Anderson, R. E., Tatham, R. L., &Black, W. C. (1998), Multivariate data analysis (5th ed.). Upper Sad-dle River, NJ: Prentice-Hall, Inc.
[56] Leech, N. L., Barrett, K. C., & Morgan, G. A. (2005). SPSS for intermediate statistics: Use and interpretation: London: Psychology Press.
[57] Taylor, R. (1990). Interpretation of the correlation coefficient: A basic review. Journal of Diagnostic Medical Sonog-raphy, 6(1), 35 39. https://doi.org/10.1177/875647939000600106
[58] Rumsey, D. J. (2002). Statistical literacy as a goal for introductory statistics courses. Journal of Statistics Education, 10(3), 6-13. https://doi.org/10.1080/10691898.2002.11910678
[59] Pallant, J. (2011) SPSS survival manual: A step by step guide to data analysis using the SPSS program. 4th Edition, Allen & Unwin, Berkshire.
[60] Grant, A., Ries, R., & Thompson, C. (2016). Quantitative approaches in life cycle assessment – part 1 – descriptive statistics and factor analysis. The International Journal of Life Cycle Assessment, 21(6), 903-911.https://doi.org/10.1007/s11367-016-1099-4
[61] Nimon, K., Gavrilova, M., & Roberts, J. K. (2010). Regression results in human resource development research: Are we reporting enough? In C. Graham & K. Dirani (Eds.), Proceedings of the Human Resource Development 2010 International Conference (pp. 803-812), Knoxville, TN: AHRD.
[62] Zientek, L. R., Capraro, M. M., &Capraro, R. M. (2008). Reporting practices in quantitative teacher education research: One look at the evidence cited in the AERA panel

report. Educational Researcher, 34, 208-216. doi: 10.3102/0013189X08319762
[63] Courville, T., & Thompson, B. (2001). Use of structure coefficients in published multiple regression articles: ß is not enough. Educational and Psychological Measurement, 61, 229-248.
[64] LeBreton, J. M., Ployhart, R. E., & Ladd, R. T. (2004). A Monte Carlo comparison of relative importance methodologies. Organizational Research Methods, 7(3), 258-282. doi: 10.1177/1094428104266017
[65] Dewan, I., &Kochar, S. (2013). SOME NEW APPLICATIONS OF P–P PLOTS. Probability in the Engineering and Informational Sciences, 27(3), 353-366. doi:10.1017/S0269964813000077
[66] Aldridge, S. and Rowley, J. (1998), "Measuring customer satisfaction in higher education", Quality Assurance in Education, 6(4), 197-204.
[67] Mwiya, B., Bwalya, J., Siachinji, B., Sikombe, S., Chanda, H., &Chawala, M. (2017). Higher Education Quality and Student Satisfaction Nexus: Evidence from Zambia. Creative Education, 8, 1044-1068. https://doi.org/10.4236/ce.2017.87076
[68] Dalati, S. (2017, March), Effects of Service Quality on Students' Satisfaction in Private Higher Education in Syria. ResearchGate. Retrieved From https://www.researchgate.net/publication/323703914
[69] Quddus, N. J. (1990). Problems of education in Pakistan. Karachi, Pakistan: Royal Book Company.
[70] Gecer, A (2013). Lecturer-student communication in blended learning environments. Educational Sciences: Theory & Practice, 13(1), 362-367.
[71] Driscoll, C. & Wicks, D. (1998). The customer-driven approach in business education: A possible danger? Journal of Education for Business, 74, 58-61.
[72] Hirsch, W. Z. and Weber, L. E., (eds). (1999). The Glion declaration, in challenges facing higher education at the millennium, IAU, The American Council on Education and the Oryx Press, Washington, USA.
[73] Alzamel S. (2014) Factors that influence student satisfaction with international programs in institutions of higher education: A proposed case study of University of Dayton International Journal of Global Business 7(1), 15-24
[74] Aritonang, L. (2014) Student loyalty modelling TrzisteXXVI(1), 77-91
[75] Chambel M. and Curral L. (2005) Stress in academic life: Work characteristics as predictors of student well-being and performance Applied Psychology: An International Review 54(1) 135 47
[76] Onneetse Mokoya, Ernest B. Fetogang, & Tsheko, G. N. (2018). Factorially Derived Cultural Factors of Gaborone Senior Secondary School Students and Mathematics Performance. Pacific International Journal, 1(2), 57–64. https://doi.org/10.55014/pij.v1i2.42
[77] Elliot K. (2002) Key determinants of student satisfaction Journal of College Student Retention 271-9

Acknowledgements
I am thankful to my respected supervisor Qu Shao Weiwho encouraged me to do this work. I am grateful to my dearest friend, Abdul Waheed, who managed to pull out time of his busy schedule and privileged me of his guidance. He boosted me up and have deep confidence in me.

Appendix
Key to abbreviations: HEQ= Higher education quality; SS= Students' satisfaction; HEI= Higher education institutions; CEC= Commission of the European Communities; QE= Quality of environment; SQ= Services Quality;IV= Independent Variable; DV= Dependent Variable; HE= Higher education