A Survey Study on Affecting Factors of Students' Satisfaction from the Electronic Services Quality of Higher Education Institutions

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Abstract

Customer satisfaction and service quality are crucial factors in the analysis of competitors. Attention to these factors can ensure the long-term profits for service organizations and educational institutions similar to manufacturing company. The current developments in higher education show that higher education should also enhance the quality of its services. Goal of full deployment of quality management in education is improving and excellence of quality services. Therefore, for achieving this goal, using scientific methods and comprehensive assessment is necessary. Therefore, it is necessary to find the methods that can improve the quality of education services. However, the assessment of the quality of services is one of the important steps in the improvement of quality services. This study evaluates the quality components of electronic service in a university (Abhar University) from the perspective of graduate students. Then, it provides constructive suggestions to improve the quality of electronic service in the university. The results of this study indicate that there is a significant gap between perceptions and expectations of students in some component of quality services including: system availability, efficiency, responsiveness and compensation. But in three other dimensions including fulfillment, privacy and contact, there isn't a significant gap.

Keywords: electronic services, service quality, higher education institutions

INTRODUCTION

With the advancement of information technology solutions, it presents new approach for planning and executing the daily activities in more economical methods [1]. In these days, we cannot separate information technology from planning and organization development. Information technology changed many work environments in economical, social, and political aspects. One of the most important subjects in information technology is electronic services. Electronic services means to provide a situation that a citizen can give services in all of times [2]. This subject is considered as important note in the recent years and smart management try to change activates of their organization and use an efficient method. In this situation they try to use of electronic service in many on area of their organizations [3].

Customers evaluate the quality service according to their expectations and their perceptions of services. Despite the emphasis on obtaining feedback from customers, Often there is not a consistency between the management of perceptions and expectations of service recipients and the customer of perceptions and this subject can harm the quality of services. In this situation, decision maker cannot prioritize the importance of subjects and the quality of services cannot meet expected customer service [4].

Educational system has changed rapidly in recent years. Now days, training are a product that present to the customer of educational system or student. Since it is necessary to have a good approach for giving good services to student, we must evaluate electronic quality service. This research wants to survey affecting factors of students' satisfaction from the electronic services quality of higher education institutions.

Theoretical Framework

Electronic service word provides an explicit and transparent concept of presenting services in the shape of electronic. However, attention to the some of circumstances for this type of service is necessary

- It is done in an electronic work flow. Data required from users flow by an application such as official automation software, business process management, organization portals, workflow systems and/or other software to present an e-services cycle.

- It storage users' electronic information. In e-services it is necessary to storage user information in archives and develop an electronic file for each user in order to able check user' historical record in future reference.

- It has an electronic financial transaction system. Therefore financial transaction is done is done electronically.

- If you require non-electronic version of documents, you can use mail service [5].

Quality Evaluation of E-Service Quality

Most of experienced and successful companies in e-commerce have understood that successful presence on the web and low cost are not only important factors for success or failure of company but also high quality of e-service is another important factor.

Recent researches show that low prices and promotions will not be as important factors for customers in the further [6].

Internet customers are ready to pay higher price for high-quality e-service in retailer markets. Marketing researches has shown that quality of e-service has significant effects on customer satisfaction, customer loyalty, customer retention and purchase decisions, and even the company's financial performance. Therefore, The Internet retailers must focus on the quality of services in order to build confidence in customers, customer loyalty and retention before, during and after exchanges. It is more important in global electronic commerce.

When customers are buying from overseas companies, they have more concerned about high quality of Internet service for electronics retailers

High Quality of E-Service

The high quality of service is defined in seven dimensions that will be in two scales including the high quality of e-service and improvements (Recovery).

The high quality e-service has four dimensions including efficiency, reliability, supplying of orders, and confidentiality of personal information.

1- The efficiency is the ability of customers to find appropriate products and relevant Information and also control them with minimal effort in the website.

2- Reliability is relevant with the technical reliability of Web site and the times that Web site is available in 24 hours of a day and works well.

3- Supplying of orders that integrates ensuring of the service promises, having sufficient product inventories and delivering product during promised period.

4- Confidentiality of personal information includes ensuring that others cannot obtain the personal treatment data of consumer purchasing and customer information card is kept secure [7].

The scale of service quality improvement has three dimensions including:

• Responsiveness that measures the ability of company to provide appropriate information for customers when a problem take place, return goods management mechanism and agreement on Internet guarantees.

• Compensation which includes the repayment of carrying and managing money for return goods.

• Contact that indicates the customers need for immediate live conversation with the Internet agent or phone.

Although the e-service quality measures are in their early stages, however, companies implement variety of measures for determination of e-service quality. Each companies use these measures individually. It must be noted seven dimensions of e-service quality is relevant with e-service quality determining factors [2].

Marketing researchers that have studied the consumer buying patterns trends have found that analysis of satisfaction levels is one of important and controversial subject in most of company. Traditionally, consumer satisfaction level is determined by the quality of e-service, price and purchase process. Thus, the electronic consent is determined by the quality of e-service, price and purchase process.

Background Research

Measurement of service quality delivery through Web sites is in its early stages. The overwhelming majority of measurement scales have been developed in business, either by individual companies or by consulting firms that sell the scales to businesses. The published scholarly literature is minimal in terms of articles dealing directly with measuring how customers assess electronic service quality

In 1985 Parasuraman, marketing specialist was identified five dimensions to measure the service quality. These dimensions are: reliability of service, responsibility, assurance, empathy and tangibles. The dimensions includes 22 pairs of views that each pair involves expected level of responsive in a service and perceived levels of presented service for the customer. Difference between service quality scores of perceived levels and the expected level of service is measured to indicate the quality of service. Therefore, Parasvraman [8] designed a measuring technique which was called Servqual.

Zeithaml et al. [9] also found that three dimensions become salient only when the online customers have questions or run into problems--responsiveness, compensation, and contact. These dimensions have been conceptualized as constituting a recovery e-SERVQUAL scale. Responsiveness measures the ability of e-tailers to provide appropriate information to customers when a problem occurs, have mechanisms for handling returns, and provide online guarantees. Compensation is the dimension that involves receiving money back and returning shipping and handling costs. The contact dimension of the recovery e-SERVQUAL scale points to the need of customers to be able to speak to a live customer service agent online or through the phone--requiring seamless multiple channel capabilities on the part of e-tailers.

In Iran and elsewhere, few studies are done on the quality of educational services and university electronic services that it can be mentioned the following: Research Between midwifery students of Qazvin University of Medical Science that shows quality of educational services isn't acceptable. Other studies show for students of Qazvin University of Medical Science quality service in five dimensions of services are not identical. In another research by kobrayi and roodbari in of Zahedan University of Medical Science was found that the majority of Students (81.6 percent) are believed that there is a quality negative gap in e-services. As Responsiveness dimension has the highest average of quality gap and reliability dimension has the lowest average of quality [10].

It should be noted that due to the importance of service quality in universities and higher education, in recent years a model is developed by Servqual that is named HEDPERF and its components is designed especially for universities and higher education centers [11].

In other research using this tool, the quality of e-services provided in the University of Tamast in Japan was investigated from the perspective of graduates, students and researchers. The results showed there is a significant difference between students and graduates perspective in components of Servqual model. Students rather than graduates were evaluated weaker staff and clients of behavior components [12].

METHODS

Questionnaire

Questionnaire is none of common research tools and a direct way data acquisition. The questionnaire is a series of questions

Efficiency	This site makes it easy to find what i need. It makes it easy to get anywhere on the site. It enables me to complete a transaction quickly. Information at this site is well organized.
System availability	Loading of pages is done quickly. Using of the site is easy. Various sections of site are well structured. In 24 hours of a day, I can use the services of the site. This site is not impaired or uncertain, and will not work. After i input a request, never the site has been disabled.
Fulfillment	Given request to the site is done according to the promised time. Given request to the site is done rapidly. The official site is honest and truthful about their promises. When i request a service, it is announced me the delivery of time of it.
Privacy	Information requests will remain confidential. My information is not shared with other sites.
Responsiveness	It tells me what to do if my transaction is not processed. Site errors are quickly resolved.
Compensation	The error occurred on my requests, will be compensated.
Contact	This site has customer service representatives available online. Information related to webmasters, is available. Responsive center performance is acceptable to answer site user questions.

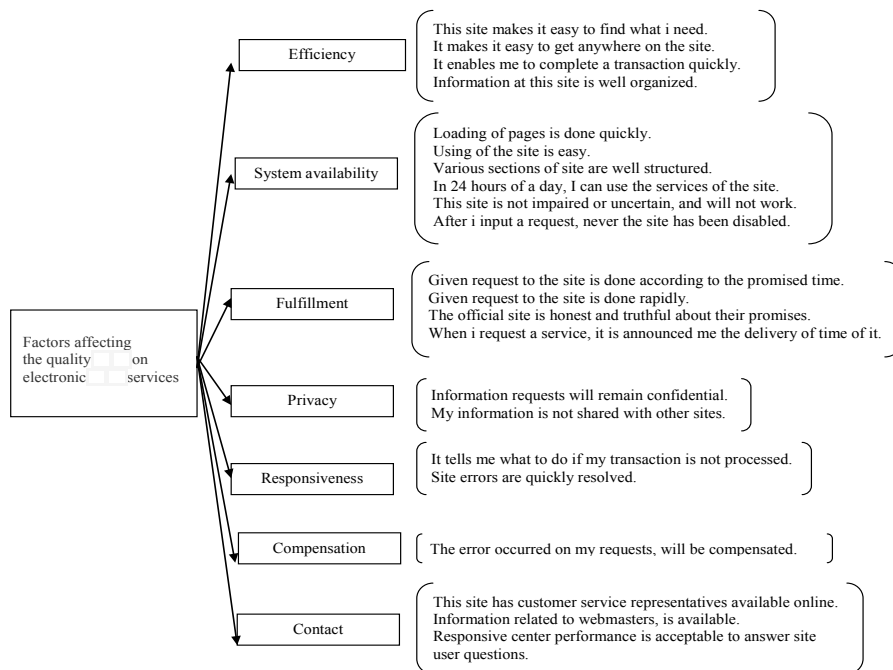Factors affecting the quality ___ on electronic ___ services

Fig.1. indicators and dimensions of affecting the quality on electronic services

that a respondent answers them. The answers are needed data for researchers. In this study, we used a standard questionnaire extracted from the paper [13] that has seven dimensions and 22 components. Its dimensions and indices are shown in the schematic in Figure 1. Since this questionnaire before has been used in several studies, its validity has been confirmed, but the researcher has used factor analysis to prove its reliability too. Using the SPSS software, the researcher obtained 0.827 for Cronbach's alpha that indicates a very high reliability of the questionnaire.

Population and Sample of the Research

The statistical population for this study is all of graduate management students in the University of Abhar that is comprised about 200 people. Using the following formula, sample size will be 53. Thus 60 questionnaires are distributed that 56 valid questionnaires has been the basis for calculations. It must be noted for determining standard deviation of the population, an initial questionnaire was distributed among 10 students. Then with placement of the standard deviation in the formula, the final sample size is obtained.

Table1. Cronbach's alpha test (reliability of the questionnaire)

Do questionnaire have an acceptable reliability?		question
reliability of the questionnaire is acceptable	Null hypothesis	Research hypotheses
reliability of the questionnaire isnot acceptable	research hypothesis	
$H_o : Alpha \geq 0.65$	Null hypothesis	Statistical hypothesis
$H_1 : Alpha < 0.65$	research hypothesis	

Case Processing Summary

		N	%	
Cases	Valid	56	56	
	Excluded(a)	0	0	test
	Total	56	56	

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.827	22

Since the calculated Cronbach's alpha coefficient (Alpha = 0 .827) is higher than 0.65, Null hypothesis can be confirmed, and this means that the reliability of the questionnaire is acceptable.	result

$$n = \frac{N \times Z_{\alpha/2}^2 \times \delta^2}{\varepsilon^2(N-1) + Z_{\alpha/2}^2 \times \delta^2} \quad \Rightarrow \quad n = \frac{200 \times (1.96)^2 \times 0.216^2}{0.05^2(199) + (1.96)^2 \times 0.216^2} = 53$$

Hypothesis

1- There is a significant difference between students' perceptions and students' expectations about quality of services provided to them in the efficiency dimension.

2- There is a significant difference between students' perceptions and students' expectations about quality of services provided to them in the availability of the system dimension.

3- There is a significant difference between students' perceptions and students' expectations about quality of services provided to them in the fulfillment dimension.

4- There is a significant difference between students' perceptions and students' expectations about quality of services provided to them in the privacy dimension.

5- There is a significant difference between students' perceptions and students' expectations about quality of services provided to them in the Responsiveness dimension.

6- There is a significant difference between students' perceptions and students' expectations about quality of services provided to them in the compensation dimension.

7- There is a significant difference between students' perceptions and students' expectations about quality of services provided to them in the Contact dimension.

DATA ANALYSIS

The Reliability Test of Questionnaires and Statistical Analysis of Research Data
Cronbach's alpha test (reliability of the questionnaire): Cronbach's alpha test has been performed to measure the reliability of the questionnaire. Cronbach's alpha test results are given in Table 1.

Validity
Factor Analysis: In this study, factor analysis was used to assess the validity of the questionnaire. It should be noted, factor analysis can be used if at least 2 times the number of indicators, the questionnaire will be distributed. In this study, distributed questionnaires were more than 2 times the number of indicators. The final results of factor analysis are as follows:

Table 2 shows the validity of the collected questions is 0.831 that is highly desirable. Table 3 shows that all of seven dimensions in the distribution questionnaire are equal and according to the main questionnaire. In addition, load factor of all indices are above 0.6.

Testing Hypotheses
Gap analysis between expectations and perceptions of students: : In this section, we analyze gap between expectations and perceptions of graduate students about quality of services provided in university of Abhar. For this purpose non-parametric

Table2. KMO and Bartlett's test indicators in the questionnaire.

Index of sampling adequacy (KMO) *Kaiser*-Meyer-Olkin index		0.831
Bartlett test	The test	512.1
	Significant level	0.0001

Table3. Load factor of each of the indicators

Number of questions	Seven Dimensions of						
	1	2	3	4	5	6	7
1	0.705						
2	0.841						
3	0.727						
4	0.821						
5		0.727					
6		0.821					
7		0.724					
8		0.753					
9		0.861					
10		0.880					
11			0.838				
12			0.767				
13			0.811				
14			0.701				
15				0.752			
16				0.722			
17					0.840		
18					0.719		
19						0.612	
20							0.724
21							0.690
22							0.812

Mann-Whitney test was used. This test examines the differences between uncorrelated couples. Mann-Whitney test is the most used alternative of t test with independent samples. Therefore, this test has the following assumptions

Null hypothesis: There isn't a significant difference between students' perceptions and students' expectations about quality of services provided to them.

Research hypothesis: There is a significant difference between students' perceptions and students' expectations about quality of services provided to them.

Table 4. Results of Mann-Whitney test

Component test	Efficiency	System availability	Fulfillment	Privacy	Responsiveness	Compensation	Contacts
Z statistic	-2.991	0.230	1.401	0.351	2.217	-0.374	1.092
Significance	0.051	0.016	0.041	0.212	0.018	0.012	0.307

According to The test error level (5%), significant levels in Table 4 confirm that there is a significant difference between students' perceptions and students' expectations in system availability, efficiency, Responsiveness and compensation dimensions for student of Abhar University and there is unmet expectations. But in three dimensions, it has not recorded a significant gap. These results indicate that hypotheses 2, 3, 5 and 6 has been proven, but other hypotheses are rejected. For more detailed and clearer conclusions, Table 5 examines these gaps on each of the indicators.

CONCLUSION

In the third millennium, many of the concepts in the leading educational organizations changed. One of these concepts is customer. Customer does not come to mind a purely commercial transaction in these days. In these days, each individual is a customer in one side and on the other side other people are his customers. Today, obtaining key customers satisfaction is a critical factor in organizations goals and most of managers known their success in achieving the overall goals of the organization depends on satisfying their customers. Also, Internet provide a new environment for publish, exchange of information that is a revolution in many aspects. This revelation can gradually change of economic, social, cultural, political and technological foundations. In the near future, major of scientific, educational, economic, tourism and many community activities exchanges will be conducted via the Internet. It can be argued that in a sentence: "All roads will lead to the Internet." Thus, one of the most important issues for managers is services quality assurance in electronic context. Goal of this study was to assess the student satisfaction with the quality of electronic services of Abhar University. Finally, researchers found that in some dimension including system availability, efficiency, responsiveness and compensation these is a significant gap between students' perceptions and expectations of e-service quality. But in other dimensions including fulfillment, privacy and contact has not recorded a significant gap. Also, 16 indicators of 22 indicators are negative gap that indicates services relevant with these indicators must be improved.

Table 5. Results of the gap between students' perceptions and expectations of the quality of electronic services

Dimension	Index	Percept	Expect	Gap
Efficiency	1 – This site makes it easy to find what i need.	3.61	3.45	0.16
	2 – It makes it easy to get anywhere on the site.	3.9	2.98	0.92
	3 – It enables me to complete a transaction quickly.	4.04	3.73	0.31
	4 - Information at this site is well organized.	3.02	5.43	-2.41
System availability	5 – Loading of pages is done quickly.	2.23	4.34	-2.11
	6 - Using of the site is easy.	1.88	3.91	-2.03
	7 - Various sections of site are well structured.	3.57	4.07	-0.5
	8 – In 24 hours of a day, I can use the services of the site.	2.3	4.53	-2.23
	9 - This site is not impaired or uncertain, and will not work.	2.12	3.65	-1.53
	10 –After i input a request, never the site has been disabled.	3.07	6.76	-3.96
Fulfillment	11 – Given request to the site is done according to the promised time	2.67	4.2	-1.53
	12 –Given request to the site is done rapidly	1.86	4.13	-2.27
	13 - The official site is honest and truthful about their promises,	3.059	3.77	-0.71
	14 - When i request a service, it is announced me the delivery of time of it.	2.24	4.48	-2.24
Privacy	15 - Information requests will remain confidential.	5.19	4.34	0.85
	16 - My information is not shared with other sites.	2.61	3.49	-0.88
Responsiveness	17 - It tells me what to do if my transaction is not processed.	3.9	4.26	-0.36
	18 - Site errors are quickly resolved.	2.02	4.09	-2.07
Compensation	19 - The error occurred on my requests, will be compensated.	1.63	4.71	-3.08
Contact	20 - This site has customer service representatives available online.	2.01	6.12	-4.11
	21 - Information related to webmasters, is available.	5.85	5.31	0.54
	22 – Responsive center performance is acceptable to answer site user questions	5.67	5.51	0.16

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