

## **Designing a Model for Measuring the Quality of Educational Services of Universities and Evaluating the Quality of Educational Services of Master of Art fields in Tarbiat Moallem University in Iran by using a Designed Model**

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**Abstract:** One of the influential factors on the success of all organizations and governmental and non-governmental institutes is their customers' satisfaction. On the other hand, one of the influential factors on the customers' satisfaction is the quality of the given services by that organization. The educational system of the country as an organization has got so many responsibilities in the society which the most important of these responsibilities serving the high quality education. However, there are no specific methods for measuring the quality of the educational services. Therefore, the goal of this study is presentation a model for measuring the quality of the educational services. In this research we are looking for a model for measuring the quality of the educational services by considering the population including 414 of students and teachers of Tarbiat Modarres University at the time period of 2012. Accordingly, a questionnaire was made for the purpose of testing the five hypothesis of the research and finally all of them are studied based on the five aspects which should be considered for measuring the quality of the educational services including the physical appearance and facilities of the organization, reliability, the degree of responsiveness, quality assurance and the customers' empathy or understanding. The results of the research indicate that the students' expectations are more than their understanding in all of the five aspects of the educational services.

**Keywords:** Educational service quality, educational service quality aspect, measurement of educational service quality

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### **INTRODUCTION**

The educational services, especially those which are offered through universities and those higher education institutes are considered as one of the most important fields of service that has got a basic role in development of societies. The qualitative promotion of education is continually necessary. The daily development of the educational centers in knowledge-based societies shows the necessity for designing an efficient instrument to evaluate and analyze the quality of the operation of the educational institutions. As Iran has to be a perfect country in the region in the field of research and development according to its perspective document, the above issue should devote a special attention in the educational system. The educational services, especially those which are offered through universities and higher education institutes are considered as one of the most important fields of service that has played an individual role in growth and development of the societies. Therefore, noting continually to the promotion of the quality of educational and research services is necessary. The necessity of considering higher education according to its goals is perceptible. The students and teachers should have a complete cognition toward the goals and

properties of education because such cognitions cause an increase in their motivation toward fulfilling these goals. Of course, we should confess not only knowing the way and goal is not enough but also it is necessary to have the basis and facilities as well. Accordingly, recognizing all of the important and influential factors in the quality of the educational services and necessity of making desirable changes in them has got some positive general and individual consequences which cannot be achieved only by doing widespread researches and studies in this area. What this article searches for is to investigate and recognize the influential factors on the quality of the educational services in Tarbiat Modarres University in Tehran according to the students' standpoints studying at Master level because they are considered as the receivers of these services.

As far as the organization of this article is concerned, a literature about the evaluation models of the quality of the services with an emphasis on its educational aspect is considered first. Then, SERQUAL tool has been used to evaluate the amount of students' satisfaction about the quality of the educational services. SERQUAL is a questionnaire including 22 questions which has been designed to evaluate the quality of services in an organization noting five different aspects including the

physical appearance and facilities of the organization, reliability, the degree of responsiveness, quality assurance and the customers' empathy or understanding. According to the definition, customer's satisfaction is met through the difference between the customer's expectations and his presumption of the quality of the product or the offered service (Hayes, 1997). Each of the 22 questions is once used for evaluation of the level of the customer's expectations and for evaluation his presumption of the quality of services in the next stage. Undoubtedly, no tool has met the expectations of the researchers as much as SERVQUAL in the field of evaluation of the quality of services (Saghaei and Kavooosi, 2005). Some researchers have criticized this model SERVQUAL tool came into existence in 1998 and we can say that the most serious criticisms was suggested by Kranin and Tailor who offered a superseded tool instead of SERVQUAL (Saghaei *et al.*, 2004).

Although a lot of researches have been done (Sapri *et al.*, 2009; Sahney *et al.*, 2006; Newman, 2001) in this field, no research has been done comprehensively in Iran and only a few individuals have focused their attention on it Yar (2004). Therefore, by understanding the importance of this issue, the researcher tries to offer a model for calculating the amount of the quality of educational services in Tarbiat Modarres University in Tehran. In the following sections we are going to discuss the population, research methodology, the model used in this research, hypotheses and finally hypothesis testing, discussion and conclusion.

## LITERATURE REVIEW

Eric *et al.* (2008) in a research entitled "Do students care about school quality? Determinants of dropout behavior in developing countries" offers a model for measuring the quality of services in schools and states "holding constant the student's own ability and achievement, a student is much less likely to remain in school if attending a low quality school rather than a high quality school. This individually rationale behavior suggests that common arguments about a trade-off between quality and access to schools may misstate the real issue and lead to public investment in too little quality. Further, because of this behavioral linkage, there is an achievement bias such that common estimates of rates of return to years of school will be overstated. The study demonstrates the analytical importance of employing output-based measures of school quality."

De oliveira (2009) in a research entitled "Adaptation and application of the SERVQUAL scale in higher education" started using SERVQUAL method in the higher education of Brazil. A questionnaire including 38

questions about receiving the educational services by students and 28 questions about their expectation toward educational services was used in the University of Sao-Paulo in this research in Brazil. He considers this tool as a valid one for evaluating the amount of students' expectations about educational services. In an article, Landram and Prai Boutack have expressed their opinions about the use of SERVQUAL method in measuring the quality of service in information system and recognized it as a valid tool which can measure the customers' expectations from offering information services under five-fold criteria of SERVQUAL method.

Rose *et al.* (2008) in a research entitled "The performance measurement model for ICT service quality" measured the amount of students' satisfaction about the quality of the educational services in the private higher education institutes of Malaysia. He suggests that "it will investigate the performance measurement area and component to measure the performance of ICTSQ within the current context of Malaysian Universities (MUs). Besides, this study will list the related factors and KPIs based on the component involved. The findings of this study is hoped to derive an appropriate performance measurement model for measuring ICTSQ based on the context of MUs. Literature review has been done and survey in preliminary study is conducted to the selected MU to gather the empirical data for this study."

For checking the amount of quality of services, five aspects have been used in this research including appearance of the service (tangibility), service reliability, service responsiveness, the service assurance and at last service empathy:

- **Tangibility or physical appearance:** The physical appearance of equipments, staff and new communication channels with a new view, accessibility, quality of the used material, searching the best for customers and all that provide pictorial aspects for customers in order to be considered for evaluation.
- **Reliability:** the capability to do the promised services completely, independently and reliably so that the customers' expectations are met. It includes commitment to the promises, speed in operations, attracting the customers' trust, similar behavior to customers, customers' classification and doing commitments about offering services.
- **Responsibility and responsiveness:** It includes staff's tendency to help the customer in offering the fast and confident services, speed of the responsiveness, staff's tendency to solve the customers' problems, level of communication with

customer in unpredictable conditions, readiness to help the customer and having the appropriate time to answer the customer. Generally, this aspect of the service quality emphasizes on sensitivity and keenness of service provider before there are any customers' orders, questions and complains.

- **Commitment (assurance):** This aspect of the quality includes the sympathetic responsibility to the customers. It is the power or authority of the organization and its reputation in providing secure and confident services which indicates the staff's efficiency and capability in attracting the customer's trust and confidence.
- **Empathy:** It means respecting the customers' identity, understanding the customers' important interests and using the intelligible words for customers according to their spirits. Further, it is a special interaction by which the customers are persuaded that the organization understood them and they are important for the organization.

## METHODOLOGY

**Participants:** The 1625 participants in this research include all teachers teaching Master courses and the student studying M.A in Tarbiat Modarres University in Tehran in 2009. Among them, there are 151 teachers teaching MA courses and 1474 students studying MA. Then, 414 teachers and students were selected among the population by using random sampling method as statistical sample, among them 108 teachers and 306 students were selected.

### Research hypothesis:

In this research there are five hypotheses include:

- There is a significant difference between the students' expectations of Tarbiat Modarres University and the received service in the quality of education from the appearance of service or tangibility viewpoint.
- There is a significant difference between the students' expectations of Tarbiat Modarres University and the received service in the quality of education from the reliability of service viewpoint.
- There is a significant difference between the students' expectations of Tarbiat Modarres University and the received service in the quality of education from the responsiveness of service viewpoint.
- There is a significant difference between the students' expectations of Tarbiat Modarres

University and the received service in the quality of education from the security and assurance of service viewpoint.

- There is a significant difference between the students' expectations of Tarbiat Modarres University and the received service in the quality of education from the empathy of service viewpoint.

Briefly, by doing this research, the teachers of Tarbiat Modarres University will be more familiar with the priority of students and other teachers and are able to offer better educational services.

**The objectives of the research:** The main objective of this research is to offer a method for measuring the quality of educational services. Furthermore, as far as the sub-goals of this research is concerned, we can refer to measuring the quality of educational services in Tarbiat Modarres University based on five-fold aspects including appearance of the service (tangibility), service reliability, service responsiveness, security and trust of the service and finally service empathy.

**Research methodology:** The current research is operational in terms of the purpose of this research on one hand and it is regarded as descriptive in terms of data collection. The method of data collection in this research includes library and documentary-based research, internet-based research and field study. The tool used for the purpose of this study is questionnaire, which is based on the quality of services model and the importance of the quality of operation.

**The research model:** In this study SERVQUAL Model was used. Parasuraman *et al.* (1985, 1988, 1991, 1993, 1994) did some studies and offered a hypothetical model for the first time. This model tries to show the noticeable activities of an organization which influences the perception of quality. In addition, this model shows the interaction between these activities and the relationship among the key activities of an organization which deal with offering a satisfactory level of the quality of services. This relationship has been shown in Fig. 1 by contradictions and gaps.

**Gap 1:** This gap occurs between the customer's expectations and the management's recognition of the customers' expectations. Sometimes, managers think that they have understood the customers' expectations. Then, they start offering services while the customers and consumers have got some different services.

This issue further occurs in governmental or state organizations because the service providers know

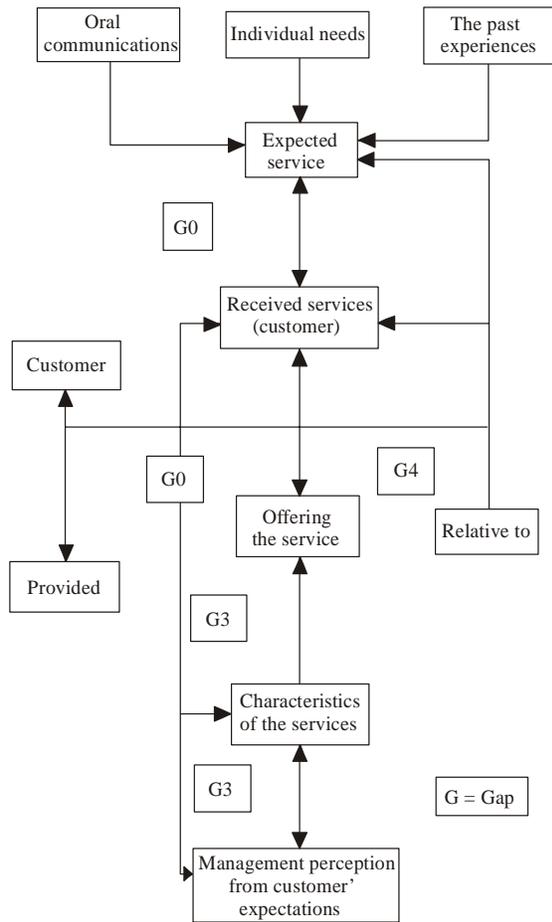


Fig. 1: The conceptual model of the quality of services (SERVQUAL) (Parasuraman *et al.*, 1991)

themselves as the knowledge expert. They imagine whatever they imagine is for customers and rarely ask them. To avoid or reduce such a gap, it is necessary for staff and managers to obtain correct information about the customers' expectations. We can start data collection using appropriate and continuous scientific models to achieve that goal. Another action which can be done to decrease that gap is using the bazaar technique. It means customers' classification according to their emotional, psychological and sociological desires, expectations and characteristics because the customers are not satisfied with homogenous products and services and they are looking for services which are in congruent with their specific form of needs.

**Gap 2:** It includes gaps between management perception and the designed characteristics for service. It is possible that there would not be any specific feature or it would not be obvious or the obvious features would not be

accessible. Although the correct perception of the customers' expectations is necessary but characteristics, designs and operational standards must be designed and accessible for offering the high quality services.

Customers' expectations and priorities should be noted more in designing these standards. The problem might be because of the experts and people who deal with codifying the standards who believe that the customers' expectations are irrational and unrealistic. Or, arranging and designing the standards could not be useful because of the intrinsic variability level of services or they think that the customers' expectations toward services are not predictable and designable.

**Gap 3:** It is the gap between the designed characteristics (standards) and offering the services. The main reason for this gap is that the service performance is not in accordance with to customer-based standards. There might be the necessary and suitable instructions for offering desirable service but because of the management weakness or unpredictable problems the operation of offering the services will not be appropriate. The major reason for this gap is the internal customers' role or in other words the staff. The staff's ignorance of their role, lack of skill, training and motivational programs might influence the increasing of this gap. Thus, to develop the human resources, the organization should investigate more carefully and solve the existing bottle-necks.

Another factor is the external customers. If they do not do their own role and do not give the service providers or ignore the guidance of the service providers, they will harm the quality of the services.

**Gap 4:** It is the gap between offering the service and customer's expectations and it happens when the offered services are lower than the expectations and commitments or when the offered service does not match with the commitments. This gap indicates the existence of a kind of inconsistency between the staff who are responsible for offering the services and the staff who are responsible for describing and advertising the service to the customers. The irrelevant information with the service of the institute leads to the customer's unrealistic expectation and consequently the organization cannot answer the promises as well. Thus, the quality of services is evaluated weakly in comparison to the customer's desired services. Therefore, the coordination between the service providers and advertisement, education and information department could be effective in decreasing this gap.

**Gap 5:** It is the gap between customer's perception and expectation about the offered services and includes all the four-fold gaps. We should do some actions to remove the

Table1: The amount of students' expectations and perceptions from the quality of the educational services for the five-fold aspect

The aspects for evaluation of the educational services	The students' expectations from services	Services which students receive	Difference between expectations and received services
Tangibility (appearance of the service)	6.642	4.034	-2.608
Reliability	5.897	3.518	-2.379
Responsiveness	6.432	3.867	-2.565
Security and trust	6.278	5.024	-1.254
Empathy	6.235	3.293	-2.942

The Researcher's calculations

Table 2: The results of test in the first hypothesis of research

Average of expectations	Average of perceptions	Error of measurement	t	Sig	Test result
6.642	4.034	0.005	14.251	0.00	Rejection of $H_0$

Researcher's calculations

Table 3: The result of test in the second hypothesis of research

Average of expectations	Average of perceptions	Error of measurement	t	Sig	Test result
5.897	3.518	0.005	25.746	0.004	Rejection of $H_0$

Researcher's calculations

fourfold gaps simultaneously if we are interested in to removing or decreasing this gap. Customers will consider the received services weakly in the case of these gaps and their expectations are not confirmed.

The above pattern is a diagnostic tool which, if it is used properly, will help the management to recognize systematically the drawbacks of the quality of the service. In other words, this model facilitates the recognition of the gap of some effective variable on the quality of the services and has got a potential power to help the management in recognizing the quality factors in relation to the customer's.

In this research, five aspects including the appearance of the service (tangibility), service reliability, service responsiveness, security and trust of the service and at last service empathy were obtained from the population by 20 questions. We use Likert-scale method (number 1 is completely disagree and number 7 is completely agree) in answering the questions. Questionnaire was handed out and collected by the researcher. It should be mentioned that, in order to check the reliability and validity of the questionnaire, we have used Kranbakh's alpha factor which was over 90% for all items which confirms the reliability and validity of the questionnaire.

## EMPIRICAL RESULTS

According to the obtained data from questionnaires distributed among the participants, the following results were elicited for each of the five-fold aspects. Table 1 show the amount of students' expectations and perceptions from the quality of the educational services for the five-fold aspect. SPSS software is used to check each of the research hypotheses.

**The first hypothesis:** There is a meaningful difference between students' expectation and received services in Tarbiat Modarres University in the quality of education regarding tangibility (appearance of the service):

- **$H_0$ :** The students' average expectations regarding the quality of education about tangibility (appearance of the service) are less or equal to their perceptions.
- **$H_1$ :** The students' average expectations regarding the quality of education about tangibility (appearance of the service) are more than their perceptions.

The results of the software have been presented in Table 2.

As it is clear from Table 2, hypothesis  $H_0$  is rejected and hypothesis  $H_1$  is confirmed at the significance level of 0.005. It means that this service has not been able to answer the students' expectations with regard to the level of the tangible educational services.

**The second hypothesis:** There is a significant difference between students' expectation and received services in Tarbiat Modarres University in the quality of education regarding reliability:

- **$H_0$ :** The students' average expectations in the quality of education regarding reliability are less or equal to their perceptions.
- **$H_1$ :** The students' average expectations in the quality of education regarding reliability are more than their perception.

The results of the software have been presented in Table 3.

According to the data in Table 3, hypothesis  $H_0$  is rejected and hypothesis  $H_1$  is confirmed at the significance level of 0.005. It means that this service has not been able to answer the students' expectations regarding the reliability of educational services.

**The third hypothesis:** There is a significant difference between students' expectation and received services in Tarbiat Modarres University in the quality of education regarding responsiveness:

Table 4: The result of test in the third hypothesis of research

Average of expectations	Average of perceptions	Error of measurement	t	Sig	Test result
6.432	3.867	0.005	32.546	0.00	Rejection of $H_0$

Researcher's calculations

Table 5: The result of test in the fourth hypothesis of research

Average of expectations	Average of perceptions	Error of measurement	t	Sig	Test result
5.024	6.278	0.005	18.687	0.001	Rejection of $H_0$

Researcher's calculations

Table 6: The result of test in the fifth hypothesis of research

Average of expectations	Average of perceptions	Error of measurement	t	Sig	Test result
3.293	6.235	0.005	31.254	0.00	Rejection of $H_0$

Researcher's calculations

- $H_0$ : The students' average expectations in the quality of education regarding responsiveness are less or equal to their perceptions.
- $H_1$ : The students' average expectations in the quality of education regarding responsiveness are more than their perception.

The results of the software have been presented in Table 4.

As Table 4 indicates, hypothesis  $H_0$  is rejected and hypothesis  $H_1$  is confirmed at the significance level of 0.005. In other words, regarding responsiveness of educational services, this service has not been able to answer the students' expectations.

**The fourth hypothesis:** There is a significant difference between students' expectation and received services in Tarbiat Modarres University in the quality of education regarding security and trust:

- $H_0$ : The students' average expectations in the quality of education regarding security and trust (Assurance) are less or equal to their perceptions.
- $H_1$ : The students' average expectations in the quality of education regarding security and trust (Assurance) are more than their perception.

The results of the software have been presented in Table 5.

Again, hypothesis  $H_0$  is rejected and hypothesis  $H_1$  is confirmed at the significance level of 0.005 according to the data in Table 5. In fact, this service has not been able to answer the students' expectations as far as security and trust (assurance) of educational services is concerned.

**The fifth hypothesis:** There is a significant difference between students' expectation and received services in Tarbiat Modarres University in the quality of education regarding empathy:

- $H_0$ : The students' average expectations in the quality of education regarding empathy are less or equal to their perceptions.
- $H_1$ : The students' average expectations in the quality of education regarding empathy are more than their perception.

The results of the software have been presented in Table 6.

As it has been indicated from Table 6, Hypothesis  $H_0$  is rejected and hypothesis  $H_1$  is confirmed at the significance level of 0.005. It means that regarding empathy of educational services, this service has failed to answer the students' expectations.

## CONCLUSION

In this study, a model for Measuring the Quality of Educational Services was presented. SERVQUAL Model was used as research model same De oliveira (2009). Furthermore five hypotheses was tested to Evaluating the Quality of Educational Services of Master of Art fields in Tarbiat Moallem University in Iran by using a Designed Model. With regard to the appearance of the service (tangibility) which refers to some factors such as the updating and completeness of the workshop and laboratory equipment's, the mean difference between the students' expectations and the performance of the university is -2.5. The same issue exists about the aspect of the reliability of the service-which points at the commitments of the university in relation to appropriate time of offering the services and the capability of the students and teachers in offering the seamless services-the students' expectations are more than the performance of the university and indicates a difference more than 2 units. As far as the third aspect is concerned, it puts an emphasis on the responsiveness of the university before students and deals with some issues such as students' and teachers' willingness and interest in solving the problems of the students, having the communication skills, the teachers' scientific ranking and the level of the students'

expectations is beyond the performance of the university and equals to 3.65. The fourth aspect of the evaluation of the quality of the services is security and trust or assurance. The results indicate that students' expectation level is almost closer to the performance of the university and show more acceptable number in comparison to other aspects of evaluation and indicates that students feel secured in their interactions with the university. Finally, in the fifth aspect of the services which deals with empathy and emphasizes the attention of the university to the students' needs and expectations, it has got less qualitative average and shows a high and meaningful difference between the students' expectations and the performance of the university in paying attention to the students' expectations and desires.

Finally, we should say that according to the obtained results in measuring the amount of the satisfaction of the students studying Master's degree in Tarbiat Modarres University and the amount of the difference between their expectations and the performance of the university, the researcher suggests that the vice-chancellor of the university should do his best to codify the improvement projects in this regard by considering the results and paying attention to the amount and dimension of the gap between the students' expectations and performance of the university in addition to using the qualitative tools such as QFD and by executing the improvement projects which are going to minimize the gap between the students' expectations and performance of the university.

### RECOMMENDATIONS

It is worth suggesting the following recommendations in order to improve the quality of services according to the results of the research:

- One of the problems which is common in the university is the lack of correlation between the students' and teachers' quantity because some classes have been occupied with so many students. Regarding this issue, it is better either enroll fewer students in each class or consider more teachers for these courses.
- It is recommended that teachers stay in the university in addition to their teaching hours to be responsive to the students' questions and problems and inform the students properly.
- Considering the centrality of the human resources in offering fast and precise services related to the customers, executing the training courses of organizational behavior by employing the teachers and experts can be efficient in increasing the communication skills of the staff's characteristics and enhancing their ability for better and more appropriate communication with students.
- It is suggested that the university change the staff's structure of duties to increase the speed of the services. For example, when it is necessary to offer fast services and there is students' congestion for receiving services-such as during the time of enrollment or exams-the university uses other employees until the considered services are offered faster to students.
- Finally, executing some training courses about new methods of teaching and promoting the teachers' communication skills by the university can be prioritized.

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