

## Simple and Multiple Relationships Between the Dimensions of Library Services Quality, Academic Achievement and Motivated Strategies for Learning

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**Abstract:** This research aims to survey simple and multiple relationships between the quality of library services dimensions, academic achievement as well as motivated strategies for learning in distance education system. The sample includes 476 students of Payame Noor University in Tehran, Gilan and Ardebil Provinces. In this correlative-descriptive research, we use cluster sampling method and Krejcie-Morgan Table considering  $\alpha = .05$ . The data was collected through motivation scale (31 questions) of Pintrich *et al.*, with reliability of  $\alpha = .96$  and Libqual questionnaire (22 questions) with reliability of  $\alpha = 0.96$  in perception questions and  $\alpha = .98$  in expectation questions. The collected data was analyzed using Pearson correlation and multiple regression- enter model. The results confirm that aspects of library services quality are predictor for motivated strategies and academic achievement of distance learners significantly ( $R^2 = .25, R^2 = .11, P < .01$ ).

**Key words:** Distance education • Motivation • Service quality • LIBQUAL

### INTRODUCTION

At the present time, information technologies are expanding to all aspects of human life and educational models are not exempted from this fact. These technologies considerably facilitate virtual delivery of educational programs and contents. Distance education, especially based on technology, has experienced a significant growth in recent years. Providing efficient support services is amongst the major discussions in this educational method [1, 2]. One of the most important and critical services in this realm is "library service". Most researchers believe that library services are amongst the major supportive requirements of distance education and e-learning programs [3, 4].

In distance education, where a major part of learning tasks is given to the students, the students directly learn from educational sources and materials and these sources and materials can be found in library. In other word, distance education makes sense through independent learning and motivation plays an essential role in this learning method [5]. Therefore, library facilities and services must play a distinguished role in learning process as an indispensable part of support services [6] which persuade the students to learn [7].

Research in the field of distance education is rather broad; but, few researches have considered the situation of library services provided for distance learners [8]. Access to library services, regardless of where the learners live and study, is necessary for acquiring better learning skills [9]. Library is the main key to enhance academic knowledge and is considered the heart of learning process. The experts believe that success of distance education programs in a region is indicative of distance learners' access to proper supportive library services [10]. Atan *et al.*, (2005) consider the quality of library services as one of the important success factors of education [11]. Farajollahi and Moenikia (2010) have considered a significant relationship between library services and academic achievement [12]. However, the studies show that the conditions of support services, especially library services are not ideal in Payame Noor University of Iran [13].

In addition to aforementioned facts, the quality of university library services is closely related to quality of academic education and providing high quality services has been always an essential goal for university libraries. On this basis, nowadays, the majority of extensive university libraries do their best to meet the expectations of their clients [14] and to assess the quality of their

services based on users' satisfaction. Today, considerable attention is being paid to bottom-up approach in evaluation of library services quality; because, this approach takes into account simple factors of library services including librarian's knowledge, swiftness, personal attention, ability to create sense of trust, polite behavior and concern, as well as the way he/she assists the users and many other factors [15]. Accordingly, understanding the difference between expected values and quality of library services is a must for librarians. Delivered quality forms client's judgment about a service. Service quality compares ideal service and delivered service, or in other words, expected service (the level of service that user expects to receive) and delivered service.

This model, known as Libqual Model, is a process that makes the librarians take users' expectations and the necessity of meeting their expectations into consideration. The most important assumption of this model is that the users can provide creative and useful information about a library. This model requires librarians to accept users' ideas and viewpoints as important factors of improving library services. It is important to note that although Libqual Model is based on Servqual Model, the studies and researches- conducted over years- show that only some aspects of Servqual conform to library concerns and it is necessary to add some more aspects to this model in accordance with the requirements of libraries. Therefore, in 1999, Libqual Model was developed as a modified version of Servqual Model. Since then, the aspects and propositions of Libqual Model have undergone many changes. In the latest version of this model, the aspects and propositions are summarized as follows: Affect of Service; human aspect of service quality on librarian-user interaction, Information Control; examines users' ability to extract the information they require automatically and independently, Library as a Place; is related to physical environment of a library as a place for individual study, team work and the creation of sense of study and research.

As mentioned before, the quality of library services is defined on the basis of students' satisfaction, in form of the difference between students' expectations or demands and their perception of the real efficiency of service. This definition is known as  $Q = P - E$  formula, where Q, represents delivered (actual) quality; P, represents customers' perception of service efficiency and E, represents customers' expectation.

Most of the researches conducted in realm of library services in Iran are concentrated on conventional universities and distance education is not much taken into

account. As mentioned before, in this research we assess the level of students' satisfaction on library services and its impacts on academic achievement and students' motivation to learn.

## MATERIALS AND METHODS

**Statistical Population:** The statistical population of this research includes students (at 3<sup>rd</sup> semesters and above) of Payame Noor University in Iran, who are studying during the academic year 2010-2011. These students were studied in all courses including B.S., M.S. and PhD's of various fields throughout Iran. They have experienced the quality of library services for at least two semesters.

**Sample:** The multi-phase clustering method was used for sampling. Also, Iranian provinces were then divided into three classes: developed, intermediate and deprived classes. Then, a province was selected in each class. For example, the province of Tehran was selected as a developed province, Guilan was selected as an intermediate province and Ardabil was selected as a deprived province. Out of the selected provinces, Payame Noor University of the capital city of each province and a center/unit were selected randomly. The sample volume was measured as 476 people (365 females and 111 males) based on Krejcie & Morgan Table through considering  $\alpha = .05$  and cluster sampling.

**Instruments:** The research instruments are two questionnaires. Libqual questionnaire measures library services on the basis of affect of service (9 questions), information control (8 questions) and library as a place (5 questions). The questionnaire is designed in such a way that the mentioned services are measured through comparing the gap between expectation state and perception state by means of Likert 5-point scale. The difference between two mentioned levels indicates the service quality gap. The validity and reliability of questionnaire are qualified and approved in many researches in both levels. Reliability of the whole questionnaire and its items in this research are qualified via internal consistency method in both levels of service and Cronbach's  $\alpha$  values are worked out as shown in Table 1.

Measured values according to Table 1, showed that the questionnaire and its components enjoy high internal consistency in terms of both current and desired states. It must be said that the measurements over these gaps indicate low service quality in its related dimensions.

Table 1: Psychometrics features of library service quality questionnaire

Component	Number of questions	Reliability of perception ( $\alpha$ )	Reliability of expectation ( $\alpha$ )
Affect of Service	9	.95	.97
Information Control	8	.91	.95
Library as a Place	5	.95	.96
library service			
Total	22	.96	.98

Table 2: Psychometrics features of motivation scale

Component	Number of questions	( $\alpha$ )
Intrinsic goal orientation	4	.84
Extrinsic goal orientation	4	.70
Task value	6	.76
Control of learning believes	4	.62
Self efficacy	8	.89
Test anxiety	5	.67
Motivation scale	31	.88

In order to gather learners' motivational data, 31 questions of Motivated Strategies for Learning Questionnaire (MSLQ) made by pintrich et al. (cited in Duncan, McKeachie; 2005) were used [17]. These questions are related to the motivation scale. The reliability of the questionnaire and its components were measured by Cronbach's Alpha (Table 2). Measured values showed that the questionnaire and its components enjoy high internal consistency. It must be said that the questions translated to the Persian. Academic achievement was obtained through asking this question from students directly.

**Procedure:** A Descriptive-correlation method was used in this study. Data was collected through a print based instrument in paradise. The collected data was analyzed through the Pearson correlation matrix and linear multiple regression.

## RESULTS

Figure1, shows the students' perception from service quality and expectation from the service of in all three aspects of affect of service, information control and library as a place, average delivered service is lower than average expected service. In other words, there is a gap between delivered and expected services and this means that students are not satisfied on the quality of services.

The results of Table 3 show that dimensions of library services quality have a positive relationship with one another and a negative relationship with learners' academic achievement and motivation. The negative sign suggests that increase in the gap between dimensions of service quality decreases learners' academic achievement and motivation. There is also a significant positive relationship between learners' motivation and academic achievement.

According to results of Table 4,  $F_{(3,472)} = 52.6$  shows that  $R = .50$  with  $p < .01$  in confidence level 99 percent is significant. In other words, three dimensions of library services quality are significant predictors for learners' academic achievement and determine 25 percent variance of for learners' academic achievement at confidence level of 99 percent. Amongst the three dimensions, affect of service is  $\beta = -.33$  and information control is  $\beta = -.24$

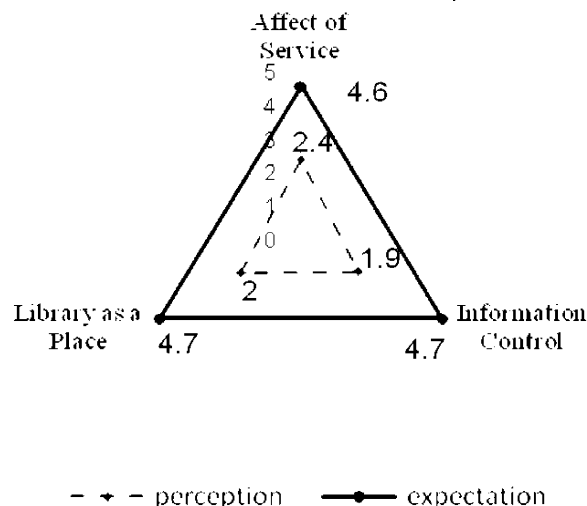


Fig. 1: Students' perception and expectation from library service quality

Table 3: Correlation among dimensions of library service quality, learners motivation and academic achievement

Variable	1	2	3	4	5
1. Affect of Service	-				
2. Information Control	.67**	-			
3. Library as a Place	.66**	.82**	-		
4. Motivation	-.33**	-.23**	-.29**	-	
5. Academic achievement	-.47**	-.44**	-.39**	.65**	-

\*\* P &lt; .01 n= 476

Table 4: Multiple relationship among dimensions of service quality with learners' academic achievement and motivation

Dependent: academic achievement	Sum of Squares	df	Mean Square	F	Sig.	R	R2	Adj. R2
Regression	581.5	3	193.8	52.6	.000	.50	.251	.246
Residual	1738.4	472	3.7					
Total	2319.9	475						
Unstandardized coefficients		Standardized coefficients						
Predictors	B	Std. Error	Beta	t	Sig.			
Constant	17.95	.257	.69.900	.000				
Affect of Service	-.08	.014	-.326	-5.900	.000			
Information Control	-.07	0.210	-.241	-3.300	.001			
Library as a Place	.01	0.280	.024	.300	.741			
Dependent: motivation	Sum of Squares	df	Mean Square	F	Sig.	R	R2	Adj. R2
Regression	43928.5	3	14642.8	19.6	.000	.33	.111	.105
Residual	353279.1	472	748.5					
Total	397207.6	475						
Unstandardized coefficients		Standardized coefficients						
Predictors	B	Std. Error	Beta	t	Sig.			
Constant	175.30	3.664		47.80	.000			
Affect of Service	-1.12	.200	-.338	-5.60	.000			
Information Control	-.19	.300	-.050	-.62	.537			
Library as a Place	.31	.396	.062	.78	.435			

significant in forecast of academic achievement, while library as place has no significance in this regard. The important point is the negative share of the two mentioned dimensions. That is to say, increase in the gap between expectation and perception state of affect of service and information control, or in other words decreasing quality of services significantly decreases learners' academic achievement.

The results of Table 4 also suggest that the value of  $R = .33$  considering  $F_{(3,472)} = 19.6$  is significant when  $P < .01$  at confidence level of 99 percent. In other words, the three dimensions of library services quality are significant predictors for motivational strategies and determine 11 percent variance of motivational strategies at confidence level of 99 percent. Amongst the three dimensions, only affect of service ( $\beta = -.34$ ) is significant in forecast of motivational strategies and shares of the other two dimensions - information control and library as place- are not significant in this regard. The important point is the negative share of affect of service. That is to say, increase in the gap between expectation and

perception state of affect of service, or in other words decrease in quality of service, decreases significantly motivation strategies of the students.

## DISCUSSION AND CONCLUSION

The results of the research suggest that the quality of library services and its three dimensions is considerably low in Payame Noor University and cannot meet the students' expectations. This finding is in line with the results of Farajollahi and Moinikia's research (2008), indicating low quality of support services in Payame Noor University of Iran [13]. Of course, the mentioned research employs a different tool from Servqual model.

Further results of the research show that the dimensions of library services quality play significant roles in predictor of academic achievement and motivation strategy of students. This finding is in line with the ideas of most experts and research results stressing on important impact of university library services quality, specifically in distance education methods, on academic

achievement and life value of students in this educational system [2, 3, 4, 11, 9, 6, 13], as well as their motivation [5, 7, 14].

Amongst the dimensions of library service quality, share of affect of service and information control in forecast of academic achievement as well as share of affect of service in forecast of learning motivation were significant and of course negative.

Considering the fact that the affect of service is related to librarians and their relationship with students, it can be admitted that students' satisfaction of librarians plays a significant role in their academic achievement and their motivation. However, another determining aspect in academic achievement is related to equipments and accessibility of sources.

Considering the importance of academic achievement and learning motivation in life value of students in distance education system [1], significant relationship between library services and the two mentioned variables and low quality of these services- as shown by research results, authorities and decision makers of distance learning system are recommended to enhance the quality of library services, specifically through training library staff.

Despite the fact that we promised all respondents to give them a personal and confidential feedback of the results of their answers, some of them were not willing to fill out the questionnaires; and this was a major constraint for this research. We thank and appreciate to all Payame Noor University students who helped us via filling of questionnaires.

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