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Evaluation of Students' perceptions of library service quality using LibQUAL model: The case study in Hospitality Institute in India

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Abstract:

The purpose of this study is to evaluate the hospitality students' perception of library service quality provided by the institute using a well-known measurement model LibQUAL. A structured questionnaire with 22 items on three dimensions of LibQUAL was distributed to undergraduate (UG) and postgraduate (PG) students using Google forms. The mean differences between the UG and PG was analyzed using independent sample t-test. The findings suggest that there is a significant difference in the mean perception of undergraduate and post graduate students about the library services provided by the institute. This study provides practical insight to library managers about the perception of services provided. The library administrators need to take note of these differences in the perception and bring the necessary changes in their standard operating procedure to improve the quality of services provided.

1. Introduction:

Academic library, which is considered as the heart of the educational institution is established with the intention to support the successful accomplishment of the institutes' objectives such as teaching, learning, research, publication programs, etc. It serves as a gateway of learning for students to do individual study, use print and electronic educational materials related to curriculum. Library also plays an important role in promoting the progress of knowledge among students. In the Librarian's Book of Lists (Chicago: ALA, 2010), George Eberhart (MacRitchie, 2011) offers, "A library is a collection of resources in a variety of formats that is (1) organized information by professionals or other experts who (2) provide convenient physical, digital, bibliographic, or intellectual access and (3) offer targeted services and programs (4) with the mission of educating, informing, or entertaining the variety of audiences (5) and the goal of stimulating individual learning and advancing society as a whole" (p 1). Libraries work together with members of other communities to participate and support the institutions' educational mission. Academic libraries also provide access to education by teaching information skills, by providing knowledge and skill in using information technologies, and by participating in library networks to enhance access to resources from outside the institute. They assist students in lifelong learning, prepare students for productive employment, and promote the enjoyment of reading.

Today's libraries are facing challenges of non-usage or less usage of educational resources mainly because of lack of awareness, lack of relevance, lack of time, and lack of skills in the use of electronic resources (Kiilu & Olike, 2016). Further, inadequate educational resource, poorly managed print and electronic resources, and non-motivated library staff that seems to be threatening the role of academic libraries. Therefore, it becomes necessary for the academy libraries to adopt a strategic approach to know their user's perception of services provided by the library. Satisfying users' needs thus become the primary objectives of both the libraries and the librarians.

For more than a decade, library professionals increasingly recognized the importance of assessing library services. Challenges like rapid change in the technology, increasing cost of printed materials, and the emergence of the internet led library managers to analyze the role of library and its impact on users' satisfaction. As noted by Nitecki (Nitecki, 1996), a measure of library service quality based solely on library collection is outdated, and as a result, the traditional measure of library service quality based on physical collection of library shifted to the accessibility of information and services provided by the library. This change in the assessment shifted the role of libraries from collection centric to service centric. According to Zeithaml, Parasuraman, and Berry, only customers' judgement on service quality are

relevant, and all other judgments are essentially irrelevant. Therefore, this study adopts the LibQUAL measurement instrument to measure the perception of hospitality students on three dimensions of library service quality; affect of service (AOS), information control (IC), and library as a place (LP). The study site is Welcomgroup Graduate School of Hotel Administration (WGSHA), one of the constituent institutes of Manipal Academy of Higher Education (MAHE), a leading private deemed University in Karnataka, India.

2. Literature Review

In order to measure and assess the library service quality, LibQUAL was developed in 1999 by the Association of Research Libraries (www.arl.org) in association with Texas A&M University. LibQUAL which is developed based on SERVQUAL, a pioneering work of Parasuraman, Zeithaml, & Berry (1988) that is accepted as a standard of service quality assessment in the business world since the mid-1980s. LibQUAL+ is a tool that libraries used in the past to solicit, understand and to measure the perception of library service quality. Since its inception, LibQUAL was extensively and effectively used by the library professional all over the world. It is implemented by a variety of institutions including college/university, general/special, high school/higher education, public, hospital, community colleges, and state libraries.

Library administrators have successfully used LibQUAL+ survey data to identify best practices, analyze deficits, and effectively allocate resources (Cabrerizo, López-Gijón, Martínez, Morente-Molinera, & Herrera-Viedma, 2017; Cristobal, 2018; Dahan, Taib, Zainudin, & Ismail, 2016; Killick, van Weerden, & van Weerden, 2014; Mallya Jyothi & Payini Valsaraj, 2018; Moore, 2017; Pourahmad, Neshat, & Hasani, 2016; ziaei & korjan, 2018). LibQUAL+ gives library users a chance to express their perception about the services provided by the libraries. LibQUAL+ is an effective survey instrument for the academic librarian to assess service quality.

AOS fundamentally comprises three of the service dimensions identified by SERVQUAL into one: Assurance, Empathy, and Responsiveness. It refers to the knowledge, willingness and ability of library staff to respond to the users' queries. This also comprises how efferently library staffs can handle users' service problem, the caring and individualized attention provided to customers by employees, and willingness to help customers and provide prompt service. Library as a place basically addresses the tangible dimension of the library. It measures the role of library as a gateway for study, learning and research, and a community space for group learning. It discusses the ambiance, location, the setting of the library, and its importance for attracting and retaining users. IC refers to the print and electronic resources available to the users. It also addresses how accesses to these educational materials are provided to the users. It is concerned with the ability to navigate and how well the collections support learning, teaching, and research. Making electronic resources deliverable to the desktop, user friendly library websites to locate information, the printed and electronic resources related curriculum, the modern equipment to let easy access to information are all components to the IC dimension.

The LibQUAL model is based on the Expectation Confirmation and Disconfirmation theory which suggests that the user develops a certain level of expectation on services provided by the library before availing them. Once they avail the service, they rate the quality of the services at three different levels: Minimum acceptable level of service, desired or expected level of service, and perceived level of service. The gap is then calculated by subtracting the score between desired, perceived, and expected level of service. However, this method of calculating the gap received a certain amount of criticism in the literature. One of the important criticisms of this gap theory was that when expectations were measured after availing the library services, the expectation of the users is subject to manipulation by the experience itself (Carman et al., 1990). Further, user often find it difficult to express their expectation if they are new to the product or services, resulting unrealistic expectations and rating (Westbrook & Newman, 1978). Further, Roszkowski, Baky, & Jones (2005) opined that it is best to consider the perceived rating of the library service than the superiority gap scores as the basis for measuring the satisfaction. After all, customers can be satisfied without having their expectation levels met (Hughes, 1991; Yüksel & Rimmington, 1998). Therefore, this study adopts only the perceived level of service quality on the three dimensions of LibQUAL+, since the objective of this study is to identify the level of library services perceived by UG and PG students.

3. Objectives of the study

The purpose of this study is to investigate the perceptions of UG and PG students of WGSHA library users relating to services delivered to them on three dimensions of LibQUAL.

- To determine how the UG and PG students perceive quality of service at WGSHA library
- To find out whether there is any difference in the perception between UG and PG students towards services provided by the library.

4. Research methodology

4.1 Background of the study

This study is conducted at WGSHA one of the constituent institutes of a leading private deemed University in Karnataka, India. The institute offers four-year bachelor's degrees in Hotel Management (BHM) and two-year master's degrees in Hospitality and Tourism Management. The institute has a well-established library for all the UG and PG students. The users have access to books, journals, magazines, online journals, and databases. The library offers off-campus access (hostels/residence) to the online databases and journals through institutional credentials.

4.2 Research site

WGSHA library has nearly 11, 300 books, 60 journals, and magazines, and has access to online databases and e-journals. This library has readerships of about 1200. The collection ranges from hospitality, tourism, food science, dietetics, nutrition, culinary arts, and other allied subjects. The library also focuses on general reading and soft skills and professional development books. The library provides services like document delivery on demand, current awareness service, and selective dissemination of information to the readers. All the operations of the library are automated. The online databases and e-journals are IP enabled and are available to all the readers in the campus.

The WGSHA library contributes to the achievement of the institute in several ways, including:

- Providing access to scholarly collections and resources related curriculum,
- Ensuring that resources are easily accessible and discoverable by students and faculty members,
- Providing learning environment that meet group and individual needs,
- Providing information on reading list for library users,
- Providing resources from other libraries on request,
- Maintaining research data management across the institute,
- Managing resources efferently and environmentally sustainable way in accordance with institutes' policy and procedure,
- Managing scholarly articles published by faculty members of institute, and
- Promoting and providing information about the addition of library's resources and activities.

4.3 Survey instrument and measures

The survey instrument had two parts: The first part consists of a modified performance-only version of LibQUAL+ tool with 22 core items from LibQUAL+. The 22 items of the performance-only scale are further divided into three dimensions of library services; AOS, IC and LP. The first dimension of LibQUAL+, i.e. AOS contains nine items relating to library staff, including readiness to help, knowledge, courtesy, handling problems related library, paying attention to students etc. The IC dimension encompass eight questions relating to the print and electronic library resources, modern equipment provided by the library, library websites, accessing tools and their ease of access by the students etc. Finally, the third dimension LP comprises of five questions relating to the physical aspects of the library such as comfortable and inviting location, gateway for study and learning, community space etc. The students were asked to rate the performance of the library on these 22 items on a 7-point Likert Scale, with 1 – Completely Dissatisfied, 2 – Mostly

Dissatisfied, 3 – Somewhat Dissatisfied, 4 – Neither Satisfied nor Dissatisfied, 5 – Somewhat Satisfied, 6 – Mostly Satisfied, 7 – Completely Satisfied. The second part of the survey instrument captures the demographic data about the students such as age, gender, and education. The questionnaire was distributed to the final year students of BHM and MSc (HTM). The purposive sampling technique was used to collect the data from the UG and PG students because researchers believed that the final year students are fit to participate in the survey because they had a greater number of years of experience. In total, 234 questionnaires were distributed using Google forms to the students. Researchers received 122 filled questionnaires resulting 52% of response rate. Further, only 93 questionnaires were considered for the final analysis after eliminating 29 questionnaires because of missing values in the response.

5. Results

5.1 Sample characteristics

The sample of the study consists of 73 (78.5) males and 20 (21.5) females. The number of UG students were 58 (62.4) whereas the number of PG students were 35 (37.6). More than one third of the samples were 21 years old i.e. 34.4 % and 31.2 % of students were 22 years.

Table1: Demographic characteristics of respondents

		Frequency	Percent
Gender	Male	73	78.5
	Female	20	21.5
Education	UG	58	62.4
	PG	35	37.6
Age	20	11	11.8
	21	32	34.4
	22	29	31.2
	Above 23	21	22.6

The mean and standard deviation for all 22 items are depicted in the table 2. It is evident that both UG (M=4.6, SD= 1.73) and PG (M=5.54, SD=1.29) students have perceived “Print and/or electronic journal collections I require for my work” as lowest, one of variables of IC dimension of LibQUAL. The top rated variable by UG students is “Knowledge to answer user questions,” whereas PG students rated “Willingness to help users” as high, both variables belong to the AOS dimension.

Table 2: Mean and standard deviation for LibQUAL items for UG

Items	Variables	Mean	SD
IC8	Print and/or electronic journal collections I require for my work	4.6	1.73
IC1	Making electronic resources accessible	4.64	1.79
AOS1	Instill confidence in users	4.67	1.59
IC2	Library web site to locate information on my own	4.67	1.58
AOS3	Consistently courteous	4.71	1.64
IC3	The printed library materials I need for my work	4.72	1.62
AOS2	Giving users individual attention	4.74	1.62
LP5	Community space for group learning and group	4.74	1.74
IC4	The electronic information resources I need	4.79	1.59
IC5	Modern equipment that lets me easily access needed information	4.79	1.74
IC7	Making information easily accessible for independent use	4.81	1.72
LP2	Quiet space for individual activities	4.81	1.83
LP4	Library as a gateway for study, learning or research	4.81	1.65

LP1	Library space that inspires study and learning	4.83	1.7
LP3	A comfortable and inviting location	4.83	1.78
AOS7	Understand the needs of their users	4.86	1.57
IC6	Easy-to-use access tools that allow me to find things on my own	4.86	1.64
AOS6	Deal with users in a caring fashion	4.88	1.56
AOS9	Handling users' service problems	4.88	1.6
AOS4	Readiness to respond to users' questions	4.93	1.62
AOS8	Willingness to help users	4.95	1.62
AOS5	Knowledge to answer user questions	5.02	1.57

Table 3: Mean and standard deviation for LibQUAL items for PG

Items	Variables	Mean	SD
IC8	Print and/or electronic journal collections I require for my work	5.54	1.29
AOS2	Giving users individual attention	5.83	1.1
IC1	Making electronic resources accessible	5.83	1.01
IC3	The printed library materials I need for my work	5.83	0.95
IC2	Library web site to locate information on my own	5.89	0.93
IC5	Modern equipment that lets me easily access needed information	5.89	0.93
AOS5	Knowledge to answer user questions	5.94	0.84
IC4	The electronic information resources I need	5.94	0.84
AOS3	Consistently courteous	5.97	0.79
AOS9	Handling users' service problems	5.97	0.79
IC7	Making information easily accessible for independent use	5.97	0.79
LP3	A comfortable and inviting location	5.97	0.95
IC6	Easy-to-use access tools that allow me to find things on my own	6	0.84
AOS6	Deal with users in a caring fashion	6.03	0.71
AOS1	Instill confidence in users	6.06	0.84
AOS4	Readiness to respond to users' questions	6.06	0.87
LP2	Quiet space for individual activities	6.06	1.08
LP5	Community space for group learning and group	6.06	0.97
LP1	Library space that inspires study and learning	6.09	1.04
LP4	Library as a gateway for study, learning or research	6.09	0.98
AOS7	Understand the needs of their users	6.11	0.72
AOS8	Willingness to help users	6.14	0.81

It can be seen from the table 2 and 3 that the mean score of UG is lower than that of PG for all the 22 variables of three dimensions of LibQUAL. This suggests that UG students perceive the services provided by the library lower than the PG students. Therefore, the data was further tested to find out the difference in the mean score was significant or not. To achieve this, independent sample test was conducted to compare the mean of UG and PG students.

An independent sample t test was performed to determine whether a significant difference existed between the perceptions of UG and PG students towards the AOS, IC and LP suggest that there exists significant difference between UG and PG students on all three dimensions of LibQUAL (Table 4 to 6).

Table 4: t Test for perceptions of UG and PG towards the AOS variables

Affect of service	Education	N= 93	Mean	SD	T	Sig. (2-tailed)
AOS1	UG	58	4.67	1.59	-4.752	0.001**
	PG	35	6.06	0.84		
AOS2	UG	58	4.74	1.62	-3.514	0.001**
	PG	35	5.83	1.10		
AOS3	UG	58	4.71	1.64	-4.26	0.001**
	PG	35	5.97	0.79		
AOS4	UG	58	4.93	1.62	-3.787	0.001**
	PG	35	6.06	0.87		
AOS5	UG	58	5.02	1.57	-3.213	0.002*
	PG	35	5.94	0.84		
AOS6	UG	58	4.88	1.56	-4.112	0.001**
	PG	35	6.03	0.71		
AOS7	UG	58	4.86	1.57	-4.434	0.001**
	PG	35	6.11	0.72		
AOS8	UG	58	4.95	1.62	-4.07	0.001**
	PG	35	6.14	0.81		
AOS9	UG	58	4.88	1.60	-3.765	0.001**
	PG	35	5.97	0.79		

Table 5: t test for perceptions of UG and PG towards the IC variable

Information Control	Education	N	Mean	SD	T	Sig. (2-tailed)
IC1	UG	58	4.64	1.79	-3.591	0.001**
	PG	35	5.83	1.01		
IC2	UG	58	4.67	1.58	-4.119	0.001**
	PG	35	5.89	0.93		
IC3	UG	58	4.72	1.62	-3.663	0.001**
	PG	35	5.83	0.95		
IC4	UG	58	4.79	1.59	-3.961	0.001**
	PG	35	5.94	0.84		
IC5	UG	58	4.79	1.74	-3.417	0.001**
	PG	35	5.89	0.93		
IC6	UG	58	4.86	1.64	-3.813	0.001**
	PG	35	6.00	0.84		
IC7	UG	58	4.81	1.72	-3.755	0.001**
	PG	35	5.97	0.79		
IC8	UG	58	4.60	1.73	-2.782	0.007*
	PG	35	5.54	1.29		

Table 6: t test for perceptions of UG and PG towards the LP

Library as a place	Education	N	Mean	SD	T	Sig. (2-tailed)
LP1	UG	58	4.8276	1.69766	-3.955	0.001
	PG	35	6.0857	1.03955		
LP2	UG	58	4.8103	1.83013	-3.658	0.001
	PG	35	6.0571	1.0831		
LP3	UG	58	4.8276	1.77841	-3.508	0.001

	PG	35	5.9714	0.95442		
LP4	UG	58	4.8103	1.64857	-4.149	0.001
	PG	35	6.0857	0.98134		
LP5	UG	58	4.7414	1.74276	-4.096	0.001
	PG	35	6.0571	0.96841		

6. Discussion and conclusion:

The primary purpose of this study is to investigate the perception towards the library service provided by one of the hospitality institutes in India. The study also aims to investigate the difference on perceived library services by UG and PG students. To achieve this, the study adapts the well-known measurement model LibQUAL with 22 items of three dimensions as proposed in the model. The questionnaire was distributed to final year students of UG and PG programs to collect the data and SPSS, a statistical package was used to analyze the data. The result of this study indicates that UG students are somewhat satisfied, whereas PG students are mostly satisfied with the services provided by the WGSHA library. There was significant difference between mean score of UG and PG students on all 22 variables of LibQUAL. This significant difference in the perception between UG and PG could be due to the familiarity with library. The PG students are more familiar with the resources available in the library and maybe they possess higher level of information retrieval skill. According to Simmonds (2001), the use of academic is influenced by the user's familiarity with library and its resources. Therefore, to motivate the UG students to use the library resources, librarians need to educate the users on how to use the library resources, both print and online. As academic environment is changing constantly, academic libraries need to re-examine the changing role of librarians in assisting the users in finding the required document or information resources. Librarians also need to understand the diverse need of UG and PG students while delivering the library services. For example, UG students may focus more on the printed document whereas PG student may need access to online or electronic resources based on the curriculum. The least rated variables as perceived by the UG students were "Print and/or electronic journal collections I require for my work (IC8)," "Making electronic resources accessible (IC1)," "Instill confidence in users (AOS1)," "Library web site to locate information on my own (IC2)," and "Consistently courteous (AOS3)." Three out of five variables belong to the dimension IC. This suggests that the UG students are less satisfied with the access and availability of print and electronic resources available to them. They are also less satisfied in finding the information using library website. Though library makes every effort to provide the library resources to the students, probably UG students are finding it difficult to access them. This is an important finding for the library administration's point of view. Library administrators need to consider these findings and take necessary actions such as implementation of library literacy program and library orientation to the UG students. Meanwhile, the least rated variables as perceived by PG students are "Print and/or electronic journal collections I require for my work (IC8)," "Giving users individual attention (AOS2)," "Making electronic resources accessible (IC1)," "The printed library materials I need for my work (IC3)," "Library web site to locate information on my own (IC4)." Four out of five variables belong to the dimension IC. Though the mean score of all these variables suggest that the PG students are satisfied with the access and availability of print and electronic collections provided by the library, there exist scopes for improvement in this area. The library administrator needs to focus on easy access or barrier free access to the information at the time of need. A rich array of full text, strong local area network, easy to reach physical location and timely access to information to distant resources through effective document delivery are desirable.

Further, the highly rated variables as perceived by UG students are "Deal with users in a caring fashion (AOS6)," "Handling users' service problems (AOS9)," "Readiness to respond to users' questions (AOS4)," "Willingness to help users (AOS8)," and "Knowledge to answer user questions (AOS5)." All these five variables belong to the service dimension of LibQUAL. Contrary to this, the top rated variables as perceived by PG students are "Community space for group learning and group (LP5)," "Library space that inspires study and learning (LP1)," "Library as a gateway for study, learning or research (LP4)," "Understand the needs of their users (AOS7)," and "Willingness to help users (AOS8)." Three out of five variables belong to LP dimension of LibQUAL. This variation in the perception between UG and PG could be due to the fact that needs of UG and PG students are different. According to the study conducted by Beard (Beard & Bawden,

2012), PG students require silent space for study and have limited interest in social media in library. Also, they have strong requirements for digital resources and IT support and are not inclined to ask help from librarians.

To conclude, it is evident from the study that the needs of UG and PG students in hospitality institute differ. Also, there is difference in the perception of UG and PG students towards the services provided by the library. In order to address these issues library administrator, need to conduct customer satisfaction survey at regular intervals. Moreover, they need to pay attention to individual requirement of the students. Library staffs also need to dedicate more time to understand the needs of students.

7. Limitations

Although the study conducted a thorough survey, there were certain limitations while exploring the aim of the study. Since the study site was limited to only WGSHA library and the respondents were from a single college, the sample was not sufficiently heterogeneous, and there was generalizability and sampling limitations. The researcher's access to participants was only through online format for ease of distribution and anonymity. Despite providing online format of the survey to students, the participation and response rate was average. Technological aptitude and other unforeseen technical challenges of the students could have prevented some potential respondents from participating.

8. References

- Beard, C., & Bawden, D. (2012). University libraries and the postgraduate student: physical and virtual spaces. *New Library World*, 113(9/10), 439–447. <https://doi.org/10.1108/03074801211273911>
- Cabrerizo, F. J., López-Gijón, J., Martínez, M. A., Morente-Molinera, J. A., & Herrera-Viedma, E. (2017). A Fuzzy Linguistic Extended LibQUAL+ Model to Assess Service Quality in Academic Libraries. *International Journal of Information Technology & Decision Making*, 16(01), 225–244. <https://doi.org/10.1142/S0219622015500406>
- Carman, J. M., CARMAN, J., Carman, J., Carman, J., CARMAN, J. M., Carman, J. N., ... Carman, G. J. (1990, January 1). Consumer perceptions of service quality: an assessment of the SERVQUAL dimensions.
- CRISTOBAL, A. (2018). Expectations on Library Services, Library Quality (LibQual) Dimension and Library Customer Satisfaction: Relationship to Customer Loyalty. *Library Philosophy and Practice (e-Journal)*.
- Dahan, S. M., Taib, M. Y., Zainudin, N. M., & Ismail, F. (2016). Surveying Users' Perception of Academic Library Services Quality: A Case Study in Universiti Malaysia Pahang (UMP) Library. *The Journal of Academic Librarianship*, 42(1), 38–43. <https://doi.org/10.1016/J.ACALIB.2015.10.006>
- Hughes, K. (1991). Tourist Satisfaction: A Guided "Cultural" Tour in North Queensland. *Australian Psychologist*, 26(3), 166–171. <https://doi.org/10.1080/00050069108257243>
- Kiilu, P. W., & Otike, J. (2016). Non Use of Academic Library Services : A Literature Review. *International Journal of Library Science*, 5(1), 7–13. <https://doi.org/10.5923/j.library.20160501.02>
- Killick, S., van Weerden, A., & van Weerden, F. (2014). Using LibQUAL+® to identify commonalities in customer satisfaction: the secret to success? *Performance Measurement and Metrics*, 15(1/2), 23–31. <https://doi.org/10.1108/PMM-04-2014-0012>
- MacRitchie, J. (2011). *The Librarian's Book of Lists*. By George M. Eberhart. Chicago: American Library Association, 2010. *The Australian Library Journal*, 60(2), 180–180. <https://doi.org/10.1080/00049670.2011.10722604>
- Mallya Jyothi, & Payini Valsaraj. (2018). An empirical study of the overall satisfaction of hospitality students towards library services. *Library Philosophy and Practice (e-Journal)*, (December).

- Moore, M. T. (2017). Constructing a sentiment analysis model for LibQUAL+ comments. *Performance Measurement and Metrics*, 18(1), 78–87. <https://doi.org/10.1108/PMM-07-2016-0031>
- Nitecki, D. A. (1996). Changing the concept and measure of service quality in academic libraries. *The Journal of Academic Librarianship*, 22(3), 181–190. [https://doi.org/10.1016/S0099-1333\(96\)90056-7](https://doi.org/10.1016/S0099-1333(96)90056-7)
- Parasuraman, a, Zeithaml, V. a, & Berry, L. L. (1988). SERQUAL: A Multiple-Item scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing*. [https://doi.org/10.1016/S0148-2963\(99\)00084-3](https://doi.org/10.1016/S0148-2963(99)00084-3)
- Pourahmad, A. A., Neshat, M., & Hasani, M. R. (2016). Using LibQUAL Model for Improving the Level of Students' Satisfaction from Quality of Services in Academic Libraries: A Case Study in North Khorasan Province, Iran. *Journal of Information & Knowledge Management*, 15(01), 1650011. <https://doi.org/10.1142/S0219649216500118>
- Roszkowski, M. J., Baky, J. S., & Jones, D. B. (2005). So which score on the LibQual+TM tells me if library users are satisfied? *Library & Information Science Research*, 27(4), 424–439. <https://doi.org/10.1016/J.LISR.2005.08.002>
- Westbrook, R. A., & Newman, J. W. (1978). An Analysis of Shopper Dissatisfaction for Major Household Appliances. *Journal of Marketing Research*, 15(8), 456–467. <https://doi.org/10.2307/3150594>
- Yüksel, A., & Rimmington, M. (1998). Customer-Satisfaction Measurement. *Cornell Hotel and Restaurant Administration Quarterly*, 39(6), 60–70. <https://doi.org/10.1177/001088049803900611>
- Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1990). *Delivering quality service : balancing customer perceptions and expectations*. Free Press.
- Ziaei, soraya, & korjan, F. R. (2018). Assessment of services quality in Tabriz central library from the users point of view based on LibQual model. *Library Philosophy and Practice (e-Journal)*.