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Investigating e-service quality criteria for university library: a focus group study

Olga Einasto

Head of Library Services, University of Tartu Library, PhD student, University of Tartu

Abstract: In the age of self-service technologies, library specialists need to understand what criteria are used by customers to evaluate library services. This study contributes to the literature by identifying the major e-service evaluation criteria from the point of view of users of the largest university library in Estonia. Focus groups were used to identify the most significant criteria of e-service quality, and participants brought out 15 quality criteria. The list of criteria is explained and discussed.

Keywords: service quality; e-services; university libraries; focus groups

1. Introduction

Service quality measurement studies constitute an important field of research in the contemporary librarianship. Economic and technological developments have changed library services and environments – today libraries are rapidly expanding into the virtual space. Many practitioners and researchers think about the new quality criteria and performance indicators for new libraries. Brophy (2001) has suggested that "we need to find new and relevant performance indicators for libraries operating in the networked world". In order to be effective, there is a need for a better understanding of what shapes library e-service quality, how users recognize and evaluate library services, and which factors influence this.

Grönroos (1998, 2000), Edvardsson (1998) and Parasuraman *et al*. (1985, 1988) argue that the process of service quality evaluation is complicated: the customers, as a rule, perceive and evaluate service quality through several dimensions and by the criteria which are the most important for them. The aim of current research was to identify the main evaluation criteria of e-services by university library users.

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2. Theoretical framework

Service quality in the library context

The service quality (SQ) concept was developed in the library science based on market researches in the commercial sector. There are two main streams of research on service quality. One of these, the Nordic school approach: Grönroos (1982, 1990, 2000), Gummesson (1991), Lehtinen and Lehtinen (1991), Ojasalo (2010) defines SQ in terms of functional quality and technical quality. Technical quality is defined as *what* the customer receives in the service outcome. In the library context the technical quality is associated with real objects – the building, the furnishing of reading rooms, books, journals, computers, etc. Functional quality is defined as *how* the customer perceived the service. Typical factors which influence the functional quality in the library are: competences of librarians, speed of services, simplicity of access.

What is more important – the technical (physical) or functional (interactive) quality? Grönroos (1998) argues that the functional aspect plays a decisive role in the consumer evaluation of services and emphasizes that, as a rule, customers evaluate functional quality more subjectively than technical quality. The services of contemporary academic libraries are not limited by their physical building, they can be used at home, workplace, or any other location equipped with the Internet access. As the library services become more Internet-based, the direct contact between the user and librarians decreases and as a result, the significance of functional quality no longer remains the same. Does this mean that in the modern library the technical quality will become an increasingly dominant variable? Apparently, in seeking to answer this question, we have to rely not so much on the different weight of these two qualities, but more on the shift in the evaluation focus. Thus, for the e-library user, the librarians' look and smile might be entirely irrelevant, while their competency continues to play a crucial role, even if the service process is conducted via the Internet.

The North American School researches Parasuraman *et al*. (1988) and Zeithaml *et al*. (1990) developed the so-called *5 Gaps model*, according to which the consumer perception of service quality is based on five gaps, each constituting a certain discrepancy:

1. The gap between customers' expectations and the service quality specifications set by the management of the service provider.
2. The gap between the pursued quality and the service quality specification.
3. The gap between service quality specifications and the service quality actually delivered.
4. The gap between service delivery and external communication to customers about the service delivery.
5. The gap between the expected and perceived service quality.

In adapting this model to the context of the university library, an additional gap should be added: the gap between the information needs of the users and the availability of financial resources of the library to meet these needs. This gap is caused primarily by the general price increase of scientific e-journals.

Despite the extensive discussion of service quality by library specialists and the increasing number of scientific publications on the topic, libraries are still lacking an unified conceptual model of service quality as well as the definition of high quality library service, including e-service quality. Many experts continue to concentrate on the users' expectations, and according to them, the library service quality is defined as the gap between the perceived level of service and user expectations: Nitecki (1996), Hernon (2002), Lincoln (2002), Einasto (2009). Based on this definition, it could be concluded that the goal of the library as a service organization should be to decrease this gap.

The e-service and the quality of e-service

The concept of an e-service has been used increasingly by researchers and practitioners from the beginning of this century. Whitman and Woszczynski (2004) define e-service as an interactive, content-centered and Internet-based customer service, driven by the customer and integrated with related organizational customer support processes and technologies with the goal of strengthening customer and service provider relationship. Thus, e-service has two main characteristics: 1) the service is accessible within electronic networks; 2) the service is consumed by a user via the Internet. According to this, the most important difference between traditional service and e-service in a library is that the e-user has to participate in the service processes more actively. He or she relies entirely on own ability to use technology to obtain the service.

Two main approaches in studying e-service quality can be distinguished from the literature. The first approach is technological, according to Ojasalo (2010), Meuter *at al*. (2000), Szymanski and Hise, (2000), since e-services are based on technology, there is often a natural temptation to understand quality as conformance to technical specifications. The second is the marketing approach, based on the American school and the Nordic school theories. Zeithaml (2002) developed E-S-QUAL scale comprises eleven dimensions for evaluating e-SQ. SITEQUAL, created by Yoo and Donthu (2001), consists of four dimensions: the ease of use, aesthetic design, processing speed, and security. Janda *et al*. (2002) also developed the e-service quality model including access, security, sensation, and information/content. Santos (2003) identified several determinants for e-service quality: the ease of use, appearance, linkage, structure and layout, content, reliability, efficiency, support, communication, security, and incentive. Santos also stressed that there is limited research in the literature on the question of online determinants and that there is no detailed framework to provide a comprehensive understanding of the user criteria of the e-SQ. The current research attempts to introduce such a framework.

3. Qualitative research

The focus group method

Higa-Moore *et al*. (2002) describe the use of focus groups as a strategic planning tool and suggest that user-oriented institutions such as libraries need to consult their users in order to gather data about their services and collections. Glitz (1997) stressed that focus groups as qualitative research is a very important application for improving library services. G.R. Walden (2006) made the annotated bibliography of library researches with the application of focus groups. According to this study, focus groups can be used effectively in assisting with hypothesis formulation, research design and questionnaire development. The proponents of the focus group method attribute its popularity to the fact that data can be provided quickly, qualitative data is produced on beliefs and attitudes, and more detail can be obtained than in surveys. The disadvantages named by Walden include the nonproduction of quantitative data, the non-generalisation of the results, the small number of interviewees, and the difficulties in recording and analyzing open-ended responses.

Focus groups in current research

Two focus groups included undergraduate, MD and PhD students and academic staff members of the University of Tartu were used to identify the most significant criteria of e-service quality. The task of focus groups was to discuss the most important issues of using library online. Recruiting the participants into the groups was based on the principle that the productivity of members depends on group's social and intellectual homogeneity. Also, in a homogeneous group, all the participants feel more freely and may express their opinions more openly, thus participants with the same academic status were invited. However, formation of groups considered that representatives of the same academic field can possess quite similar needs, wants and attitudes when using the e-library services, therefore, to avoid any conformism, representatives of various departments were invited. For the same reason the participants were not familiar with each other. In summary, for heterogeneously classified participants, groups by academic status and specialization were homogeneously formed. The first group was attended by eight Bachelor and Master Students, where 3 of them were members of Socialia, 2 of Medicina, 2 of Humaniora and 1 from Realia. The second group consisted of seven faculty members and PhD students (2 - Socialia, 1 - Medicina, 3 - Humaniora and 1 - Realia). All the participants were active users of library e-services.

4. Qualitative analysis and findings

Library and technology, e-library

Positive feeling of icebreaking at the beginning of the discussion helped to "explain to an alien from another planet what does library mean". It is interesting to note, that in their explanations all participants used a physical library image, describing the building where books are stored and people can communicate. Nobody attempted to provide a virtual library image or virtual collection of books. In the descriptions the following terms were used: books, magazines, storage, silence, collections, reading rooms, catalogue,

communication, information, inspiration, support, meetings, learning, searching, comfort. At the same time, the words, directly associated with the e-library (computer, Internet, e-access, e-delivery, website etc.) were not mentioned at all. Therefore, the moderator had to suggest an additional question, how these keywords might fit into the context of the library. Eventually the participants proposed a metaphor that the computer and Internet may be considered as some sort of gateway to a different, virtual library.

The ways to use the library

It has been revealed from the discussion that most participants in both groups are hybrid library users. The participants named four services, most often requested through the library website: search for specific books or themes; finding information about the library and its services; renew of borrowed books; access to scientific journals databases. Also, many students linked a search success to their own skills and experience. Many students stressed that high information search competence results in pride and respect from their fellow students. Negative e-service experience can be classified by the cause of failure, such as technical reasons ("technique/technology malfunction", "server error", "Internet connection is too slow"), associated either with the service provider ("requested information was outdated or absent", "uncomfortable processing", "it was not clear if my order has been processed") or the user ("forgotten password", "could not find an appropriate keyword", "do not know how to adjust ez-proxy setup in my computer", "had no idea even where to start from").

The criteria for successful e-service

In the discussion about positive and negative e-service experience, the criteria were arranged by participants in the order of importance. Users identified significant and non-significant criteria, stated the rationale for choosing this criteria and finally ranked the criteria according to importance. On the final stage of analysis the framework provided by Krueger (1994) was used to interprete coded data by seven attributes: words; context; internal consistency; frequency and extensiveness of comments; specificity of comments; intensity of comments; big ideas. Finally, 15 criteria were ranked in the order of importance.

User-friendliness was revealed as the main criterion. Participants explained this as a "possibility to find easily the information I need", "well-structured site and well-organised information", "fast and easy navigation". The participants found that they wanted to feel comfortable and convenient on the library web site, just as in case of physical space.

As an essential quality criterion, access *reliability* was also mentioned: "correct technical functioning of the site", "confidence that the site is always in working condition, does not crush", "no broken links". However, not only technical characteristics were important, as well as, for example, "keeping promises about books and full texts availability", "assurance in the e-document delivery", "feels confident dealing with the library site", "accuracy of service promises". All this

was identified by respondents as *assurance*, which can be referred to users as the perception of the confidence and trust toward the website.

Respondents found that when using library services online, *security* and *speed* are very important: "I want to know that my personal information is protected and not shared with other sites", "I would like that my searching topics and searching behavior were discrete", "I hope that information about my fines is private". *Speed* criterion means quick navigation, search and downloading, "easy and quick access to the service", "instant confirmation of the order", "quick feedback", "fast transition from page to page and fast downloading of the full text".

Focus groups also stressed such criterion as *credibility*, associated with e-information which the user receives through the library web site: "the library site must provide trustful information", "information should also be useful". The following comment was interesting: "in comparison with Google, which gives a lot of information, but I cannot always trust all of it, there may be less information from the library site, but I am sure in its quality". It is also important for the library site to provide updated information about the functioning of the library and relevant news, "it should not be so that the site is full of old and already irrelevant information". Thus, according to the focus groups *the relevance* of e-information is an important e-quality criterion: "both are bad – too much information and too little information, because there is no time for the selection". Related to the information is also *clarity* – concise and understandable contents, terms and conditions, "the ease of ordering and contact through site".

Under *competence* the participants meant the library specialists' possession of the required knowledge and skills to render library services: "Not only information competence is required, but also technical skills to design user-friendly web site, ensure the availability of the e-services". To give a confidence to e-services users that certain service is actually provided, a reliable *feedback* is mandatory. They would like to receive information about "what I have done using e-library and what the library IT-system has done". They would prefer to see the result, a personal feedback from the library about book ordering, an instant confirmation on the display.

Students stressed out that often they were not sure, whether a certain e-service is working or not, so they do not take the risk to order a book from a stock through Internet. They want to see on the display that "the information request or question to the subject librarian has been sent to the library specialists". This is quite an interesting observation, that it is not enough for users to have "human-computer" interaction, but they need the communication "human-via-computer-to-human". Thus, important criteria are also *dialogue* and *user participation*, "self-service opportunities", "virtual area for comments and questions", "the ease of contact". Doctoral students proposed to discuss the library e-

communication model from the perspective of person's contact with the system. In other words, how a hypothetical user perceives e-communication, whether the user feels that he or she communicates with an information system itself or with friendly people "behind the screen, on the other side of the computer". Participants found that it depends very much on the type of service. In the case of simple service procedure, the human aspect is weakened. On the contrary, if certain service involves a continuous dialogue in the searching process, then, according to the participants, the user feels communication with library professionals. Also, some users mentioned that they even can reconstruct the librarian-email adviser's face and voice.

Responsiveness criterion is also largely related to communication and dialogue, and means "the desire to solve problems and provide support to user". As the most important aspects of e-communications, courtesy and empathy were marked, as of traditional communication, and it is interesting that participants explained *empathy* not so much as a human quality (empathy of the personnel, "understanding and listening to the users"), but as a system quality ("empathy of system").

Discussing the library website design, the participants also named *aesthetics* as an important criterion of e-quality. They understand aesthetics as "pleasant and visually attractive, stylish design", "use of eye-catching colours, images and animations". The discussion "aesthetics and design vs easy search" took place, because, as some members stated, "the library website is designed awfully" due to lack of attractive photos, misusage of fonts etc, disrupting active study of information and search capabilities, offered by the website. Others have found that very simple and minimalistic design of e-resources may provide rather fast and friendly access to information. It is possible that in this case simplicity and user-friendliness are synonymous of aesthetic and nice design.

5. Conclusions, implications and limitations

Quality development requires a well defined quality concept, for which it is necessary to understand, how do users estimate the quality. It was clear that during focus group discussions most of the participants will name such criteria, as user-friendliness, reliability, assurance, speed, security. The most interesting finding was that criteria like "dialogue" and "participation" also represented a very high value for the focus group members. The research findings revealed that reliable feedback and effective communication give confidence to e-service users. Furthermore, the user also wants to have a dialogue with the library staff, that is, a two-sided communication channel is extremely important. Equally important for the library e-user is the possibilty to communicate through the library site with other users. The study has revealed that the user's experience, information competence and skills, combined with their willingness to communicate and participate in the service process, also affect the user-perceived quality.

The research offers a fresh view for library theoretist and manager in analysing the e-service quality and developing library services. The information provided by the focus groups may find implications for library managers as well as for academics. The practical value of the study is showing the possibility to design e-services in accordance with users expectations, based on quality criteria important to them. The theoretical contribution of the research lies in introducing a social approach for understanding e-SQ, based on communication and user participation, in addition to technological and marketing approaches. Thereby, contact with the library IT-system is viewed by users as a social process, based both on technology and communication. With the arrival of Library 2.0, and with the greater interaction between users, communication becomes a significant element in ensuring high quality of the library e-service.

The study is not devoid of limitations. The criteria proposed by focus groups are important to consider, but not sufficient. The list of quality criteria obtained by this qualitative method was considered as the first step to build a conceptual model of e-service quality and the basis for developing the questionnaire for further quantitative survey. The criteria presented in this study are ranked according to their importance, as perceived by focus-groups participants. The list of criteria should be tested statistically with quantitative studies to receive adequate information to generalize it. Thus further quantitative study with factor analysis is needed to develop the conceptual model of e-SQ and finalize its dimensions.

References

Brophy, P. (2001). *The Library in the Twenty-First-Century: New Services for the Information Age.* Library Association Publishing, London.

Edvardsson, B. (1998). Service quality improvement. *Managing Service Quality*, Vol. 8, No. 2, 142 - 149.

Einasto, O. (2009). Using service quality monitoring to support library management decisions: A case study from Estonia. *The International Information and Library Review*, 41, 12-20.

Glitz, B. (1997). The focus group technique in library research: an introduction. *Bulletin of the Medical Library Association*, Vol. 85 No. 4, 385-390.

Grönroos, C. (1982). *Strategic Management and Marketing in the Service Sector*. Swedish School of Economics and Business Administration, Helsinki.

Grönroos, C. (1990). *Service Management and Marketing. Managing the Moments of Truth in Service Competition.* Lexington Books, Massachusetts.

Gronroos C. (1998). Marketing services: the case of a missing product. *Journal of Business & Industrial Marketing*, Vol. 13, No. 4/5, 322-338.

Grönroos, C. (2000). *Service Management and Marketing. A Customer Relationship Management Approach.* Wiley & Sons, Chichester.

Gummesson, E. (1991). Service quality. A holistic view: In Brown, S., Gummesson,E., Edvardsson, B. and Gustavsson, B.O. (Eds.), *Service Quality. Multidisciplinary and Multinational Perspectives.* Lexington Books, Lexington.

Hernon, P. and Calvert, P. (2005). E-service quality in libraries: exploring its features and dimensions. *Library and Information Science Research*, Vol. 27, No. 3, 377-404.

Janda, S., Trocchia, P. J. and Gwinner, K. (2002). Consumer perceptions of internet retail service quality. *International Journal of Service Industry Management*, Vol. 13, No. 5, 412-431.

Krueger, R.A. (1994), *Focus Groups: A Practical Guide for Applied Research*. Thousand Oaks, CA, Sage Publications.

Lehtinen, U. and Lehtinen, J. (1991). Two approaches to service quality. *The Service Industries Journal*, 3, 287–303.

Lincoln, Y. (2002). Insights into library services and users from qualitative research. *Library and Information Science Research*, Vol. 24, No. 3, 3-16.

Meuter, M., Ostrom, A., Roundtree, R. and Bitner, M. (2000). Self-service echnologies: understanding customer satisfaction with technology-based service encounters. *Journal of Marketing*, 64, 50-64.

Nitecki, D.A. (1996). Changing the concept and measure of service quality in academic libraries. *The Journal of Academic Librarianship.* Vol. 22, No. 3, 181-190.

Ojasalo, J. (2010). E-service quality: a conceptual model. *International Journal of Arts and Sciences*. Vol. 3, No. 7, 127-143.

Parasuraman, A., Zeithaml, V.A. and Berry, L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, Fall, 41-50.

Parasuraman, A., Zeithaml, V.A. and Berry, L. (1988). SERVQUAL: a multiple-Item scale for measuring customer perceptions of service quality. *Journal of Retailing*, Spring, 12-40.

Santos, F. (2003). E-service quality: a model of virtual service quality dimensions. *Managing Service Quality*, Vol. 13, No. 3, 233-246.

Szymanski, D.M. and Hise, R.T. (2000). E-satisfaction: an initial examination. *Journal of Retailing*, Vol. 76, No. 3, 309–322.

Walden G.R. (2006). Focus group interviewing in the library literature: a selective annotated bibliography 1996-2005. *Reference Services Review*, Vol. 34, No. 2, 222-241.

Whitman, M. and Woszczynski, A. (2004). *The Handbook of Information Systems Research*, IGI Global.

Yoo, B. and Donthu, N. (2001). Developing and validating a multidimensional consumer based brand equity scale. *Journal of Business Research*, Vol. 21, No. 1, 1-14.

Zeithaml, V.A., Parasuraman, A. and Berry, L. (1990). *Delivering Quality Service: Balancing Customer Perceptions and Expectations*, The Free Press, New York.

Zeithaml, V.A. (2002). Service excellence in electronic channels. *Managing Service Quality*, Vol. 12, No. 3, 135-138