



**University of Cyprus**

**Department of Public and Business Administration**

**MBA Program**

**STAKEHOLDERS' SATISFACTION IN A NON-PROFIT ORGANIZATION:  
THE CASE STUDY OF THE LIBRARY OF THE UNIVERSITY OF CYPRUS**

Elena Diomidi-Parpouna

Charoula Theocharous-Soteriou

Nicosia

November, 2009

An Applied Business Project submitted to the faculty of the MBA Program in partial fulfillment of the requirements for the degree of MBA (Master in Business Administration) in the Department of Public and Business Administration of the University of Cyprus.

APPROVED BY:

Academic Advisor – Name: Dr. Kassinis George

Signature:

Grader –Name: Dr. Kosteas Eleni

Signature:



## ACKNOWLEDGEMENTS

We are grateful to a number of individuals whose support and guidance were of paramount importance to this dissertation. In the first place, we would like to thank our academic adviser Professor George Karamas for his continuous support and feedback kept our motivation at high levels throughout the duration of the study. We would also like to thank Dr. Philippos Tsimbogiannis, Director of the Laboratory of the Chemistry of Organic, whose enthusiastic support was an essential part of the progress of this study. We are also grateful to the members of the staff of the Chemistry Department who gave a lot of the time helping us develop our practical exercises and extend our work. The LINGUAL team, Maria Kyriakidou and David Green, for their prompt response to all our queries regarding LINGUAL, and our numerous corporate sponsors who provided financial support for improving the response rate of our questionnaire. We would also like to thank Professor Dr. John Kiriakidis and Dr. Robert Kiriakidis, members of the LINGUAL team, for their support and advice throughout the duration of the study. The prompt feedback from all the members of the LINGUAL team is gratefully acknowledged. It is also gratefully acknowledged.

Last but not least, we would like to thank our families for their support during the last few months, with all their love and affection, for their support and affection, for their support and affection.

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Elena Diomidi-Parpouna  
Charoula Theocharous-Soteriou

## ACKNOWLEDGEMENTS

We are grateful to a number of individuals whose support and guidance was of paramount importance towards the completion of this thesis. First, we would like to thank our academic advisor Professor George Kassinis, whose continuous support and feedback kept our motivation at high levels, throughout the duration of the study. We would also like to thank Dr. Philippos Tsimboglou, the Head of the Library of the University of Cyprus, whose enthusiastic support was vital towards the completion of the study. We are also grateful to the members of the staff of the library, many of whom spent a lot of the time helping us develop our questionnaire and execute our study. The LibQUAL team, Martha Kyrillidou and David Green, for their prompt answers to all our queries regarding LibQUAL and our numerous corporate sponsors who provided financial support for improving the response rate of our questionnaire. We would also like to thank Professors Leonidas Kyriakides and Andreas Soteriou, members of the EFQM Steering Committee, for the valuable comments at the launch of this work. The prompt feedback from different faculty members of various departments of the University is also greatly appreciated.

Last but not least, we would like to thank our families for always being there during the last few months, while we considered satisfaction issues for many stakeholders, often ignoring their satisfaction which is directly related to the time we allocate to them.

## ABSTRACT

### STAKEHOLDERS' SATISFACTION IN A NON-PROFIT ORGANIZATION: THE CASE STUDY OF THE LIBRARY OF THE UNIVERSITY OF CYPRUS

Our aim with this project was to analyze the importance of Service Quality (SQ) and Customer Satisfaction (CS) while taking into consideration the engagement and the role that the stakeholders have through their involvement at the University of Cyprus (UCY) Library. We have used the LibQUAL+ as a service quality measurement tool in order to engage the stakeholders of the Library of the UCY by providing feedback through a questionnaire. The results of the analysis and the commitment of the library to proceed with the questionnaire were part of a journey that the UCY started few years ago with the European Foundation for Quality Management (EFQM). The Library has been selected by the Steering Committee to act as a "role model" unit and obtain the Recognized for Excellence (R4E) certification and a prerequisite for the R4E is the feedback from the customer – user.

Through this process we have analyzed feedback from 1574 users. LibQUAL+ is the adaptation of the well known SERVQUAL in a library setting. It identifies and analyze three dimensions: affect of service, information control and library as a place. The aim of the analysis is to effectively allocate resources were needed; assess whether the library meets users' expectations, for future planning purposes and at the same time identify areas that require internal or external funding. Nonetheless some of the limitations that the system has include the complicating rating, the fact that the terms minimum and desired level of service were not easily understood, user group demographics are not easily customizable, it should be repeated for better longitudinal results and also the fact that it must be combined with other assessment tools.

The results have shown that some groups of stakeholders are satisfied with several issues however the general opinion is that the library needs to proceed with fundamental changes in order to meet the users/stakeholders needs. Assessment is an on going process that needs to be repeated for planning and decision making purposes. By using similar assessment tools with other libraries there is benchmarking for better comparison. In addition staff training and development is necessary for the improvement of the service provided to the users.



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## 1. INTRODUCTION

The notion of service quality (SQ) has moved from the service “with smile” to “service excellence” (Fitzsimmons, 2008). Users do not any more compromise with an average service and good intentions. They consider good service a prerequisite, a given, an obligation of the organization and they only value exceptional service or a service exceeding the expectations. Therefore, with good service being a basic expectation, achieving high levels of SQ becomes an issue of paramount importance.

For a nonprofit organization SQ is defined by users’ perception and evaluation of the services offered. In the case of libraries and mainly for academic or research libraries, user satisfaction is an ongoing target since it is the only way for libraries to maintain their relevance to the community they serve. In short, it makes no difference whether you have high quality material available, if at the same time your operation is not welcoming for the user to engage in exploring and utilizing it. According to Zeithaml, Parasuraman, and Berry (1999, p.33) “...only customers’ judge quality, all other judgments are essentially irrelevant.”

It is well known that unless you measure something you cannot improve it. A measure cannot be arbitrary or generic. Rather it should be systematic and coherent. It should be organized and tested and in that sense it should allow comparisons with other organizations similar in size and industry, comparisons with standards or, even better, comparisons with best practices. In other words, it should allow not only continuous improvement but also benchmarking after best practices. SQ is no exception from the above rules. There should be tools to measure service quality, compare it with standards and aim at copying or exceeding best practices. And of course in improving SQ the aim should not only be customer satisfaction but one should aim to exceed customer expectations and do that consistently and on an ongoing basis.

Facilities, systems, procedures, practices, technology, innovation, standardization, manuals etc., are all essential parts in the process of establishing and maintaining high SQ in any



setting. Still, it's the human element that can give the extra touch in making an average service experience, a service experience as expected, a memorable one. It is the human touch coming from well trained, good intended, excited and empowered front line operators that makes the difference. All other aspects are easily considered a given, a prerequisite from the user, as they are considered part of the job.

Apart from employees or management staff though, users have an essential role to play towards achieving service quality in an organization setting in their capacity of "co-producers". The receivers of the service and their feedback are vital. The latter becomes the measure of success, the ongoing feedback of repeated users, that measures improvement and the feedback of these or other users of similar facilities that measures success compared to other similar settings.

As a consequence of the above, the measurement of user satisfaction has been the focal point in most service organizations' marketing research programs, including academic and other libraries. In fact, the need for gauging user satisfaction is increasingly becoming more important than holdings, budgets, expenditures, and staff (Fitzsimmons and Fitzsimmons, 2004)

Users in this framework are considered as the stakeholders. Stakeholders play an important role in affecting the processes, the decision making as well as the development of an organization. As Freeman (1984) point out stakeholders are any group or individual who can affect or is affected by the achievement of the organizations objectives. Therefore their satisfaction is vital for the advancement of a non profit organization and especially in the library case since the stakeholders can affect and can be affected by the service provided by the library.

Furthermore, the fact that different people want different things from their relationships with organizations makes it impossible to know with certainty what stakeholders want. In particular in situations where stakeholders are a number of different groups of people such as the academicians, the students, the employees, the public, other libraries etc the creation of value is an important element.

User satisfaction, as the post-user evaluation of a product or a service, is essential to successful marketing because satisfied users/customers are more likely to show loyalty and to spread positive word-of-mouth recommendations (Heskett et al 2000). For customers though, the differences between SQ and satisfaction are frequently blurred. The complex interpretation of the ingredients that make up a high SQ, which can then be translated by the user as customer

satisfaction make the lines between the two blurred. SQ though, is more cognitive in nature than evaluations of satisfaction, which include emotional factors. However, from the perspective of customer loyalty, assessing customer satisfaction is more critical than measuring SQ.

This thesis reviews the literature on SQ in academic settings and presents a study of measuring SQ in the case of the University of Cyprus (UCY) Library. LibQUAL, a variation of the well known SERVQUAL instrument is used to measure SQ perceptions from the users of the UCY library.

In light of the recent in going efforts of the University to achieve the “Recognized for Excellence” award from the EFQM in the library, this study serves as the first step towards gaining a good understanding of the level of SQ currently delivered by the library and at the same time improve the quality of service provided and maximize the contribution of stakeholders.

This thesis is divided into six chapters as follows: after the introduction (chapter 1), Chapter 2 presents some recent theoretical developments. Chapter 3 analyses the research methodology that is used for conducting the survey, Chapter 4 comments on the results of the survey and finally Chapter 5 makes suggestions for improvement. Concluding remarks are presented in the last chapter.



## **2. BACKGROUND: RECENT RELATED THEORETICAL DEVELOPMENTS**

This Chapter presents recent theoretical developments regarding SQ. More specifically Section 2.1. refers to the importance of service quality, Section 2.2. analyses the discussion between service quality vs customer satisfaction, Section 2.3. introduces the main theoretical frameworks of excellence that exist around the world, Section 2.4. explains what we mean by quality in a library setting, Section 2.5 presents the case of the library of the University of Cyprus (UCY), and finally, Section 2.6. refers to measurement instruments of SQ.

### **2.1 Importance of Service Quality**

Quality is a difficult term to define since people view quality in relation to their personal criteria and according to what they consider important (Fitzsimmons & Fitzsimmons, 2008). Scholars in this field have defined SQ as the difference between customer expectations regarding a service to be received and perceptions of the service being received (Parasuraman, Zeithmal and Berry, 1988). Further, Parasuraman et al. (1985), point out that SQ is an abstract and elusive construct, because of 3 features unique to services: intangibility, heterogeneity and inseparability of production and consumption. Additionally, some authors argue that SQ is reached when service meets customers' needs or expectations.

There are 3 different research streams. The first research stream involves the customer satisfaction (CS) or service quality studies that examine behavioral intentions such as the likelihood to stay, repurchase intentions, inclination to recommend or to spread by word of mouth propensity to switch, willingness to pay price premiums and so on, which are often referred to as proxy for loyalty. Further, the second research stream concerns the relationship between CS

Parasuraman et al (1988) identified ten dimensions of SQ (tangibles, reliability, responsiveness, competence, courtesy, credibility, security, access, communication and understanding the customer), which link specific service characteristics to consumers'

expectations. These dimensions were the foundation for the development of the SERVQUAL instrument for measuring quality service, which will be analyzed at a later stage. These customers' expectations include: (1) Tangibles: appearance of physical activities, personnel, equipment and visual materials, (2) Reliability: ability to perform the promised service dependably and accurately, (3) Responsiveness: willingness to help customers to provide prompt service, (4) Competence: possession of required skill and knowledge to perform service, (5) Courtesy: consideration and friendliness of contact personnel, (6) Credibility: honesty of the service provider, (7) Security: freedom from danger, risk or doubt, (8) Access: approachability and ease of contact, (9) Communication: listening to customers' and acknowledging their comments and keeping the customers informed in a language they can understand and (10) Understanding the customer: know customers and their needs. These dimensions were then reduced to five dimensions of tangibles, reliability, responsiveness, assurance and empathy.

When providing quality of service, an organization should be able to view services from the customer's point of view and try to satisfy customer's expectations. On the other hand, customer expectations are affected by issues such as personal service, personal needs, communication and past experiences. Lewis, Moore and Creedon (1996,) define quality as "consistently meeting or exceeding customer's expectations".

As Brian Quinn (p.361) suggests the overall quality of service can be improved in several ways by: a) measuring customer's service expectations, b) improving service and lowering costs, c) showing customers respect and d) paying greater attention to the overall atmosphere or ambiance in which business is conducted. Since the nature of most services is such that the customer is present in the delivery process, thus the perception of quality is influenced not only by the service outcome but also by the service process (Ghobadian, 1993 p.43)

Quinn (1997, p.367) argues that incorporating service quality concepts into the academic library setting is perfectly feasible and potentially valuable but some adaptation is necessary. Especially when someone takes into consideration the threats or opportunities when used appropriately faced by a library such as the global digital environment. They have to improve the quality of their services in order to survive. The notion of measuring quality in terms of its collection size and various counts of use, no longer exists. The quality measurement instruments developed by scholars such as SERVQUAL and LibQUAL, take into consideration topics such as measuring the library's performance in terms of element important to customers, they describe performance or indicate whether service quality is good, indifferent or bad.



In the case of the University of Cyprus Library, the quality of service provided to the users is what determines the superiority of the library. Within this framework, our study took into consideration the opinions of undergraduate and postgraduate students, academic staff, other university staff and library staff. Their views and opinions are vital for the future development of the library. When the library succeeds in understanding what the user \ customer expects in terms of SQ, then the service provided will add value to the user and it will improve the management of the library.

## **2.2 Service Quality and Customer – Stakeholder Satisfaction**

Customer (stakeholder) satisfaction (CS) and SQ are two different concepts that have sparked considerable interest in the literature and have often been confused. Some authors point out that strong relationships exist between SQ and CS while emphasizing that these two are conceptually distinct constructs from the customers' point of view (Sureshchandar et al., 2003). Others consider that there is no theoretical derivation between them. However, others (Taylor and Cronin 1994, Parasuraman et al 1994, Teas 1994) consider satisfaction as an outcome of SQ.

CS is a feeling which results from a process of evaluating what was expected and the final purchased made. Bitner and Zeithmal (2003) argue that satisfaction is the customer's evaluation of a product or service in terms of whether that product or service has met their needs and expectations. According to Parasuraman et al (1988) both SQ and CS involve a comparison between expected and perceived service, but while satisfaction refers to the predicted service (expectations of what the service is likely to be), SQ deals with the ideal or desired (what the service should be). As Cronin and Taylor (1992) suggest, service quality is a general attitude before service. When measuring perceived quality, the comparison level is what the consumer should expect. In the case of satisfaction the appropriate standard is what the customer is probably expecting.

One can assume that the satisfaction we receive, will determine our future actions towards that service. In other words, when we are happy with the service that the provider is offering, we will be willing to re-use the service and even recommend it to our friends. This is perhaps the most reliable indicator of the SQ that is actually delivered to customers. Or as Oliver (1980) points out, CS is a summary cognitive and effective reaction to a service incident.



Satisfaction results from experiencing a SQ encounter and comparing that encounter with what was expected.

Oliver (1993) in contrast with all the above, takes the discussion a step further, and argues that quality is not satisfaction driven and considers quality as an antecedent among other influences, to satisfaction. “Quality perceptions are viewed as fairly enduring characteristics of services, much like attitude, therefore satisfaction acts as a reinforcer or extinguisher of prior quality perceptions” (p.135). According to this notion, quality has specific referents, while satisfaction is a superordinate concept which includes quality influences and it also involves dimensions unique to satisfaction judgments.

The importance of stakeholder’s satisfaction as well as their involvement in the process of improving the service provided is considered of great importance for the University of Cyprus Library since it will add value to what is provided. As Kassinis and Vafeas (2006) argue, stakeholders can influence the practices of organizations by exerting pressures on them. Through the process of the questionnaire the users – stakeholders have the opportunity to express their opinions, views, ideas and comments as well as to influence the procedures that will follow in the library. Their answers will benefit first of all themselves as the users of the library and further the library personnel since they will be able by knowing their limitations to improve the services they offer.

### **2.3 Theoretical Frameworks of Excellence**

The acknowledgment of the importance of service quality lead to the development of numerous quality management awards and theoretical frameworks of excellence throughout the world. For the purpose of this study we are going to comment on the importance of Total Quality (TQ) and introduce some of the most widely used awards and certifications that recognize the effective application of Total Quality principles. These include the Deming Award, the Malcolm Baldrige National Quality Award (MBNQA) and the European Framework of Quality Management (EFQM).

Total Quality emerged when companies realized its use and importance in providing services that will be valued. Originally the term became known in 1992 when 9 major US corporations came up with the definition of the term: “Total Quality is a people-focused management system that aims at continual increase in customer satisfaction at continually lower

real cost.....is a total system approach...it works horizontally across functions and departments, involves all employees, top to bottom and extends backward and forward to include the supply chain and the customer chain.” (Evans and Lindsay, 2008, p.18) Total Quality is based in 3 principles that involve a) continuous improvement and learning, b) focus on customers and stakeholders and c) teamwork and engagement by all people in an organization.

For this purpose TQM systems were developed and aimed mainly in improving internal business processes. Regarding this issue, Kordupleski, Rust and Zahorik (1995) point out that without totally satisfying customers, by identifying customer needs, expressed in the customer's own words, linking customer satisfaction and customer-perceived quality to internal managerial processes, and measuring the impact of quality improvement on the marketplace there can be no true Total Quality Management (1995, p. 93).

### **MBNQA**

The Malcolm Baldrige National Quality Award is the most powerful award in the US, some say in the world. Since 1987, the Malcolm Baldrige National Quality Improvement Act was signed in to law aiming mainly in encouraging companies and organizations to establishing effective quality control in the provision of their goods and services, recognize and reward those companies that excel in the improvement of quality and establish criteria, guidelines and methodology for helping others to improve (Criteria for Performance Excellence). These criteria are divided in seven categories which include strategic planning, customer and market focus, business results, leadership, human resource focus, process management as well as measurement, analysis and knowledge management. The use of this criteria as a way to improve performance and quality has shown that “the program changed the way in which many organizations around the world manage their operations and helped significantly to bring the principles of TQ into the daily culture of these organizations” (Evans and Lindsay, 2005, p.122).

### **THE DEMING AWARD**

The Deming Application Prize was introduced in 1951 by the Union of Japanese Scientists and Engineers in appreciation of Edwards Deming's achievements in relation to statistical quality control. Edward Deming has developed the theory of profound knowledge which is based in systems theory and on the principle that each organization is composed of a system of interrelated processes and people which make up system's components. Since quality is considered to be a systematic process, in order to achieve the optimum quality 4 components



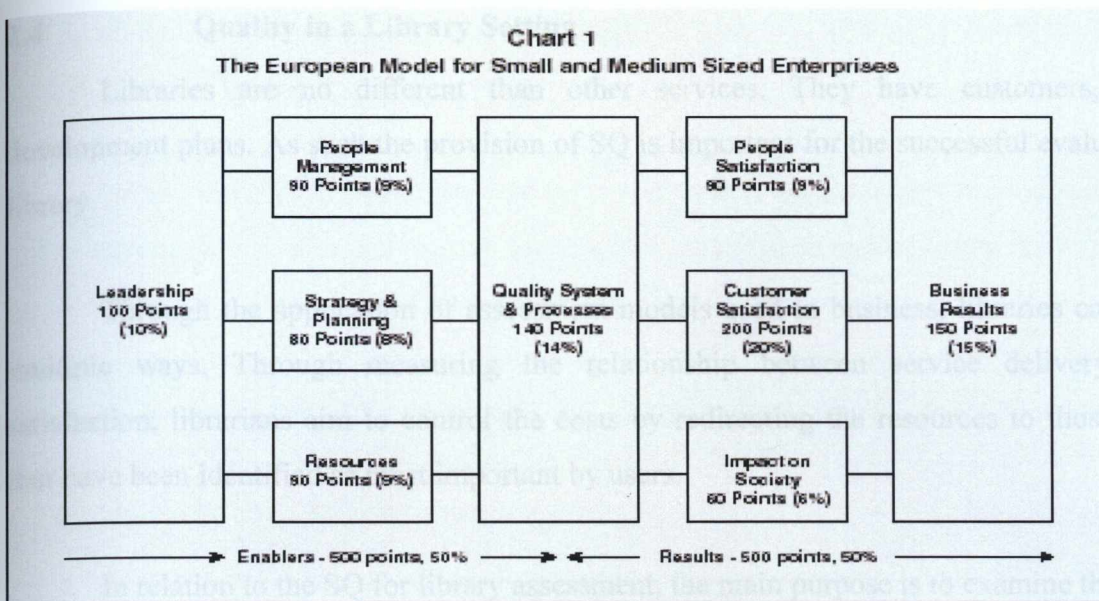
have to be met. These include the appreciation of a systems, the theory of knowledge, the psychology of change and the knowledge about variation.

The Deming application award is given to a company that has achieved outstanding performance in applying quality group. Prizes are also given to individuals, factories and small companies. According to JUSE (Japanese Union of Scientists and Engineers), companywide quality control (CWQC), "...is a system of activities to assure that quality products and services required by customers are economically designed, produced and supplied while respecting the overall public well being" (Evans and Lindsay, 2005, p.123). The Japanese have moved a further step, and the Deming Prize winners are eligible for the Japan Quality Medal, which demands from a company to sustain excellent quality over a five year period of demanding criteria and expectations.

### **EFQM**

The European Foundation for Quality Management (EFQM) is the framework of excellence most widely used in Europe. It was founded in 1988 by 14 high profile companies such as British Telecom, KLM, Bull, Nestle, and Volkswagen etc. The European Model of European Excellence aims at creating a common procedure for the excellent management of organizations in every business sector. This model is used by 30,000 organizations in Europe and is specifically designed to be used as a self-assessment tool, as a comprehensive management tool and as means of international recognition. The European Quality Award, which is considered the European equivalent to the Baldrige Award, aims in the adoption of total quality as a business improvement vehicle. Hence, it is mainly used as a tool for self-assessment, it demonstrates a picture on how well an organization operates in comparison to similar or very different organizations and it identifies areas for improvement.

EFQM is an organizations management system which is based on 9 criteria which involve both what the organization does but also what the organization achieves. The model is based on the premise that excellent results with respect to performance, customers, people and society are achieved through leadership deriving policy and strategy, that is delivered through people, partnerships, resources and processes. As the chart shows, the arrows emphasize the dynamic nature of the model. Innovation and learning is helping to improve enablers that lead to improve results.



**Figure 1: The conceptual model behind the EFQM award.**

The objective of the award is to recognize top quality performance in Europe. Essentially, arrows are the enablers, the way to reach the target, have results. In the heart of this model exists the RADAR logic which argues about continuous improvement: Results, Approach, Deployment, Assessment, Review,. There are certain steps that need to be taken in order to reach our results which include target, methodology, implementation and quality improvement.

There are three different levels of excellence, which include:

- The European Excellence Award which is given annually to the best performing non profit organizations and companies in Europe is the top level of the EFQM Levels of Excellence recognition scheme.
- “Recognized for Excellence” (R4E) is a scheme designed for organisations that are well on their way to organisational excellence. Through this process organizations have the opportunity to identify the strengths and areas for improvement. The University of Cyprus is currently at this stage and the library will be the pilot project for this assessment.
- Committed to Excellence (C2E) offers the opportunity to organizations to improve, regardless of their size, location or sector. It’s the first stage for companies in order to build on their knowledge and it involves two stages, self assessment (assessing the organisation against the 9 criteria of the EFQM Excellence Model) and at the next level by using the outcome from the self-assessment prioritise and plan actions to address the opportunities identified.



## 2.4 Quality in a Library Setting

Libraries are no different than other services. They have customers, a budget, development plans. As such the provision of SQ is important for the successful evaluation of the library.

Through the application of assessment models used in business, libraries can benefit in multiple ways. Through measuring the relationship between service delivery and user satisfaction, librarians aim to control the costs by redirecting the resources to those SQ issues that have been identified as most important by users.

In relation to the SQ for library assessment, the main purpose is to examine the difference expectations and the customer's perceived sense to actual performance. Hernon (2002), while taking into consideration the ambiguity that exists between the concepts of SQ and customer/user satisfaction, pointed out that "SQ focuses on the interaction between expectations about service provision and perception about how the service was actually provided. Satisfaction on the other hand does not involve gap analysis".

SQ is a different way to manage the library, it has customers, and therefore it exists. For that reason, by providing quality service in a library setting, we are able to view services from the customer's point of view and then meeting the customer's expectations because this how we can define value to the service provided.

Libraries can assess the quality of the services they offer, by conducting customer surveys, performing needs analysis and conducting information audit. Through this processes the library will have the opportunity to assess customers' needs and expectations as well as understand the user and improve information distribution and delivery.

Hernon and Altman (1996), introduce benchmarking in libraries. Through this system they assess how efficiently a given task is executed. Through the application of this system libraries can assess how much they have improved since the last study. As Quinn (1997) points out, this system emphasizes that leadership plays a crucial role in any service quality initiative, because it is library management that must conduct research, interpret the results and redefine roles and responsibilities of subordinates in order to better meet customer needs. Of course, this is true for all the assessment tools applied. As in this case with the application of LibQual, the management has the last word, since they have the duty to take the results of the questionnaire

into consideration and formulate the policies and changes that need to be taken in order to meet the users' expectations.

On the other hand, when we talk about users expectations, one should also consider that user's expectations are based on such factors such as personal needs, implicit service promises personal service philosophy and past experience. That is why different methods of collecting the users views should be deployed, However, as Sirkin (1993) suggests, even with adequate customer feedback, it can sometimes be difficult to interpret data, because customers expectations and perceptions are inherently subjective and can be contradictory.

Libraries are facing major challenges today, mainly due to the expansion of the internet, the opening of big bookstores and the access to a load of useful and not so useful information. Berry (1996) argues that there must be a change in how libraries market themselves. Thus, the quality of service can be improved by: (1) measuring not just the customers perception of service, but also customer's service expectations, (2) improving service and lowering costs, (3) showing customers respect and (4) paying greater attention to the overall atmosphere or ambiance in which business is conducted.

Many of the limitations of the application of the SQ stem from the fact that these were originally developed for use in commercial business environments (Parasuraman, Zeithmal, Berry 1988, Quinn 1997). When Quinn (1997) discussed the adaptation of service quality concepts to academic libraries, LibQual did not exist. Although, LibQual takes into consideration many of the notions that Quinn mentions as limitations, a lot of critics have argued against the application of the service quality models in the library context.

One should take into consideration the multidimensionality of the customers-users of the library and the challenges that this presents for the organization, such as a library. A library, and in this case an academic library, has many customers including students, faculty members, university administrators, library staff or even as in the case of the university of Cyprus, the public university, the library has indirect customers such as state governing bodies and the public itself. At a later stage we discuss this notion of engaging the stakeholders of the organization at the policy formulation process and the importance of taking into consideration the ideas, opinions and views of the users.



## 2.5 The Case of the University of Cyprus Library

The University of Cyprus (UCY) Library was established in 1992 as an academic library. Its mission is to serve the learning and information needs of the academic community (undergraduate and graduate students, academic staff, researchers and administrative staff), while maintaining within its scope the provision of information services to the broader scientific community of the country. The library is also used by the public and its budget comes from the state.

The Library has more than 267.289 books, with an annual increase of approximately 12.000 new titles. In the last years the University of Cyprus Library has become practically fully electronic (function-wise) and hybrid (content-wise), since its collections include printed, digital and audiovisual material. Furthermore, the Library is capable of producing material in Braille format for visually impaired users. The following subsystems and electronic information services are available through the digital-virtual library: online Public Access Catalogue (WebOpac), 30.000 full-text e-journals, 26 databases installed locally and an additional 157 databases installed at the producers'/suppliers' servers, accessible through the Web, more than 15.000 e-book titles, 100 virtual collections containing 200.000 e-books, dissertations etc. on several websites, 360 useful links organized in structured indices.

The value of the library, as stated in the library's website, includes:

Open Access to knowledge: We provide the opportunity to all our users to have access to up-to-date knowledge and information sources.

Encouragement of challenges and change: We believe in continuous progress and in change that comes as a result of the participation and involvement of our people.

Support of a culture of cooperation and excellence: We are committed to encourage and support systematically every effort towards best outcome through collaborative work and partnerships of mutual benefit.

The UCY library through the years has continually developed with great capabilities in improving and expanding and at the same time trying to compete other libraries around the world while maintaining superior service quality.

Moreover the UCY has recently decided to engage in the development and adoption of the EFQM model (European Foundation of Quality Management) in its operations and pursue the recognition "Recognized for Excellence" following a "Committed to Excellence" recognition the University received in 2007. In this effort, the UCY library needs to engage in a library assessment project. LibQUAL+® has been chosen as a tool for this assessment of the performance of the UCY library, which has been developed, tested and established in North America, as a more standardized tool developed to help measure, manage and improve service quality in libraries' environment.

We next discuss two of the main assessment models used in the library context in order to assess the quality of service provided by libraries: the SERVQUAL and the LibQUAL.

## **2.6 Assessment Models**

Assessment is essential and vital in an organization due to the fact that it can help them to acknowledge limitations, weaknesses, but also strong points and manage to improve. The theoretical frameworks already mentioned intend to set out the criteria for assessing the organization or company and setting up requirements, and criteria for achieving the maximum quality result.

### **2.6.1 SERVQUAL**

SERVQUAL, a tool for measuring serving quality, was introduced in 1988 and was revised in 1991 after some criticism. The authors, Parasuraman, Zeithaml and Berry, prepared a 22 item questionnaire that was based on 5 quality dimensions such as reliability, responsiveness, tangibles, empathy and assurance. SERVQUAL is used to measure the gap between customer expectations and experience. This gap is considered to be the measure of service quality. When SERVQUAL was revised a number of changes were introduced and no negative statements were made.

SERVQUAL obtains info from 2 perspectives a) expected performance of and b) perceived actual performance. SERVQUAL used Likert type scales from 1-7. Later on, they described the area between the minimum and desired service expectations are known as the *Zone of Tolerance*. The zone of tolerance represents the range of service performance that customers consider satisfactory. Johnson, Berry and Parasuraman defined the zone of tolerance in terms of



the customer's evaluation of in process service performances: "The zone of tolerance is a range of service performance that a customer considers satisfactory. A performance below the tolerance zone will engender customer frustration and decrease customer loyalty. A performance level above the tolerance zone will pleasantly surprise customers and strengthen their loyalty". Other changes that have been made included "changes that focused on the expectations element where now respondents were now required to indicate what an excellent service would provide rather than firms in the industry should provide" (Smith,1995).

This tool was highly criticized due to its conceptualization and operationalization. The authors recognized the centrality of customer perceptions of SQ; therefore they devised methods to assess customer views of quality (Cook and Thompson, 2000). SERVQUAL was considered overly complex, subjective and statistically unreliable.

Consequently, as Teas argues the debate between Parasuraman and al. (2000), Cronin and Taylor (1994), has resulted in the identification of several important questions concerning alternative conceptual and operational definitions of perceived quality, the role of normative expectations as determinants or components of perceived quality and the link between perceived quality and customer satisfaction.

In the SERVQUAL model, quality is defined as 'perceived quality' rather than 'objective quality'. One that it is dependent on the customers' perception of what they can expect from a service and what they believe they have received, rather than any objective standard determined by a professional group or in a conventional performance measurement.

SERVQUAL was later adapted in order to meet library challenges. Hernon and Altman (2002) were the first to introduce the model to academic library managers. Further, Nitecki (2006), tested the SERVQUAL instrument on three aspects of library service and concluded that the instrument was useful in determining how well services match user expectations.

LibQual+ was developed by the Association of Research Libraries (ARL), in order to have a tool for library service quality assessment. This new instrument is a variation of SERVQUAL. A brief description follows in the next section.

## 2.6.2 The LibQUAL+® instrument

LibQUAL+ is mainly a web base survey that is used in order to improve library services. In 2001, the Association of Research Libraries in cooperation with the Texas University libraries developed this tool based on previous work done for SERVQUAL. LibQUAL+ is the adaptation of the SERVQUAL instrument to the environment of a library. Due to the fact that SERVQUAL was mainly used in the business sector, it's limited in measuring some service dimensions unique to libraries. Adhering to its SERVQUAL origins, LibQUAL+ proceeds from the same principle "only customer's judge quality, all other judgments are essentially irrelevant" (Cook et al. 2000, p. 265).

As Berry (1995) writes in his book "*On Great Service*", LibQUAL+ was developed to satisfy the need for a total market survey in the library sphere to compare and to assess service in libraries longitudinally for benchmarking and best practices purposes.

LibQUAL+ is used by libraries to solicit, track and understand users' opinions in order to act upon them and enhance their service quality. As a tool, LibQUAL+ provides to the libraries the means for achieving a culture of excellence, understating user perception upon their services, collect and interpret user feedback (<http://www.libqual.org>) by measuring the perceptions of library service quality in three dimensions:

- (a) Affect of Service
- (b) Information control
- (c) Library as place

When considering *library as service* issues such as assurance, empathy, responsiveness and reliability are assessed. In this context, assurance is the knowledge and ability of employees to convey trust, empathy is the attention given to library users, responsiveness is the willingness to help users and reliability is then ability to perform expected services. On the other hand, when analyzing *library as place*, we assess the ability of a library to meet the users' requirements in relation to facilities and environment. Furthermore, when assessing access to information the dimension of provision of comprehensive collections at the local level is measured. Additionally when analyzing personal control, things such as the user locating information on its own are evaluated.



Due to the fact that, each question is administered across three scales of minimum, desired and perceived performance, there is a lot of that can be analyzed. Responses are measured on a 9 point scale thus creating zones of tolerance between excellence and minimal level of service perception. As Cook et al. (2000) suggest, optimally perceived performance scores would float comfortably within this zone of tolerance, the closer to the desired boundary the better. What the management needs to take into consideration are the gaps of opportunity that exist between current and excellent levels of service perception.

LibQUAL+ has contributed substantially to the work of library assessment both for management decision making and resources allocation as well as cross institutional benchmarking and identifying existing best practices. As a web delivered and managed survey, administering LibQUAL+ is considered to be easy, and cost effective in terms of time and money. Through the use of LibQUAL+ the attention is shifted to the user, the customer is the centre for measuring quality. Some scholars argue that the LibQUAL+ results can be subjected to rigorous psychometric analysis and replication and re-grounded to take into account evolving library environments.

In addition, it attempts to relate perceptions of library service quality to perceived outcomes of academic success. The increasing pressure for moving towards outcome-based assessment and not only relying on input, output, or resource metrics, shows how well a library serves its users and also helps to demonstrate efficiency and effectiveness. LibQUAL+ as an outcome-based assessment facilitates these aims in an easy and accurate way. It provides libraries with comparable assessment information from peer institutions and at the same time identifies best practices in library service. In addition, the enhancement of library staff analytical skills for interpreting and also acting on data that is gained in the process creates the potentials for continued improvement.

Although LibQUAL+ is described as a tool for measuring service quality rather than satisfaction, users of the questionnaire frequently consider it to be a measure of the user satisfaction. In fact, the distinction between SQ and user satisfaction is not entirely clear even on the LibQUAL+ Web page in the frequently asked questions section (<http://www.libqual.org/About/FAQ/index.cfm#FAQ25>). In reply to the question "What is the difference between the LibQUAL+ survey and a CS survey?" the following rather murky answer is provided (note that no reference to satisfaction is made, so it cannot be contrasted to service quality): "*Customer service can be defined as comprising all programs, activities, facilities, etc.*

*of an organization, which have a bearing on customers' experiences during and as a result of their interactions with the organization. Customer service focuses on the customers' personal and emotional reaction to service. Service quality is the customers' assessment of how good/bad, or pleasant/unpleasant their experiences are. 'Service quality' is the customers' subjective evaluation of 'customer service'. The LibQUAL+ instrument SQy 'measurements' consists of snapshots or discrete summaries of customers' evaluation of their experiences".*

These descriptions should not be surprising, since that even the latest LibQUAL+ procedures manual also describes the instrument as a "customer satisfaction survey". While SQ may theoretically be different from user satisfaction, and the understanding of one's quality of service can be valuable on its own, it is nonetheless also clear that the distinction between the two is frequently either not understood or ignored by users as has already be mentioned above. Moreover, a primary aim of administering the LibQUAL+ survey appears to be one of gauging the customer's level of satisfaction with an academic library's services.

#### **2.6.2.1 The theory behind LibQUAL+**

According to scholars, customers have certain standard(s) or expectation(s) in their minds before making a purchase. After buying the product or service, the performance of the product or service is compared to this pre-purchase standard. If performance exceeds the pre-purchase standard, a positive disconfirmation occurs, which in turn leads to satisfaction. If performance falls below the pre-purchase standard, it results in a negative disconfirmation, which creates dissatisfaction. In the case where performance matches expectations, confirmation occurs, and this leads to indifference (moderate satisfaction). In other words, the level of satisfaction a customer experiences is a function of the direction and magnitude of disconfirmation.

The LibQUAL+ uses the above notion in its questionnaire design. Thus, on each item of the LibQUAL+ questionnaire, the respondent provides three ratings of library service level of service: (a) Minimum acceptable level of service, (b) Desired (i.e., expected) level of service, and (c) Perceived (i.e., currently provided).

By subtraction, gaps are calculated between desired, perceived, and minimum expectations of service (Weaver, 2005). The gap between the desired and the perceived ratings-called the "superiority gap" is the most critical piece of information because it is thought to determine satisfaction. When expectations are met or exceeded, the gap is positive and the



consumer is satisfied. Conversely, if perceived performance falls short of expectations, the gap is negative and the customer is dissatisfied. The second difference score on the LibQUAL+ is between the minimum acceptable level and the perceived level. Termed the “adequacy gap,” it indicates how much a service falls above or below the least acceptable level.

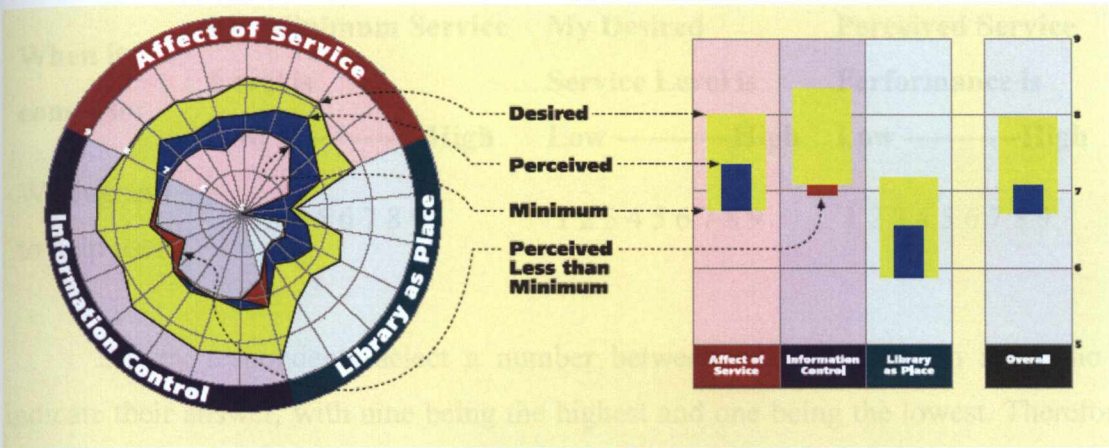


Figure 2: The dimensions of SQ in LibQUAL (Weaver. 2005).

### 2.6.2.2 How LibQUAL+ works

The 22 core survey items measure user perceptions of service quality in the dimension mentioned above (Affect of Service, Information Control, and Library as Place). For each item, users indicate their minimum service level, desired service level, and perceived service performance.

The survey contains additional items that address information literacy outcomes, library use, and general satisfaction. The open-ended comments box provides a wealth of information for qualitative analysis and secures their concerns and suggestions about library services. Historically, 40 percent of respondents provide comments using "the Box."(Kyrillidou, 2008). Libraries undertaking the assessment have the option to select five additional local questions among over a hundred options to add to their survey. Locally it requires only little technical expertise. The users are invited to take the survey by using the URL provided via e-mail on library’s web side or another method.

Respondents complete the survey form and their answers are sent to a central database. The data are analyzed and presented to the library in reports describing library users' minimum, desired, and perceived expectations of service.

For each of the twenty-two core questions participants answer by identifying their minimum expectations, the perceived level of service, and the desired level of service.

The following is an example from the questions used.

When it comes to:	My Minimum Service	My Desired	Perceived Service	N/A
	Level is	Service Level is	Performance is	
	Low -----High	Low -----High	Low -----High	
Willingness to help users	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	N/A

Survey respondents select a number between one and nine on the radio buttons to indicate their answer, with nine being the highest and one being the lowest. Therefore, for each of the twenty-two questions, three answers are obtained (minimum, desired, and perceived).

Questions in the affect of service dimension focus on empathy, responsiveness, assurance and reliability of the staff. Information control questions cover scope, timeliness, convenience, ease of navigation, and condition of equipment. The library as place dimension poses questions regarding the library as a utilitarian space, symbol, and refuge. The dimensions are not segregated: all questions are intermingled.

The following schematic, presents the three areas that LibQUAL+ aims to evaluate a library setting breaking the three main areas to thirteen dimensions that are evaluated through the survey (Kyrillidou, 2008).



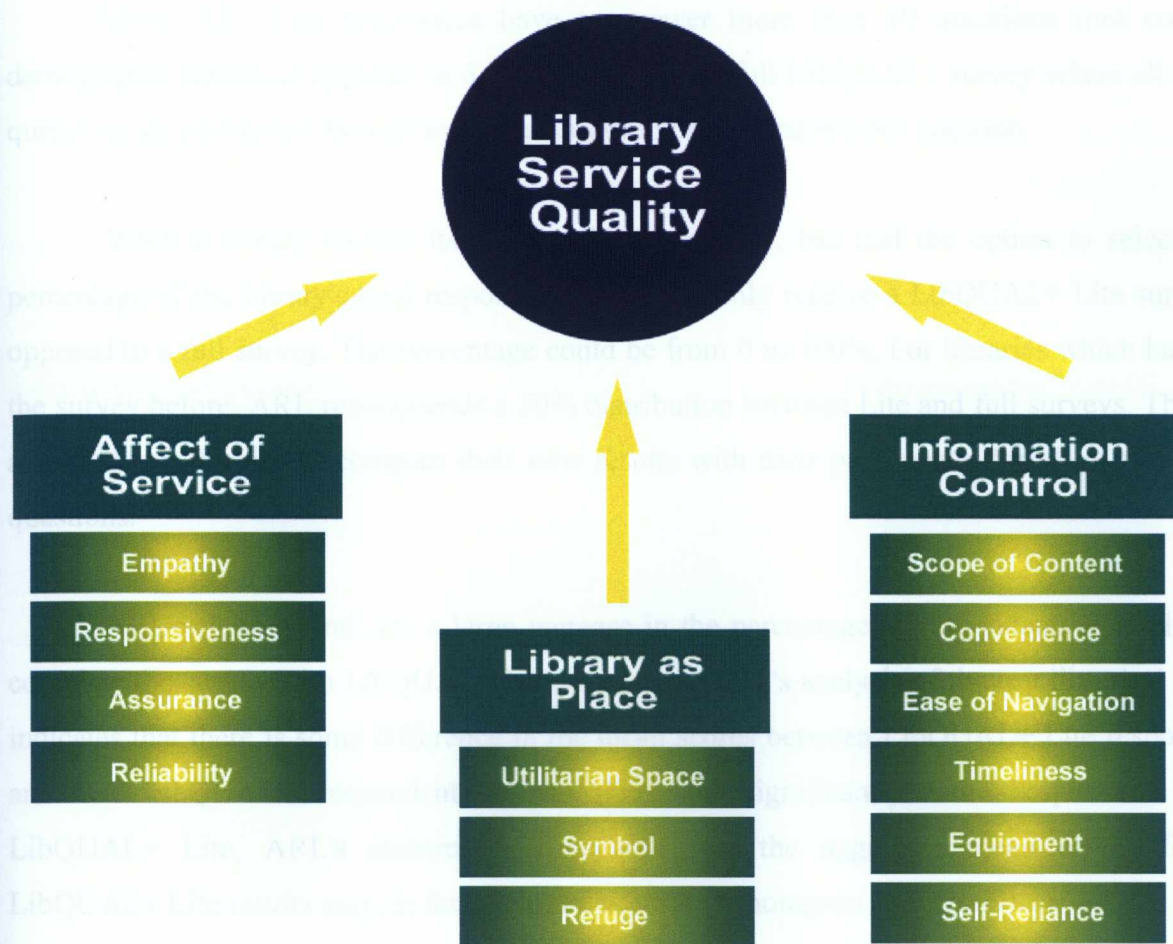


Figure 3: Sub dimensions of SQ in LibQUAL (Kyrillidou, 2008).

### 2.6.2.7 Introducing the LibQUAL+™ Lite

The basic and full LibQUAL+ survey consists of 33 questions including optional selections. Libraries which have used the LibQUAL+ reported a significant numbers of respondents who start but do not complete the full LibQUAL+ survey. Other potential respondents may also have declined to take the survey because of its size. In response to that, the ARL has recently developed and introduced LibQUAL+ Lite to address these concerns by providing the option of selecting the percentage of using both survey versions.

LibQUAL+ Lite uses **matrix sampling**. *Matrix sampling* is a survey method that can be used to collect data on all survey items without requiring every participant to react to every survey question. With this approach all of the LibQUAL+ questions will still be asked but not from every respondent.

LibQUAL+ Lite respondent have to answer more than 19 questions (not counting demographic items) as opposed to 34 questions for the full LibQUAL+ survey where all the 34 questions are addressed, though by a smaller group of respondents per question.

When a library choose its options for the survey, has had the option to select what percentage of the library's total respondents will randomly receive a LibQUAL+ Lite survey as opposed to a full survey. The percentage could be from 0 to 100%. For libraries which have run the survey before, ARL recommends a 50% distribution between Lite and full surveys. This will allows these libraries to compare their new results with their past results for all of the survey questions.

ARL's findings indicate a large increase in the percentage of respondents who chose to complete the survey with LibQUAL+ Lite. However, ARL's analysis of the test libraries' results indicates that there is some difference in the mean scores between LibQUAL+ Lite respondents and full LibQUAL+ respondents. Since there are significantly more respondents using LibQUAL+ Lite, ARL's researchers concluded that the aggregate mean scores for the LibQUAL+ Lite results may, in fact, be more accurate (Thompson et al. 2009).

**LibQUAL+®**

22 Core Questions on:

- Affect of Service
- Information Control
- Library as Place
- 5 Information Literacy Questions
- 3 General Satisfaction Questions
- 3 Library Usage Patterns
- Demographics
- Free Text Comments Box
- 5 Local Questions (optional)

**LibQUAL+® Lite**

3 Core Questions on:

- Affect of Service
- Information Control
- Library as Place
- 8 Randomly selected from the above three dimensions
- 2 Information Literacy Outcomes
- 2 General Satisfaction Questions
- 3 Library Usage Patterns
- Demographics
- Free Text Comments Box
- 1 Local Question (optional)

Table 1: LibQUAL and LibQUAL Lite items.



LibQUAL+ gives the opportunity for 5 specific questions customized to the library local needs. It can therefore be to a certain extent also localized. In a sense, you get the benefits of both worlds. The ability to compare and benchmark through the standardized part and the ability to measure things that are more specific and local. The flexibility that would have been lost with a purely standardized survey can be gauged with the customized questions of the survey.

#### 2.6.2.8 The Comments Box

An important and informative component of the survey is the results from the comments box. Respondents are eager to share their thoughts and often enter library specific comments. Participating libraries have the ability to view the comments during the open time for survey completion, a survey feature that many staff members have found to be addictive and entertaining! The comments are available only to the home library and are not included in the aggregate results of consortiums. Some institutions later code the remarks and categorize them for further study.

In additions to the printed reports (which are also online), raw data in SPSS or Excel files are provided electronically for additional analysis. Although LibQUAL+ is a total market survey tool and it serves its purpose in measuring customers view on the service, Leonard Berry (Thompson et al. 2000, p.10) argues that a critical facet of total market surveys is the measurement of competitor's service quality, therefore this required using non-customers in the sample to rate the services of their suppliers.

LibQUAL seems to satisfy the analysis of total market surveys. It provides the basis for comparison between other libraries, it provides systematic listening to users thus improving decision making and allocation of resources and it can be used as the instrument to improve service quality.

### **3. RESEARCH METHODOLOGY**

This section consists of the analysis of the methodology used in conducting this survey. LibQUAL+ is been discussed along with issues concerning its advantages and disadvantages, the benefits of the implementation for the UCY as well the Prerequisites Procedures for Implementing LibQUAL+ to UCY. Additionally issues such as improving the response rate and participation at the survey are pointed out.

#### **3.1 Why LibQUAL+**

The options faced were either to create our own instruments, or to follow a common practice among university libraries worldwide for measuring user's perceptions. LibQUAL+ is known to be a reliable tool since it follows a methodology and a scientific approach rooted back to SERVQUAL (Parasuraman et al. 1988). But most importantly, this assessment becomes much more useful when you are given the chance to compare how well or how bad you are doing compared to other similar institutions. LibQUAL provides such an opportunity for benchmarking with other libraries that use the same instruments.

#### **3.2 The Benefits of LibQUAL+ use in Libraries**

The UCY Library can have multiple benefits with the use of LibQUAL+ since it helps to identify best practices, analyze deficits and effectively allocate resources. Library users can express their expectations seeking for reactions and subsequent improvements. The data gathered and the resulting reports enable libraries to assess whether their services meet user's expectations and if not improve them.

Aggregated reports and data provided allow libraries to compare their performance with other institutions and at the same time look at the practices of libraries highly rated by their users. This comparison with similar institutions is very important for the improvement of the libraries in general. Those rated lower will seek improvement to meet the high fliers and those



highly rated will fight to keep their leading positions. As with all forms of assessment, the data obtained are not only useful in evaluating current library services but most importantly for future planning. The expectations of the users and the changing expectations over time (when measured consistently), provide a guiding light for the development of the services in the library. LibQUAL+ of course is just one of many assessment tools and may be used in conjunction with other standard methods for a comprehensive assessment.

Tools such as LibQUAL+ can serve the library community by providing institutions with useful data for change and improvement. Libraries have to be responsive to the needs of the users in order to ensure funding and survival. They need to know the ever-changing needs of their users and achieving greater levels of service excellence, relevance and impact.

### **3.3 Advantages of using LibQUAL+**

By using the LibQUAL+ tool, libraries may have a number of advantages, including but not limited to the following:

- Cost effectiveness
- Easily accessible on the internet
- Separate administration for each library making data available for benchmarking
- Tested for reliability and validity

### **3.4 Disadvantages of using LibQUAL+**

Similarly there are a number of disadvantages that is important to mention, including:

- Limited ability to focus on local issues as it is has been prepared used and establish by a number of libraries and used as a basis for benchmarking
- User Group Demographics not customizable in versions that have been already used in many libraries.
- The terms Minimum and Desired Level of service are not easily understood by the majority of participant since everyone expect(desire) the service level always to be the maximum (9) as the desired and the minimum level is not a significant measurement .
- The appearance of ranging the level of services is complicated and often confused the participants about the difference among these three ranging sections.

Additionally, some other limitations of the instrument include the fact that LibQUAL is adequate to some extent for determining academic library effectiveness, particularly with regard to delivering library service. Nevertheless, it needs to be complemented by an additional approach incorporating the technical features of academic library quality. Within this framework, LibQUAL+ focuses primarily on one of the three general user needs, met by library operations—the library as place—but not the other two, affect on service and information control.

LibQUAL+ makes substantial provision for users' self-reliance but not for their need for professional library assistance. Furthermore, LibQUAL+ does isolate short-term user perceptions of and satisfaction with service delivery. However, LibQUAL+'s instrument does not make specific provision for ensuring that users' cumulative perceptions, ones reflective of underlying technical SQ over long periods of time particularly if conducted as a one-time survey, are captured.

In summary, its contributions—and limitations—indicate that LibQUAL+ should not be the only tool for evaluating academic libraries. Instead, as is often the case, it should be one of several—including interviews, observation, and documentary or statistical analysis—that help determine the complex, multidimensional nature of academic library effectiveness as well as taking into consideration the stakeholders involved as well how this process will be affecting them.

### **3.5 Benefits for the University of Cyprus library from implementing LibQUAL+**

Library assessment is increasingly an essential task that all libraries have to fulfill in an environment where the information pluralism is continuously increased. This is the first time that the University of Cyprus Library has gone through an assessment process. User satisfaction surveys or service quality surveys have never been performed before. The Library grew merely with the growth of the University. In the absence of an organized national library it took roles beyond its scope as an academic library. At the same time, a lot of material was directed to the library from various sources enhancing the size and diversity of its collection. The absence of built facilities has inevitably been a limitation factor for its improvement. The realities mentioned above, inevitably drew most of the attention in managing its growth in non-convenient settings. Service quality and customer satisfaction, though always in the mind of its



management, could not get the necessary attention as other basic but pressing needs pushed it to a lower priority.

For all the reasons explained in this thesis, the UCY library needs to focus its attention and efforts in measuring and therefore improving its service quality. As time goes by, it has to maintain its relevance, its responsiveness, its ability to keep pace but most importantly its ability to draw funding either for the UCY budget but also from other private, public sources or European funding. It is therefore not just a matter of marginal improvement but of long term relevance and development.

### **3.6 The application of LibQUAL+ Instrument to the UCY**

Applying the LibQUAL+ instrument to the University of Cyprus community has not been an easy task for a number of reasons. First of all, it was the first time that the survey was used in the Greek language. In addition, it was the first time to be applied in the Greek environment – culture in any kind of library. The survey had to be translated in Greek and since this was the first time to do so, this was difficult task since all the terminology and the meaning of the questions had to be correctly conveyed. This was a long and complicated process. Nevertheless, having to go through this rigorous process before conducting the survey gave us a better understanding of the questionnaire and a better appreciation of its aims.

Secondly, the UCY is the first library which decided to launch the survey in three languages (Greek, English and French) thus addressing various needs of its users. Consequently, these decisions put more pressure and made the process more complicated since it involved the coordination and management of all related entities, e.g. French Studies and Modern Languages Department and the LibQUAL+ team in an intermediary role.

Thirdly, the UCY library was the first to use the new beta platform of the LibQUAL+. We have therefore been experimenting with a new language, a tri-lingual survey and a new platform. In fact we were part of the development of the new platform as we were the first to test it in a real environment and our feedback was used to improve it. The whole project involved four stakeholders: the library, the UCY (EFQM process), the LibQUAL+ organization and the UCY MBA program. We had to make sure that all players remained satisfied with the procedures and the respective decision made in the implementation.



### 3.7 Prerequisites Procedures for Implementing LibQUAL+ to UCY

The preparation was imperative because of certain time constraints. Since the decision was made to incorporate the survey in the measures needed for the EFQM process we had to satisfy the time limitations associated with the process. In addition, we had to run the survey early enough to meet the MBA program deadlines, while allowing enough time for the first year students to form an opinion about the services of the library. The whole preparation took about five months (Including the translation) and was facilitated by the good and timely communication between the university and the LibQUAL+ team. The main stages of the preparation have been the following:

- Translation of the whole template from English to the Greek language
- Corrections and finalizing of the translation with the help of other Greek librarians and information scientists as well as business academic staff, in order to use the most appropriate wording to convey the exact meaning of each question.
- Selection of the five local questions between more than hundred options by focusing on things that the library wanted to have (users feedback was not taken into consideration in the standard survey).
- Registration as well as providing to the system all relevant local information for customizing the questionnaire, e.g. 5 local questions, disciplines, positions, library branches, percentage used for LibQUAL+ Lite . The UCY selected to use the LibQUAL+ Lite with 50% percentage as one of the first libraries which use it at its introduction stage.
- Not only we were the first to run the survey in Greek, but we were also the first to run it in three languages, at the same time. The preparation and translation of the five additional questions in French with the support of the French Studies and Modern Languages Department was one more task we had to take to undertake.
- Data gathering from the Human Resources Services and the Academic Affairs and Students Welfare Services as well as from the Library in order to prepare the Representativeness Questionnaire. The Representativeness Questionnaire is required to provide data for the

university population per group in order to evaluate the percentage representation of each group in the respondents sample and for making further analysis.

-At pre-survey stage library staff was asked to answer the questionnaire and make any suggestions for improvement both in wording and structure approach. Also pre-survey stage was important for having the first reactions and answers the first questions regarding its completion in real Greek academic environment before being finalized and inviting users for response.

### **3.8 Constraints**

The main constraints we had to face in this process include:

- The preparation took place mainly during summer period and this was a limitation towards involving and securing commitment by member of library staff.
- The continuing changes every time when there was a need for improvement and customization especially concerning the Greek language survey.
- Since this was a standard survey which has already been used in many libraries worldwide, no changes were allowed to fit local peculiarities even for the 5 local questions chosen. Therefore, there was no flexibility in the basic survey as this would have compromised the standardization and make comparisons and benchmarking impossible.
- The decision to run the survey in French language involved more procedures and delays for adjusting all relevant issues.
- The time differences caused a delay during preparation stages, especially in cases where the guidelines from LibQUAL+ team were for moving to the next step.

### **3.9 Participation**

An important issue was the selection of what considered, being the most appropriate sample. The choices were between choosing a probability sample, and census of the population. The whole population was targeted as our sampling frame. Since this was the first time that the



library conducted this kind of research, the evaluation from all disciplines and categories was desired, and finally the library felt that it had to give everyone the opportunity to express his/her opinion.

### **3.10 Duration of the Survey**

The survey was open for three weeks (28 Sept. – 18 Oct. 2009) which was the minimum period suggested and the participants had access to the questionnaire through the UCY library homepage.

### **3.11 Improving the response rate**

We felt that being in an environment where assessment is not a day to day practice we had to market the event, inform people and promote the questionnaire and manage to pursue them to answer it. To do so we used various tools, the main of which are listed below:

- Posters at the University campus and buildings
- Announcements through the radio station, the newsletters
- Official Invitation and sending often reminders
- Student and faculty involvement
- Electronic and daily Incentives Prizes
- Commercial involvement and support
- Calling for Student union support with special announcements in Blackboard, Homepages and general to all UCY Portals
- Flyers
- Email correspondence
- Official involvement of Library Committee, Senate, Rectors Council,
- Sms sent to more than 5500 students' mobile phones
- Faculty staff involvement in areas where their scientific field was directly related to the our research, e.g. business, marketing, services operation,
- Library staff involvement

Of great importance and help was the business sector, which provided us with gifts that were included in a draw. Some of these companies include, Austrian Airlines, Zorbas, Kantzellaris bookstore, Anatypo stationary, Hilton Hotel, Lordos Beach Hotel etc.

4. SURVEY RESULTS

This Chapter focuses on the analysis of the survey results. Special attention is given to analysis according to different groups. Specific results regarding the different SQ dimensions are presented next. The Tables referred to this Chapter refers to can be found in the Appendixes presented at the end of the document.

4.1 Survey Response Rate

As stated above the research was applied to the whole University of Cyprus population and the respondent rate was as shown in the following table. The Appendix 1 and Appendix 2 also present the respondent data related to the library branches used most often, the full or part time students, rate as well as the sex profile and academic discipline rates.

The following table shows survey participants according to group category and academic discipline.

	UNDER-GRADUATES	POST-GRADUATES	ACADEMIC STAFF	LIBRARY STAFF	STAFF	TOTAL
Population						
- N	4565	1509	501	50	400	7025
Respondent						
nt - n	988	364	129	37	56	1574
%	62,8%	23,1%	8,2%	2,4%	3,6%	22.4%

Table 2: Survey participants according to group category and academic discipline.



The LibQUAL+® survey is a multidimensional survey measuring various parameters in three main groups, the Affect of Service, the Information Control and the Library as Place. It measures the perception of the performance of the library by its users Vs their minimum and their desired level of expected performance.

When evaluating the results, it is of essence to concentrate on what is more important for the organisation, despite the fact that all the parameters of the results can provide useful insights for the improvement of the organisation. It is therefore of more importance to see how the most important users of the library evaluate its performance and then look at the perceptions of other less important groups that are not using the library on a day to day basis. In this case, it is important to concentrate first on the perceptions of the students and the academic staff of the University.

Additionally, the evaluation of the gap between the Desired and the Perceived performance (Superiority Gap) is more important when the gap between the Minimum and the Perceived Performance (Adequacy Gap) is positive. In simple words, when the Adequacy Gap is negative, as it is the case with the UCY library, which means that on average the users perceive that the performance of the Library is below the minimum they expect, the discussion about the Superiority Gap becomes by definition less relevant.

The results in Table A8 show clearly that the perceptions between the different user groups vary according to their expectations from the library. Depending on what each user group perceives more important in the service they get from the library and their group needs, they tend to evaluate the performance of the library accordingly. Some questions are more relevant to specific groups and therefore their evaluation should also be perceived as more relevant.

It is also obvious that the academic level and the experience of each group affect their evaluation. Therefore, the postgraduate students and the academic staff, having more experiences with other academic libraries, usually in larger and more mature academic institutions, are more critical in their evaluations. And their perceptions should be considered in that sense as more relevant for the improvement of the UCY library as by definition they are comparative and more informed evaluations.

The results at a first glance show the following:

1. The higher the academic level and experience of the users, the higher the expectations from the library and the highest the perceived Adequacy Gap
2. All the user groups, except the library staff, consider that there is an Adequacy Gap.
3. Despite the fact that the library staff have high Minimum Performance standards from the library, they consider that their performance meets this Minimum Performance standards (no Adequacy Gap on average) but rather high Superiority Gap
4. The library staff sets the highest Desired Performance expectation
5. The Library as Place group of questions shows by far the highest Adequacy Gap and it is consistently the weakest point of the library among all the user groups and the three groups of questions
6. The library staff considers basically that there is only Adequacy Gap with regard to the building facilities of the library. They rate their performance (Affect of Service) and the material of the library (Information Control) higher than their perceived Minimum.
7. The students and the academic staff rate consistently the performance of the library below the minimum expected
8. The other staff of the university for some parameters they rate the library better than the minimum expected but overall, as an average, they rate the library lower than the undergraduate students
9. The undergraduate students in general give the highest rating to the library among the most relevant users.
10. The postgraduate students and more the academics give in general the lowest ratings to the library.

One of the most important observations from the results is that the library staff considers that the library falls below minimum expectations only concerning the building facilities of the library. It is a fact that the library is missing a dedicated library building and it has to operate in remote locations and in mostly non-convenient settings. All user groups indicate that in their responses. And in fact, this is a parameter that is out of the control of the staff. They are not responsible for the absence of a dedicated building. Almost all the other parameters regarding the Affect of Service and the Information Control are issues that the staff can change and improve. There is therefore, based on the results, a possibility that the library staff blame the absence of the proper building facilities for all or almost all the problems of the library.



Another important observation for the Information Control section which is relevant to the information resources of the library and the accessibility to the users, is that the library staff consider that the performance of the library exceeds the minimum requirements, while all the other relevant users (students and academics) do not agree so. And the Adequacy Gap grows moving from undergraduate students to graduate students and to the academics. This is an area where the staff should concentrate on real improvements since it considers the core of the role of the library to provide timely and easily accessible information to its users. And although the staff feels that the library meets the minimum expectations on this core service, the users almost consistently feel that the library falls below the minimum expectations.

Finally, for the Affect of Service section which relates mainly to the adequacy of the staff in terms of knowledge, responsiveness, dependability, behaviour, care to the user and willingness to serve, although the library staff rates its performance above the minimum required, the majority of the most relevant users (students and academics) rate them below the minimum. In fact, only the undergraduate students rate on average marginally above the minimum the staff. The academics and more the post graduate students rate the staff below the minimum expectations. Again, this is an area of concern for the staff (in fact it should be the first target for improvement) as these are the parameters directly related to them and almost in their full control.

#### 4.3 Dimension 1 -Affect of Service

In order to establish the dimensionality of SQ in the setting of the library of the UCY we subjected the responses regarding perceived performance to multivariate factor analysis. Appendix A7 shows the factor loadings obtained after VARIMAX rotation. The results suggest the presence of 3 dimensions of quality in the UCY setting as follows according to the 22 core items of the questionnaire:

- 6,11,13,15,18
- 3,17,21,8
- 2,10,4,5

This result is in agreement with the work done when the original LibQUAL was developed. The dimensions correspond to the dimensions of Affect of Service, Information Control, and Library as a Place. We next discuss the most important observations for each of the dimensions.

For the dimension of Affect of Service, the most important observations are:

1. The library staff instil confidence in users

2. Staff can give more individual attention to users. In fact the staff itself recognises this more than the rest of the users
3. Apart from postgraduate students, the rest of the users and the staff considers that the staff is not far from lowest expectations in terms of consistent courtesy
4. Academics and post graduate students felt that the staff does not show the necessary readiness to respond to user enquiries. This must be related to the level of enquiries (more complicated enquiries by advanced users) and the highest expectation for service from more advanced users.
5. Academics and post graduate students consider that the staff falls short of knowledge to answer user questions. This parameter, like the above must be related to the level and complexity of the questions and the highest service expectations
6. All relevant users (though with variations) do not consider that they receive a caring service. On the contrary, the library staff considers that it provides a caring service.
7. All users (post graduate students at the most degree) do not feel that the staff adequately understand the needs of the users. The library staff believes the opposite
8. Academics and post graduate students do not feel there is adequate willingness to help users. On the contrary, the library staff believes rather strongly that it shows such willingness
9. Academics and post graduate students do not feel that the staff is adequately dependable in handling users' and service problems. The library staff also agrees with this evaluation

Overall, the message from this section is that the relevant users are not as satisfied as the library staff is, and these relevant users rate the library consistently lower than the staff. The library staff has to learn to listen to their users and consistently improve their service to the users, their knowledge level, their responsiveness, dependability, behaviour, care to the user and their willingness to serve. And make also the users feel they are getting a good service that exceeds at least their minimum expectations.

#### **4.4 Dimension 2 - Information Control**

The most important observations are:

1. All relevant users do not feel that they have adequate remote access to the electronic resources of the library. And the higher the level of the user, the highest the Adequacy Gap. The library staff strongly believes that this service is adequate



2. Academics and post graduate students are not happy with the user friendliness of the library website. The library staff feels that the site meets the minimum requirements
3. All relevant users do not feel that they have adequate printed library material for their work. The library staff feels that the printed material meets their minimum requirements
4. Academics and post graduate students are not happy with the electronic information resources from the library. The library staff feels that the electronic information resources well meet the minimum standards.
5. All relevant users do not feel that the library provides adequate modern equipment for easy access to needed information. The library staff feels that the equipment is modern and adequate and allows easy access to needed information
6. All relevant users do not feel that the library provides adequate and easy to use access tools that allows the users to find things on their own. The library staff feels that these access tools are adequate.

Only academics feel that the library does not make information easily accessible for independent use. The library staff and the students feel that the information is made easily accessible for independent use. This must be related to the level of the information for the specific users and the highest expectation for service from more advanced users.

Only academics feel strongly that the library provides print and/or electronic journal collection required for their work. This must be related to the level of the information for the specific users or to their knowledge for appreciating the scientific level of the electronic journal provided since most of them are their suggestions according to material ordering policy.

The message from this section is that the relevant users of the library in general do not consider that they get the minimum expected level of service in terms of material made available to them and its relevant accessibility. And this finding is opposite to the library staff beliefs. The problem becomes more important in relation to the high academic level of the users. This shows that the library is more geared to serve students and less the more advanced academic users. This is naturally expected in a young university that is now strengthening its postgraduate courses. The expectations are also raised for more advanced users that have more experience with other more mature academic libraries in larger and more mature academic institutions abroad.

The most important observations for the dimension Library as Place are:

1. All users and mostly the library staff consider that the library as a place does not inspire study and learning. The library staff actually feels this inadequacy much more than the users
2. All users and the library staff but mostly the academics do not consider that the library is a quiet space for individual work.
3. All users and the library staff but mostly the academics do not consider the library as a comfortable and inviting location.
4. All users and the library staff but mostly the academics do not consider the library as a haven for study, learning or research
5. All users but mostly the library staff and the academics do not consider the library as a space for group learning and group study.

Although it's a fact of life that the library is missing a dedicated building and that as a result it uses non-convenient remote locations, the observations made in this section are not just about the buildings. Comments also relate to the order in the operations of the library (quiet, location, space for group learning etc.). These are issues that can be fixed even at non-perfect facilities and the library staff should concentrate in fixing these parameters that can be controlled.

In addition to the 22 standardised questions of the survey, 5 local questions were used to measure local specifics that the library chooses to evaluate through the survey. In general there is a similar trend with the rest of the survey with the library staff to rate the library performance above the rest of the users and more specifically the most relevant users. In addition, again the postgraduate students and the academics are more critical and rate the performance of the library lower than the rest of the users.

The postgraduate students, the academics and the rest of the staff consider that the library web page is not user friendly. The undergraduate students feel that the website is marginally better than the minimum accepted, but the library staff believe that the website is significantly above the minimum accepted.



All the users consider to a lesser or a greater extent that the working hours of the library are not so convenient. The academics are the most critical in this parameter. On the contrary, the library staff consider that the working hours are convenient. The Interlibrary Loan service seems to be accepted as efficient by most users. Only the academics find the service slightly below the minimum expectations. This may be a result of varying needs between the users. The students believe that the library does not sufficiently add resources to library collections on request, whereas the academics, the library staff and other staff find the performance for this parameter sufficient. All users except the general staff consider that the library does not sufficiently teach the users how to access, evaluate and use information.

The general suggestion to the library staff remain the same as with the rest of the survey. They need to listen to their users and try to improve the services offered. An important finding of these extra questions comes from the last question. The library staff, with the highest Adequacy Gap among all the users, consider that the users are not sufficiently taught and trained to use the library resources. This is an important acknowledgement by the library staff as the lack of training of the users may be one of the reasons for lower ratings in the rest of the survey. And being an issue that is purely under the control of the management and the staff of the library, it naturally comes out as the first thing that it should be fixed. If you manage to have informed users who have easy access to support and personalized support where possible, then the overall ratings of the library should be expected to improve.

#### **4.7 Analysis by Local Academic Disciplines**

Focusing on the results from the University of Cyprus departmental disciplines for the 22 core questions shown in Appendix F can someone easily realize that the Adequacy Gap is overall negative for all the parameters from most of them. The FREN and PHYS departments have the highest positive Adequacy Gap. Less but also positive Adequacy Gap appears also at EDU, ELEC, HIST, and SOC Departments. The rest of the departments consider that the Library services are below the minimum expected to all three dimensions of the survey

##### **4.7.1 Affect of Service - Evaluation from the Academic Departments**

For this dimension of the survey it seems that Library almost reaches its users minimum expectations with very small negative Adequacy gaps. The biggest ADGap appears for the questions about Employees understanding the needs of their users and Giving users

individual attention. Both parameters are important and are directly related to the performance of the staff and the service they offer to the users.

#### **4.7.2 Information Control - Evaluation from the Academic Departments**

For this dimension all the departments express their dissatisfaction from the library services either for the collection subject coverage or for the accessibility to the information resources both physically and electronically. The highest negative Adequacy Gap is related to the parameter "Making electronic resources accessible from home or office". So remote connectivity proves to be the weakest link, although we are in an era of connectivity, broadband communications and high speed connections.

#### **4.7.3 Library as a Place - Evaluation from the Academic Departments**

The evaluation results for this dimension show that this is the weakest area for the library. The high negative Adequacy Gaps for all questionnaire items expresses the users' strong need for improvements in library space facilities. In fact the highest shortcoming they indicate is the lack of space for group learning and group studying and a library that performs as a gateway for studying, learning and research. Library's location and set-up have also been negatively criticised.

#### **4.7.4 Local Questions Evaluation from the Departments**

For the local questions, it is obvious that the highest shortcoming indicated by the departments is the poor Library program aiming to teach them how to access evaluate and use information. The users also rate negatively the service hours of the library which are found not satisfactory and convenient and the parameter resources added to library collections on request. On the other hand, users consider the interlibrary loan/document and delivery service as an efficient one and they are rather satisfied with the ability to navigate library web pages easily.

#### **4.7.5 Reasoning some of the Results**

One cannot provide single dimensional reasoning for multidimensional conclusions. Having though the experience and the day to day friction with the happenings in the



library settings, one can connect some results with events and omissions that seem to be related. Some of these observations (though definitely not exhaustive) are given below. This kind of observations provides also the background for some of the suggestions for the improvement of the library in the future.

The FRENCH Department, as mentioned above, has given a high positive Adequacy Gap. The Department is an example of which all of its students have attended a series of organised library seminars in their first year as students in the University. The faculty staff has been actively involved in this process and encouraged and monitored all the students to participate in these seminars. As part of their mandatory courses students have also been graded for their participation to these seminars raising the Information Literacy to a core course in their academic program of studies. The results of this effort are very possible that has affected their knowledge and appreciation of the Library and its services.

The HISTORY Department also shows positive Adequacy Gap which can be attributed to the fact that the Department has as a dedicated special research library with its own rules and specialized staff. This gives to the students of the Department a more specialised and personalised service catering for their specific needs. It is possible therefore to have evaluated their own part of the library and not so much the services of the library in general. The vary results of the History Department may indicate that such satellite libraries, when kept under good control and in line with the capacity of the library to serve them properly, may prove to be a good way to develop the library in the future.

The PHYSICS Department is a third department that has expressed a positive Adequacy Gap. There is no direct event or omission that can be easily associated with these results. It must be examined further to see why students and academic staff of this department are overall more satisfied with library services quality than other departments.

## **5. SUGGESTIONS FOR IMPROVEMENT**

Apart from knowing how the organization is doing at a certain point in time and according to the perception of its users, the biggest value of such surveys is the chance they give you to think and put in practise measures to improve the performance of the organisation. Some suggestions, aiming at improving the performance of the library in the future, are explained below.

### **5.1 Affect of Service**

#### **5.1.2 Library staff development**

The Library staff has expressed rather high minimum expected levels of service for the parameters related to the Affect of Service. This shows the importance they place on these parameters (which is higher than the main users of the library) and their willingness to achieve more in library service quality and enhance Library performance standards. The staff needs however to realise that the main users of the library do not consider that they get a good service in these parameters. Therefore, there is enough room for improvement in this important area of the library performance. To enable the development of the staff in this area it will require the support of the University authorities and any possible facilitation for the further development and improvement.

#### **5.1.3 Training the Library Staff**

The library staff must be trained or retrained on the main service principles in order to acquire the capabilities for handling any library user as a customer that deserves the best treatment. It will need to learn to give attention to the details that usually turn an average experience to a memorable one. A suggestion is to run a special series of seminars or develop a crash-program in cooperation with the Department of Public and Business Administration for developing these special skills. In fact, a crash program may be developed as a pre-requisite for new employees



joining the staff before they are left to work with the users. In addition training and development is an ongoing task. It does not finish nor is limited to a single course. Skills need to be brushed and knowledge has to be remembered.

#### **5.1.4 Better Staffing and Utilisation of Staff**

It is well known that human resources are the most vital assets of a company. An organisation recruiting average people cannot become much better than average. The staff qualifications, competencies, experience and certainly their personality, are the basic elements that the library needs for enhancing its service quality. Therefore the library should avoid the trap of getting people that are limited in capacity especially at key positions while expecting to offer exceptional service. Exceptional service cannot be offered by average people. Rotating staff is also a useful procedure to allow more well-rounded and multi-skilled staff. Many of the existing staff members have been doing the same task without any change for year (some up to 16 years). It is tough to expect innovation and new initiatives from people who got so used to do a certain job in a certain way for so long. Long stay in a position may enhance specialisation but its possible that it slows down innovation and improvement.

#### **5.1.5 Liaison/Subject Librarians**

Library will have better results if it chooses to apply the model of Departmental Liaison/Subject Librarians for all the academic departments. This means that there will be specialised and dedicated Librarians responsible for each Department. These employees will be the intermediary between the academic staff the students and the Library. They should also be specially educated and capable employees responsible for any bidirectional communication and for keeping both sites aware of any relevant developments in order to proactively provide the necessary tools for improved service. This will solve many of the Affect of service issues as the users will be getting more individual and more specialized attention. It will improve the trust between the users and the staff as the specialized staff will be able to give specialized support and will give a general picture of a well informed and supportive service.

## **5.2 Information Control**

### **5.2.1 Information Literacy**

Library has to follow a new strategy for making library services known and relevant for each user group according to their experience, knowledge and academic needs. It is obvious that aware and more developed users have higher expectations from the Library services. And the library should be in position to cater for the varying needs of its users. For example academic staff and postgraduate students are more demanding and hard to be satisfy and they feel that the library cannot cater for their needs. Their previous experience in other more mature universities abroad gives them the ability to compare and demand better treatment as well as better service quality.

Library staff answered the questionnaire as a different user group category. Their feedback reflects the direct knowledge they have about the library collection and its accessibility. They know well that the information resources of the library in the scientific issues are the best existing in Cyprus or even in the general Greek academic environment. The fact though that the rest of the users are not so aware of the depth of the information resources apparently reflects the rather poor dissemination of this knowledge in the rest of the academic community. This makes it very obvious that a certain area of improvement is the proper and effective “marketing” of the library services to the target users. And of course a good way to do so is to revive and strengthen the introductory seminars to new comers in the academic community (students, researchers and academics).

Undergraduate students (especially Cypriots) have the least experience in using library services and this is a result of the lack of library culture in Cyprus. Especially the first year students at the beginning of the academic year do not have any experience with the library and its services. Therefore, their feedback to the total of the survey is not really relevant as they do not have an informed opinion. This must be taken into account when running a similar survey in the future in order to either subtract their data from the sample or have a separate set of questions specifically targeted to them. Their feedback will be useful if they are asked about their first impressions of the library, the building resources of the library, the feeling they have when they get there (is it inviting or not?) etc.



### **5.2.2 Collection Management Policy**

The material collection adequacy is another issue raised as a shortcoming from all library users. Library collection management policy has to be re-examined in order to cover all the user groups' needs and not only those of the academic staff, even though their suggestions and orderings are directly related to the academic programmes offered by the university. Especially postgraduate students that are involved in varying research initiatives must have special budgets for ordering library information resources necessary for their research. In many cases, books are needed in more than one copies to cover large audience lectures. Now, economic but also space limitations block the purchases of handbooks in more than one copy and this certainly dissatisfies many users who cannot have access to necessary material. The policy needs to be re-examined with an aim not only to have more options but also to have enough pieces of material to satisfy the needs of the users. It's easy to drop into the trap of going always for the additions of new publications to increase the coverage of the library but we should always keep in mind that the success of the library is not only related with that but also with the ability to cover the real needs of its users.

### **5.2.3 Implementing a Special Tool for Collection Development**

Information control has been a major issue for all kind of libraries since high budgets are devoted to collection development and its accessibility. For this purpose special tools have been developed for evaluating a collection and present possible gaps of subject coverage. A possible suggestion is to run the Conspectus tool which has been already used in several libraries for detective any missing material for a special scientific area. This will also allow the library to optimise its purchasing and ensure that each scientific area is sufficiently covered. It will also solve the problem of specialised informed users that know their area very well and are up to date to find the library unprepared in their specific demands. It will strengthen the trust that these specialised users will have in the library and improve the general image of the library in their eyes.

### **5.2.4 Enhancing Library Seminars for Users**

From departmental evaluation it is clearly shown that in the cases in which students were driven to attend the special library seminars, they have rated the library services higher. These results are a proof that aware users tend to highly appreciate the collection and

services of the library. The example of the French Studies and Modern Languages Department also strongly indicates that seminars give even better results when they become a requirement to attend within a specific course framework and if attendance is associated with the grading of the courses. In addition to the seminars an open day event for university members in order to inform them about the services and collections that the university of Cyprus provide could be a step forward keep them aware and familiar with library's activities.

### **5.2.5 Advancing and facilitating ILL service**

Since no single library can sufficiently have all available resources, the cooperation agreements with other peer institutions must be encouraged and supported. Library users, mainly academic staff and postgraduate students, must be provided with special budgets for making orders of material through ILL services avoiding today's complicated and bureaucratic procedures. Things must be simple, effective and efficient. In this manner the library will be seen as richer and more complete without the relevant associated cost. It will become bigger by being more efficient.

### **5.2.6 Electronic Access**

At this new technological era library services must be adjusted to the users' needs for remote accessing of the information when and where the users believe is more convenient for them. The traditional way of using the resources at library's physical premises has now being replaced by proper and updated wireless network connections at the University of Cyprus. The University has to create the soonest the basic technological infrastructure for offering to its user these facilities. VPN connections or connections via Athens Login to all members must be easily provided and continuously supported.

Also multiple and simultaneous searching of many search engines in a user friendly environment must be acquired in order to make the electronic information resources easily and effectively accessed, to compete with Google or Yahoo gateways.

The library also has to follow the trends and utilise the most popular communication means used by its users (e.g. Facebook, Second Life, web2).



### 5.3.1 Space in New University Campus

It is generally and clearly proved that users are urging for better library premises for individual or group studying. The library, apart from its role to host and secure information material has also to provide facilities for communication among its users and also be part of their socializing. This dimension is almost completely lost due to the lack of space, to the many and remotely branches with inconvenient operations but mostly due to its complete absence from the new university campus area. While the life of the University is slowly transfused from the old to the new campus, the library remains in the old campus and has no presence in the new campus. This cannot continue for a long time without detaching the library from the life of the University. Until the new library building in the new campus is finished, the University has to find ways to provide a light version of the library services at the new campus. It also has to ensure that the new library building is pursuit the soonest before having almost all the students in the new campus without a proper library in the area.

### 5.3.2 Improving Existing Premises

The management of the library has an important role to play as it has to do the best in the existing circumstances without using the absence of better building facilities to excuse all the shortcomings of the library. Existing facilities need to be stretched in creative and practical ways to improve the utilisation of the premises. Better arrangements and better materials will help to reduce noise and provide more inviting group or individual places for studying or learning.

### 5.3.3 Extending the service hours

According to the majority of library users, service hours must be extended further during working days and weekends. This can be done on a trial basis during academic semesters and also services can be differentiated at different times of the day or night, e.g. only as a study area, self-service borrowing books, etc.

## 6. CONCLUDING REMARKS

This study provided a first assessment of the level of SQ, from the user's perspective, at the library of the University of Cyprus. The use of a standardized tool, such as LibQUAL, can deliver actionable results and the possibility for benchmarking the library's performance with other libraries.

An important outcome from the results of this study is the identification of the need to inform and teach the target users of the library of the resources available to them and how they can access and utilize them to their benefit. The library needs to promote itself, needs to market itself as a brand and make its attributes known to the target audience.

One can argue that this issue is under the control of the management and the staff of the library, and it naturally comes out as one of the first things that should be fixed. Our study identified a number of areas that require immediate attention, including the need to inform the library's customers and provide support and personalized service where possible.

In addition, equally important is the training or retraining of the staff in customer service, appearance, face to face support, problem solving, and communication skills. Again, this is purely an issue under the control of the library and the university's top management. We believe, and our study clearly points to that direction, that staff development should become a priority for the library. In fact, if the library is to raise its level of service and cater for the needs of a vibrant and growing academic community it should look on how it compares with more advanced institutions in terms of information resources and its availability to the users. So benchmarking after best practices should become an ongoing process for the library. Our study provides the first steps in doing so.

Our study took place under the bigger umbrella of the EFQM model. The adoption of the EFQM model in the management of the library, which is currently under development, is only the first milestone towards a long, but rewarding, road to service





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APPENDICES

Appendix A: Survey Population and Overall Results

Appendix A1  
University of Cyprus Population Data

POPULATION DATA						
	UNDERGRADUATES	POSTGRADUATES	ACADEMIC STAFF	LIBRARY STAFF	STAFF	TOTAL
Population - N	4565	1509	501	50	400	7025
Respondent - n	988	364	129	37	56	1574
%	62,80%	23,10%	8,20%	2,40%	3,60%	22.4%

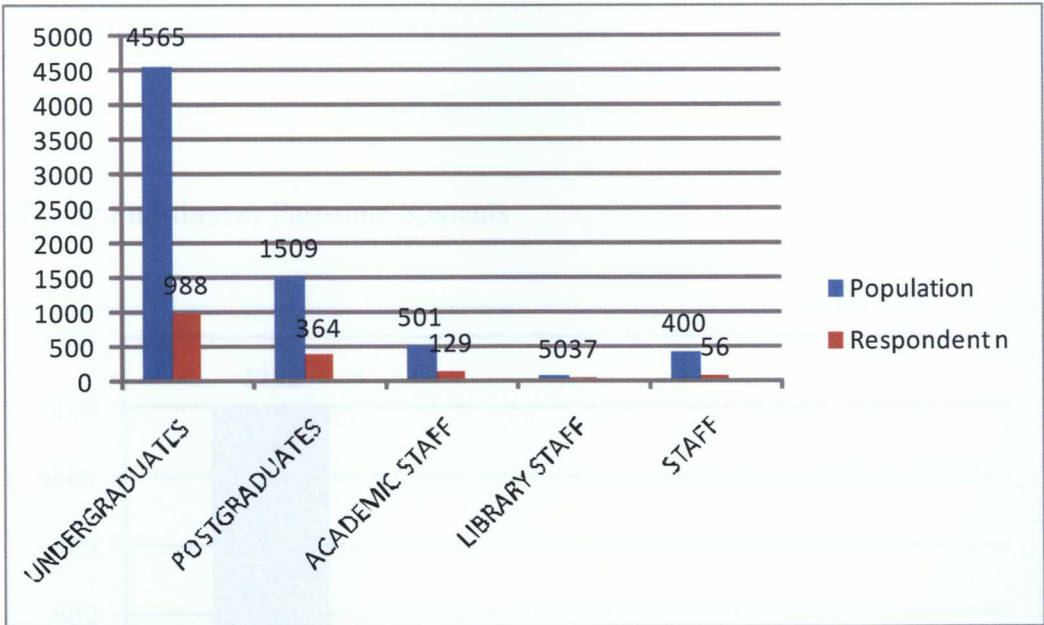
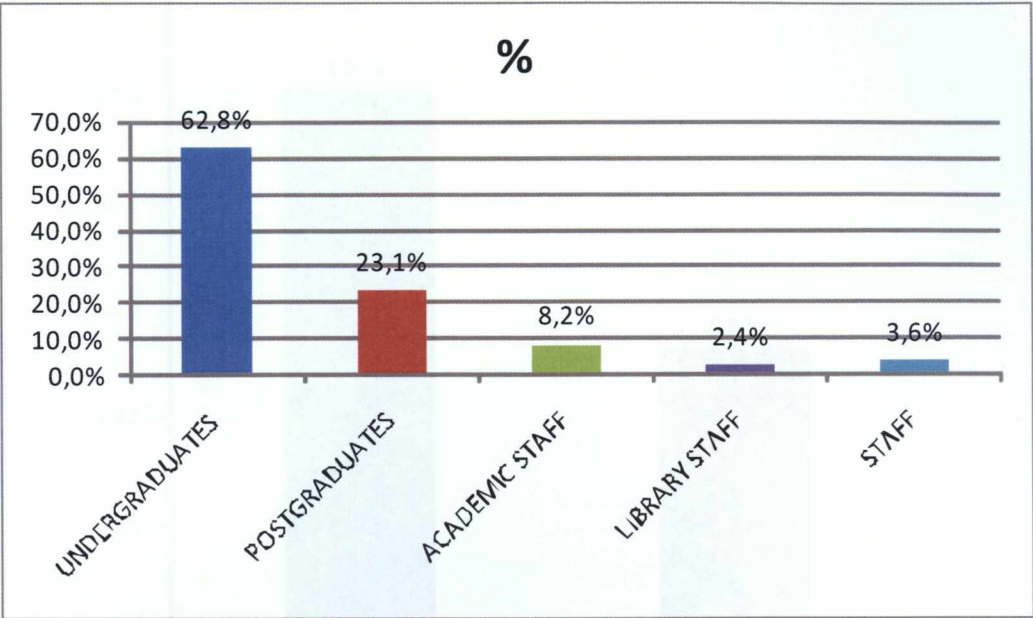
Appendix A2  
University of Cyprus Population by Discipline

Aprev.	Discipline	N	n	%
ARCH	Architecture	104	22	1,50%
BIOL	Biological Sciences	176	18	1,20%
BYZ	Byzantine and Modern Greek Studies	265	78	5,40%
CHEM	Chemistry	220	30	2,10%
CIVIL	Civil and Environmental Engineering	283	48	3,30%
CLAS	Classics and Philosophy	285	58	4,00%
COMP	Computer Science	456	85	5,90%
ECON	Economics	584	98	6,80%
EDUC	Education	899	191	13,20%
ELEC	Electrical and Computer Engineering	362	92	6,40%
ENG	English Studies	189	137	9,50%
FREN	French Studies and Modern Languages	150	47	3,30%
HIST	History and Archaeology	215	61	4,20%
LAW	Law	87	19	1,30%
MATH	Mathematics and Statistics	254	68	4,70%
MECH	Mechanical and Manufacturing Engineering	250	45	3,10%
PHYS	Physics	190	24	1,70%
PSYC	Psychology	271	63	4,40%
PUBL	Public and Business Administration	856	131	9,10%
SOCI	Social and Political Sciences	333	71	4,90%
TURK	Turkish and Middle Eastern Studies	152	58	4,00%
Library staff		50	37	74,00%
Admin. Staff		400	56	14,00%



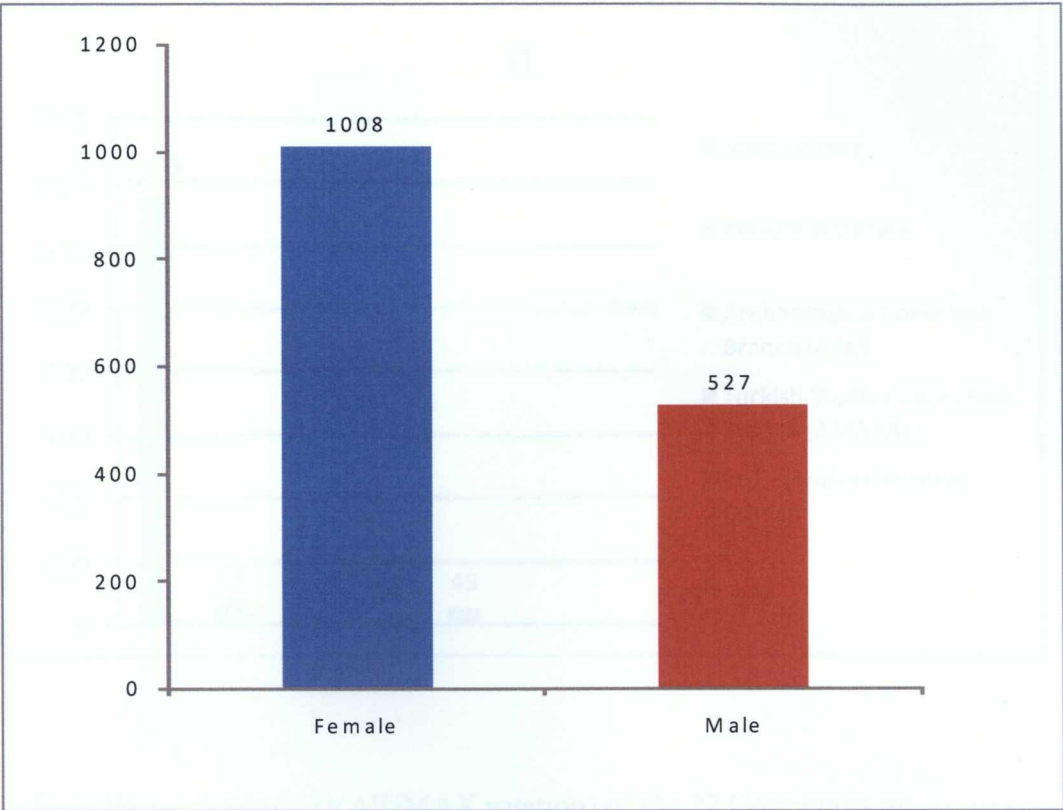
Appendix A3

Population and Observed Response Rate



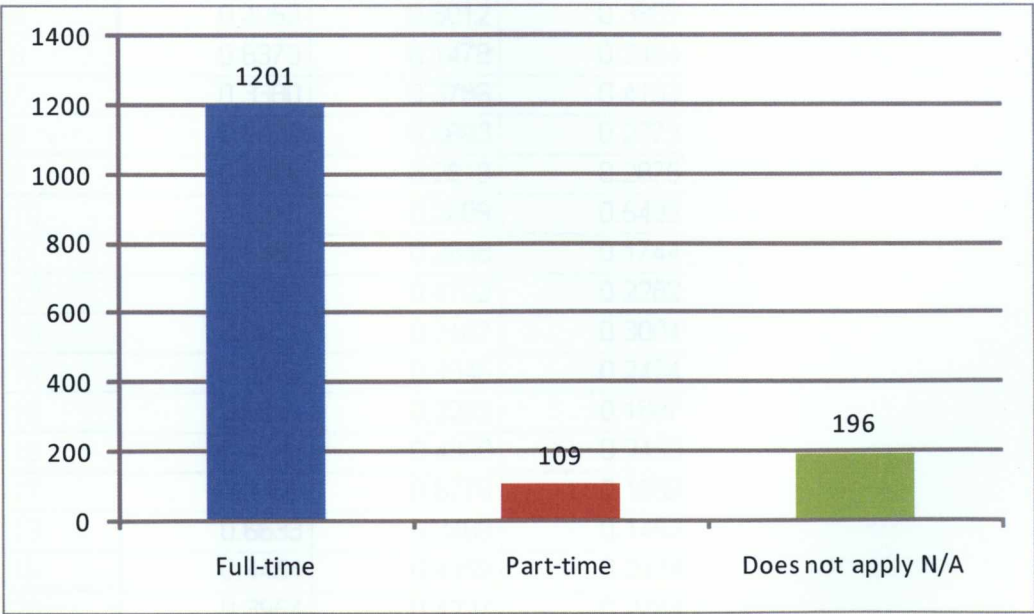
**Appendix A4**

Respondent Profile By Sex



**Appendix A5**

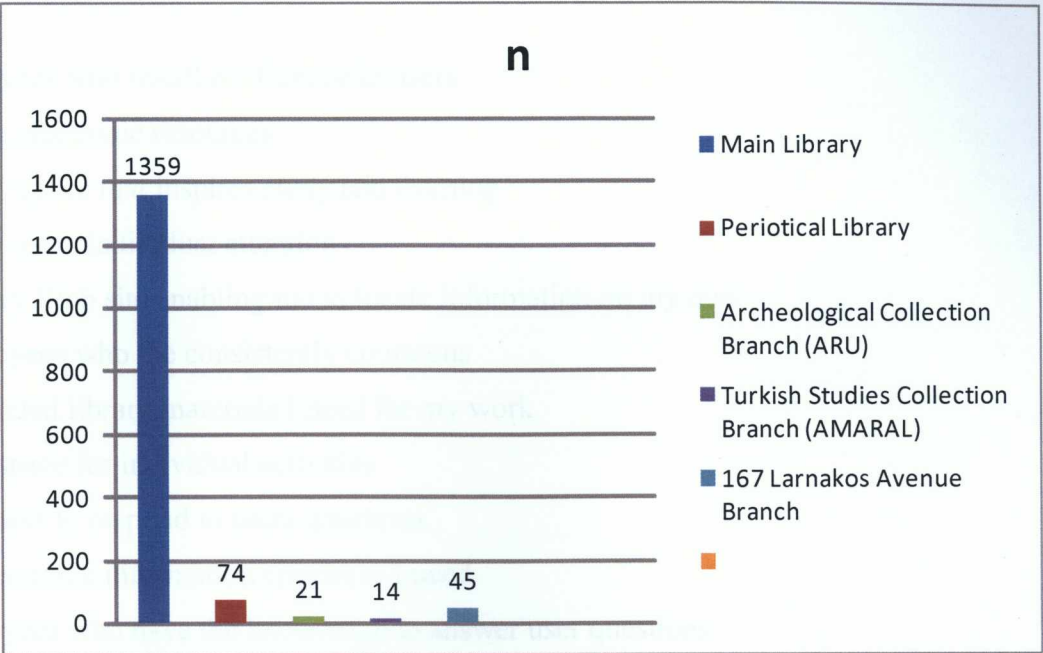
Respondent Profile by Full-time or Part-time Students





Appendix A6

Respondent Profile by Library Branch used Most Often



Appendix A7

Factor Loadings from Factor Analysis (VARIMAX rotation) of the 22 Core Items on Service Performance.

	FACTOR1	FACTOR2	FACTOR3
1	0.5310	0.1241	0.3530
2	0.2308	0.1773	0.5586
3	0.1157	0.5574	0.4174
4	0.4866	0.2616	0.3840
5	0.4053	0.3012	0.3889
6	0.6373	0.1478	0.2484
7	0.3380	0.3786	0.4152
8	0.1473	0.5693	0.2273
9	0.5876	0.2819	0.2875
10	0.3246	0.2889	0.5433
11	0.6460	0.2648	0.1744
12	0.3099	0.4702	0.2282
13	0.6011	0.2187	0.3004
14	0.4306	0.4945	0.2474
15	0.6811	0.3263	0.1887
16	0.4789	0.4380	0.2453
17	0.2486	0.6776	0.1559
18	0.6633	0.3469	0.1452
19	0.4454	0.4959	0.2134
20	0.3954	0.4227	0.2764
21	0.2621	0.5794	0.0722
22	0.5879	0.3686	0.1611

## **Appendix A8**

### **The 22 Core Items of the Survey**

- AS 01** Employees who instill confidence in users
- IC 02** Making electronic resources
- LP 03** Library space that inspires study and learning
- AS 04** Giving users individual attention
- IC 05** A library Web site enabling me to locate information on my own
- AS 06** Employees who are consistently courteous
- IC 07** The printed library materials I need for my work
- LP 08** Quiet space for individual activities
- AS 09** Readiness to respond to users questions
- IC 10** The electronic information resources I need
- AS 11** Employees who have the knowledge to answer user questions
- LP 12** A comfortable and inviting location
- AS 13** Employees who deal with users in a caring fashion
- IC 14** Modern equipment that lets me easily access needed information
- AS 15** Employees who understand the needs of their users
- IC 16** Easy-to-use access tools that allow me to find things on my own
- LP 17** A getaway for study learning or research
- AS 18** Willingness to help users
- IC 19** Making information easily accessible for independent use
- IC 20** Print and/or electronic journal collections I require for my work
- LP 21** Community space for group learning and group study
- AS 22** Dependability in handling users service problems



Appendix A9

Adequacy Gap. between Minimum and Perceived Level of Service

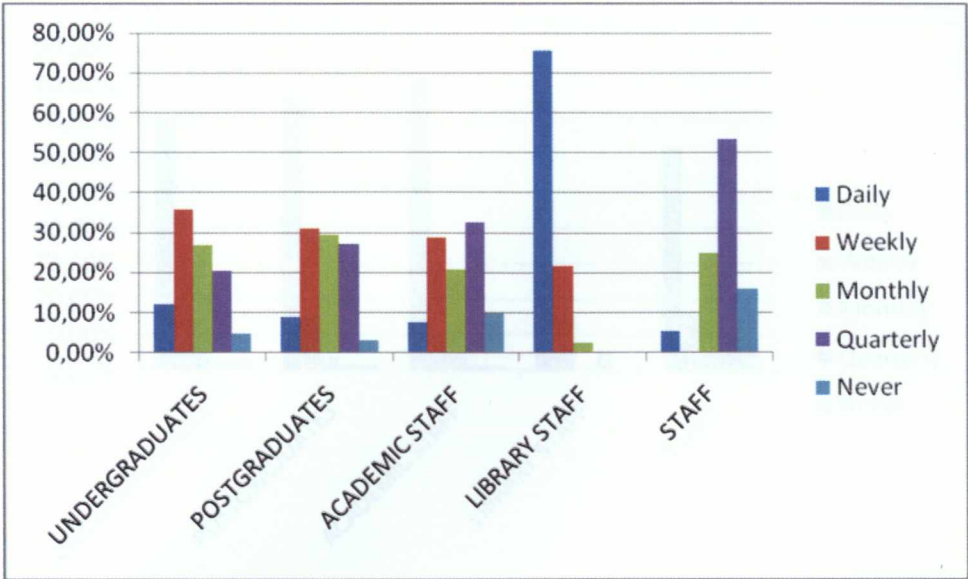
ADEQUACY AVG GAP						
		UNDERGRAD.	POSTGRAD	ACAD. STAFF	LIBRARY STAFF	STAFF
AS-1	Library staff who instill confidence in users	0,11	0	0,25	0,24	0,23
AS-2	Giving users individual attention	-0,15	-0,14	-0,31	-0,5	-0,03
AS-3	Library staff who are consistently courteous	-0,05	-0,25	0,05	-0,05	-0,09
AS-4	Readiness to respond to users' enquiries	0,09	-0,27	-0,56	0,22	0,14
AS-5	Library staff who have the knowledge to answer user questions	0,1	-0,2	-0,18	0,12	0,18
AS-6	Library staff who deal with users in a caring fashion	-0,05	-0,28	-0,05	0,35	0,05
AS-7	Library staff who understand the needs of their users	-0,15	-0,38	-0,14	0,24	-0,14
AS-8	Willingness to help users	0,06	-0,22	-0,18	0,5	0,17
AS-9	Dependability in handling users' service problems	0,05	-0,18	-0,26	-0,13	0,27
	AS	0,00	-0,21	-0,15	0,11	0,09
IC-1	Making electronic resources accessible from my home or office	-0,29	-0,49	-0,53	0,61	0,49
IC-2	A library Web site enabling me to locate information on my own	0,03	-0,37	-0,31	-0,08	-0,03
IC-3	The printed library materials I need for my work	-0,15	-0,54	-0,4	0	0
IC-4	The electronic information resources I need	0,04	-0,33	-0,53	0,92	0,43
IC-5	Modern equipment that lets me easily access needed information	-0,14	-0,46	-0,37	0,18	0,22
IC-6	Easy-to-use access tools that allow me to find things on my own	-0,21	-0,27	-0,43	0,15	-0,14
IC-7	Making information easily accessible for independent use	0,05	0,37	-0,56	0,38	-0,13
IC-8	Print and/or electronic journal collections I require for my work	-0,01	0,57	-0,72	0,76	0,23
	IC	-0,09	-0,19	-0,48	0,37	0,13
LP-1	Library space that inspires study and learning	-0,14	-0,69	-0,56	-1,28	-0,66
LP-2	Quiet space for individual work	-0,04	-0,86	-1,81	-0,67	-0,41
LP-3	A comfortable and inviting location	-0,24	-0,36	-1,08	-0,83	-0,81
LP-4	A haven for study, learning, or research	-0,19	-0,77	-1,8	-1,45	-0,58
LP-5	Space for group learning and group study	-0,69	-1,23	-1,7	-2,3	-1,26
	LP	-0,26	-0,78	-1,39	-1,31	-0,74
	OVERALL	-0,04	-0,38	-0,58	0	-0,06
L1	Ability to navigate Library Web pages easily	0,08	-0,09	-0,09	0,64	-0,31
L2	Convenient service hours	-0,13	-0,41	-0,74	0,14	-0,05
L3	Efficient Interlibrary Loan/ document delivery	0,17	-0,03	-0,14	0,86	0,13
L4	Resources added to library collections on request	-0,21	-0,63	0,12	0,39	0,35
L5	The library program teaches me how to access, evaluate and use information	-0,12	-0,35	-0,43	-0,75	0,1
	LOCAL QUESTIONS					



Appendix B: Library Usage Patern

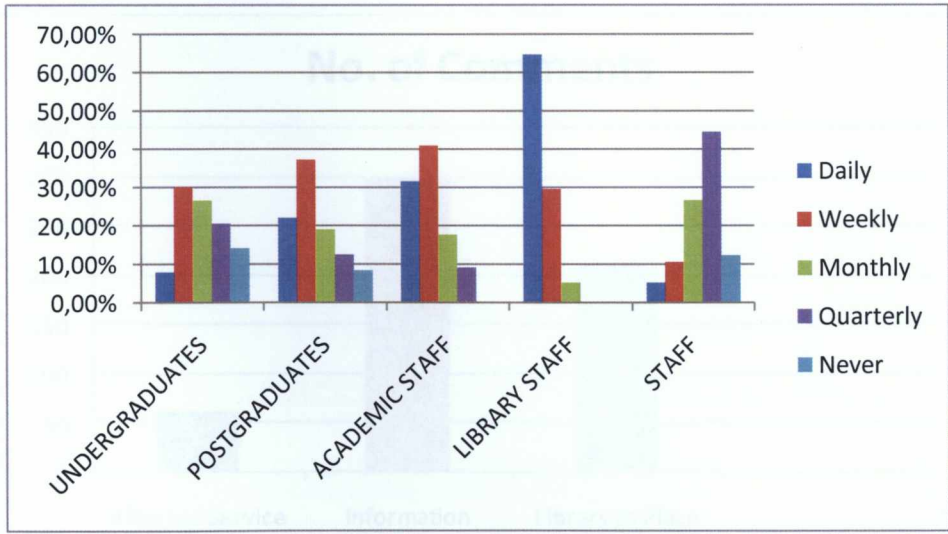
Appendix B1

How Often do You Use Resources within the Library?



Appendix B2

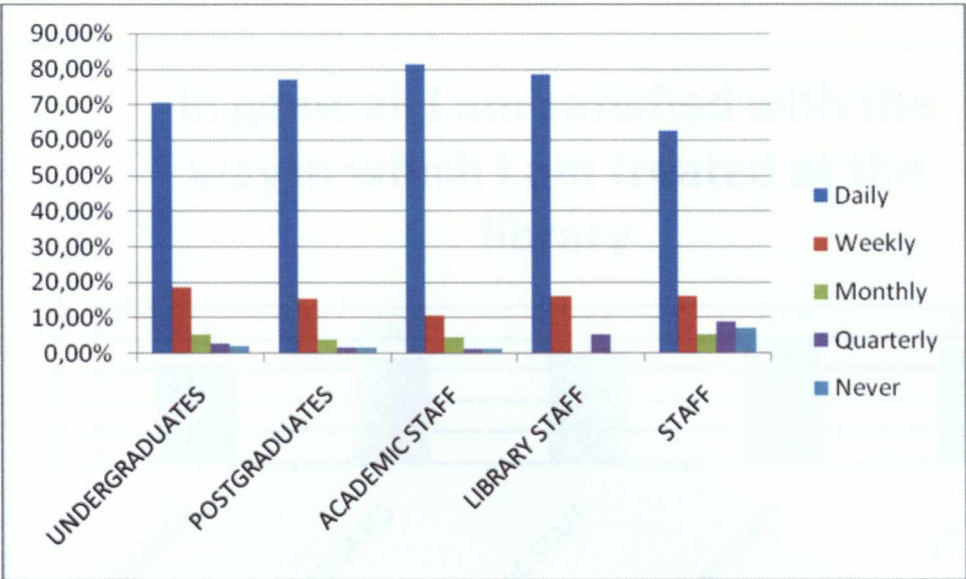
How often do you Access Library Resources through a Library Web Page?





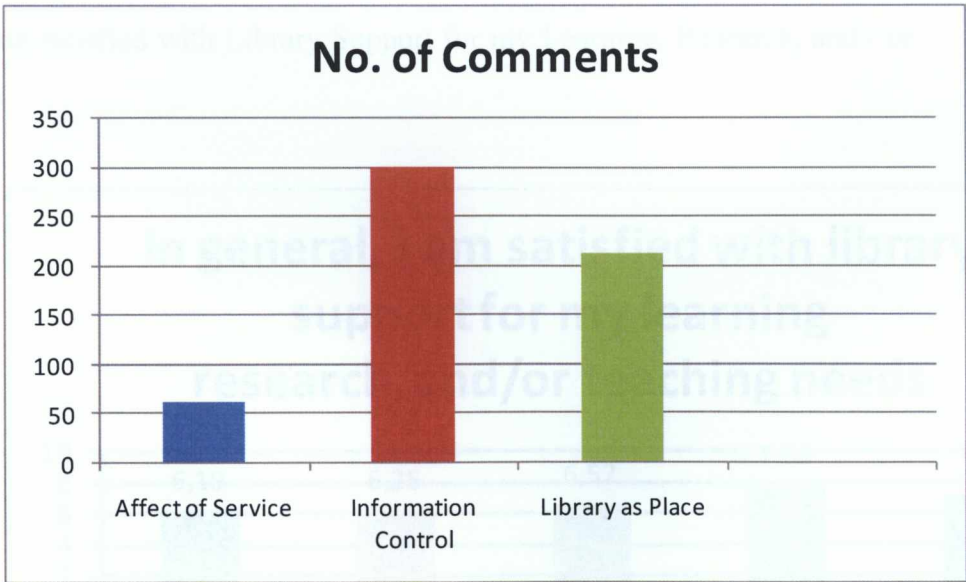
Appendix B3

How Often do you use Yahoo™, Google™, or Non-Library Gateways for Information?



Appendix B4

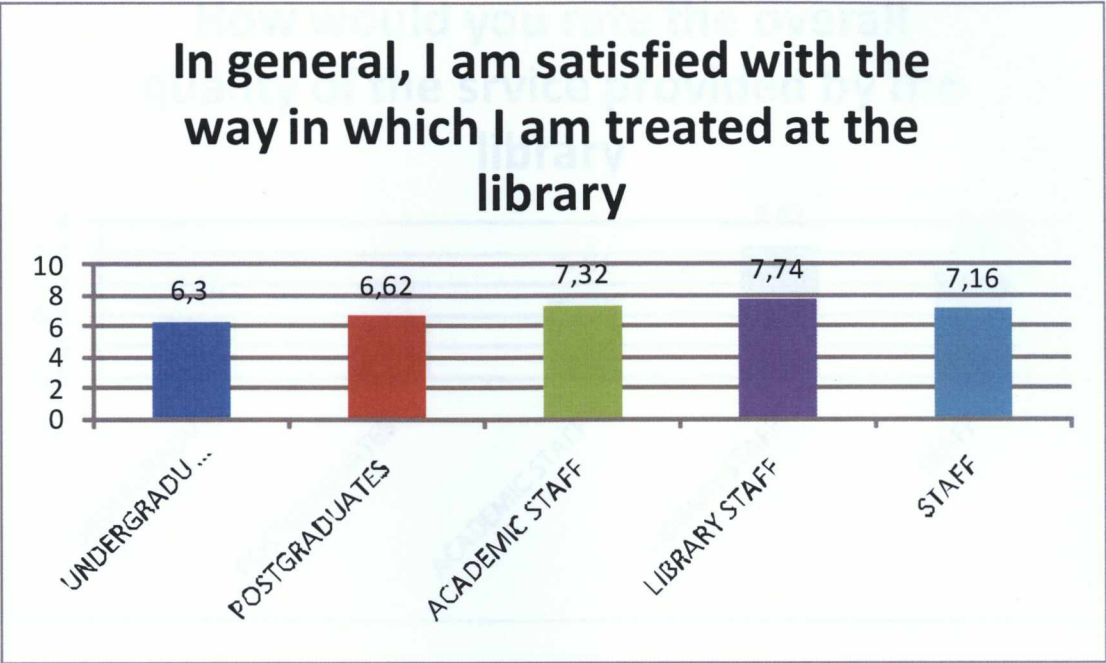
Number of Comments Given in Questionnaire Comment Box



Appendix C – Satisfaction Questions

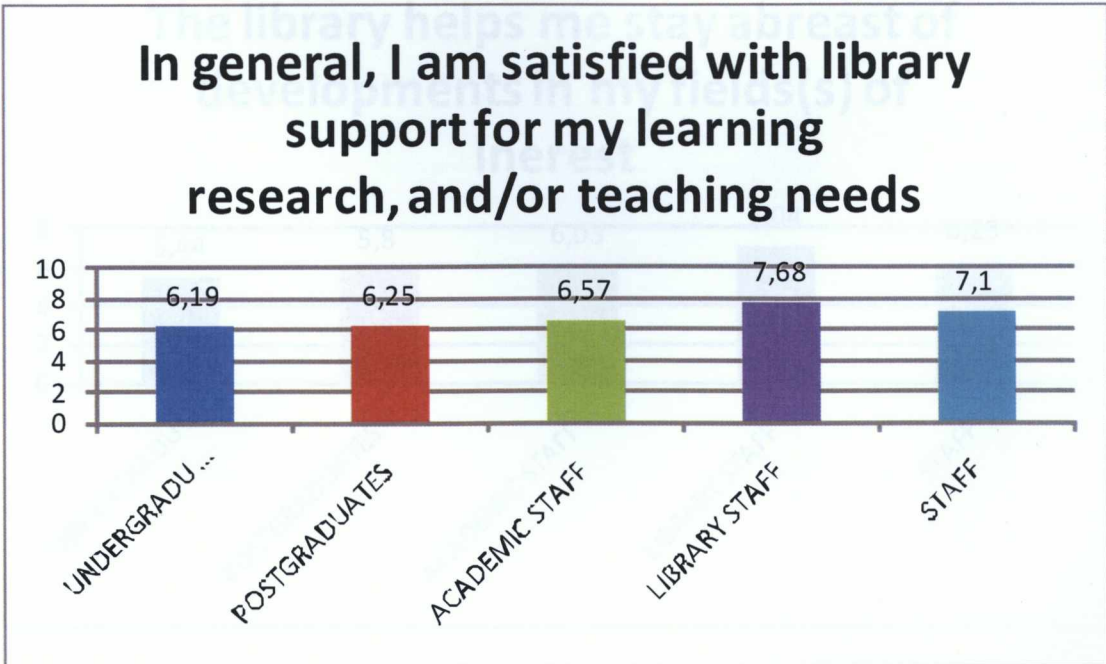
Appendix C1

SQ-1 - In General, I am satisfied with the way in which I am treated at the Library



Appendix C2

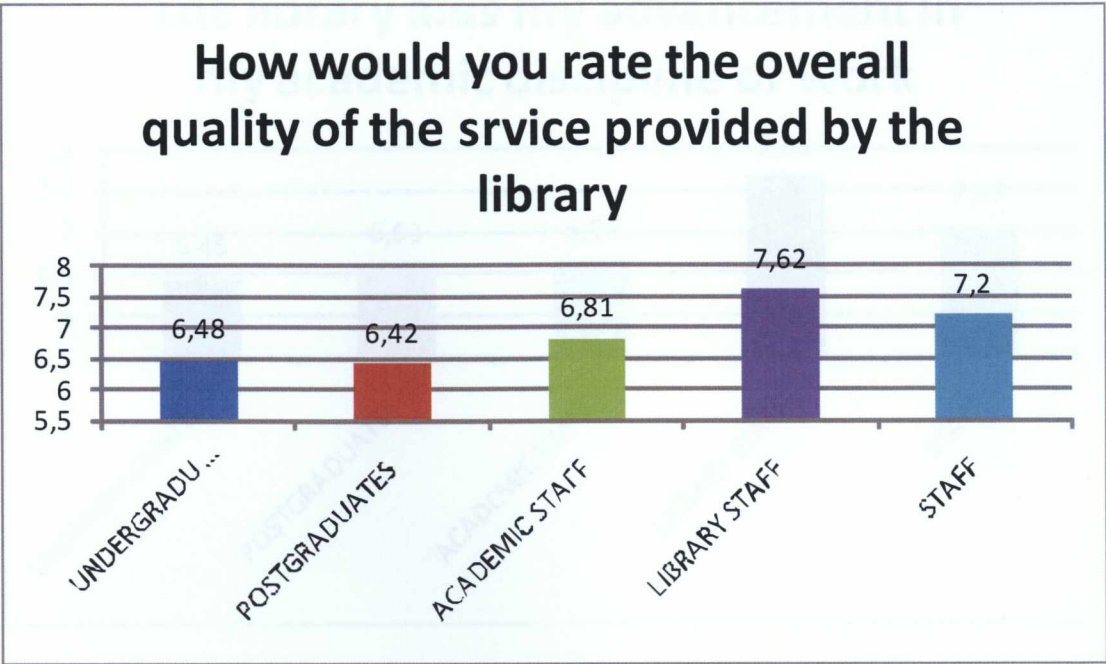
In General, I am satisfied with Library Support for my Learning, Research, and / or teaching needs





Appendix C3

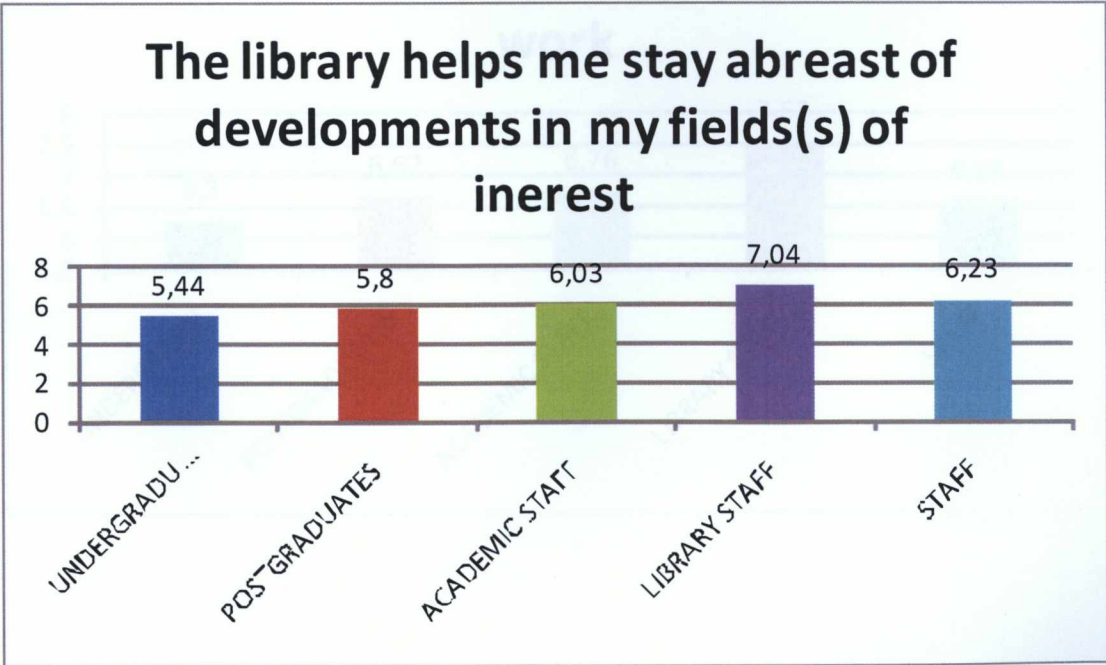
SQ-3 How would You Rate the Overall Quality of the service Provided by the Library



Appendix D: Information Literacy Questions

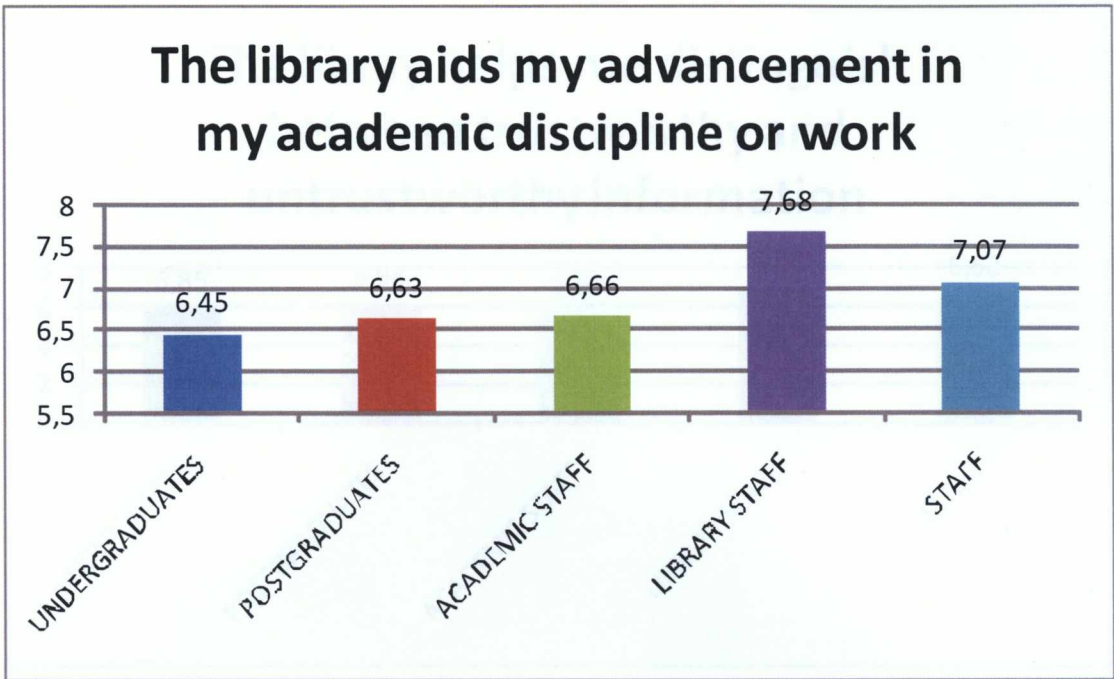
Appendix D1

The library helps me stay abreast of developments in my fields(s) of interest



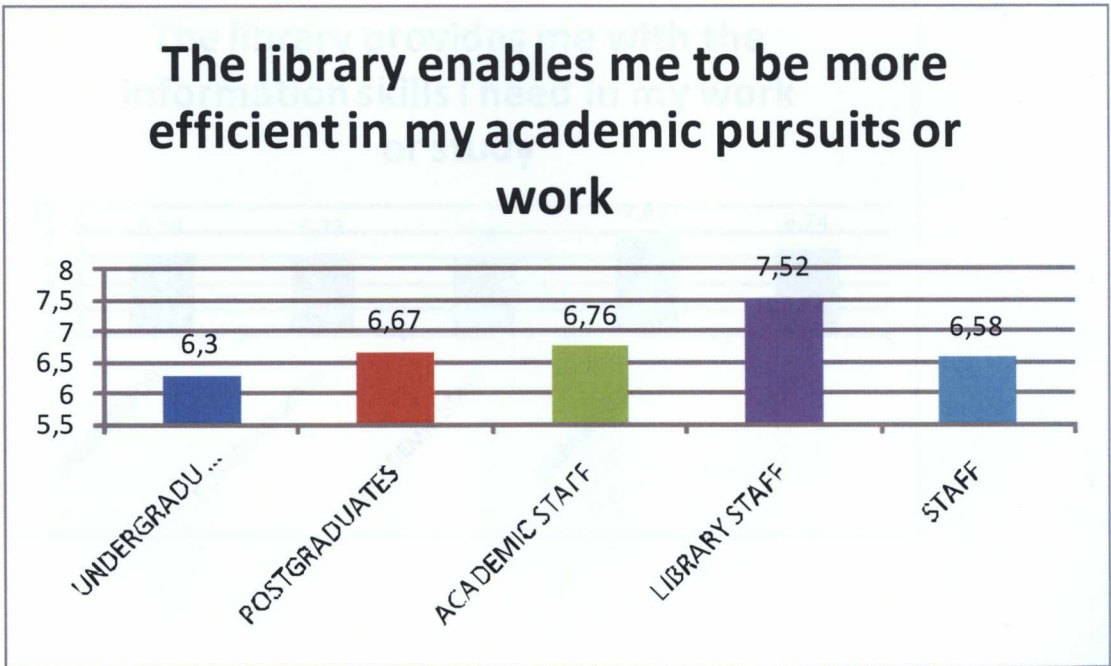
Appendix D2

The library aids my advancement in my academic discipline or work



Appendix D3

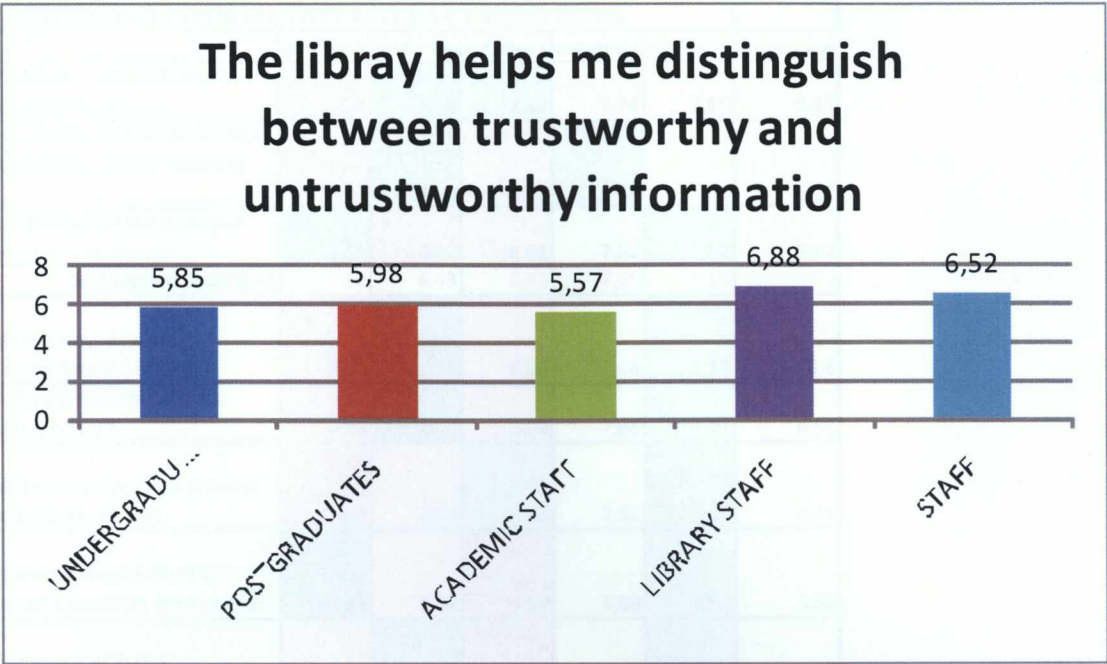
The library enables me to be more efficient in my academic pursuits or work





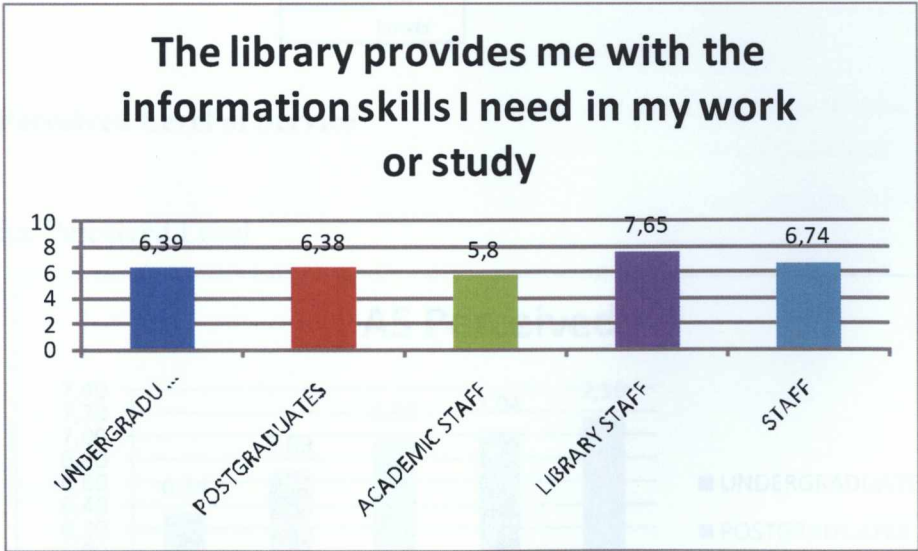
Appendix D4

The library helps me distinguish between trustworthy and untrustworthy information



Appendix D5

The library provides me with the information skills I need in my work or study



Appendix D6

Satisfaction and Information Literacy Questions Data by Group Category

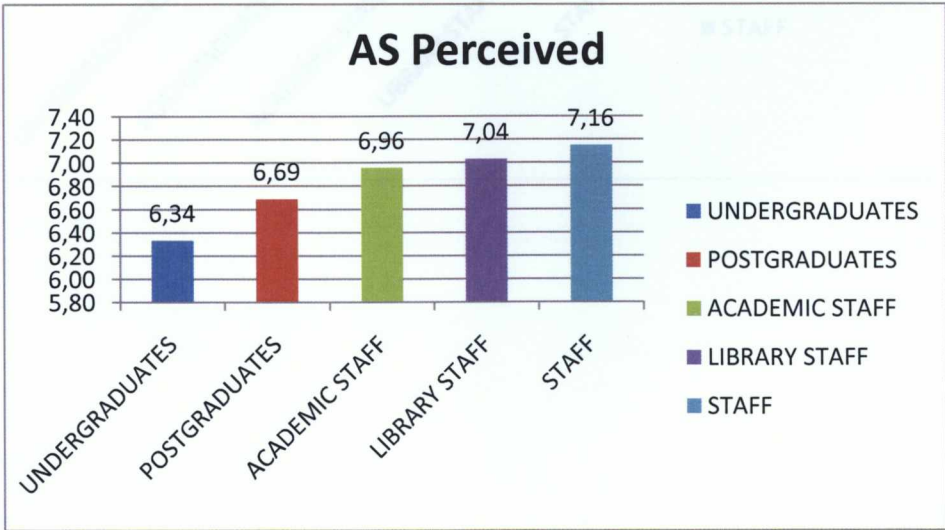
SATISFACTION AND INFORMATION LITERACY QUESTIONS							
		UNDERGRAD	POSTGRADU	ACADEMIC S	LIBRARY STA	STAFF	Summary in Re
SQ1	In general, I am satisfied with the way in which I am treated at the library	6,3	6,62	7,32	7,74	7,16	6,49
SQ2	In general, I am satisfied with library support for my learning research, and/or teaching needs	6,19	6,25	6,57	7,68	7,1	6,27
SQ3	How would you rate the overall quality of the srvice provided by the library	6,48	6,42	6,81	7,62	7,2	6,52
	Satisfaction Questions	6,32	6,43	6,90	7,68	7,15	
IL1	The library helps me stay abreast of developments in my fields(s) of inerest	5,44	5,8	6,03	7,04	6,23	5,6
IL2	The library aids my advancement in my academic discipline or work	6,45	6,63	6,66	7,68	7,07	6,53
IL3	The library enables me to be more efficient in my academic pursuits or work	6,3	6,67	6,76	7,52	6,58	6,43
IL4	The libray helps me distinguish between trustworthy and untrustworthy information	5,85	5,98	5,57	6,88	6,52	5,88
IL5	The library provides me with the information skills I need in my work or study	6,39	6,38	5,8	7,65	6,74	6,35
	Information Literacy Questions	6,09	6,29	6,16	7,35	6,63	



Appendix E: Perceived Level of Service

Appendix E1

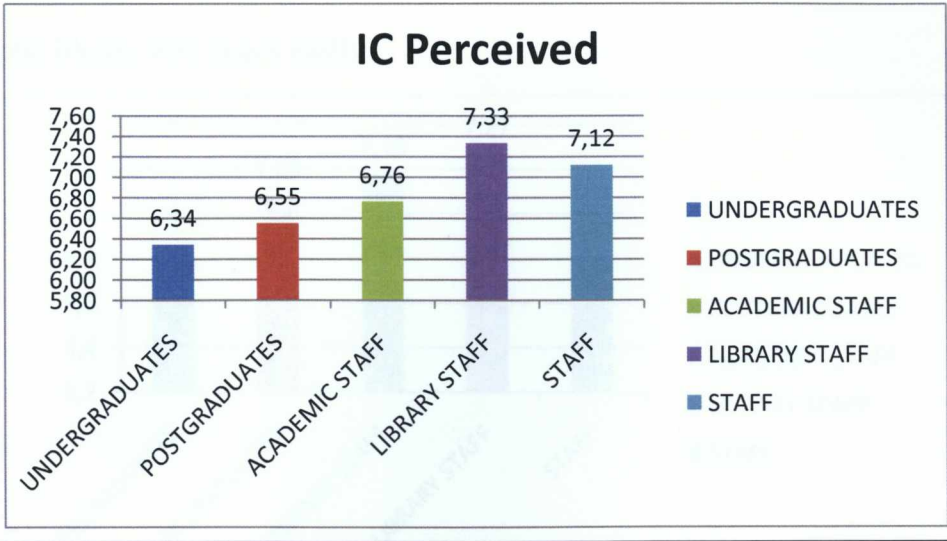
Affect of Service Perceived Level





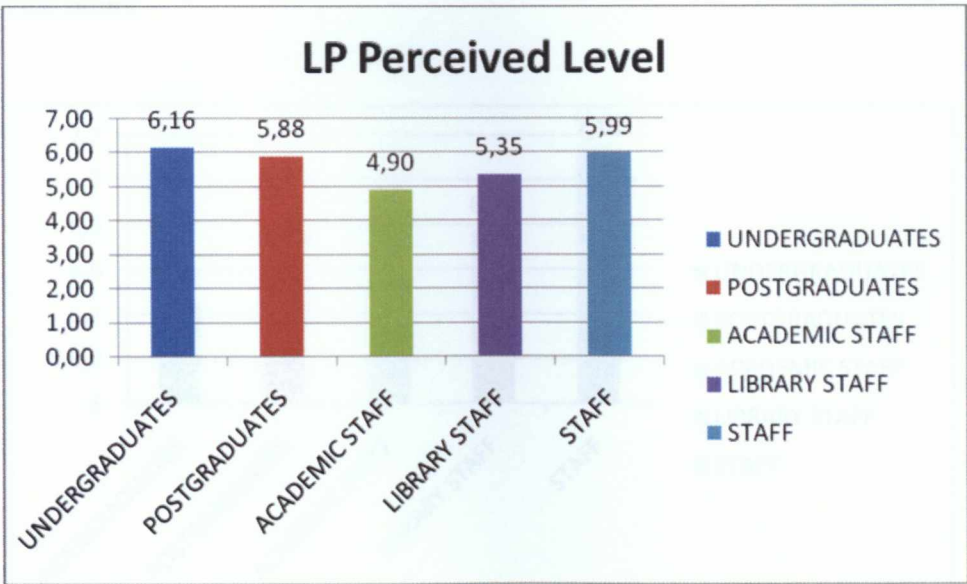
Appendix E2

Information Control Perceived Level



Appendix E3

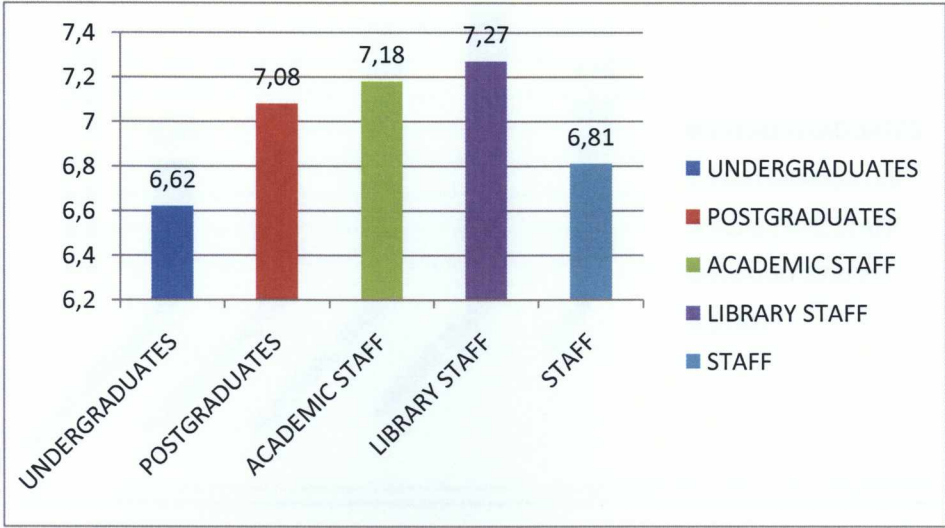
Library as a Place Perceived Level



Appendix F: Local Questions

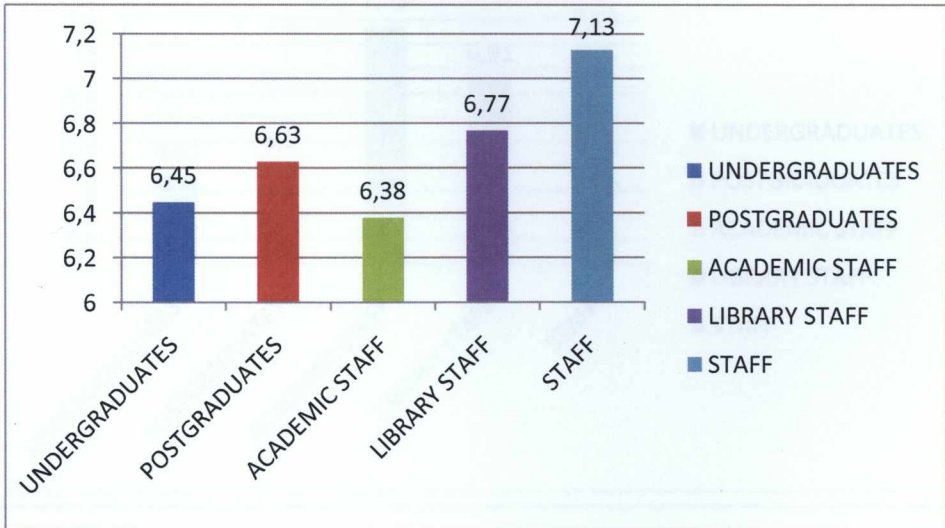
Appendix F1

Ability to navigate library web pages easily



Appendix F2

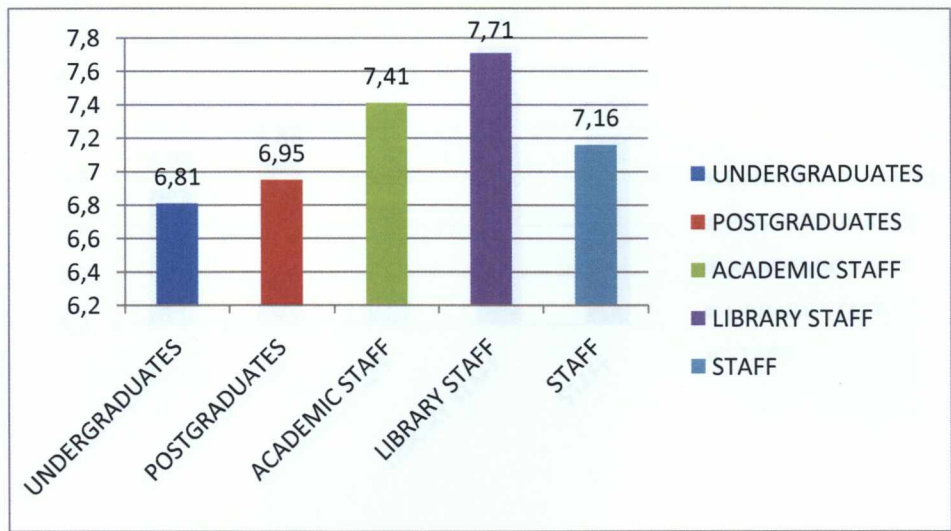
Convenient service hours





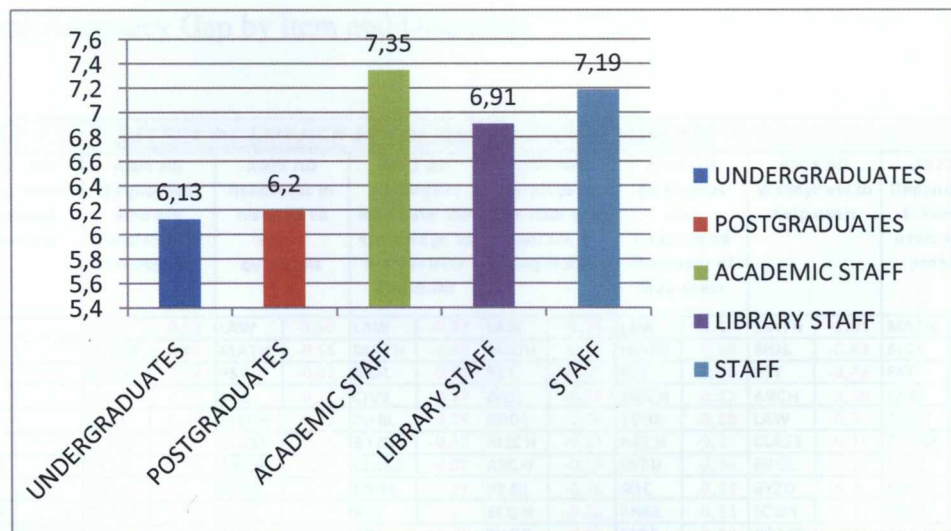
Appendix F3

Efficient Interlibrary Loan/ Document Delivery



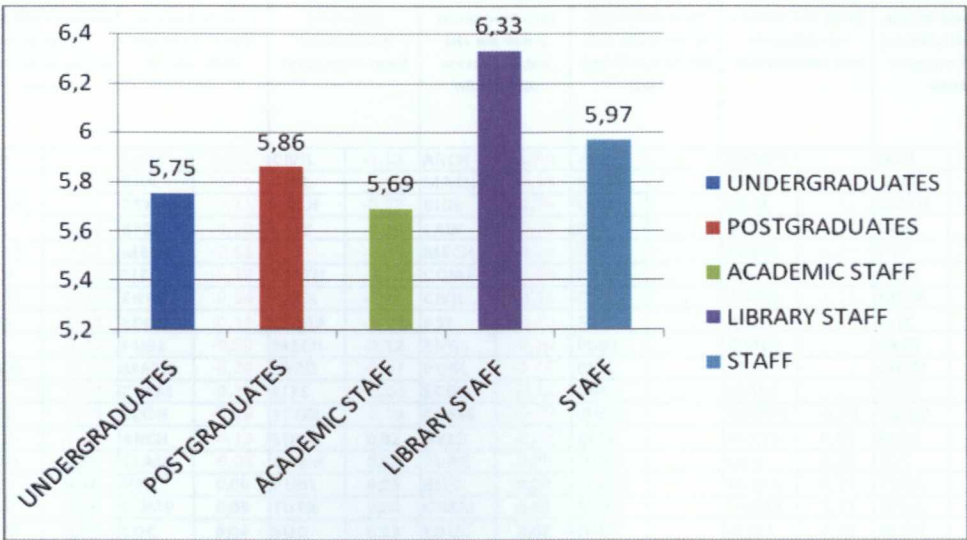
Appendix F4

Resources added to library collections on request



Appendix F5

The library program teaches me how to access, evaluate and use information



Appendix G: Adequacy Gap by Discipline

Appendix G1

Affect of Service Adequacy Gap by item and Discipline

AFFECT OF SERVICE ADEQUACY GAP BY DISCIPLINE																	
AS01 AD Employees who instill confidence in users		AS04 AD Giving users individual attention		AS06 AD Employees who are consistently courteous		AS09 AD Read iness to respond to users questions		AS11 AD Employees who have the knowledge to answer user questions		AS13 AD Em ployees who deal with users in a caring fashion		AS15 AD Em ployees who understand the needs of their users		AS18 AD Willingness to help users		AS22 AD Dependability in handling users service problems	
CIVIL	-0,75	ARCH	-1,08	ARCH	-0,53	LAW	-1,30	LAW	-0,92	LAW	-0,76	LAW	-1,27	MATH	-0,64	MATH	-0,71
MATH	-0,27	CLASS	-0,63	MATH	-0,44	MATH	-0,55	MATH	-0,90	MATH	-0,65	MATH	-0,98	BIOL	-0,43	BIOL	-0,64
MECH	-0,23	CIVIL	-0,53	MECH	-0,44	PSY	-0,33	BIOL	-0,25	PSY	-0,53	PSY	-0,66	PSY	-0,42	PSY	-0,19
PSY	-0,23	ENGL	-0,51	BIOL	-0,44	SOC	-0,25	CIVIL	-0,17	BIOL	-0,35	MECH	-0,52	ARCH	-0,38	LAW	-0,18
CHEM	-0,21	BIOL	-0,50	CIVIL	-0,38	MECH	-0,23	PUBL	-0,15	ENGL	-0,26	ECON	-0,28	LAW	-0,30	ARCH	-0,18
LAW	-0,20	PSY	-0,49	CLASS	-0,31	CLASS	-0,15	BYZD	-0,12	MECH	-0,26	ARCH	-0,27	CLASS	-0,16	COMP	-0,17
ARCH	-0,20	MECH	-0,37	BYZD	-0,25	ARCH	-0,14	CLASS	-0,08	ARCH	-0,19	BYZD	-0,24	ENGL	-0,16	CIVIL	-0,15
HIST	-0,09	SOC	-0,35	ENGL	-0,18	PUBL	-0,12	ENGL	-0,07	BYZD	-0,15	SOC	-0,24	BYZD	-0,16	MECH	-0,10
TURK	-0,09	MATH	-0,34	COMP	-0,18	ELEC	-0,12	PSY	-0,07	ECON	-0,12	ENGL	-0,23	ECON	-0,12	ENGL	-0,09
COMP	-0,07	BYZD	-0,24	PSY	-0,17	TURK	-0,10	SOC	-0,04	TURK	-0,07	BIOL	-0,19	COMP	-0,08	CLASS	-0,06
PUBL	-0,06	COMP	-0,14	ECON	-0,13	HIST	-0,08	ECON	0,03	EDUC	-0,06	PUBL	-0,18	EDUC	0,02	ECON	-0,01
BIOL	-0,06	CHEM	-0,13	TURK	-0,09	BYZD	-0,04	MECH	0,09	COMP	-0,06	COMP	-0,17	CIVIL	0,06	BYZD	0,02
CLASS	0,07	HIST	-0,09	FREN	-0,02	CIVIL	0,00	COMP	0,10	PUBL	-0,04	CHEM	-0,14	PUBL	0,08	EDUC	0,06
ENGL	0,12	LAW	0,00	LAW	0,00	ENGL	0,03	CHEM	0,19	CIVIL	-0,03	CIVIL	-0,13	SOC	0,16	CHEM	0,06
BYZD	0,13	PUBL	0,01	PUBL	0,08	COMP	0,06	EDUC	0,20	ELEC	0,02	CLASS	-0,08	HIST	0,18	PUBL	0,11
ECON	0,14	ECON	0,01	HIST	0,09	BIOL	0,14	PHYS	0,27	CHEM	0,13	TURK	-0,02	ELEC	0,19	SOC	0,14
ELEC	0,25	TURK	0,06	SOC	0,10	EDUC	0,17	ELEC	0,28	SOC	0,18	EDUC	-0,02	MECH	0,26	ELEC	0,14
FREN	0,41	EDUC	0,08	EDUC	0,12	ECON	0,23	ARCH	0,29	CLASS	0,20	HIST	0,08	CHEM	0,38	TURK	0,17
EDUC	0,50	ELEC	0,14	ELEC	0,16	PHYS	0,31	TURK	0,43	HIST	0,44	PHYS	0,09	PHYS	0,40	PHYS	0,45
SOC	0,89	FREN	0,53	PHYS	0,27	FREN	0,32	HIST	0,50	PHYS	0,52	ELEC	0,17	TURK	0,43	FREN	0,52
PHYS	1,31	PHYS	1,00	CHEM	0,44	CHEM	0,75	FREN	0,60	FREN	0,62	FREN	0,80	FREN	0,78	HIST	0,58
	0,06		-0,17		-0,11		-0,07		0,01		-0,07		-0,21		0,01		-0,01



Appendix G2

Information Control Adequacy Gap by item and Discipline

INFORMATION CONTROL ADEQUACY GAP BY DISCIPLINE															
IC02 AD Making electronic resources accessible from my home or office		IC05 AD A library Web site enabling me to locate information on my own		IC07 AD The printed library materials I need for my work		IC10 AD The electronic information resources I need		IC14 AD Modern equipment that lets me easily access needed information		IC16 AD Easy-to-use access tools that allow me to find things on my own		IC19 AD Making information easily accessible for independent use		IC20 AD Print and/or electronic journal collections I require for my work	
ARCH	-1,92	CIVIL	-1,45	CIVIL	-0,80	CIVIL	-1,32	ARCH	-1,00	ARCH	-1,00	COMP	-0,47	BIOL	-1,38
BIOL	-1,38	LAW	-1,15	BIOL	-0,74	BIOL	-0,80	MATH	-0,84	MATH	-0,78	ARCH	-0,44	CIVIL	-1,07
CIVIL	-1,35	MATH	-0,55	PSY	-0,71	ARCH	-0,77	BIOL	-0,75	LAW	-0,69	ENGL	-0,43	MATH	-0,56
PSY	-1,07	BIOL	-0,46	BYZD	-0,60	LAW	-0,43	LAW	-0,75	PSY	-0,57	BYZD	-0,36	LAW	-0,45
LAW	-0,91	COMP	-0,33	MECH	-0,53	PSY	-0,26	MECH	-0,70	MECH	-0,48	PUBL	-0,25	PSY	-0,42
MECH	-0,74	ARCH	-0,29	ELEC	-0,39	MATH	-0,20	COMP	-0,69	COMP	-0,45	MECH	-0,23	PHYS	-0,36
COMP	-0,50	CLASS	-0,26	ENGL	-0,34	ENGL	-0,16	CIVIL	-0,52	CIVIL	-0,41	MATH	-0,21	MECH	-0,35
MATH	-0,46	PUBL	-0,23	EDUC	-0,33	COMP	-0,14	PSY	-0,46	SOC	-0,41	BIOLL	-0,20	ELEC	-0,33
ENGL	-0,45	PSY	-0,20	PUBL	-0,30	MECH	-0,12	ENGL	-0,29	PUBL	-0,38	CIVILIL	-0,15	ENGL	-0,26
CHEM	-0,39	MECH	-0,12	MATH	-0,24	BYZD	-0,07	PUBL	-0,26	BIOL	-0,30	PSYC	-0,13	CHEM	-0,24
BYZD	-0,26	SOC	-0,12	CHEM	-0,24	ELEC	-0,03	ECON	-0,11	ENGL	-0,27	CLASS	-0,08	BYZD	-0,20
ECON	-0,21	ENGL	-0,07	ECON	-0,16	ECON	-0,03	CLASS	-0,09	CHEM	-0,21	ECONN	-0,03	COMP	-0,14
PHYS	-0,14	BYZD	-0,06	ARCH	-0,13	EDUC	0,02	BYZD	-0,08	BYZD	-0,21	PHYSS	0,00	PUBL	-0,11
PUBL	-0,07	ECON	0,04	CLASS	-0,05	CHEM	0,03	TURK	0,00	TURK	-0,07	LAW	0,10	SOC	-0,06
TURK	0,00	ELEC	0,08	HIST	0,00	PUBL	0,05	ELEC	0,02	CLASS	-0,05	ED UCC	0,10	TURK	0,00
SOC	0,00	TURK	0,18	COMP	0,03	TURK	0,09	CHEM	0,07	ECON	-0,04	TURKK	0,21	EDUC	0,02
EDUC	0,03	CHEM	0,20	SOC	0,04	SOC	0,13	EDUC	0,08	EDUC	-0,02	ELEC	0,23	ECON	0,25
ELEC	0,03	EDUC	0,24	PHYS	0,13	FREN	0,54	SOC	0,25	PHYS	0,08	SOCI	0,26	CLASS	0,29
FREN	0,05	HIST	0,31	LAW	0,25	PHYS	0,56	PHYS	0,43	ELEC	0,10	HIST	0,36	FREN	0,33
CLASS	0,28	PHYS	0,55	TURK	0,29	CLASS	0,57	FREN	0,44	HIST	0,17	CHEM	0,47	HIST	0,43
HIST	0,80	FREN	0,77	FREN	0,56	HIST	0,81	HIST	0,50	FREN	0,70	FREN	0,90	ARCH	0,62
	-0,41		-0,14		-0,20		-0,07		-0,23		-0,25		-0,02		-0,19

Appendix G3

Library as Place Adequacy Gap by item and Discipline

LIBRARY AS A PLACE ADEQUACY GAP BY DISCIPLINE									
LP03_ad LP03 AD Library space that inspires study and learning		LP08 AD Quiet space for individual activities		LP12 AD A comfortable and inviting location		LP17 AD A getaway for study learning or research		LP21 AD Community space for group learning and group study	
BIOL	-1,18	BYZD	-1,14	ARCH	-1,62	CLASS	-1,37	ARCH	-1,83
BYZD	-0,78	PUBL	-0,88	MATH	-1,45	BIOL	-1,15	MECH	-1,71
CLASS	-0,77	MECH	-0,72	LAW	-1,27	MATH	-0,96	CLASS	-1,70
CIVIL	-0,76	BIOL	-0,71	COMP	-1,07	PUBL	-0,95	LAW	-1,27
PSY	-0,68	CLASS	-0,64	PUBL	-0,87	ARCH	-0,94	COMP	-1,14
ELEC	-0,65	PSY	-0,61	CIVIL	-0,87	BYZD	-0,89	PUBL	-1,04
MATH	-0,65	LAW	-0,50	TURK	-0,69	CHEM	-0,72	BYZD	-1,02
ARCH	-0,62	CIVIL	-0,50	CLASS	-0,62	COMP	-0,64	CIVIL	-1,00
ENGL	-0,61	MATH	-0,42	BIOL	-0,53	LAW	-0,55	PSY	-0,93
PUBL	-0,44	COMP	-0,38	BYZD	-0,39	ENGL	-0,46	ECON	-0,91
COMP	-0,44	ELEC	-0,35	SOC	-0,39	PSY	-0,40	EDUC	-0,89
MECH	-0,42	ENGL	-0,32	ENGL	-0,22	MECH	-0,35	HIST	-0,83
ECON	-0,39	TURK	-0,25	ECON	-0,04	ECON	-0,32	MATH	-0,77
LAW	-0,38	EDUC	-0,21	MECH	-0,03	CIVIL	-0,29	ENGL	-0,76
HIST	-0,38	ECON	-0,08	PSY	-0,03	EDUC	-0,14	BIOL	-0,74
CHEM	-0,30	CHEM	0,00	HIST	0,08	ELEC	-0,13	ELEC	-0,71
TURK	-0,27	ARCH	0,00	CHEM	0,15	SOC	-0,10	TURK	-0,60
EDUC	-0,21	HIST	0,00	ELEC	0,25	HIST	-0,10	SOC	-0,36
SOC	0,35	SOC	0,19	ED UC	0,26	TURK	-0,09	PHYS	-0,30
FREN	0,54	PHYS	0,21	FREN	0,40	PHYS	0,27	CHEM	-0,21
PHYS	0,64	FREN	0,54	PHYS	0,60	FREN	0,46	FREN	0,34
	-0,40		-0,32		-0,40		-0,47		-0,88



Appendix G4

Local Questions Adequacy Gap by item and Discipline

LOCAL QUESTIONS ADEQUATE GAP BY DISCIPLINE									
L178 AD Ability to navigate library Web pages easily		L175 AD Convenient service hours		L173 AD Efficient interlibrary loan / document delivery		L219 AD Resources added to library collections on request		L554 AD The library program teaches me how to access evaluate and use information	
ARCH	-0,71	MATH	-1,47	ARCH	-0,40	BIOL	-0,96	CLASS	-0,95
CIVIL	-0,44	ARCH	-1,00	PSY	-0,38	MATH	-0,78	ARCH	-0,92
ENGL	-0,41	PUBL	-0,88	MATH	-0,31	PSY	-0,53	BIOL	-0,81
CHEM	-0,36	MECH	-0,72	CIVIL	-0,24	TURK	-0,48	LAW	-0,73
COMP	-0,30	PSY	-0,56	LAW	-0,17	COMP	-0,39	MATH	-0,72
MATH	-0,30	BIOL	-0,41	ENGL	-0,13	MECH	-0,39	PSY	-0,71
BIOL	-0,29	COMP	-0,41	BYZD	-0,04	ARCH	-0,36	COMP	-0,53
LAW	-0,27	BYZD	-0,40	PUBL	-0,02	PUBL	-0,36	CIVIL	-0,50
MECH	-0,17	CIVIL	-0,33	BIOL	-0,02	ENGL	-0,24	CHEM	-0,38
PUBL	-0,16	TURK	-0,30	COMP	-0,01	BYZD	-0,19	MECH	-0,30
BYZD	-0,04	LAW	-0,30	CHEM	0,15	SOC	-0,18	TURK	-0,28
PSY	0,02	SOC	-0,20	ELEC	0,18	EDUC	-0,18	ENGL	-0,27
CLASS	0,05	CHEM	-0,06	TURK	0,19	CHEM	-0,14	EDUC	-0,12
SOC	0,15	ENGL	-0,05	ECON	0,26	ECON	-0,13	SOC	-0,04
ECON	0,27	CLASS	0,14	EDUC	0,36	ELEC	-0,04	BYZD	0,02
HIST	0,27	EDUC	0,20	HIST	0,40	LAW	0,00	ECON	0,04
EDUC	0,39	ECON	0,23	SOC	0,41	CIVIL	0,10	PHYS	0,11
ELEC	0,42	ELEC	0,24	PHYS	0,42	CLASS	0,14	PUBL	0,14
FREN	0,54	FREN	0,41	FREN	0,53	PHYS	0,15	ELEC	0,23
TURK	0,68	PHYS	0,90	CLASS	0,53	HIST	0,45	HIST	0,69
PHYS	0,85	HIST	0,91	MECH	0,61	FREN	0,66	FREN	0,83
	0,01		-0,19		0,11		-0,18		-0,25

Appendix G5

Adequacy Gap for the 22 Core Items by Discipline

		ADEQUACY GAP FOR CORE ITEMS BY DISCIPLINE																					
		ARCHIT	BIOL	BYZD	CHEM	CIVIL	CLASS	COMP	ECON	EDUC	ELEC	ENGL	FREN	HIST	LAW	MATH	MECH	PHYS	PSY	PUBL	SOC	TURK	AVG-Dep
AS-1	Library staff who instill confidence in users	-0,20	-0,06	0,13	-0,21	-0,75	0,07	-0,07	0,14	0,50	0,25	0,12	0,41	-0,09	-0,20	-0,27	-0,23	1,31	-0,23	-0,06	0,89	-0,09	0,07
AS-2	Giving users individual attention	-1,08	-0,50	-0,24	-0,13	-0,53	-0,63	-0,14	0,01	0,08	0,14	-0,51	0,53	-0,09	0,00	-0,34	-0,37	1,00	-0,49	0,01	-0,35	0,06	-0,17
AS-3	Library staff who are consistently courteous	-0,53	-0,44	-0,25	0,44	-0,38	-0,31	-0,18	-0,13	0,12	0,16	-0,18	-0,02	0,09	0,00	-0,44	-0,44	0,27	-0,17	0,08	0,10	-0,09	-0,11
AS-4	Readiness to respond to users' enquiries	-0,14	0,14	-0,04	0,75	0,00	-0,15	0,06	0,23	0,17	-0,12	0,03	0,32	-0,08	-1,30	-0,55	-0,23	0,31	-0,33	-0,12	-0,25	-0,10	-0,07
AS-5	Library staff who have the knowledge to answer user questions	0,29	-0,25	-0,12	0,19	-0,17	-0,08	0,10	0,03	0,20	0,28	-0,07	0,60	0,50	-0,92	-0,90	0,09	0,27	-0,07	-0,15	-0,04	0,43	0,01
AS-6	Library staff who deal with users in a caring fashion	-0,19	-0,35	-0,15	0,13	-0,03	0,20	-0,06	-0,12	-0,06	0,02	-0,26	0,62	0,44	-0,76	-0,65	-0,26	0,52	-0,53	-0,04	0,18	-0,07	-0,07
AS-7	Library staff who understand the needs of their users	-0,27	-0,19	-0,24	-0,14	-0,13	-0,08	-0,17	-0,28	-0,02	0,17	-0,23	0,80	0,08	-1,27	-0,98	-0,52	0,09	-0,66	-0,18	-0,24	-0,02	-0,21
AS-8	Willingness to help users	-0,38	-0,43	-0,16	0,38	0,06	-0,16	-0,08	-0,12	0,02	0,19	-0,16	0,78	0,18	-0,30	-0,64	0,26	0,40	-0,42	0,08	0,16	0,43	0,01
AS-9	Dependability in handling users' service problems	-0,18	-0,64	0,02	0,06	-0,15	-0,06	-0,17	-0,01	0,06	0,14	-0,09	0,52	0,58	-0,18	-0,71	-0,10	0,45	-0,19	0,11	0,14	0,17	-0,01
	AS Avg	-0,30	-0,30	-0,12	0,16	-0,23	-0,13	-0,08	-0,03	0,12	0,14	-0,15	0,51	0,18	-0,55	-0,61	-0,20	0,51	-0,34	-0,03	0,06	0,08	-0,06
IC-1	Making electronic resources accessible from my home or office	-1,92	-1,38	-0,26	-0,39	-1,35	0,28	-0,50	-0,21	0,03	0,03	-0,45	0,05	0,80	-0,91	-0,46	-0,74	-0,14	-1,07	-0,07	0,00	0,00	-0,41
IC-2	A library Web site enabling me to locate information on my own	-0,29	-0,46	-0,06	0,20	-1,45	-0,26	-0,33	0,04	0,24	0,08	-0,07	0,77	0,31	-1,15	-0,55	-0,12	0,55	-0,20	-0,23	-0,12	0,18	-0,14
IC-3	The printed library materials I need for my work	-0,13	-0,74	-0,60	-0,24	-0,80	-0,05	0,03	-0,16	-0,33	-0,39	-0,34	0,56	0,00	0,25	-0,24	-0,53	0,13	-0,71	-0,30	0,04	0,29	-0,20
IC-4	The electronic information resources I need	-0,77	-0,80	-0,07	0,03	-1,32	0,57	-0,14	-0,03	0,02	-0,03	-0,16	0,54	0,81	-0,43	-0,20	-0,12	0,56	-0,26	0,05	0,13	0,09	-0,07
IC-5	Modern equipment that lets me easily access needed information	-1,00	-0,75	-0,08	0,07	-0,52	-0,09	-0,69	-0,11	0,08	0,02	-0,29	0,44	0,50	-0,75	-0,84	-0,70	0,43	-0,46	-0,26	0,25	0,00	-0,23
IC-6	Easy-to-use access tools that allow me to find things on my own	-1,00	-0,30	-0,21	-0,21	-0,41	-0,05	-0,45	-0,04	-0,02	0,10	-0,27	0,70	0,17	-0,69	-0,78	-0,48	0,08	-0,57	-0,38	-0,41	-0,07	-0,25
IC-7	Making information easily accessible for independent use	-0,4	-0,2	-0,4	0,5	-0,1	-0,1	-0,5	0,0	0,1	0,2	-0,4	0,9	0,4	0,1	-0,2	-0,2	0,0	-0,1	-0,3	0,3	0,2	-0,02
IC-8	Print and/or electronic journal collections I require for my work	0,62	-1,38	-0,20	-0,24	-1,07	0,29	-0,14	0,25	0,02	-0,33	-0,26	0,33	0,43	-0,45	-0,56	-0,35	-0,36	-0,42	-0,11	-0,06	0,00	-0,19
	IC Avg	-0,62	-0,75	-0,23	-0,04	-0,88	0,08	-0,34	-0,04	0,02	-0,04	-0,28	0,54	0,42	-0,50	-0,48	-0,41	0,15	-0,48	-0,19	0,01	0,09	-0,19
LP-1	Library space that inspires study and learning	-0,62	-1,18	-0,78	-0,30	-0,76	-0,77	-0,44	-0,39	-0,21	-0,65	-0,61	0,54	-0,38	-0,38	-0,65	-0,42	0,64	-0,68	-0,44	0,35	-0,27	-0,40
LP-2	Quiet space for individual work	0,00	-0,71	-1,14	0,00	-0,50	-0,64	-0,38	-0,08	-0,21	-0,35	-0,32	0,54	0,00	-0,50	-0,42	-0,72	0,21	-0,61	-0,88	0,19	-0,25	-0,32
LP-3	A comfortable and inviting location	-1,62	-0,53	-0,39	0,15	-0,87	-0,62	-1,07	-0,04	0,26	0,25	-0,22	0,40	0,08	-1,27	-1,45	-0,03	0,60	-0,03	-0,87	-0,39	-0,69	-0,40
LP-4	A haven for study, learning, or research	-0,94	-1,15	-0,89	-0,72	-0,29	-1,37	-0,64	-0,32	-0,14	-0,13	-0,46	0,46	-0,10	-0,55	-0,96	-0,35	0,27	-0,40	-0,95	-0,10	-0,09	-0,47
LP-5	Space for group learning and group study	-1,83	-0,74	-1,02	-0,21	-1,00	-1,70	-1,14	-0,91	-0,89	-0,71	-0,76	0,34	-0,83	-1,27	-0,77	-1,71	-0,30	-0,93	-1,04	-0,36	-0,60	-0,88
	LP Avg	-1,00	-0,86	-0,84	-0,22	-0,68	-1,02	-0,73	-0,35	-0,24	-0,32	-0,47	0,46	-0,25	-0,79	-0,85	-0,65	0,28	-0,53	-0,84	-0,06	-0,38	-0,49
LQ1	Ability to navigate Library Web pages easily	-0,71	-0,29	-0,04	-0,36	-0,44	0,05	-0,30	0,27	0,39	0,42	-0,41	0,54	0,27	-0,27	-0,30	-0,17	0,85	0,02	-0,16	0,15	0,68	0,01
LQ2	Convenient service hours	-1,00	-0,41	-0,40	-0,06	-0,33	0,14	-0,41	0,23	0,20	0,24	-0,05	0,41	0,91	-0,30	-1,47	-0,72	0,90	-0,56	-0,88	-0,20	-0,30	-0,19
LQ3	Efficient interlibrary loan/ document delivery	-0,40	-0,02	-0,04	0,15	-0,24	0,53	-0,01	0,26	0,36	0,18	-0,13	0,53	0,40	-0,17	-0,31	0,61	0,42	-0,38	-0,02	0,41	0,19	0,11
LQ4	Resources added to library collections on request	-0,36	-0,96	-0,19	-0,14	0,10	0,14	-0,39	-0,13	-0,18	-0,04	-0,24	0,66	0,45	0,00	-0,78	-0,39	0,15	-0,53	-0,36	-0,18	-0,48	-0,18
LQ5	The library program teaches me how to access, evaluate and use information	-0,92	-0,81	0,02	-0,38	-0,50	-0,95	-0,53	0,04	-0,12	0,23	-0,27	0,83	0,69	-0,73	-0,72	-0,30	0,11	-0,71	0,14	-0,04	-0,28	-0,25
	LQ Avg	-0,68	-0,50	-0,13	-0,16	-0,28	-0,02	-0,33	0,13	0,13	0,21	-0,22	0,59	0,55	-0,29	-0,71	-0,19	0,49	-0,43	-0,26	0,03	-0,04	-0,10
	General Average	-0,59	-0,58	-0,29	-0,03	-0,52	-0,21	-0,32	-0,06	0,03	0,01	-0,26	0,52	0,24	-0,53	-0,63	-0,34	0,36	-0,43	-0,27	0,02	-0,02	-0,19



Appendix H

The LibQUAL+ Survey



LIBRARY - Service Quality Survey

Thank you for your participation!

We are committed to improving your library services. Better understanding your expectations will help us tailor those services to your needs.

We are conducting this survey to measure library service quality and identify best practices through the Association of Research Libraries' LibQUAL+® program.

Please answer all items. The survey will take about **10 minutes** to complete.

Information supplied on this form will be processed in the United States. Data protection legislation requires us to make clear that supplying information on the form is entirely voluntary

**Please rate the following statements by indicating:**

**(1 is lowest, 9 is highest):**

**Minimum** --the number that represents the minimum level of service that you would find acceptable

**Desired** --the number that represents the level of service that you personally want

**Perceived** --the number that represents the level of service that you believe our library currently provides

For each item, you must EITHER rate the item in all three columns OR identify the item as "N/A" (not applicable). Selecting "N/A" will override all other answers for that item when the survey is submitted.

When it comes to...		My <u>Minimum</u> Service Level is	My <u>Desired</u> Service Level is	<u>Perceived</u> Service Performance is	N/A
		Low .....High	Low .....High	Low .....High	
1	Προσωπικό που εμπνέει εμπιστοσύνη στους χρήστες	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
2	Ηλεκτρονικές πηγές που είναι προσβάσιμες από το σπίτι ή το γραφείο μου	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
3	Χώρο που ενθαρρύνει τη μελέτη και τη μάθηση	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
4	Εξατομικευμένη προσοχή στους χρήστες	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
5	Ιστότοπο Βιβλιοθήκης που με διευκολύνει να εντοπίζω πληροφορίες μόνος/η μου	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
6	Δυνατότητα εύκολης πλοήγησης στον ιστότοπο της Βιβλιοθήκης	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
7	Προσωπικό που είναι πάντα ευγενικό	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
8	Έντυπο υλικό που απαιτείται για την εργασία μου	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
9	Ήσυχο μέρος για ατομική μελέτη	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	

		My <u>Minimum</u> Service Level is	My <u>Desired</u> Service Level is	<u>Perceived</u> Service Performance is	N/A
When it comes to...		Low .....High	Low .....High	Low .....High	
10	Ετοιμότητα για απαντήσεις σε ερωτήματα χρηστών	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
11	Ηλεκτρονικές πηγές πληροφόρησης που χρειάζομαι	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
12	Βολικό ωράριο παροχής υπηρεσιών	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
13	Προσωπικό που είναι σε θέση να απαντά σε ερωτήσεις χρηστών	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
14	Αποτελεσματική υπηρεσία διαδανεισμού / παράδοσης τεκμηρίων	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
15	Άνετη και ελκυστική τοποθεσία	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
16	Προσωπικό που ενδιαφέρεται πραγματικά για τους χρήστες	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
17	Σύγχρονο εξοπλισμό που μου επιτρέπει την εύκολη πρόσβαση στις πληροφορίες που χρειάζομαι	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
18	Συλλογή που εμπλουτίζεται με υλικό κατόπιν προτάσεων από τους χρήστες	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
19	Προσωπικό που κατανοεί τις ανάγκες των χρηστών	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
20	Εύχρηστα εργαλεία που μου επιτρέπουν να εντοπίζω υλικό μόνος/ή μου	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
21	Ιδανικό χώρο για μελέτη, μάθηση και έρευνα	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
22	Προθυμία για παροχή βοήθειας στους χρήστες	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
23	Εύκολη πρόσβαση στην πληροφορία για ανεξάρτητη χρήση	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
24	Έντυπες ή/και ηλεκτρονικές συλλογές περιοδικών που είναι απαραίτητες για την εργασία μου	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
25	Χώρο για ομαδική μάθηση και ομαδική μελέτη	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
26	Σεμινάρια Βιβλιοθήκης που διδάσκουν πώς να εξασφαλίζω πρόσβαση, να αξιολογώ και να χρησιμοποιώ την πληροφορία	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	
27	Αξιοπιστία στην αντιμετώπιση προβλημάτων κατά την εξυπηρέτηση των χρηστών	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	



Please indicate the degree to which you agree with the following statements:

		Strongly Disagree .....Strongly Agree								
28	Η βιβλιοθήκη με βοηθάει να παρακολουθώ τις εξελίξεις στο πεδίο ή τα πεδία του ενδιαφέροντός μου	1	2	3	4	5	6	7	8	9
29	Η βιβλιοθήκη με βοηθάει να βελτιώνω τις γνώσεις μου στον επιστημονικό μου τομέα	1	2	3	4	5	6	7	8	9
30	Η βιβλιοθήκη με βοηθάει να είμαι πιο αποτελεσματικός/η στις ακαδημαϊκές μου επιδιώξεις	1	2	3	4	5	6	7	8	9
31	Η βιβλιοθήκη με βοηθάει να κάνω διάκριση ανάμεσα σε αξιόπιστες και μη αξιόπιστες πληροφορίες	1	2	3	4	5	6	7	8	9
32	Η βιβλιοθήκη μου παρέχει τις δεξιότητες πληροφόρησης που χρειάζομαι για την εργασία ή τις σπουδές μου	1	2	3	4	5	6	7	8	9
33	33) Γενικά είμαι ικανοποιημένος/η με τον τρόπο που αντιμετωπίζομαι στη Βιβλιοθήκη	1	2	3	4	5	6	7	8	9

		Strongly Disagree .....Strongly Agree								
34	In general, I am satisfied with library support for my learning, research, and/or teaching needs.	1	2	3	4	5	6	7	8	9
35	How would you rate the overall quality of the service provided by the library?	Extremely Poor .....Extremely Good								
		1	2	3	4	5	6	7	8	9

Please indicate your library usage patterns:

36	How often do you use resources within the library?	Daily	
		Weekly	
		Monthly	
		Quarterly	
		Never	
37	How often do you access library resources through a library Web page?	Daily	
		Weekly	
		Monthly	
		Quarterly	
		Never	
38	How often do you use Yahoo(TM), Google(TM), or non-library gateways for information?	Daily	
		Weekly	
		Monthly	
		Quarterly	
		Never	

Please answer a few questions about yourself:

39	The library that you use most often:	Main Library	
		Periodicals Library	
		Archaeological Collection Branch(ARU)	
		Turkish Studies Collection Branch(AMARAL)	
		167 Larnakos Avenue Branch	
40	Age:	Under 18	
		18 - 22	
		23 - 30	
		31 - 45	
		46 - 65	
		Over 65	
41	Sex:	Female	
		Male	

**Discipline:**

43	Αγγλικές Σπουδές	Μηχανικών Μηχανολογίας και Κατασκευαστικής	
	Αρχιτεκτονική	Νομική	
	Βιολογικές Επιστήμες	Οικονομικά	
	Βυζαντινές και Νεοελληνικές Σπουδές	Πληροφορική	
	Γαλλικές Σπουδές και Σύγχρονες Γλώσσες	Πολιτικών Μηχανικών και Μηχανικών Περιβάλλοντος	
	Δημόσια Διοίκηση και Διοίκηση Επιχειρήσεων	Συνδυασμός Προγραμμάτων Σπουδών	
	Επιστήμες της Αγωγής	Τουρκικές και Μεσανατολικές Σπουδές	
	Ηλεκτρολόγων Μηχανικών και Μηχανικών Υπολογιστών	Φυσική	
	Ιστορία και Αρχαιολογία	Χημεία	
	Κλασικές Σπουδές και Φιλοσοφία	Ψυχολογία	
	Κοινωνικές και Πολιτικές Επιστήμες	Άλλο	
	Μαθηματικά και Στατιστική		

44	<b>Position: (Select the ONE option that best describes you.)</b>		
Undergraduate:		Πρωτοετής	
		Δευτεροετής	
		Τριτοετής	
		Τεταρτοετής	
		Πέμπτο έτος και άνω	
		Παρακολούθηση μόνο/Δεν οδηγεί σε πτυχίο	
Postgraduate:		Μεταπτυχιακός τίτλος με παρακολούθηση μαθημάτων	
		Μεταπτυχιακός τίτλος με έρευνα	
		Διδακτορικό έρευνας	
		Παρακολούθηση μόνο/Δεν οδηγεί σε πτυχίο	
Academic Staff:		Καθηγητής	
		Αναπληρωτής Καθηγητής	
		Επίκουρος	
		Λέκτορας	
		Ερευνητικό Προσωπικό	
		Άλλη ακαδημαϊκή ιδιότητα	
Library Staff:		Διεύθυνση	
		Υπεύθυνος Γραφείου/Αρχηγός Ομάδας	
		Βιβλιοθηκονόμος	
		Βοηθός Βιβλιοθηκονόμος	
		Άλλο	
Staff:		Διοικητικό Προσωπικό	
		Άλλη ιδιότητα	

45 **Please enter any comments about library services in the box:**

46 **Enter your e-mail address in the box below if you would like to enter an optional drawing for a prize. Your e-mail address will be kept confidential and will not be linked to your survey responses. (Not required)**