Alumni: another piece of the puzzle

- The study of alumni service quality in a New Zealand academic library

by

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Acknowledgements

Table of Contents

List of Illustrations

Abstract

Alumni are recognized as one of the academic library user groups although traditionally alumni were only considered as donors. This paper briefly reviewed the background of alumni studies and library service quality studies. According to the previous research, there is an absence of studies about alumni's expectation and perception toward library services. A better understanding of alumni library memberships' service quality can help the library to develop more suitable services and programmes for alumni, which is beneficial to the library, the alumni office and the university.

This research measured the service quality of library alumni service in three dimensions, reliability, library staff and library resources. The results indicated alumni are mostly comfortable with the library services. Reliability was the most important service quality dimension which received the highest rating from alumni. The result also suggested that alumni expect the library membership package to provide access to a bigger collection of e-journals and databases.

1. Introduction

1.1 Background

Alumni generally include graduates and any former students or staff of the university (Gurse, 2003). Today's academic library is much more than a collection of books and incorporates an evolving, interactive community. The librarians are developing or have developed various services to reach different user groups. Many academic libraries have included alumni into their user community. University libraries try to stay in touch with alumni through the alumni membership programme in order to gain their support and to attract donations. Some have been providing a book borrowing service, limited electronic access and reference services to alumni. In addition, alumni library membership can support alumni's life-long learning after having left Alma Meter, and also helps universities connecting to their wider communities.

Library alumni services had been discussed in case studies from different countries but most studies are related to communication and marketing strategies. Some librarians discussed alumni services and its possibilities at the practical level such as building the alumni portal which helped the staff to communicate with alumni. The measurements of quality services have been discussed and studied in Library Information Studies (LIS). However, researchers have mainly focused on current students and staff rather than alumni when examining the service quality in different

library service aspects. There are very limited studies examining the service quality of the library alumni services. The purpose of this research is to seek and study alumni's expectations and perceptions of the current alumni library membership and to measure the service quality in three dimensions, reliability, library staff and library resources.

1.2 Research Benefits

This study would benefit libraries and universities in many different aspects. First of all, the result of the survey can provide first-hand information about alumni's expectation of library services, which can help libraries and alumni offices to design suitable membership packages. Universities and libraries can tailor their marketing strategies based on alumni's needs, which might potentially increase the number of alumni users. A well designed membership programme would build a better communication channel between the university and alumni, which could trigger more donations and support from alumni. In addition, this study can provide evidence based data to help libraries to identify the possible improvement of current alumni membership. Libraries can provide more effective services if they know what services are important for alumni. This can save staff time as that they can manage library resources, concentrating on the more important ones. Moreover, the result can also be used in library collection development process when libraries make decisions about selecting library resources, de-selecting physical materials, cancelling current subscriptions and negotiating licenses with electronic resource publishers.

1.3 The Structure of the Report

This report consists of seven chapters. Chapter 1 describes the background, objectives and benefits of the research. Chapter 2 reviews the previous literature on alumni studies and theoretical works on library service quality. Chapter 3 introduces the research questions. Chapter 4 describes the methodology adopted in this research. Chapter 5 gives consideration of ethical issues. The main results of survey and a discussion on those results are provided in chapter 6. Chapter 7 concludes this study.

2. Literature Review

2.1 Researches in alumni relationship

Alumni are normally considered as potential donors for higher education institutions and university libraries. Numbers of scholars have studied different marketing strategies that universities have used to build a closer relationship between alumni and Alma Mater. A study conducted in the United Kingdom, compared students' emotions evoked over three years of university life and their emotions generated by attending the graduation ceremony. Authors have pointed out that a positive experience of the graduation ceremony was more likely to built alumni's loyalty (Palmer & Koenig-Lewis, 2008). Another study in the United States identified different business principles applied in alumni services. Those principles include creating a strong tie between alumni and the alma maters, selecting suitable programs for alumni and engaging alumni to build alumni relationship (Kelleher, 2011). Kelleher (2011) pointed out that targeted services for individual alumnus was the evidence of using relationship marketing principles such as the strategy of *"one-to-one interaction with customers"* (p. 108) from the business field. The specialities of alumni as a user group should been emphasized to build a beneficial relationship through alumni library membership. There is not enough literature in LIS to support the development of marketing strategies that specially target alumni as a separated library user group. Wright and Bocarnea (2007) pointed out that it is important for organizations especially nonprofits educational organizations to study alumni's attitudes and

behaviours in fundraising processes. Any marketing strategies should be base on in-depth understanding of the targeted audiences. Identifying alumni's attitudes and finding out their types of behaviours are emphasized in this research project.

In addition, researchers have studied different activities and practices which libraries could use to attract more donations from alumni. Konzak & Teague (2009) studied the relationship between the library and donors and found out that alumni can become potential donors for library's special collections through communication and various library activities. Alumni of distance learning programs were specially pointed out as library donors by Casey and Lorenzen (2010). Authors stated that distant students were generally more mature with stable financial status therefore would be more likely to donate money to the library if it could successfully raise the awareness of libraries needs (Casey & Lorenzen, 2010).

Recently, the emphasis of alumni's role for libraries has started to shift from a donor to a customer. Information researchers and librarians started to recognize alumni as a special library user group. In 2001, Smith (2001) surveyed SCONUL (Society of College, National and University Libraries, United Kingdom) member libraries regarding the kinds of services were included in their alumni membership and found that most participating libraries were providing a limited borrowing service to alumni with charges.

In New Zealand, all university libraries provide library services in their alumni memberships. Table 1 summarized different memberships provided by university libraries in New Zealand. A membership generally includes an annual subscription which offers print item loans or restricted electronic access.

Table 1. New Zealand University Alumni Library Memberships
Sources from each university's website.

	Print Borrowing	**Electronic Resources Access**	**Inter-Library Loan**	**Fee**
University of Auckland	Yes – in person only	1. As 'walk-in' user; 2. Off campus licensed databases	Yes with extra fee	$385.00/year (incl. 30% alumni discount)
Auckland University of Technology	Yes	As 'walk-in' user	N/A	$150.00/year (incl. 50% alumni discount)
University of Waikato	Yes - in person only	Licensed alumni databases – (Life Member Alumni Only)	N/A	- $100.00/year - $150.00 one-off Life Membership
Massey University	Yes – distant service available	As 'walk-in' user	Yes with extra fee	$100.00/year (incl. 50% alumni discount)
Victoria University of Wellington	Yes – in person only	Off campus licensed databases	Yes with extra fee	$250.00/year
Lincoln University	Yes – in person only	As 'walk-in' user	N/A	$100.00/year
University of Canterbury	Yes –$10.00 extra fee for Library Card	As 'walk-in' user	No	$160.00/year (incl. 20% alumni discount)
University of Otago	Yes	N/A	N/A	N/A

All libraries charge alumni for book borrowing except Otago University. Only three libraries offer inter-library loan with extra charges. Five out of eight universities indentify alumni as a part of walk-in user group and provide limited electronic

resource access which alumni can use when they are on campus. Only in Victoria University of Wellington and University of Auckland can alumni choose to have online access membership separately from in-person access. Both libraries offer online access which gives alumni remote access to licensed alumni databases. The University of Waikato also offers licensed alumni database access remotely but it is only available for 'Life Member Alumni'.

As stated above, various alumni library services are developed in different libraries. To date there is a lack of research regarding alumni's needs and measuring the current service quality of alumni library membership. According to Nitecki and Hernon (2000), service quality research can identify the gaps between users' expectations and perceptions and the result can be used to improve library services in order to meet users' expectations. Many libraries have participated in the service quality research, but the focus has always been on current students and researchers. To develop a successful service, libraries have to realize the different expectations of different user groups (Edwards & Browne, 1995; Haglund & Olsson, 2008; Xia, 2003). Given the fact that there is a lack of research in alumni expectations, it is difficult to say that library alumni memberships have met the alumni's expectations.

2.2 SERVQUAL, LibQUAL+ and development of Service Quality instruments

Service quality study has been developed and used to analyse library's services. First of all, researchers adapted SERVQUAL to measure library service quality. The service quality study measures the gaps between what user need and what libraries delivered therefore helping them to alter their services to fit users' expectations (P. Hernon & Nitecki, 2001). In LIS, researchers applied the Gaps Model of Service Quality created by Zeithaml, Parasuraman and Berry to measure library service quality. There are five gaps that can be used to measure service quality: 1. Customers expectations of service and management's perspective on these expectations; 2. Service quality specifications and management's perspective of customer expectations; 3. Service quality specifications and service delivery; 4. Service delivery and external communication to customers about that delivery; and 5. Customers' expectations of service and perceived service delivery (Zeithaml, Parasuraman, & Berry, 1990). The fifth gap between customers' expectation and perception was later expended and used to develop SERVQUAL. The questionnaire of SERVQUAL asked participants to rank two sets of twenty-two statements on scales – the first set is about expectations of desired services and the second set is about perceptions of received services; these twenty-two statements were allocated in five dimensions of the service quality: tangibles, reliability, responsiveness, assurance and empathy (Zeithaml, et al., 1990).

The SERVQUAL method has been widely used to seek the customer desired services and perceived services. However, SERVQUAL was questioned for its usefulness over different industries such as the academic library (Edwards & Browne, 1995; P. Hernon & Nitecki, 2001; van Dyke, Kappelman, & Prybutok, 1997). Numbers of studies in LIS field tested SERVQUAL and identified the lack of special focus on library perspectives, such as resources. For example, Nitecki (1996) examined service quality in an academic library setting and argued that the SERVQUAL did not fulfil all the library's needs in measuring service quality in every aspect. Nitecki argued that the five dimensions did not cover specific needs in academic library perspectives (Nitecki, 1996). A research project in 1999 adapted SERVQUAL in the library setting and developed LibQual$^+$ where resource was added as the fourth dimension on top of affect of service, reliability and tangibles (Cook & Heath, 2001; Cook & Thompson, 2001) . Cook and Heath (2001) suggested that a more library focused method was needed to examine service quality including more special dimensions such as self-reliance, ubiquity/easy to access and library as place.

As stated above, scholars questioned the usefulness of LibQual$^+$ when measuring local situations. Therefore, there is a further development from SERVQUAL in the service quality research that focuses on the local approach and its flexibility to suit individual libraries. During the process of seeking for extended method to address local needs, researchers developed a range of statements that can be chosen and amended to suit specific circumstances in the library environment (P. Hernon &

Calvert, 1996; Nitecki & Hernon, 2000). Hernon and Calvert (1996) created fifty-nine statements in a seven point scale survey in which the statements can be selected or altered to measure the service quality of individual libraries and special services. Nitecki and Hernon's study (2000) adapted SERVQUAL and developed a statement survey in an academic library environment which concentrated on helping local libraries to improve their service quality. Libraries were encouraged to amend the statements so that they can create a suitable service quality survey based on their own situations and priorities (Nitecki & Hernon, 2000). This research project adopted this survey instrument which suits the alumni user group and the local library setting.

2.3 Dimensions in service quality researches

2.3.1 Reliability

Out of all service quality dimensions, reliability is commonly agreed to be a key measurement of service quality. Accurate information was highly rated through library researches. Alumni, who may not come to the library as frequently as current students and staff, would heavily rely on accurate holding information and records to use the library. Many studies mentioned the importance of the reliable library services. Nitecki (1996) pointed out that from SERVQUAL studies, reliability was mostly rated the most important dimension. According to Nitecki and Hernon's study (2000),

reliability was rated the most important aspect of the library service by academic library users, followed by responsiveness, tangibles, assurance and empathy. The study also showed that users would prefer dependable and accurate services over personal attention that the library provided to its user (Nitecki & Hernon, 2000). Cook and Heath (2001) analysed the library's reliability from three aspects including the accuracy of record, reliable equipment such as photocopier, and the efficiency in collection management process. The study found that the inaccurate holding records could created frustrations among participants and consequently discouraged students from using the library's physical collection (Cook & Heath, 2001).

Moreover, library users will experience the reliability of library holding records directly through using the Open Public Access Catalogue (OPAC) and borrowing services. Some researches studied the library online catalogue as an important service quality measurement (Johari & Zainab, 2007; Xia, 2003). Based on an academic library survey result, Xia (2003) pointed out that OPAC was the most frequently used service but was also rated as the highest priorities for improvement. Johari and Zainab (2007) discussed that some OPAC functions including allowing online reservation were rated below 60% and therefore needed immediate or further improvements. Users' perception of service reliability was studied in a university library in the United States. According to the result, the correct borrowing records, including re-call, availability and overdue notices, also influenced users' perceptions of library's reliability (Ho & Crowley, 2003).

2.3.2 Librarian services

The academic librarian's role has changed over the past century. Scholars examined the reference competencies for the 21st century librarians and indicated the need to understand library collections (Fagan, 2000) and implement alternative services models (Bell, 2009; Cardina & Wicks, 2004; M. Pinto & Manso, 2012). Reference services and information literacy services have been emphasized in the electronic environment. Librarians are always looking for efficient methods to educate different levels of users to use library all collections and services, such as implementing visual references (M. Pinto & Manso, 2012) and improving ebook reference skills (Bell, 2009). An earlier research studied remote library users in an academic library and the survey result showed that the difficulty of using technologies and conducting an effective search were two major issues remote users encountered (Cooper, Dempsey, Menon, & Millson-Martula, 1998). Authors suggested that the librarian's personal contact was needed to help users to conduct research and to become more aware of library services (Cooper, et al., 1998). Simmons and Andaleeb (2001) emphasized librarians' value in increasing library usage if they can ensure users' understanding of library services. Many studies in LIS discussed the importance of librarians' special knowledge for the improvement of service quality. Scholars pointed out that librarians would help users familiarize with the library and find resources effectively (Pedramnia, Modiramani, & Ghanbarabadi, 2012; Simmonds & Andaleeb, 2001).

Librarians' understanding towards different user groups was rated highly among participants in a North American study (Cook & Heath, 2001).

The importance of librarian services was discussed in numbers of studies but some students and academics do not seem to have a deeper understanding of librarians' specialties. There are different opinions over librarians' value in library services. For example, according to the survey conducted in United Status academic libraries, seventy percent of staff from chemical engineering faculty and Latin American faculty were relying on librarians for teaching research skills (Maughan, 1999). At the same time, more than sixty percent and almost half of respondents from ancient history and classics faculties respectively never used librarian services (Maughan, 1999). Kayongo and Helm (2010) surveyed graduate students in an American university and found that some services including the 'Ask-a-Librarian' service have never been used by graduate students. On the rank of library resources, graduate students thought library material collections were more important than the interlibrary loan services and that the Subject Librarians service was the least important of all library resources (Kayongo & Helm, 2010).

2.3.3 Library resources

Another service quality dimension is library resources. Electronic resources, which were not very popular at the beginning of 21st century, have become a key developing area for academic libraries. In 1999, a survey about different library use patterns of faculties and graduate students across various disciplines was conducted in the United States and the business faculty among seven departments was the only group both academics and students preferred electronic resources over print resources (Maughan, 1999). With the popularity of the internet, the overwhelming need for electronic resources is becoming a growing theme for academic libraries. There are noticeable growing expectations for more user-friendly, reliable and multidisciplinary e-resources collections. Many LIS researchers increasingly focus on library's electronic resource management. Based on a LibQUAL[+] survey, the accessibility of electronic resources and interdisciplinary collection were two major issues which affected perceived service level of library electronic resource services (Heinrichs, Sharkey, & Lim, 2006). Other researchers examined the electronic resources user patterns of faculties' members and suggested that there is a need for developing digital collections based on academic staff's professional needs as well as students' needs (McMartin et al., 2008). Pinto, Fernandez-Marcial, & Gomez-Camarero (2010) pointed out the increase usage of electronic resources in science and technology fields and the electronic journal was rated the second most significant resources after journals. Rasul and Singh (2010) examined different research behaviours in Malaysia

and found that the access of e-resources was the most important library feature for postgraduate students during their research process compared with other library services such as computer facilities, print collections and the institutional repository.

In addition, academic libraries have spent a great effort on providing electronic resources access, negotiating licence and maintaining electronic collections for alumni. For instance, Turner, Sweany, Stockton and Gaetz (2008) examined the process of making databases available for alumni of Regis University in the United States. An intensive marketing programme was hold to help the launch of the alumni online database and brochures and talks were given during various events to advertise the service (Turner, et al., 2008). A pilot project in UK tested a one-year free alumni access to selected databases (Smith, Street, & Wales, 2007). The survey at the end of the project noticed the need for extra library services such as document delivery, postal book loans, and helpdesk by participants (Smith, et al., 2007). More importantly, this survey provided a promising result which showed that sixty-one percent of respondents would be prepared to pay for online resources access (Smith, et al., 2007).

Furthermore, some librarians pointed out the issue of electronic resource licensing could affect alumni's access to electronic journals and databases. The library plays an important role in the negotiation process to include alumni in the licence agreements. For example, extending the existing licence for former students and staff to enable

them to access electronic resources would lead to extra costs and further negotiations with publishers and suppliers (Horava, 2007; Wetherill, 2008). Alternatively, libraries could seek additional finding to subscribe or purchase licence for alumni databases if there is evidence of alumni's high expectations of more electronic resources.

2.3.4 Summary

In some service quality studies, reliability was rated as the most important service quality dimension. A search conducted in VUW Library in 2003 showed that the library OPAC was not only the most used service but also urgently needed improvement. Although many scholars studied the value of librarian services, there was evidence suggesting that students did not consider librarian services as important as other library resources. There were many studies which show the increasing need for electronic resources. However, LIS studies have concentrated on current students and staff and there are very little research done to study alumni as a separate user group.

3. Research Questions

This research will attempt to address the following Research Questions (RQ).

The overall question is what is the service quality of library alumni services?

- RQ1: Do alumni consider reliability to be the most important dimension of service quality? If not, which dimension is?

- RQ2: What do alumni expect from librarian's services?

- RQ3: What are alumni expectations and perceptions for different types of library materials?

4. Methodology

4.1 Research design

Different libraries have been developing different packages for alumni with different local priorities. LibQUAL$^+$ is not a suitable instrument as the LibQUAL$^+$ survey is not fixable enough to measure service quality of particular services such as alumni service. This research project followed a strand of SERVQUAL to identify university alumni's needs for library services with an emphasis on local circumstances. This survey, therefore, used service quality statements as research instrument, which is a more flexible and adaptable method developed from SERVQUAL. A twenty-four statement survey was created based on Hernon & Calvert's work (1996) and Nitecki & Hernon's research (2000). The statements were amended to suit the alumni and the particular library situation. A seven-point scale survey was chosen to collect first hand data for a quantitative analysis. The research took place in Victoria University of Wellington (VUW) library. VUW library was going through a constructional redevelopment when the research took place. Library users had to tolerate changes of physical space therefore some of the service quality dimensions such as tangible will not be measured in this research. Based upon the literature review, the statements were divided into three main sections: reliability, library staff, and collection. The reliability section measured the reliability and accuracy of library services and its web-site, including OPAC. The library staff section measured professional services

provided by reference librarians and other library staff. Finally, the collection section measured library collections to identify alumni's expectations and perceptions for different types of collections such as electronic journals, databases, ebooks, and print materials.

In the first three sections, twenty-four statements were rated on a seven-point scale. Firstly, alumni's expectations of important library services were rated from 1 (not important) to 7 (Highly important). For the same statements, alumni were asked to indicate their perceptions of VUW library services on the seven-point scale again (1 as strongly disagree and 7 as strongly agree). This technique was used to find out what services are more important than others and if there are any gaps between expected services and received services.

The final section of the survey was an overall rating for SERVQUAL's five dimensions: tangible, reliability, responsiveness, assurance and empathy. Participants were asked to allocate 100 points among the five library service quality dimensions with the most important feature receiving more points. The five dimensions represent different aspects of library services as the following: Tangibles (physical facilities, equipment, and the appearance of personal); Reliability (ability to perform the promised service dependably and accurately); Responsiveness (willingness to help customers and provide prompt service); Assurance (knowledge and courtesy of employee and their ability to inspire trust and confidence); and Empathy (caring,

individualized attention the firm provided its customers) (Zeithaml, et al., 1990). This section provided the results showing which dimensions are the most important for alumni.

4.2 Research Sample and communication channels

The research sample was based on the research design. The intention of this study is to examine VUW Library's alumni services by studying alumni's expectations and perceptions of library services. VUW Development Office selected 55 alumni who have or had applied for VUW library membership as the survey sample. After the discussion with the Alumni Relations Manager from VUW Development Office, two survey distribution options were given. The first option which was the preferred option for the office was to send the survey on the researcher's behalf. The second option was to provide alumni's contact details to the researcher, which might involved more complicated processes relate to human ethical considerations. Giving the fact that alumni's age, their gender, occupation, or other personal details are not relevant to this research project, the first option was chosen and the questionnaire was processed and communicated through VUW Development Office.

There are benefits and disadvantages of this option. Firstly, the researcher was not informed about any personal details of participant which kept the anonymity of the survey. Secondly, the involvement of the Development Office showed official support

from the university, which could encourage participation. However, other contact newsletters or business related email messages would be sent to alumni from the Development Office during the survey period. There was a chance that the survey questionnaires would be overlooked and ignored by alumni. Additionally, alumni had to pass their feedback and questions through the office staff, which could create a communication barrier. Overall, the advantages overrode the disadvantages.

4.3 Data collection

A questionnaire survey as the research instrument was adopted to collect primary data for this research. Within a two-week period of commencing the study, five pilot surveys were conducted. Studies indicate that pilot surveys give valuable feedback on any misleading or ambiguous questions as well as providing opportunities to discover new issues that might be overlooked in the questionnaire design stage (Guthrie, 2010). Two pilot volunteers responded to the original question 4 in section one which was '*The online library catalogue shows me materials I have borrowed*'. It was indicated that the phrase 'materials I have borrowed' might lead to different means such as 'all borrowing history' and 'items borrowed currently'. This resulted in the amendment of question 4 in section one which read as '*The online catalogue allows me to check the status of items I borrow and find out about overdue notices*' (See Appendix 1 for all statements included). After modifications, a final questionnaire was available to be distributed.

A survey pack including a cover letter from the Development Office, a participant information sheet, a questionnaire, a freepost self-addressed envelop was distributed to every participant via post. The participant information sheet on the letterhead of Victoria University of Wellington explained the project, the benefit of the project, and the ethical consideration of the survey. A copy of the participant information sheet can be found in Appendix 1. Alumni are considered as to be a busy user community with would lead to a potentially lower response rate. A prize draw of a local supermarket shopping card was used to improve the motivation. It is established that a reward and the trust of the delivering of the reward will increase the response rate (Dillman, 1978). Name and contact details were asked for the prize draw only. It was communicated to the participants that the identification details on the completed survey would be removed by the Development Office staff to ensure the research was strictly anonymous. Three weeks after the hard copy was sent out, a reminder email was sent to the selected alumni with the electronic copy of the questionnaire attached. Four surveys came back after the reminder and two of them were filled and sent back through email.

Fifty-five questionnaires were distributed to the selected survey group and twelve responses were received. As there was only a small sample of 55 questionnaires, the response rate of 22% makes the results unlikely to be statistically significant and difficult to make valid generalisations from. The survey result might not be

statistically significant. However, the findings presented some similar results with other service quality studies and a larger sample size would increase the validity and the significance level of the finding.

4.4 Data analysis

The analysis used Microsoft Excel software to calculate the mean value of each statement's scores on both expectation and perception. Within the ideal library section, the high mean values indicated the importance of the service expected by alumni. On the other hand, the ranking in the VUW Library section indicated the alumni's perceptions of the services that they actually received. Gap scores between expected services and perceived services were calculated to measure if the library services met or exceeded expectations. Negative values of gaps indicate the need for improvement. The five dimensions ratings from the final section of the questionnaire were also input in the Excel file to calculate the mean scores for each dimension and to rank the five dimensions by importance.

The quadrant analysis was used to analyse the survey results by placing each statement in to four service attributes quadrants. Quadrant analysis is used as a marketing tool to produce a logical and simplified graphic result which can benefit the process of decision making and strategic planning (Lynch, Carver, & Virgo, 1996). Quadrant analysis has been adopted in library service quality research by providing a

visualized analysis of the service attributes (Peter Hernon & Calvert, 2005; Nitecki & Hernon, 2000). The method gave a clear and visualized view of the services performance therefore suggestions can be made for future actions.

5. Ethical considerations

Ethical consideration is important and has to be considered during the process of this research. The proposal was passed to SIM Human Ethics Committee for approval of the survey before data collection. All selected alumni were informed that participating in this survey was completely optional. The survey questionnaires were distributed by VUW Development Office. It was guaranteed that responses were anonymous. The contact information of the researcher and the supervisor was provided to participants in order to provide the necessary communication channel for any questions or concerns that could occur during the research process. Moreover, it was indicated in the questionnaire's cover letter that the survey data would only be used for academic purposes with the research report to be submitted to the School of Information Management for marking and deposited in the university library. All questionnaires would be destroyed two years after the completion of the project.

6. Results and Data analysis

6.1 Service quality analysis

Statements of ideal library were ranked from 1 (not important) to 7 (highly important). The statements below received highest means scores over 6 points.

- The online catalogue is an accurate source of information about all material held by the library. (mean 6.75)

- The library provides access to a wide range of electronic resources that I need. (mean 6.25)

- Instructions on remote access to the online library catalogue are easy to follow. (mean 6.17)

- The library provides access to a wide range of electronic resources that I need, in particular full-text e-journals. (mean 6.17)

- The library provides access to a wide range of electronic resources that I need, in particular online databases. (mean 6.08)

- The library provides access to a wide range of print resources that I need. (mean 6.08)

- The library provides access to a wide range of print resources that I need, in particular print books. (mean 6.08)

Two statements' indicating the expectations received mean ratings below 4.00. They are: *Librarians are expert in the literature that I am investigating.* (mean 3.20) and *Library staff members offer suggestions on where to look for information outside the library.* (mean 3.83). The mean rating for the rest of the statements were between 5.92 and 4.00. The accurate online catalogue was the most important service to expect an ideal library for alumni which rated 6.75 on a seven point scale. Considering alumni are employed or otherwise occupied, it is not a surprise that an accurate online catalogue is the most important service for alumni. They rely on the holdings information to use the library effectively. Within the seven top-ranked statements, five of them are under the dimension 'Library Collections' and two of them are under the dimension 'Reliability'.

Based on the result, alumni have indicated that the Library Collection is an important dimension for them. This is especially displayed in the mean ratings for electronic resources (6.25), e-journals (6.17), and databases in particular (6.08). Full-text e-journals appeared to be the most needed electronic resources with the mean rating of 6.17. For alumni who subscribe to library membership for their continued research, e-journals and databases would provide up-to-date research data. Comparably, e-books were not as popular as e-journals and databases and only gained 4.67 in mean rating. However, the research results show alumni's different opinions about print books and e-books. The print books received a mean rating of 6.08 which is ranked much higher in the importance of library services than e-book (mean 4.67).

Considering the popularity of electronic journals and databases, alumni did not show interest in e-books.

The print collection ranks highly in alumni's expectations. Print resources and print books in particular both received mean ratings of 6.08. It is interesting to see that e-journals were rated more important for alumni than the print format. The print journals were rated 5.33 in mean score which was considerably lower than e-journals' mean score of 6.17. With the highly developed electronic journal publishing industry, many core research journals, if not online only, offer the electronic option on top of the print subscription to deliver the anytime-anywhere access. Electronic journals have many other functions that one cannot find in print format, such as exporting citation, copy/paste, and cross-search ability. The values of these electronic journals' special features were evidenced in the higher rating of the importance of electronic journals than the print format.

As shown above, alumni clearly considered Reliability and Library Collection more important than Library Staff. This is also shown in the lower ranked statements under library staff dimension. The six aspects of library services that were rated as the least important for alumni are all under the 'Library Staff' dimension. '*Librarians are expert in the literature that I am investigating*' was ranked the least important aspect of alumni's expectation which was rated 3.20.

In comparison, alumni were asked to rate the same statements that describing VUW library services. The mean rating was between 5.82 and 3.25. Six out of eight reliability statements were rated higher than 5.10. Alumni rated the best service provided by VUW library was '*The library web site allows me to find out about library hours, locations, services, and policies*' (mean 5.82). VUW Library's electronic collections were rated in the lower range. Online databases, general electronic resources, e-books and e-journals were rated 3.82, 3.75, 3.73 and 3.67 respectively. The services' gap was measured as expectation minus perception.

To compare with alumni expectations, general electronic resources and e-journals both received the highest gaps of 2.50 followed by online database which produced a gap of 2.27. VUW Library provides alumni selected electronic resources to access under their membership. As discussed in the literature review, licensing issues limited the abilities of library providing alumni's access to electronic resources (Horava, 2007; Wetherill, 2008). The conflict between library's lack of ability to provide full access to electronic resources and alumni's perception of an ideal library's electronic resources collection obviously created the service gap in this area.

Based on findings, VUW Library had shown its reliability in many aspects. The following statements were ranked the first six features ranging from 5.82 to 5.10. They received higher scores of alumni perceptions and the library's ability to provide reliable finding aids.

- *The library Web site allows me to find out about library hours, locations, services, and policies. (mean 5.82)*

- *The library's World Wide Web page contains correct and useful information about library services and materials. (mean 5.70)*

- *The online catalogue allows me to find out any holds on items I borrow, renew material, place a hold on material, and view fines. (mean 5.60)*

- *The online catalogue is an accurate source of information about all material held by the library. (mean 5.40)*

- *Instructions on remote access to the online library catalogue are easy to follow.(mean 5.20)*

- *The online catalogue allows me to check the status of items I borrow and find out about overdue notices. (mean 5.10)*

There are three statements in which VUW Library's services exceeded alumni's expectations. '*The library's world wide web page contains correct and useful information about library services and materials*' received mean score of 5.55 in an ideal library and 5.70 in VUW library which produced a gap of -0.15. The other two statements '*Librarians do not overwhelm me with too much information and details*' and '*Librarians are expert in the literature that I am investigating*' received -0.13 and -0.05 respectively in gaps between expectations and VUW Library service performances. VUW Librarians' services were acknowledged but alumni did not express their needs of such a service. It is worth to point out that the statement

'Librarians are expert in the literature that I am investigating' was rated the least important of alumni's expectations. The rating under Library Staff dimension maybe suggests that alumni have more independent learning styles.

The final section of the survey questionnaire represented the different rating of the importance of library service quality dimensions. Table 2 presents the result of the five dimensions scores and ranking according to alumni responses.

Table 2. Ranking of the five dimensions of library service quality

Dimensions	Total score	Mean	Rank
Reliability	420	35	1
Assurance	220	18.33	2
Tangibles	220	18.33	3
Responsiveness	190	15.83	4
Empathy	145	12.08	5

As the result shown, reliability was rated the most important library service aspect, which receiving a mean score of 35 out of 100. This finding confirmed previous studies in which reliability is normally rated more important than other dimensions. According to this survey, there are no noticeable differences between the other dimensions.

6.2 Quadrant analysis

The service quality data was plotted into four quadrants with two dimensions which were users' expectations of ideal library services and users perceptions of VUW Library services. The expectation dimension is located along the horizontal axis to represent the importance of library services for alumni in the ideal situation and the perception dimension is plotted along the vertical axis to show actual library services received by alumni.

As showed in figure 1, the 24 survey statements were placed in one of the four quadrants in the quadrant chart. Quadrant one represents the service attributes that were considered as highly important for alumni and they perceived these features were delivered by the library. Libraries should maintain the current service level of statements in quadrant one and inform the users that the library provides these services (Lynch, et al., 1996). Fourteen out of twenty-four statements were located in quadrant one according to the survey result, which suggests that alumni are mostly comfortable with the library services. However, it is worth to mention that the statement '*The online catalogue is an accurate source of information about all material held by the library*' created a service gap of 1.35 between the alumni's expectation of ideal library services and perception of VUW Library services. Online catalogue still requires improvement to exceed alumni's expectation although the mean rating was 5.4 for the VUW library service as compared to mean score of 6.75

received under alumni's expectation. There are a number of possible reasons that caused this gap. Firstly, the VUW alumni library membership includes access to limited number of electronic resources. Alumni would find that they cannot access the full text e-resources that they have found on the library catalogue. Secondly, the library had implemented the discovery services in 2011. Users might find the items showing as available on the discovery layer not available on the library catalogue. The different search results received from the discover search and the library catalogue search might have created the dissatisfaction with library catalogue.

Figure 1: Quadrant chart of the 24 service statements
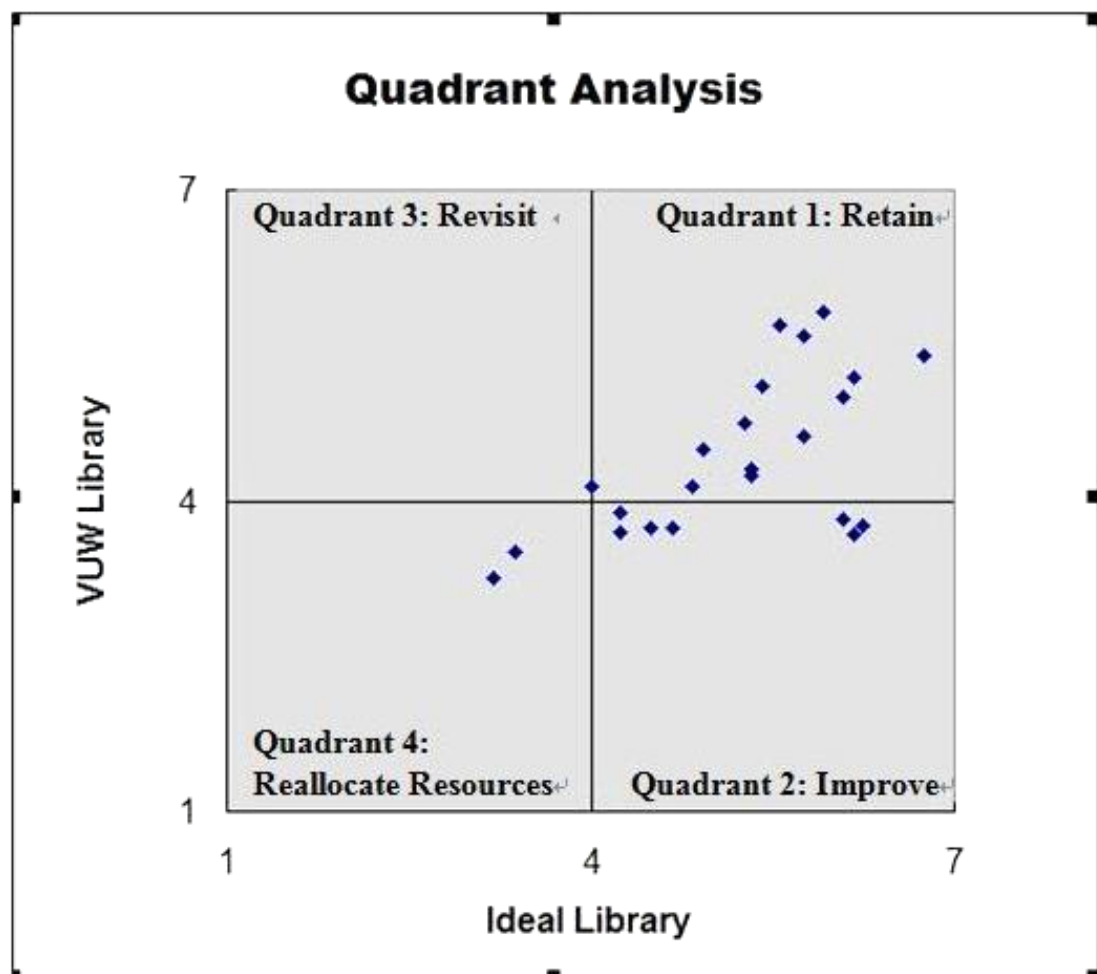
Statements falling into the second quadrant were also rated highly important by alumni, but received lower ratings in the actual library performance. This quadrant presents services areas that need most of the librarians' attention. These service attributes in quadrant two were either not delivered to users or delivered without users' awareness. There are request of librarians and library staff to provide reference help on using materials and selecting electronic resources. These services are attached to the high demand of electronic resources from alumni. Alumni needed help with using these materials effectively as well as having access.

The three attributes located at the far end of the expectation axis in quadrant two obviously needed more assessment. These statements are '*The library provides access to a wide range of electronic resources that I need*', '*The library provides access to a wide range of electronic resources that I need, in particular full-text e-journals*', and '*The library provides access to a wide range of electronic resources that I need, in particular online databases*'. These three library aspects created service quality gaps of 2.5, 2.5 and 2.27 respectively. This result represents the alumni's high expectation of electronic resources which were not fulfilled by the limited alumni access of selected ones only. Two approaches could reduce the gaps for these three service attributes. A clear explanation of the benefits included in alumni library membership would prevent the higher expectation. It might help to point out explicitly that alumni membership only include a limited number of the library's electronic resources. Secondly, the library might need to negotiate with publishers and involved parties to

increase the number of alumni databases. However, purchasing or subscribing to alumni licences can be challenging due to the currently shrinking library budget.

Attributes in quadrant three are the statements that were rated less than 4 points on the seven-point scale so were considered as less important services for alumni. Services in this quadrant, however, were delivered to and were recognized by alumni. Statements falling into quadrant three would either be unimportant to alumni or alumni were not aware of the importance of these services. Librarians might check these service attributes and move staff and resources to improve services located in quadrant one and two. Alternatively, library can rebrand or promote these services by finding out why alumni considered these aspects unimportant. According to this study, there is not any statement included in quadrant 3. However, there is one statement '*Librarians do not overwhelm me with too much information and detail*' was located between quadrant one and quadrant three. This indicated that VUW librarians have not been providing too much extra information to alumni, which was appreciated by alumni.

Quadrant four represents services that neither were felt as important nor were perceived as higher quality services by alumni. Similar with quadrant three, there is a rebranding opportunity for services that fall into the quadrant four. The result might be a surprise for library staff as two statements included in quadrant four are under library staff dimension: '*Library staff members offer suggestions on where to look for information outside the library*', and '*Librarians are expert in the literature that I am*

investigating'. Library staff and librarians' proactive services were not perceived by alumni. These services have the potential to move to quadrant one if users experience staff and librarians taking the extra step to make suggestions or show their expertise when they are approached. On the other hand, librarians could consider reallocating time and resources to services located in quadrant two such as providing teaching programmes and reference help in electronic resources.

7. Conclusion

7.1 Conclusion

This study aimed to find the gaps between alumni expectations of ideal library services and perceptions of VUW Library services. The survey followed the strand SERVQUAL and sought to measure service quality of VUW library alumni membership. The results show alumni strongly considered reliability to be the most important service quality dimension in the five SERVQUAL service quality dimensions, which received the mean score of 35 out 100 points. VUW library's accurate information of library hours, locations and services on their website was mostly appreciated by alumni. The accurate service information on the VUW library page was rated highly and exceeded alumni's expectation. According to the result of

this survey, alumni do not have strong preference for other dimensions such as assurance, tangibles, responsiveness and empathy.

Reference help was required by alumni, especially in selecting and using electronic resources. The findings indicate that the VUW librarian service has exceeded the alumni's expectation, although the librarians' expertise in research literature was considered as the least important aspect. Moreover, participating alumni expressed their high expectations in electronic journals and databases although print books were as needed as databases. Interestingly, ebooks were rated the least important library materials comparing to e-journals, databases, print books, and print journals. With the high demand for electronic resources, the library should seek for strategies to reduce service quality gaps in providing access to electronic resource, e-journals and databases.

7.2 Limitations of the research

This research project targeted at alumni who are the emerging user community in academic libraries. The VUW library only had 55 alumni users when the research was conducted. The result of this study might not be accurate due to the small size of research sample. Moreover, this research is based on the VUW library alumni services so that it may not fully represent all aspects of other university libraries. The statements used for this survey were selected and amended to apply to the unique user

group of the VUW library. As a result, statements might not be applicable to other libraries.

Respondents' bias or misunderstanding on survey questions may affect the accuracy of research. Although the researcher's contact details were given to participants, no questions or clarifications about the survey statements were asked during the process. It does not mean that they fully understood all the survey statements. For example, one participant wrote a note on the returned questionnaire where she/he mentioned that she/he was confused with one particular statement. The participant provided two ratings for the same question based on understandings. Limited by the data collection restrictions, the researcher did not have contact details of alumni so that could not communicate with the alumni directly to seek feedback or provide clarification.

7.3 Future research

Due to the small sample and the selection of one university to conduct the research in, there might be sampling bias that could affect the validity of the result. Future studies could cover different universities and use a larger sample group to help eliminate this bias in future results. Moreover, this research found that alumni expectations of library staff and librarians were lower than other library service aspects. Further research could be conducted to seek in depth understanding of alumni's attitude towards librarian services. E-books were rated as the least important library materials,

which creates the opportunity to research why this is so. For example, alumni's research behaviour could provide reasons as to the unpopularity of ebook. The library can also find out if alumni are aware of the e-book collection.

There are expectations of providing teaching programmes, more help with selecting and using electronic resources. Thus, librarians can investigate alumni's research behaviour, especially in the electronic environment and tailor librarian services to fit the needs of alumni as a user group. Additionally, libraries can conduct a survey of current learning and teaching tools from alumni's point of view. This will allow the librarians to evaluate the current services and develop or create suitable programmes for alumni.

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Appendix 1. Information Sheet

Participant Information Sheet for a Study of university library alumni services

Researcher: Xiaolu Guo; School of Information Management, Victoria University of Wellington

I am a student in School of Information Management at Victoria University of Wellington. I am undertaking a research project as a part of Master of Information Studies. The project is examining service quality of library alumni services. An understanding of alumni library membership's service quality can be beneficial to the library, the alumni office and the university to develop suitable services and programmes for alumni. It may lead to an improvement in the service the Library provides to you, the alumni.

The University requires that ethics approval be obtained for research involving human participants and this has been given. I am inviting alumni of Victoria University of Wellington who currently have or who have had an alumni membership of the Library to participate in this study. Participants will be asked to complete a survey questionnaire that will take about twenty minutes to complete. Please post the completed questionnaire back in the freepost envelope provided.

Victoria University of Wellington Alumni Relations Office will receive the completed questionnaires. They will remove all indentifying data from the surveys and then pass them to the researcher. The process will ensure that the research is strictly anonymous.

Responses collected will form the basis of my research project and will be put into a written report on an anonymous basis. It will not be possible for you to be identified personally. All material collected will be kept confidential. No other person besides me and my supervisor, Dr Philip Calvert, will see the questionnaires. The research report will be submitted for marking to the School of Information Management and deposited in the University Library. It is possible that one article may be submitted for publication in scholarly journals. Questionnaires will be destroyed two years after the end of the project.

If you have any questions or would like to receive further information about the project, please contact me at Ivy.Guo@vuw.ac.nz or my supervisor, Dr Philip Calvert, at the School of Information Management at Victoria University of Wellington, P O Box 600, Wellington, phone 04 4636629, email philip.calvert@vuw.ac.nz .

Xiaolu Guo

Appendix 2. Ranking of the ideal library (IL) services expectations

Section	Questions	Mean	Rank
Reliability	The online catalogue is an accurate source of information about all material held by the library.	6.75	1
Library Collection	The library provides access to a wide ran;ge of electronic resources that I need.	6.25	2
Reliability	Instructions on remote access to the online library catalogue are easy to follow.	6.17	3*
Library Collection	The library provides access to a wide range of electronic resources that I need, in particular full-text e-journals.	6.17	3*
Library Collection	The library provides access to a wide range of electronic resources that I need, in particular online databases	6.08	5*
Library Collection	The library provides access to a wide range of print resources that I need.	6.08	5*
Library Collection	The library provides access to a wide range of print resources that I need, in particular print books.	6.08	5*
Reliability	The library Web site allows me to find out about library hours, locations, services, and policies.	5.92	8
Reliability	The online catalogue allows me to find out any holds on items I borrow, renew material, place a hold on material, and view fines.	5.75	9*
Reliability	Material I requested comes within the time frame quoted if it is currently on loan.	5.75	9*
Reliability	The library's World Wide Web page contains correct and useful information about library services and materials.	5.55	11
Reliability	The online catalogue allows me to check the status of items I borrow and find out about overdue notices.	5.42	12
Library Collection	The library provides access to a wide range of print resources that I need, in particular print journals.	5.33	13*
Library Collection	The library provides electronic document delivery services (full text to customer's desktop) for material that the library does not subscribe to.	5.33	13*
Library Staff	The library provides online information services that answer my question within three days.	5.27	15
Library Staff	The library provides online information services that acknowledge my question within 24 hours.	4.92	16
Reliability	The online library catalogue has a 'Help' option which I can easily understand.	4.83	17
Library Collection	The library provides access to a wide range of electronic resources that I need, in particular Ebooks.	4.67	18

Library Staff	Library staff members help me to select appropriate electronic resources.	4.50	19
Library Staff	Librarians provide teaching programmes which enable me to make more effective use of library materials and services.	4.25	20*
Library Staff	Library staff members personally help me to use electronic resources.	4.25	20*
Library Staff	Librarians do not overwhelm me with too much information and detail.	4.00	22
Library Staff	Library staff members offer suggestions on where to look for information outside the library.	3.83	23
Library Staff	Librarians are expert in the literature that I am investigating.	3.20	24
*A tie in the ranking			

Appendix 3. Ranking of the services expectations of VUW Library

Section	Questions	Mean	Rank
Reliability	The library Web site allows me to find out about library hours, locations, services, and policies.	5.82	1
Reliability	The library's World Wide Web page contains correct and useful information about library services and materials.	5.70	2
Reliability	The online catalogue allows me to find out any holds on items I borrow, renew material, place a hold on material, and view fines.	5.60	3
Reliability	The online catalogue is an accurate source of information about all material held by the library.	5.40	4
Reliability	Instructions on remote access to the online library catalogue are easy to follow.	5.20	5
Reliability	The online catalogue allows me to check the status of items I borrow and find out about overdue notices.	5.10	6
Library Collection	The library provides access to a wide range of print resources that I need.	5.00	7*
Library Collection	The library provides access to a wide range of print resources that I need, in particular print books	5.00	7*
Library Staff	The library provides online information services that answer my question within three days.	4.75	9
Reliability	Material I requested comes within the time frame quoted if it is currently on loan.	4.63	10
Library Staff	The library provides online information services that acknowledge my question within 24 hours.	4.50	11
Library Collection	The library provides electronic document delivery services (full text to customer's desktop) for material that the library does not subscribe to.	4.30	12
Library Collection	The library provides access to a wide range of print resources that I need, in particular print journals.	4.25	13
Reliability	The online library catalogue has a 'Help' option which I can easily understand.	4.13	14*
Library Staff	Librarians do not overwhelm me with too much information and detail.	4.13	14*
Library Staff	Librarians provide teaching programmes which enable me to make more effective use of library materials and services.	3.88	16
Library Collection	The library provides access to a wide range of electronic resources that I need, in particular online databases.	3.82	17
Library Collection	The library provides access to a wide range of electronic resources that I need.	3.75	18
Library Staff	Library staff members help me to select appropriate electronic resources.	3.73	19*

Library Collection	The library provides access to a wide range of electronic resources that I need, in particular Ebooks.	3.73	19*
Library Staff	Library staff members personally help me to use electronic resources.	3.70	21
Library Collection	The library provides access to a wide range of electronic resources that I need, in particular full-text e-journals.	3.67	22
Library Staff	Library staff members offer suggestions on where to look for information outside the library.	3.50	23
Library Staff	Librarians are expert in the literature that I am investigating.	3.25	24
*A tie in the ranking			

Appendix 4. Survey result

Section	Questions	IL Mean	VUW Mean	Gap
Reliability	Instructions on remote access to the online library catalogue are easy to follow.	6.17	5.20	0.97
Reliability	The online catalogue is an accurate source of information about all material held by the library.	6.75	5.40	1.35
Reliability	The online catalogue allows me to find out any holds on items I borrow, renew material, place a hold on material, and view fines.	5.75	5.60	0.15
Reliability	The online catalogue allows me to check the status of items I borrow and find out about overdue notices.	5.42	5.10	0.32
Reliability	The online library catalogue has a 'Help' option which I can easily understand.	4.83	4.13	0.71
Reliability	Material I requested comes within the time frame quoted if it is currently on loan.	5.75	4.63	1.13
Reliability	The library's World Wide Web page contains correct and useful information about library services and materials.	5.55	5.70	-0.15
Reliability	The library Web site allows me to find out about library hours, locations, services, and policies.	5.92	5.82	0.10
Library Staff	Librarians provide teaching programmes which enable me to make more effective use of library materials and services.	4.25	3.88	0.38
Library Staff	Library staff members help me to select appropriate electronic resources.	4.50	3.73	0.77
Library Staff	Library staff members personally help me to use electronic resources.	4.25	3.70	0.55
Library Staff	Library staff members offer suggestions on where to look for information outside the library.	3.38	3.50	0.33

Library Staff	Librarians do not overwhelm me with too much information and detail.	4.00	4.13	-0.13
Library Staff	The library provides online information services that acknowledge my question within 24 hours.	4.92	4.50	0.42
Library Staff	The library provides online information services that answer my question within three days.	5.27	4.75	0.52
Library Staff	Librarians are expert in the literature that I am investigating.	3.20	3.25	-0.05
Library Collection	The library provides access to a wide range of electronic resources that I need.	6.25	3.75	2.50
Library Collection	The library provides access to a wide range of electronic resources that I need, in particular full-text e-journals.	6.17	3.67	2.50
Library Collection	The library provides access to a wide range of electronic resources that I need, in particular online databases.	6.08	3.82	2.27
Library Collection	The library provides access to a wide range of electronic resources that I need, in particular Ebooks.	4.67	3.73	0.94
Library Collection	The library provides access to a wide range of print resources that I need.	6.08	5.00	1.08
Library Collection	The library provides access to a wide range of print resources that I need, in particular print journals.	5.33	4.25	1.08
Library Collection	The library provides access to a wide range of print resources that I need, in particular print books.	6.08	5.00	1.08
Library Collection	The library provides electronic document delivery services (full text to customer's desktop) for material that the library does not subscribe to.	5.33	4.30	1.03