Exploring the Postgraduate Experience of Library eBooks

by

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Exploring the Postgraduate Experience of Library eBooks

(hereafter referred to as 'The MIS Research Project')

being undertaken by

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Abstract

Research Problem

In 2013 and 2014 surveys of the University of Otago student population, eBooks fell below the mean as a service that was meeting the needs of the above third year student group. The purpose of this study was to explore the experience of using library eBooks from the perspective of postgraduate students, in order to identify factors which may be contributing to this service failing to meet student's needs.

Methodology

Semi-structured interviews were conducted with eight University of Otago postgraduate students, across disciplines and levels of postgraduate study. The interview data was analysed using a thematic analysis methodology to identify overarching themes. The interview data was compared and contrasted against findings from the existing research.

Results

Although the sample size for this study was small and did not include as many students from across all disciplines as was desired, the results still contribute to the understanding of the experience of using library eBooks for University of Otago postgraduate students. The findings illustrate how eBooks are accessed and used by students and have led to the following suggestions for changes to this library service: that there is a need and desire for an online training and support tool for using eBooks – especially the advanced features, that the 7 day loan limit on some eBooks is not long enough for postgraduate students, and that postgraduate students want to use DRM free eBooks that can be downloaded in PDF format.

Implications

Areas identified for further research include further exploration of this topic with postgraduate students from outside of the humanities, exploration of how the undergraduate experience of eBooks compares to the postgraduate experience, and reasons for and implications of a preference to use Google Scholar by students.

Keywords: eBooks, postgraduate students, academic libraries, user experience

Contents

Introduction

The aim of this research project was to gather and analyse qualitative data from a sample of postgraduate University of Otago students, in order to discover what factors are affecting their experiences and perceptions of library provided electronic books (eBooks).

In 2013 the University of Otago Support Services Survey of students began collecting data on eBooks, electronic journals and electronic databases. In the 2014 Support Services Survey eBooks ranked as one of the top 10 most important services across all user groups (University of Otago Quality Advancement Unit, 2015). In both the 2013 and 2014 survey results, eBooks fell below the mean as a library service that was meeting the needs of students in the above third year group, indicating that although this student group feels that eBooks are an important service to them, it is one that is not meeting their needs.

The University of Otago library has an extensive eBook collection with 744,321 accessible eBooks in 2015 (University of Otago Library, n.d.b). All library provided EBooks can be found and accessed through Library Search|Ketu, this is the University of Otago library's installation of Primo, an Ex-Libris discovery layer product.

The University of Otago Library has invested a significant amount of collection development funds in purchasing eBooks to support research and teaching. It is library policy to purchase eBooks in preference to print books in many cases (University of Otago Library, n.d.a), and as demand for physical space within the libraries grows there may be more of a move towards reliance on E-Resources over print. Provision of eBooks is a key service that the library provides to students. Therefore it is important that the student experience of using eBooks is positive, and that students are satisfied with this method of accessing information to support their learning.

Above third year or postgraduate students are a significant subsection of the University of Otago student population with more than 4,200 students out of 21,000 studying at postgraduate level (University of Otago, n.d.a). As a user group their information needs differ from undergraduate students as they are more likely to be using library resources, including eBooks, for in-depth study and research.

Topic Statement

The purpose of this study was to explore the experience of using library eBooks from the perspective of postgraduate students, in order to identify factors which may be contributing to this service

failing to meet student's needs. The following research questions were identified to frame the exploration of this topic.

Research Questions

1. What are the needs of postgraduate students with regards to library provided eBooks?

    -   Do students feel that they have access to the eBooks that they want and need to use?

    -   Do students want different things from eBooks than print books?

    -   For what reasons do students use eBooks?

2. What is the postgraduate student experience of using library provided eBooks?

    -   Do students feel that eBooks are difficult or easy to use?

    -   Do students experience difficulties (i.e. accessibility, usability, and technical) in using eBooks, and of what kind?

    -   Are students aware of library support for eBook use and what is their experience of this?

3. What gaps can be identified between student needs and the current library eBook service?

    -   Do students feel that they need more support from the library in using eBooks?

    -   If and in what ways do students identify that eBooks are failing to meet their study/research needs?

    -   In what ways do students feel that library provision of eBooks could be improved?

    -   In what ways, if at all, do students' eBook needs and experiences with eBooks differ between disciplines?

Review of the Related Literature

EBooks are now a major part of most academic libraries resource collections, in February 2011 the Association of American Publishers found that eBooks ranked as the number one format in all categories of trade publishing (Sporkin, 2011 as cited in Polanka, 2011). The Library Journal survey of eBook use in libraries found that 94% of academic libraries included eBooks in their collections (Polanka, 2011). Since eBooks were introduced into academic library collections there has been research conducted into various aspects of them, from the libraries' experience of purchasing and managing eBooks, to user experience and usability of different eBook platforms. The review of the literature focuses on research that looks at the user experience of and attitudes towards eBooks, as this best fits the aim of this research study.

Additionally this review of the existing research focuses on that conducted more recently, from 2008-2015, as the design of eBooks, range of platforms and delivery styles, and availability of eBooks has developed quickly in recent years.

The focus and findings of this existing research can be categorised into the following areas: awareness of eBooks, eBooks versus print books, advantages and disadvantages of eBooks, and, usability of eBooks.

Awareness of EBooks

One common finding from many studies is that there is a lack of awareness of library provided eBooks among students (Hobbs & Klare, 2015, Shelburne, 2009, Cassidy, Martinez & Shen, 2012, Abdullah & Gibb, 2008 and Gregory, 2008). In a case study at the University of Ulster, Smyth and Carlin (2012) found that a perceived lack of accessibility and availability of eBooks was a main theme in free text responses from students in a survey conducted.

In Shelburne's (2009) research responses also indicated a lack of awareness of what eBooks are and their content. The University of Guelph library eBook strategy working group also identified that students had a lack of awareness of the difference between different types of online information such as eBooks, eJournals and other sources of information (Jacobs et al., 2014). Some studies have included a definition of eBooks in surveys presented to students to try and remedy this issue, such as Rod-Welch, Weeg, Caswell and Kessler (2013) and Smyth and Carlin (2012). Jacobs et al. (2014) had a face to face meeting with students taking part in their study to ensure they agreed on what an eBook was.

EBooks vs Print Books

Over the 4 years that Hobbs and Klare (2015) gathered data in their longitudinal study investigating student attitudes towards and experiences of Ebooks, students indicated a consistent preference for print books over eBooks, particularly for in-depth study or reading large portions of a book. These findings are consistent with findings from research by Cassidy, Martinez and Shen (2012), Abdullah and Gibb (2008) and Gregory (2008). The University of Guelph library eBook strategy working group (Jacobs et al., 2014) also found that students prefer to use a print book over an eBook when reading more than a chapter or two, and when comparing two or more texts, the student sample population in this study contained four postgraduate students, two from the Humanities and two from the Sciences, thirteen participants were undergraduates. Students surveyed at the University of Ulster indicated a strong preference for using a print book over an eBook when given the choice, despite usage statistics indicating that eBooks are used significantly more than print books (2,980% more)(Smyth & Carlin, 2012). Students also indicated that print books had a strong advantage for "pleasure and ease of reading" (Smyth & Carlin, 2012, p189).

Hobbs and Klare (2015) found that eBooks were valued by students for searching, skimming and reading short portions of text. Smyth and Carlin (2012) found that eBooks were preferred over print for "making copies" i.e. printing, and the ability to copy and paste into notes.

When interviewed, students at the University of Taiwan indicated that almost all would use both print books and eBooks if they had the choice, using the eBook to browse text and keyword search and the print version for in-depth reading (Wu & Chen, 2011). This study included five graduate students from each of the humanities, social sciences, science and technology, and medicine disciplines, this study found that all of the humanities students were high users of eBooks, but all would still choose print over eBook if available, three of the five medicine students were high eBook users and preferred to use an eBook over a print book (Wu & Chen, 2011).

Cassidy, Martinez and Shen (2012) also sought to learn more about users and non-users of eBooks at Sam Houston State University. In 2011 they conducted an online survey of the faculty and graduate student body, with the aim of learning more about the preferences and characteristics of those in-depth researchers who use eBooks and those who do not, the population sample was made up of 63% graduate students with the remainder university faculty, 65% of all respondents had a humanities background. Interestingly, although this study was conducted 3 years later than Shelburne's (2009) study, the percentage of users who had not used library eBooks was higher at 62% vs 43%. In addition instead of a lack of awareness of eBooks being the main reason for not using eBooks, Cassidy, Martinez and Shen (2012) found that 31% of non-users of eBooks reported dislike for eBooks as a reason for non-use and 69% reported that they did not anticipate any need to start using eBooks.

In summary, the literature reviewed indicates that students prefer to use print books for reading for pleasure, for in-depth reading or when reading more than a chapter or two of a text. EBooks are preferred for dipping into a text or reading only a short section.

Advantages and Disadvantages of EBooks

Difficulty or discomfort in reading from a screen is an often reported disadvantage of eBooks, with a significant proportion of users reporting this in studies by Smyth and Carlin (2012), Wu and Chen (2011) and Shelburne (2009). Distractions such as social media and email when reading online have also been reported as a perceived disadvantage of eBooks for some students (Smyth & Carlin, 2012; Wu & Chen, 2011).

In research conducted at Pepperdine University, Brahme and Gabriel (2012) found that only 14% of students reported never having used an eBook and 56% of students surveyed preferred to use an eBook on a tablet device (such as an iPad). A majority of students indicated that they can read from

a screen for at least an hour at a time (Brahme & Gabriel, 2012), this is in contrast to other studies which have found that discomfort in reading from a screen is a common issue with eBooks.

Other disadvantages of eBooks reported in Shelburne's (2009) research were navigation difficulties, searching and locating material, digital rights management (DRM) restrictions and technical or internet access difficulties. In a study conducted by Brahme and Gabriel (2012), they also found that users encountered general technology issues such as timeouts and loss of internet connection. The eBook strategy working group at the University of Guelph library (Jacobs et al., 2014) found that factors such as slow internet connections, log-in issues and limited numbers of concurrent users all negatively impacted on students' perceptions of eBooks.

DRM restrictions are a factor which appears to be negatively impacting users' experience of eBooks. DRM varies between eBook providers and between individual eBook titles, and may restrict the number of users who are able to use an eBook at once, how many pages may be printed or copied and pasted from an eBook and whether and for how long an eBook may be downloaded for off-line use. DRM restrictions were identified as a disadvantage of eBooks for users in Shelburne's research (2009). Cassidy, Martinez and Shen (2012) found that comments from users indicated that they had an expectation that library eBooks would be available to multiple concurrent users. Restrictions on the ability to copy and paste text into personal notes was found to be a disadvantage of some eBooks for users by the University of Guelph Library eBook strategy working group (Jacobs et al., 2014).

Perceived advantages of eBooks for users are: the ability to keyword search (Jacobs et al., 2014, Smyth & Carlin, 2012, Abdullah & Gibb, 2008); the ability to access eBooks from anywhere and 24/7 access (Smyth & Carlin, 2012, Sieche, Krey & Bastiaens, 2013, Shelburne, 2009)

A study conducted by Cassidy, Martinez and Shen (2012) did not survey for perceived advantages and disadvantages of eBooks but asked users to rank the importance of eBook features to them, the results were that the ability to search the whole text and to print were ranked as the most important followed by the ability to take notes and highlight text.

Usability of EBooks

Factors affecting the perceived usability of eBooks can range from the design of the eBook platform and reading screen, to technical issues such as a slow internet connection.

Brahme and Gabriel (2012) found that some reported issues with eBooks were general technology issues and a lack of desired functionality, such as ability to add notes and highlight, although these features are in fact available from many library provided eBooks at the time of the study. The authors concluded that the variety of eBook models and constant change with this technology

results in "a type of resource that in practice is unknowable" (Brahme & Gabriel, 2012 p.192). These findings suggest that a perceived lack of desired functionality rather than an actual lack of functionality may be a factor affecting the user experience of Ebooks.

An interesting finding from the longitudinal study carried out at Wesleyan University is that although over the 4 years of data gathering an increase in usage of eBooks has been seen, students have not become more sophisticated in their use of them; task observation sessions showed that most students have little or no difficulty with basic navigation within eBooks, but did have difficulty using the more advanced features, and often did not even try to use these (Hobbs & Klare, 2015). When interviewed students said that they were not interested in spending time learning how to use the advanced features of different eBooks, and would prefer to use formats, such as print and PDF, that they already have working knowledge of (Hobbs & Klare, 2015). However, after a guided demonstration from library staff during the task usability session, students indicated that they had a higher opinion of eBooks and would be more likely to use the features they had been shown in the future (Hobbs & Klare, 2015).

Muir and Hawes (2013) focussed on undergraduate students' use of eBooks to complete course work, conducting an observational case study of one undergraduate physics class, preceded by a questionnaire and followed by an interview. The aim of this research was to learn more about how students use eBook functionality and to evaluate the usability of eBook platforms; this case study was conducted using only two eBooks, one from Myilibrary and one from Netlibrary (Muir & Hawes, 2013). Although this qualitative research used a smaller sample (14 students) and only two different eBook platforms, the issues encountered by the students while completing the set task still provide insight into the kinds of issues that may be barriers to student satisfaction with eBooks. Even though nearly all of the students who took part had used eBooks before (98.3%) the study found that many students had difficulty navigating within eBooks, this included difficulty locating the search box and difficulty with page-to-page navigation (Muir & Hawes, 2013). Difficulty reading and comprehending the text when needing to scroll down the page and when only one page would load at once, a lack of context for search results, slow loading of pages and time-outs also caused frustration for students (Muir & Hawes, 2013). The authors felt that the students' interactions with the eBooks significantly influenced their perceptions of how well they had done with the task and conclude that librarians and academics need to do more to train students' in effectively using eBooks to support their study (Muir & Hawes, 2013).

EBooks in the New Zealand context

There have not been a large number of studies conducted into eBooks in academic libraries in New Zealand. Two studies have been carried out at the University of Waikato, the first in 2012 investigated the awareness, use and perception of eBooks among academic staff at the university through a quantitative online survey (Lamb, 2012) the second, in 2015, investigated students attitudes towards and usage of eBooks also through a quantitative survey, conducted online and in hard copy (Wilkinson, 2015). The student survey had a much higher response rate from postgraduate rather than undergraduate students, with 33% of respondents being postgraduate Masters students and 19% Doctoral students, in total 88% of respondents had used or attempted to use an eBook for academic study (Wilkinson, 2015). Some findings of this study were that there was a high awareness of eBooks and that most students found them easy to find and use, however, participants also indicated that they felt eBooks should be easier to find, needed improved user guides and better training in how to use them, free text comments also indicated difficulties using different eBook platforms and a need for more training from the library (Wilkinson, 2015).

Summary

The existing research into the user experience of eBooks in an academic setting tells us that students are not as aware of the eBooks provided for them by the university library as we might hope. These findings indicate that libraries are perhaps not doing a good job of promoting the fact that EBooks are available from the library, and this may be an issue at Otago. If students are unaware of the range and number of EBooks that are available, then they may perceive that the library is not providing them with the EBook service that they want and need. It also suggests that users do not necessarily have a clearly defined understanding of what an eBook is, and how it is different from, for example, an online journal article, which may cause difficulties for researchers wishing to focus only on the user experience of using eBooks. Surveys of users have shown that users prefer print books to eBooks, especially for in-depth reading, but that the advantages of eBooks are perceived as 24/7 off-campus accessibility, search, and print functions. From the findings of Hobbs and Klare (2015) by it may be inferred that eBooks with more sophisticated features may not be valued by students, and that ease of use may be a barrier to student satisfaction with eBooks. Findings also indicate that this may be improved through better skills training provided to students by the library (Hobbs & Klare, 2015 and Wilkinson, 2015).

EBooks at Otago

The University of Otago library purchases eBooks title by title and as part of aggregator packages, they are purchased based on recommendations from academic staff and students, and selections made by library staff. Otago also runs a patron driven acquisition program (PDA) with Proquest

Central (formally EBook Library (EBL) and Ebrary). For this bibliographic records of non-owned eBooks are added to the library catalogue so that they can be discovered by users through Library Search|Ketu, after a 5 minute browse period users are prompted to request that the eBook be purchased by the library, through an automated form. This request is then manually checked and approved or declined by a library staff member.

Besides EBL and Ebrary the library also provides access to eBooks through Springerlink, ProQuest Safari Books Online, Elsevier aggregated databases such as ScienceDirect and ClinicalKey, EBSCOhost, Project MUSE, Ovid and including many publisher eBook platforms such as Alexander Street Press, Cambridge University Press, Routledge, Taylor and Francis, Oxford University Press, SAGE, CRC Press, and Emerald.

Delimitations

This research project included only current University of Otago students (not students of any other organisation) using University of Otago library provided eBooks. The methodology has meant that a snapshot in time of experience is captured, it may be useful to repeat this research again at a later point as eBook availability and features change.

Furthermore, this research only to gathered data from postgraduate students, not undergraduate students or University staff.

Definitions

For the purposes of this research project **students** are defined as: currently enrolled University of Otago students who are studying at the level of fourth year or above, that is: postgraduate honours, Masters (both course work masters and research masters), PhD, and Postgraduate Certificate and Postgraduate Diploma students, across all disciplines offered at Otago. Broadly these are: Sciences, Health Sciences, Humanities, and Commerce. In total the University offers over 120 postgraduate qualifications (University of Otago, n.d.b).

Several definitions of **eBook** exist, for the purposes of this research eBooks are: digitally published books, which may be a digitised version of a print book or a 'born digital' book, which can be accessed online or downloaded to a device for off-line access.

Library provided ebooks are those which the library has purchased, may purchase through PDA, or are freely available and which the library provides access to through its search function, library search/Ketu.

Digital Rights Management or **DRM** is "a means of extending control on digital objects in cyberspace. DRM is being employed today to protect digital content (encryption), control specific

operations on the content (play, print, copy, save) and to limit the number of times a particular operation may be exercised on the content (e.g. view three times)" (Davis & Lafferty, 2002).

Research Design

The majority of existing studies looking at student use of eBooks and attitudes towards eBooks have used quantitative methodologies, most commonly user surveys or questionnaires (Brahme & Gabriel, 2012, Cassidy, Martinez & Shen, 2012, Lamb, 2012, Shelburne, 2009, Sieche, Krey & Bastiens, 2013, Smyth & Carlin, 2012, Rod-Welch, Weeg, Caswell & Kessler, 2013 and Wilkinson, 2015). These have allowed for useful insights into for example: preference for print books or eBooks, frequency of use of eBooks and awareness of eBooks. However quantitative research could not explore the depth and range of experiences of finding, accessing and using eBooks that this research project aimed to explore.

Qualitative research using interviews, in some cases combined with other data collection methods such as task observation and questionnaires, have been used successfully by researchers such as Abdullah and Gibb, 2008, Hobbs and Klare, 2015, Jacobs et al., 2014, Muir and Hawes, 2013 and Wu and Chen, 2011. These qualitative studies have led to insights around the kind of issues that students encounter when they use eBooks, the way that students prefer to use eBooks, as well as perceived advantages and disadvantages of eBooks. By conducting interviews with students these researchers were able to "explore the depths and nuances" of the topic, to gain insight into personal experiences and perceptions (Guest et al, 2013). A qualitative methodology was a good fit for the objective of this research study, to explore the postgraduate student experience of using library eBooks at the University of Otago. Interviews allowed the researcher the opportunity to discover what student's needs are, and what their experiences of eBooks have been, in order to identify factors which are impacting on the student experience of this library service.

The research study described here gathered qualitative data through individual semi-structured interviews with a small (8) sample of postgraduate University of Otago students. A non-probability purposeful sampling strategy was used, in order to select students who had experience with library eBooks and to cover a range of disciplines and level of postgraduate study. Although this type of sampling does not allow the ability to statistically extend results to the entire population, the data gathered still offers useful insights into the shared experience and understandings of the student group (Guest et al. 2013).

Methodology and Methods

Students who fit the following criteria were sought for participation: postgraduate students of the University of Otago, who have self-identified as having used or attempted to use library provided eBooks.

Information about the research study was emailed to academic liaison librarians of the University of Otago Library, with the request that they pass on the information to postgraduate students that they had contact with who might be willing to participant. This method was very effective in recruiting postgraduate students from the division of Humanities with emails expressing interest in participating received from around fifteen Humanities postgraduates at varying levels and one Commerce student. The intention was to solicit for participants through posters and flyers advertising the research study, placed in the University libraries, because of the good response from Humanities students in response to the emails sent out by the academic liaison librarians, posters and flyers were placed at the Science and Health Sciences libraries only. Participants were offered a $20 grocery voucher as a token of thanks for their time, this was advertised on the recruitment poster, flyers and emailed information. It was hoped that a small reward would encourage participation. Participants were also offered the option of having a summary of results sent to them on completion of the research. In total eight students were interviewed.

Interview questions (see Appendix d) were emailed to participants before the interview took place, to allow them more time to reflect on their experiences. The participant information sheet (see Appendix b) was also emailed to participants in advance of the interview in case they had any questions arising from it. The same interview question guide was used for each interview, follow up or probing questions were used when needed to elicit more detail or to clarify the response. Each interview was recorded on a portable recording device and later transcribed from the audio file.

A laptop computer was made available during the interview for participants to use if they wished, to aid in describing or explaining problems encountered in using EBooks, this was explained to participants before starting the interviews, as well as explaining that the interview would be audio recorded but not video recorded. The reason for this was that the first participant interviewed asked if the interview was being video recorded and the idea of this seemed to make her uncomfortable. No participants chose to use the laptop to demonstrate specific issues encountered with eBooks, but it was used to demonstrate some other things, such as the citation availability in Google Scholar. The interviewer also used it to show participants how to find some information such as the off-campus Google Scholar link.

Although the participant information sheet was emailed to participants before the interview they were also given a print copy and time to read through it and ask any questions before the interview began. Participants were also asked to complete a consent form for the audio recording of the interview, and then a brief paper demographic questionnaire (see Appendix e).

At the conclusion of the interview participants were also asked if they had any questions about the research project or their part in it. The audio recordings of the interviews were transcribed by the researcher and emailed to the participant for approval. Two minor corrections were made to transcripts as a result of feedback from the participants.

Ethical Considerations

Human Ethics Committee approval was applied for and granted by the Victoria University School of Information Management before data gathering commenced. The University of Otago Human Ethics Committee office advised that ethics approval did not also need to be sought from the University of Otago. Permission to carry out this proposed research and to interview University of Otago students was granted by the University library on behalf of the University of Otago.

Participation was voluntary and the identity of participants was only known to the researcher. Data was gathered through one-on-one interviews with students, conducted in a library seminar room. The researcher used an interview guide (see Appendix c), each participant was provided with an information sheet about the research project (see Appendix a) and a consent form to sign (see Appendix b). Participants were given the option to withdraw from the research up to 2 weeks after an interview had taken place, and were advised that if they chose to do so all data gathered relating to them would be destroyed. None of the participant chose to withdraw from the study.

Notes, interview recordings, and transcripts were stored securely either in a password protected electronic file or in a locked drawer in the researcher's office, and only available to the researcher. All raw data will be destroyed up to 2 years after completion of the research.

Participants' privacy is protected through interview transcripts not being identified by participants name or other identifying details. Care has been taken that any information or direct quotes from interviews used in this account of the research cannot be identified to an individual participant.

Assumptions

As mentioned in the review of the related literature, a common understanding of the term "eBook" cannot be assumed. In this research, what students perceive as being a library eBook is as relevant as what the library defines as a library eBook, as it is the student experience and perception of the service which is being explored.

Limitations

Asking students to recount their experiences with eBooks rather than observing them in real time means that inaccuracies in recalled details need to be allowed for (Leedy & Ormrod, 2013). However, this method allows for a much broader range of experiences to be shared than that which could be measured in a task observation scenario.

The small sample size and inability to achieve a sample which is truly representative of the population demographics does mean that the results cannot be assumed to be representative of the entire postgraduate student body. Effort was made to recruit and select participants from across disciplines and level of study, however it was not possible to recruit enough participants from the Health Sciences and Commerce disciplines, or across all levels of postgraduate study.

For the same reason the results cannot necessarily be applied to any university library, but they may provide a useful guide or highlight potential areas which warrant further investigation at other libraries.

Data Analysis

All interviews were audio recorded; recordings were then transcribed by the researcher. A thematic analysis model was used to analyse the data, using the three stages of: descriptive coding, interpretive coding, and overarching themes, as described by King and Horrocks (2010). The researcher first read through the transcripts, copying out the interview text and putting it into an excel spreadsheet against different themes. In the descriptive coding stage themes were developed first around the questions from the interview guide; and additional themes were identified based on the researchers knowledge of the data gathered. Further themes were added as the researcher identified they were necessary as the interview transcripts were worked through, some data was coded to more than one theme. All interviews were worked through individually and coded against the same themes, and data copied into the same spreadsheet in a new column for each interview. This meant that the interview data for each theme could be easily viewed next to each other.

In the interpretive coding stage the initial themes identified were clustered together, and broader or overarching themes were derived which encompassed one or more of the earlier identified themes. The seven overarching themes were developed based on the interview data and influenced by the researcher's knowledge of the existing research. This coding and summarising was further reviewed and revised as the researcher worked through the analysis of the data against the research questions and the existing research. The data coding schema is included in Appendix f.

The information gathered in the demographic questionnaire completed by each participant was collated to ascertain the demographic spread of the research participants, and is discussed in

comparison to the latest information available about the University of Otago postgraduate student population later in this report, under the heading Demographics. The demographic information was also noted against the interview data, so that it could be used for further discussion of differing experiences or opinions between participants.

Validity

Validity of the research data and findings is supported by use of the following strategies

- Description of all differing opinions and experiences reported by the research participants, including use of quotes. This "thick description" allows readers to "draw their own conclusions" from the data (Leedy & Ormrod, 2013, p.104).
- Participants were able to validate their own data provided by being sent a copy of the transcript of their interview for feedback and approval.
- The data gathered is compared against findings from the existing research, and any points of difference noted.

Limitations in the data and future improvements

The interview data did not yield much in terms of very specific problems encountered in using eBooks, this was in most part due to a lack of clarity in the participants' memory and description of issues. No participants chose to use the laptop provided to demonstrate details of issues they had encountered in using eBooks. I think that if in the future the library wanted to gather data about specific issues faced, then usability testing using set tasks, to be performed with eBooks on a computer by participants, would yield better results.

Participants did not seem to have a clear idea of which eBook providers they liked or disliked using. Although two participants did make reference to finding specific provider's eBooks and platforms more or less easy to use, there was a lack of clarity on behalf of the participant about which providers they were referring to. This does not give a clear idea of specific eBook provider's that students find difficult to use, although the data gathered around issues faced when using eBooks could be compared against features and restrictions offered by different providers. Usability testing could also be used to evaluate different eBook providers from the student perspective.

The students recruited for this study were not representative of the student population in terms of demographics; this affects the applicability of the results to the student population. In particular the inability to recruit more students from the Health Sciences and Commerce disciplines limits the ability to compare the needs and experiences of students between disciplines.

Although the majority of the students interviewed had previously studied at universities other than Otago, only two comments were made about the experience of using eBooks at another university, and no clear points of comparison between the Otago library eBook service and the eBook service of the other university library were able to be made. So although the information about whether participants had studied at a university other than Otago was interesting, it did not add value to the data analysis.

Additionally no clear differences in experience or preference could be identified between the genders or ages of participants. A larger population sample could lead to this demographic information having more meaning for the results.

Demographics

Of the eight students interviewed all but two had previously studied at a University other than the University of Otago. Of the six that had studied at Universities other than Otago three had studied at Tertiary institutions overseas and three in New Zealand. Two participants identified themselves as international students during the interviews, having come to New Zealand to study from overseas.

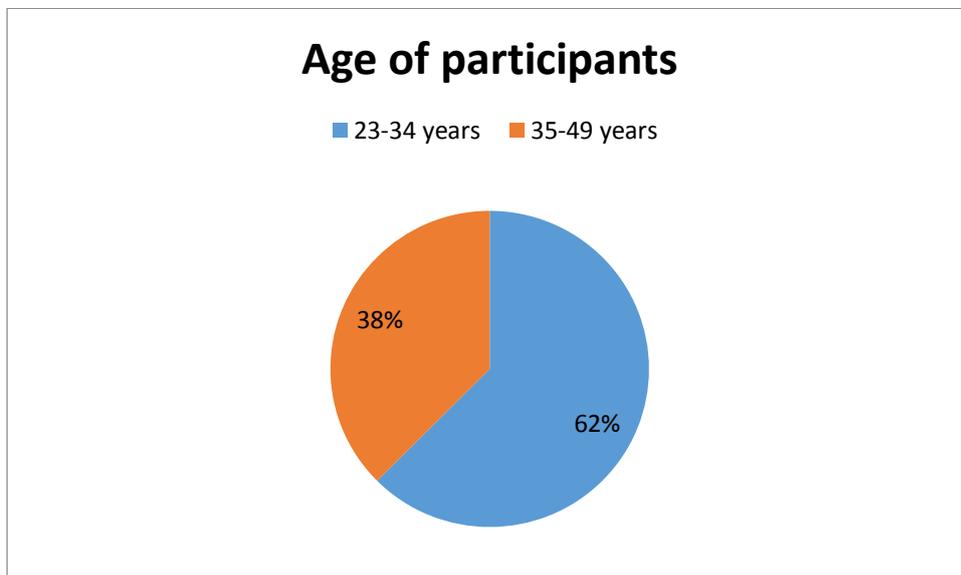The demographic information gathered about participants interviewed is as follows:

Age range:

Figure 1

Five participants identified themselves as being in the 23-34 years age group, three in the 35-49 years age group (figure 1).

There were five age ranges listed on the demographic survey. It's perhaps not surprising that the students interviewed only fit into two of the categories. As postgraduate study requires at least

three years of undergraduate study, which most students in New Zealand begin at 18 years old, it would be expected that most postgraduate students would be at least 21 years old. Recent changes in government policy mean that students who are over 55 years old cannot access a living costs loan or allowance from the government to support them when studying (Ministry of Social Development, 2016), meaning that tertiary study may be less available to those over 55 years of age.

Statistics were not available for the age range of the University of Otago student population.
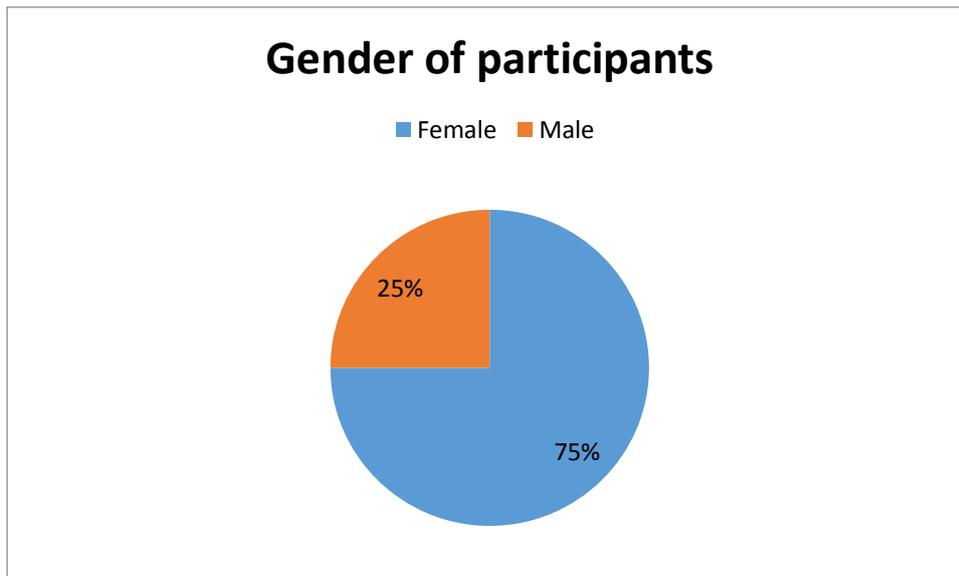
Gender:

Gender of participants

■ Female   ■ Male

25%

75%

Figure 2

Six of the participants were female and two male. In 2015 58% of the University of Otago student population were female, 42% male (University of Otago, n.d. a), in comparison the participants in this study were 75% female and 25% male (figure 2). Therefore in this sample female students were over-represented and male students under-represented, in comparison to the university population. Statistics were not available for postgraduate students by gender at the University of Otago.
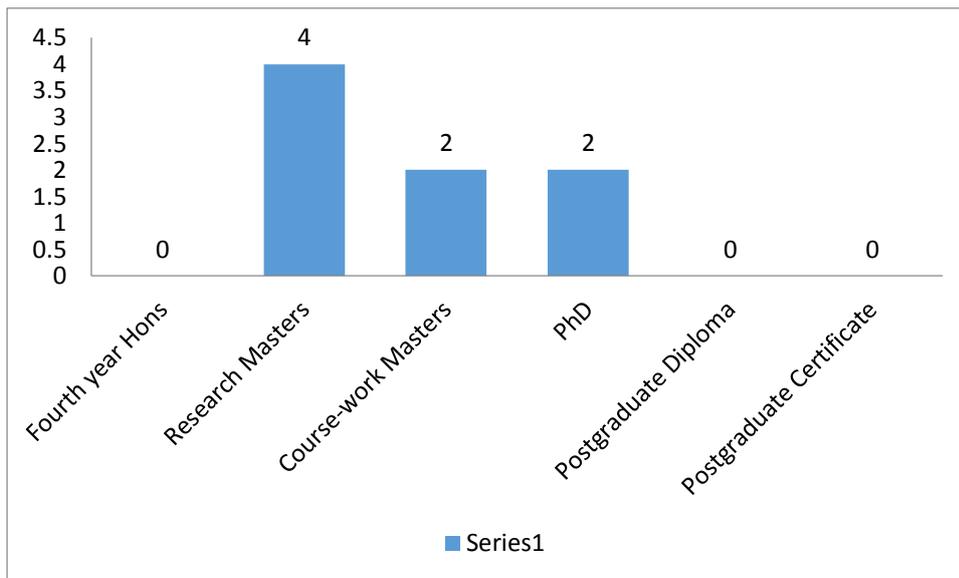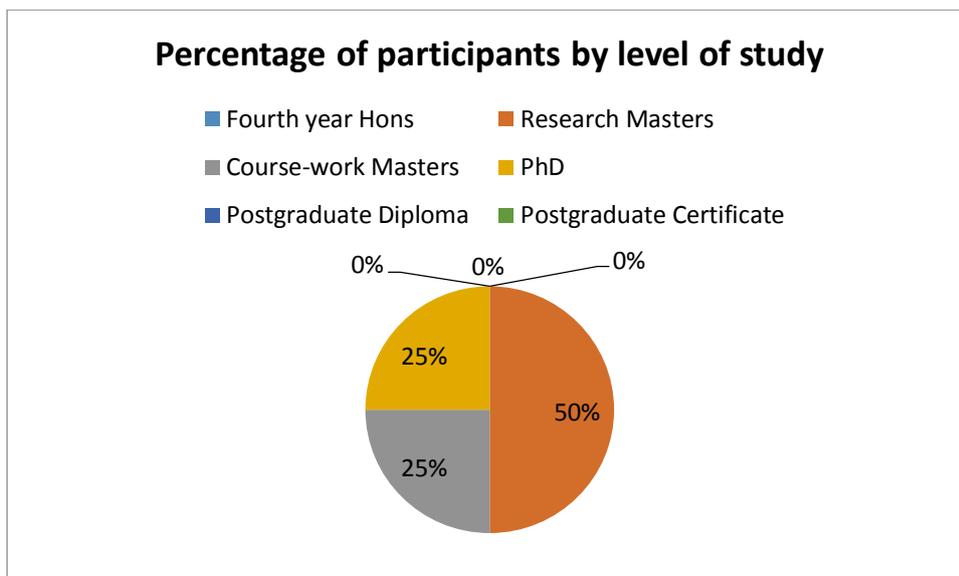
Level of Study:

Figure 3

Figure 4

Four of the study participants were enrolled in a research Masters course, two a course work Masters and two in a PhD programme. No participants were fourth year Honours, Postgraduate Diploma or Postgraduate Certificate students (figure 3).

In 2015 30% of postgraduate students at the University of Otago were PhD or professional doctorate students, 27% Masters, 20% Postgraduate Diploma, 13% Postgraduate Certificate, and 10% Honours students. So in comparison to the student population, the sample of students interviewed is over-representative of Masters Students at 75% (combining research Masters and course-work Masters), and under-representative of PhD students (assuming the 2016 percentage spread has not changed

significantly from 2015). The fact that no Honours, Post Graduate Diploma or Post Graduate certificate students were able to be included in the sample is also a shortcoming.
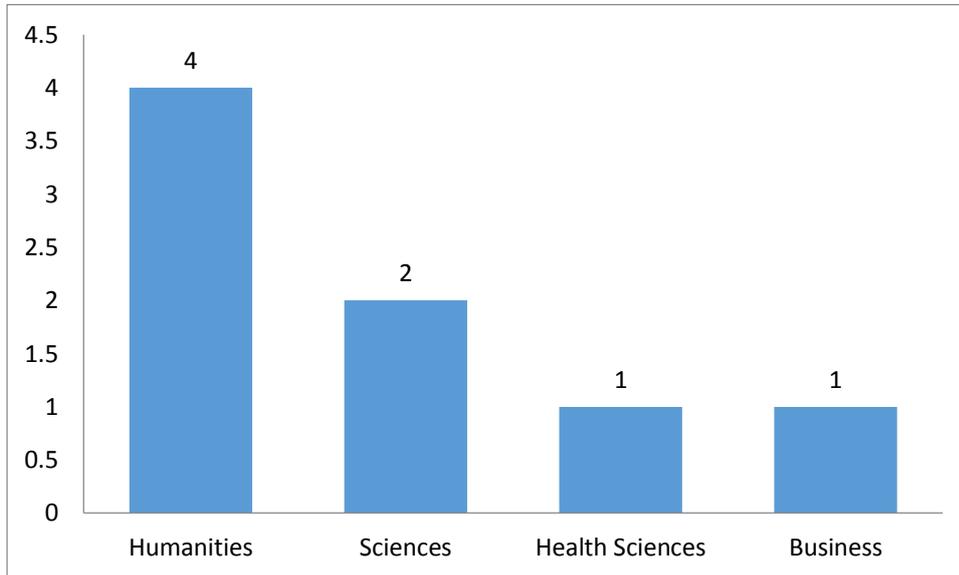
Discipline:

Figure 5
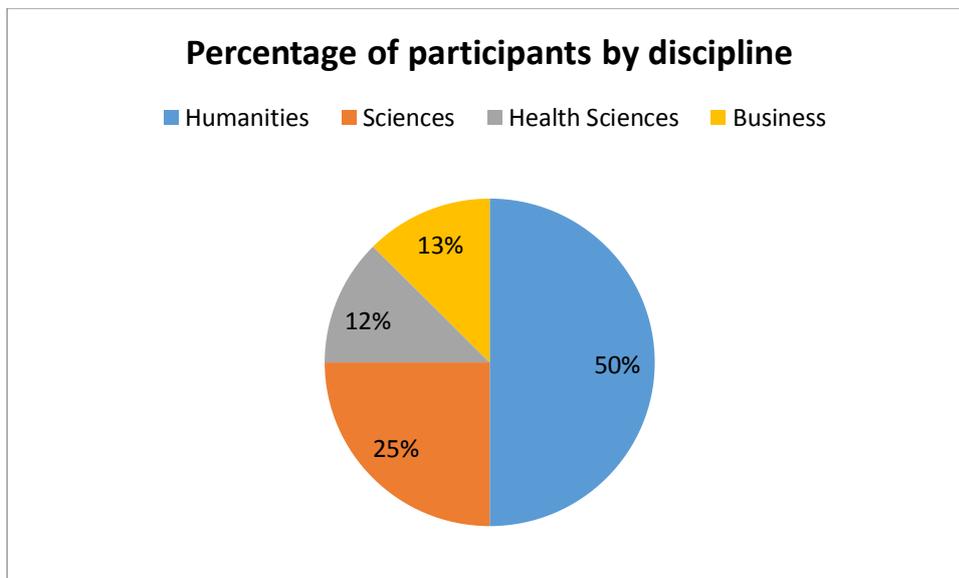
Figure 6

The participants by discipline were: four from the Humanities, two from the Sciences, and one each from Health Sciences and Commerce (figure 5). Figure 6 shows the students who participated in the study as a percentage by discipline, 50% of the participants were from the Humanities in comparison with 29% of postgraduate students, 25% from the Sciences in comparison with 28%, 12.5% from the Health Sciences in comparison with 31% and 12.5% from Commerce in comparison with 12% of all postgraduate student enrolments by paper in 2015 across the University population (University of

Otago, 2015). Interviewing at least one more student from the Health Sciences would have helped to bring the spread of participants by discipline more in line with the actual numbers of postgraduate students at the university by discipline, based on 2015 enrolments.

Answering the Research Questions

What are the needs of postgraduate students with regards to library eBooks?

Do students feel that they have access to the eBooks that they want and need to use?

Participants were asked if they feel that the library is providing the eBooks that need for their study. The overall response to this question was positive, with one participant mentioning a time that they had requested a book and been turned down. Across all other participants the responses were positive, for example "enough for me", "everything I've ever wanted I've been able to access online"

Do students want different things from eBooks than print books?

Participants were asked if there were times that they would prefer to use a print book, or an eBook, and for what reasons. The descriptions of how participants were using print books and eBooks, and issues faced with eBooks also shed some light on this question. With print books participants described liking to add their own tags or post-its, being able to move quickly between several print books, liking the longer loan period for print books, liking to be able to physically see the books that they had on loan and preferring to have a print copy of a key or "essential" text or one they were going to read cover to cover. Two participants also talked about the portability of a print book in giving them the freedom to work wherever they wanted, for example outside or while having lunch.

Three participants also described preferring eBooks for their portability, the ability to download a copy to a personal laptop or tablet and not having to carry the weight of a physical book. Participants described searching the text of eBooks for keywords, and one participant described being frustrated with eBooks that were not full text searchable. Being able to access eBooks while working off campus, and the ability for more than one person to use an eBook at once were described as advantages of eBooks.

For what reasons do students use eBooks?

Only one participant described reading eBooks for leisure, all had used eBooks for research. Six participants described choosing to use eBooks due to the ability to access them from off-campus, either online or by downloading a copy to a personal laptop or tablet. The convenience of being able to make notes on a computer by copying and pasting text from an eBook, taking a screen shot, or saving a PDF copy and adding notes were described by five participants as a reason for using eBooks. Two participants preferred to print from an eBook and add their own notes and highlighting in hard

copy. One participant described a preference for an eBook over print if there was a lot of text she wanted from the book, rather than photocopying large sections. Two participants described the ability to more quickly find information relevant to their question through keyword searching as a reason for using eBooks.

What is the postgraduate student experience of using library provided eBooks?

Do students feel that eBooks are difficult or easy to use?

When asked if in general they found eBooks easy or difficult to use, five of the eight participants described using eBooks as easy. However, all but one participant mentioned problems they have experienced in accessing and using eBooks. This suggests that the majority of participants don't have a perception that eBooks are difficult to use, even though they have experienced various difficulties in using them.

Do students experience difficulties (i.e. accessibility, usability, and technical) in using eBooks, and of what kind?

All but one of the students interviewed talked about some kind of difficulty they had experienced in using eBooks. Access issues that came up were mention of broken or failing links to eBooks, issues experienced when accessing eBooks from off-campus being "kicked out", and not being able to access eBooks due to payment being required. Usability issues experienced were not being able to search the full text of an eBook as this wasn't an available feature, one participant described using the functionality within the eBook platform to add notes and then losing them all, another described the "over complicated" e-reader software as an issue.

DRM restrictions were mentioned by five participants as being an issue they had experienced in using eBooks when they couldn't download a PDF copy of the eBook. Restrictions on the amount of an eBook that could be copied and pasted, only being able to download a certain number of pages at a time and the download loan length were all described as difficulties experienced when using eBooks.

Technical difficulties described were trouble printing from eBooks, eBooks crashing when the user scrolled down the screen, and being unable to download eBooks.

Are students aware of library support for eBook use, what is their experience of this?

When asked where they had been or would go for help with eBooks if needed, five participants mentioned that they would seek help from their subject liaison librarian, all five had sought help from their subject liaison librarian in the past, "you get the feeling that your first point of call is your subject librarian". Other places for seeking help mentioned were library staff in general through

approaching the library desk or by phone, and the students' academic department or supervisor. No participants mentioned seeking help from anywhere else. Two participants mentioned occasions where they had sought help with eBooks, I believe one was describing placing a PDR request for an eBook and was happy with the experience "that was so easy", the other had sought help from staff at a library desk when a student at a university other than Otago, they described receiving help promptly although their issue was not able to be resolved.

Three students described requesting the purchase of eBooks from the library either through a PDR request or other means.

What gaps can be identified between student needs and the current library eBook service?

Do students feel that they need more support from the library in using eBooks?

Five of the eight participants expressed an interest in or desire for more training or support from the library for using eBooks. "a little bit of training on sort of how to do would be really quite handy". Of these two had a preference for being able to access training online and two were potentially interested in a library class or online training, one participant expressed a preference for video. The interview data suggests that the further training that students would like with regards to eBooks is around how to create their own notes and how to save excerpts from eBooks for later reference, either in the eBook reader platform or to a personal computer, "if it is possible to do things like save a few pages, download a few pages for later reference, if that's possible then yes, training in those sorts of things". One participant mentioned that a FAQ (frequently asked questions) for trouble shooting technical issues with eBooks could be useful.

Of the three participants who did not feel that they had a need for further training or support with eBooks from the library one mentioned that she had been asked by other students about how to reference eBooks, and that she felt this was an area that the library could provide more training in. One participant felt that they had no desire to learn more about how to use the different eBook provider's platforms because it would be too time consuming, "because every publisher is different so I'd learn it for one, or I'd learn it for a few, then it might be different for some other ones".

If and in what ways do students identify that eBooks are failing to meet their study/research needs?

When asked if they felt that there were any ways that eBooks were failing to meet their study or research needs, the majority of participants (5 out of 8) answered in the negative, that eBooks were not failing to meet their needs. Two made positive comments about eBooks, "mostly they serve me pretty well", "for the amount that I use them I certainly have always had um, like a positive experience with them". One participant commented that if eBooks were made easier to access they would better meet their needs (specific comments are included in the following sub-question).

In what ways do students feel that library provision of eBooks could be improved?

Answers to this question ranged from a desire for DRM free eBooks, for all library books to be available as print books and eBooks, and a desire for all eBooks to be full text searchable. One participant commented that they felt that the design of the eBook platforms or e-readers was too "cluttered", "90s era", with "clicky buttons everywhere" and could be made simpler in design "I think if they just made it really simple and easy to use that would be far more enticing". This participant also commented that they would find it helpful to be able to see which articles or books other students in their course had used, or found helpful "almost like a class rating system"

In what ways, if at all, do students' eBook needs and experiences with eBooks differ between disciplines?

This question could have been better answered if more students from outside of the humanities had been able to be recruited for comparison.

One of the Sciences, and the only Health Sciences student interviewed, identified that eBooks were not their main source of information, preferring to use journal articles, "I haven't spent a lot of time with eBooks…it's just journal articles that I have tended to use…I need the latest research", [about eBooks] "they're definitely not my main source".

Three of the four humanities students interviewed preferred to use eBooks over print in most situations, the health sciences student interviewed expressed a preference for print books in most cases, this is not consistent with findings from research by Wu and Chen (2011) which found that humanities postgraduate students expressed a preference for print books and postgraduate medicine students a preference for eBooks. Further data would need to be gathered to further test this finding and explore any differences in eBook use and requirements between students of different disciplines.

Discussion

The following is a discussion of the interview data, by the broad themes identified, and a comparison with findings from the existing research.

Students' perceptions of the library eBook service

The catalyst for this research study was outcomes from the 2013 and 2014 University of Otago Support Services Review Surveys, showing that eBooks were falling below the mean as a service that "meets needs" for the above third year or postgraduate student group. The data gathered in this research project does not strongly support the finding that postgraduate students feel that library eBooks are not meeting their needs, or that they are dissatisfied with this service. The majority of

the students interviewed said that they found eBooks easy to find and easy to use. When asked if there were any ways that they felt that eBooks were failing to meet their research or study needs, only one student replied by describing the way that eBooks were failing to meet their needs and how this could be improved on. Six other students either said that eBooks weren't failing to meet their needs or made a positive comment about eBooks. One student who had indicated a strong preference for print books over eBooks made this comment in reply to the question, "I feel like most of these issues are my own, not the libraries or eBooks fault specifically, um, if I've got a preference to deal with hard copied things, then there's nothing that could be done", this comment suggests that while the student may not necessarily like eBooks, she does not feel that this is a reflection on the service that the library is providing her. As the participants in this study knew that the interviewer was a library staff member before beginning the interview, it is possible that they would not have felt comfortable expressing dissatisfaction with the libraries services to the interviewer. However four of the eight students interviewed did make comments about ways that they felt the library eBook service could be improved, and five of the eight participants also made comments that were critical of other library services. These comments suggest that the participants were comfortable enough to share criticism of library services with the interviewer.

Preferences for print books or eBooks and why

Of the eight students interviewed, three had a strong preference for using eBooks over print books for their study or research, one had a strong preference for print over eBook, "if nothing else is available I'll go for the eBook version, it really is my least preferred form of getting information", and the remaining four students preferred print or eBook depending on the situation or type of book they were accessing. These findings are in contrast to existing research that has shown a strong preference for print books over eBooks among tertiary students (Hobbs & Klare, 2015, Cassidy, Martinez & Shen, 2012, Abdullah & Gibb, 2008, Smyth & Carlin, 2012). As this research study only recruited participants who had used or attempted to use eBooks this may have skewed the data as it will have excluded those students who have never used eBooks due to a strong preference for print over eBook.

The reasons given for a preference for eBooks or print books, and perceived advantages of eBooks or print books mentioned in the interview data were many. Some of these are consistent with the findings of existing research and some are new points. Convenience of access including off-campus access, and the ability to key-word search making it easier and quicker to locate relevant information within the book are advantages of eBooks mentioned by participants in this study, and are points consistent with findings by Smyth and Carlin, 2012, Sieche, Krey and Bastiaens, 2013, Shelburne,

2009 (convenience of access) and Jacobs et al., 2014, Smyth and Carlin, 2012, Abdullah and Gibb, 2008 (ability to keyword search).

Other advantages of eBooks mentioned in the interviews were: not having to carry the weight of a print book, ability to download a PDF copy to retain, ease of use in terms of manipulating content and creating own notes, the ability for more than one concurrent user, up to date content, cost compared to purchasing a text book, and eBook access removing the need to photocopy large portions of text.

The ability to compare or move between books was one advantage of print books over eBooks mentioned in the interview data, this is consistent with findings from the University of Guelph Library eBook Strategy Working Group (Jacobs et al., 2014).

Other reasons given for a preference for print books, or perceived advantages of print books were: their portability – the ability to work away from a computer, a preference for looking at paper rather than a screen, being able to add paper tags or Post-Its to the book – this was mentioned by three participants, the ability to dip in and out of the book when reading, the ability to physically see which books the student had on loan, the longer loan period of print books meaning that the student could work at a slower pace, "being able to flick from place to place", and a preference to have a print copy of an "essential" text or a reference book that will be used often.

One participant discussed the idea that they felt that print books were perceived to be more socially acceptable that eBooks and that they would prefer to read a print book if they were travelling (or in a public place) rather than reading from a laptop.

Research by Hobbs and Klare, 2015, Cassidy, Martinez and Shen, 2012, Abdullah and Gibb, 2008 and Gregory, 2008, found that students have indicated a strong preference for print over eBooks for in-depth study or reading large portions of a book. The interview data gathered in this study has indicated that some students do have a preference to have a print copy either as well as or rather than an eBook copy of a book that will be used often, but this was not a preference that came up strongly in the data, it was mentioned by two of the eight students interviewed. One student did have a strong preference for print books over eBooks, only using an eBook when there was no other option. The main reason she gave for this was that she preferred to spend her reading time away from a computer as she spent so much time at the computer when writing, the other reason mentioned was a lack of knowledge of how to use eBooks effectively for her needs, especially in terms of making notes, "I don't like how I can't copy much from the book, and I don't find it particularly easy, if I'm copying and pasting I don't like that", "I still like to have something in front of

me, I like to highlight, and I know you can highlight on some eBook things, but I don't feel like I have as much control over that , I like to have something in my hand that I can control, write notes on".

Other studies have found that difficulty or discomfort in reading from a screen is an often reported disadvantage of eBooks (Smyth & Carlin, 2012, Wu & Chen, 2011, Shelburne, 2009). Only two participants in this study mentioned that they found reading from paper more comfortable than reading from a screen. Four of the students interviewed made comments that they were quite comfortable reading from a screen, and three of these mentioned adjusting the screen lighting or moving between a tablet and an e-reader to make reading more comfortable. Two students preferred to print out pages from an eBook that they wanted to read. These findings perhaps suggest that students are becoming more comfortable with reading from a screen and finding ways to adjust the technology to suit their needs, rather than viewing the discomfort of reading from a screen as a reason not to use an eBook.

Issues encountered when using eBooks

A range of issues encountered when accessing or using eBooks were mentioned in the interviews. These were not described very specifically by participants so some judgment has had to be made by the researcher about what type of issue is being described.

Only one student had no experience of problems or issues with eBooks, and she had identified herself as someone who didn't use eBooks particularly often, or certainly not as a main source of information. For one other student the only issue experienced with eBooks was frustration with eBooks that were not full text searchable. Two students mentioned issues with broken links to eBooks, and one mentioned issues with off-campus access, "[being] kicked out", one mentioned scrolling down the page of an eBook causing it to crash. These types of general technology or technical issues have been identified as disadvantages of eBooks for users in research by Shelburne, 2009, Brahme and Gabriel, 2012, and Jacobs et al., 2014.

DRM restrictions causing issues when using eBooks were described by five of the eight students interviewed. These were mostly around copying and pasting text from eBooks and limited eBook loan periods, "time limiting and that sort of thing is a bit frustrating… I just want to be able to get access for a decent amount of time", "I find that frustrating so I don't even bother copying and pasting anymore". One student also mentioned frustrations with only 30 pages of an eBook being able to be downloaded at a time, and eBooks that are limited to a single user, "I think that's just really stupid". From the language used DRM restrictions were clearly the biggest frustration for some of the students interviewed. Some DRM restrictions were identified as a disadvantage of

eBooks for users in research by Shelburne, 2009, Cassidy, Martinez and Shen, 2012 and the Jacobs et al., 2014.

Library help for using eBooks

Although none of the students interviewed described seeking help or training in using eBooks, six of the eight did feel that there was a potential for the library to provide further help with using eBooks. Three of these students expressed an interest in learning more about how to use the advanced features of eBooks. This interest in further training needs to be balanced against the fact that the students spoken to had not previously sought help with using eBooks from the library, and all chose to make notes in ways other than using the eBook advanced features. One student said that they would not be interested in learning how to use the advanced features because there were so many different types of eBook to learn them for, and they would prefer to keep using them in the way that they had been, as PDF files downloaded to a reference manager. This lack of interest in learning how to use the advanced features of eBooks is consistent with findings from Hobbs and Klare, 2015. However, Hobbs and Klare (2015) also found that students indicated that they would be more likely to use the advanced features of eBooks after they were demonstrated to them by library staff. From the findings of this research study it is hard to know for sure if students really would respond to more training resources from the library on how to use advanced eBook features. It is interesting to note however that the one student interviewed who expressed a strong preference for print and dislike of using eBooks, said that she felt concerned that she was not comfortable using eBooks, especially as the number available were increasing faster than print books. This student said that if she had more knowledge of how to use eBooks, she might be more likely to use them, "maybe they're not as bad as I think".

Research conducted at the University of Waikato found that students felt that eBooks should be easier to find, needed improved user guides, and more training from the library in how to use them (Wilkinson, 2015). This study did not find that students found eBooks difficult to find, in fact seven of the eight students interviewed described finding eBooks as "easy", although some mentioned difficulties in using Library Seach|Ketu. Six of the eight students did feel that there was a need for further support or training from the library, and the kind of help suggested could be described as coming under the category of "user guides", for example "just a page of step by step screen shots or something, if I knew it was available then yes I definitely would use something like that", "FAQ or something page", "I think a video might be better", "I think if it was available as an online tutorial I think a lot more people would be responsive to it".

Although the students interviewed had not previously sought help with using eBooks from the library, some did describe seeking help for other issues. One student described seeking help with an eBook from a University other than Otago from staff at the library desk; one described attending a library workshop about using End Note as a positive and useful experience; one described using the library subject guides and a positive experience with library training received as a part of their course through the Law library; five of the students described seeking help from their liaison librarians for things other than eBooks; and one student described seeking help to use the Interloan service. This suggests a willingness on the part of the students to seek help from the library when needed.

Ways of searching for and accessing eBooks

The information about where students go to search for resources that came up in the interviews was interesting. The majority of students named Library Seach|Ketu (the University of Otago Library's installation of Primo search) and Google Scholar as places they would search, Google was also mentioned by two students, Wikipedia and specific databases were mentioned by two students: JSTOR, Scopus, and Medline. Four students expressed a preference for searching Google Scholar, one Commerce student, one Health Sciences, and two from the Sciences. This suggests that perhaps Humanities students prefer to use Library Seach|Ketu, while students from other disciplines prefer to use Google Scholar, this is supported by research into the use of Google Scholar by Graduate students at the University of Taiwan, which found that Science and Technology students favoured Google Scholar more than Humanities and Social Science students (Wu & Chen, 2014). It would be interesting to explore this further to find out what the reasons for this preference are, and if there are aspects of Google Scholar as a search interface which could be used to improve the usability of Library Search|Ketu for students. There is an existing body of research into the use of Google Scholar in academic institutions, for example Cothran, 2011, Timpson and Sansom, 2011 and Wu and Chen, 2014.

The reasons for using Google Scholar given in the interviews were that it is easy to export citations from Google Scholar into a reference manager, and that the student felt that using Google Scholar saved time and effort in searching as it was more accurate in terms of relevance than Library Search|Ketu. "Because Google itself has already tagged it, you know, and linked it to appropriate sources, so, once you get the correct keyword, there's a high possibility that you're going to get the correct reference, what you are looking for, if you are just looking, if you just go to the library and search through all of the articles it will take you, like, days".

Ways of using eBooks

EBooks provided by the library can be read online, downloaded to another computer or device for a loan period, or in some cases downloaded permanently as a PDF file. In the interviews conducted it was interesting to hear how students are choosing to use eBooks, and why, and what difficulties they were facing in using eBooks in the ways that they want to.

Three students said that they will briefly browse an eBook online and then download a copy if they want to read it further. These students were describing a download loan of an eBook. Of these students all three felt that the current download loan period for eBooks was too short, two mentioned that at least one month would be a preferable loan time. The reasons given for this was that these students (2 PhD and 1 Masters) were conducting extensive in-depth research on a topic and would want to borrow multiple books at once, but the download time limit of 7 days prevented them from being able to read several books at once as desired, and was not long enough to read a book.

Five of the students interviewed talked about a preference to download a PDF copy of an eBook to their reference management software, if it was available. Of the remaining three, one student preferred to use the read online functionality when using eBooks, another would only download a PDF copy of an eBook if "I would still reference it for future work or future research, I feel it's very important, or maybe it's interesting enough, or maybe I can share it with someone else,". The reasons given for preferring a PDF download were: ease of use, the ability to access it from anywhere, correct page numbers (compared with an ePub version), the ability to add notes to the PDF, the ability to search the text of the PDF for keywords, the ability to copy and paste and print from the PDF, not having to download specific software to use it, and being able to access the file again at a later date easily. One student mentioned that they felt that they had paid for access to the eBook or article content through their University fees and so should be able to retain access in perpetuity. The same student said that if they could not download a PDF copy of a library eBook they would look for an alternative source instead, perhaps try and locate a freely available PDF version online or try to access a print copy of the book.

The students interviewed had all developed their own preferred way of making notes as they used eBooks. Most used a combination of taking notes on paper or a printed PDF of text, and making notes on a computer, either on a PDF file or in a word document. Students described printing, copying and pasting, and taking screen shots, as ways to save specific parts of eBooks that they needed. Only one of the students interviewed mentioned successfully using the more advanced

features within an eBook to add notes, highlight etc., and this student still said that they preferred to print out pages that they wished to read and add their own notes etc. to the print copy.

These findings are consistent with research conducted by Hobbs and Klare (2015) that found that students preferred to use formats such as print and PDF that they already had working knowledge of, rather than spend time learning how to use the advanced features of different eBooks.

Comments about other library services

During the interviews students made various comments about library services other than eBooks. Four participants commented on the usability of Library Search|Ketu, all expressed negative experiences with this search interface, "I kind of find it quite hard to use the library website sometimes, so I tend to avoid using it", "Google Scholar is ah, more easy to use…it's a little more complicated than Google Scholar", "in the library catalogue … it's the stuff like when you click it and it's got like all the different download options, and then have you read this, just extra stuff", "It's the navigation I think is the trickiest bit, um, sometimes the links don't work the first time, or you get something wrong. It's not intuitive, and I think that's more to do with the interface you've got, the library search thing,", "it feels clunky". One student commented on the wireless internet available in the library, "the reason why I don't usually go to the library, because the library is really, you know the internet connection is really slow and intermittent and I feel that, um, I cannot, I cannot, do my stuff, like there would be times that I had to stop, because there is no internet connection, so I feel like it's interrupting me".

The following comment was made about locating help resources on the library website "one of the issues with finding any help is that it's often quite buried on the library site".

As mentioned in the discussion about library help for using eBooks, several students made positive comments about help they had received from library staff, for example: "I did a library training course last week on End Note, that although I've been using End Note taught me a couple of really valuable tricks", "certainly my personal subject librarian I find very, very good", "I'd probably contact her, cause I've done that in the past and she's really fast at getting back to you… she just put me through to all of the necessary people ".

Conclusions and Recommendations

The data gathered about the postgraduate student experience of using library eBooks at the University of Otago has provided some interesting insights into how these students are accessing and using eBooks, and what may be needed from the library to improve this experience. From the data gathered I would make the following recommendations to the University of Otago Library:

- That the library look at developing an online training or help guide to assist students in using the more advanced features of eBooks, including advice on how to troubleshoot some of the issues that may be experienced.

- That the library investigates whether it would be possible to extend the download period of eBooks from 7 days to 1 month.

- That the library chose to purchase DRM free eBooks that can be downloaded in PDF format where available.

In addition, the finding that many of the students interviewed reported using Google Scholar in preference to Library Search|Ketu should be of interest to the library for further exploration. This preference may impact on library support and training for research and future development of the library search interface.

The fact that no participants reported seeking help from the library in using eBooks, but nearly all had experienced some kind of issue in accessing or using eBooks suggests that reporting of problems or issues experienced may be well below the actual number of students facing access and use issues.

The library may wish to take into consideration the comments received about the usability of Library Search|Ketu and wireless internet in the library. Library staff can be reassured by the positive comments made about student's experiences of library classes and help, especially that received from the subject liaison librarians.

The interview data indicates that although there is room for improvement of the eBook service that the library provides, it would not be accurate to describe it as 'failing' to meet the needs of postgraduate students.

Recommendations for Further Research

It would be useful to gather more data from postgraduate students from disciplines outside of the Humanities, to add more balance to the results, the researcher intends to attempt to recruit further students from the Health Sciences and Commerce disciplines for interview, to add to the data, however this will be outside of the time frame for this report. This would also allow for more comparison in how the needs of students may differ between disciplines.

It would also be interesting to be able to compare how the use of and experience with library eBooks may be similar or different across postgraduate students at other Universities in New Zealand, as the body of research on student use of eBooks at tertiary institutions in New Zealand is still small.

The undergraduate experience of using library eBooks could be investigated and compared to the findings about the postgraduate experience, in order to see if undergraduate's needs and experiences are the same, and what the implications of this may be for library provision of eBooks. The use of Google Scholar by postgraduate students as well as or in preference to the University of Otago's library search (Primo) was an interesting finding from this study. There could be potential for further research to be conducted into why Google Scholar is preferred by students, and if there are aspects of this search engine which could be adapted to library search to make it more user-friendly.

References

Abdullah, N., & Gibb, F. (2008). Students' attitudes towards e-books in a Scottish higher education institute: Part 1: Analysis of e-book usage. *Library Review, 57*(8), 593 – 605. http://dx.doi.org.helicon.vuw.ac.nz/10.1108/00242530810899577

Brahme, M., & Gabriel, L. (2012). Are students keeping up with the e-book evolution? Are e-books keeping up with students evolving needs?: distance students and e-book usage, a survey. *Journal of Library and Information Services in Distance Learning, 6,* 180-198. doi: 10.1080/1533290X.2012.705109

Cassidy, E., Martinez, M., & Shen, L. (2012). Not in love, or not in the know? Graduate student and faculty use (and non-use) of e-books. *Journal of Academic Librarianship, 38*(6), 326-332. doi: 10.1016/j.acalib.2012.08.005

Cothran, T. (2011). Google Scholar use and acceptance among graduate students: a quantitative study. *Library & Information Science Research, 33*(4), 293-301. doi:10.1016/j.lisr.2011.02.001

Davis, D., & Lafferty, T. (2002). Digital rights management: implications for libraries. *The Bottom Line, 15*(1), 18-23. http://dx.doi.org.helicon.vuw.ac.nz/10.1108/08880450210415725

Gregory, C. (2008). "But I Want a Real Book": An investigation of undergraduates' usage and attitudes toward electronic books. *Reference & User Services Quarterly, 47*(3), 266-273. Retrieved from http://www.jstor.org.helicon.vuw.ac.nz/stable/20864892

Guest, G., Namey, E., & Mitchell, M. (2013). *Collecting qualitative data: A field manual for applied research*. Thousand Oaks, California: SAGE.

Hobbs, K., & Klare, D. (2015, March 25-27). *Exploring the student e-book experience*. Paper presented at the Association of College & Research Libraries Conference, 25-27 March 2015. Retrieved from http://www.ala.org/acrl/sites/ala.org.acrl/files/content/conferences/confsandpreconfs/2015/Hobbs_Klare.pdf

Jacobs, P., Bergart, R., Da Maren, L., Day, L., Easter, J., Gale, A., Martin, H. & Wanner, J. (2014). *Report of the ebook strategy working group*. Retrieved from http://www.lib.uoguelph.ca/sites/default/files/ebook_strategy_working_group_april30_2014.pdf

King, N., & Horrocks, C. (2010). *Interviews in qualitative research*. London: SAGE Publications.

Lamb, A. (2012). *An investigation of academics' perception, uptake and use of ebooks at the University of Waikato.* Unpublished master's thesis, Victoria University of Wellington, Wellington, New Zealand. Retrieved from http://researcharchive.vuw.ac.nz/handle/10063/3060

Leedy, P.D., & Ormrod, J.E. (2013). *Practical research: planning and design*. (10th Int. ed.). Boston, Massachusetts: Pearson.

Ministry of Social Development. (2016). Who can get a student loan. Retrieved 6/06/16 from http://www.studylink.govt.nz/student-loan/who-can-get-it/

Muir, L., & Hawes, G. (2013). The case for e-book literacy: undergraduate students' experience with e-books for course work. *The Journal of Academic Librarianship, 39*(3), 260-274. doi: 10.1016/j.acalib.2013.01.002

Rod-Welch, L.J., Weeg, B.E., Casswell, J.V., & Kessler, T.L. (2013). Relative preferences for paper and for electronic books: implications for reference services, library instruction and collection management. *Internet Reference Services Quarterly, 18*(3-4), 281-303. doi:10.1080/10875301.2013.840713

Shelburne, W. (2009). E-book usage in an academic library: User attitudes and behaviors. *Library Collections, Acquisitions and Technical Services, 33*(2), 59-72. doi:10.1016/j.lcats.2009.04.002

Sieche, S., Krey, B., & Bastiaens, T. (2013). Investigating students' usage and acceptance of electronic books. *Journal of Educational Multimedia and Hypermedia, 22*(4), 465-487. Retrieved from http://go.galegroup.com/ps/i.do?id=GALE%7CA362661947&v=2.1&u=vuw&it=r&p=EAIM&sw=w&asid=14786f94848a4d7d38f4b9fe9723643d

Smyth, S., & Carlin, A.P. (2012). Use and perception of ebooks in the University of Ulster: a case study. *New Review of Academic Librarianship 18*(2), 176-205.

doi:10.1080/13614533.2012.719851

Timpson, H., & Sansom, G. (2011). A student perspective on e-Resource discovery: has the Google factor changed publisher platform searching forever? *The Serials Librarian 61*(2), 253-266. doi:10.1080/0361526X.2011.592115

Polanka, S. (2012). *No shelf required 2: use and management of electronic books.* Chicago: ALA editions.

University of Otago. (n.d.a). Postgraduate Prospectus. Retrieved 27/01/16 from
http://www.otago.ac.nz/study/otago123580.pdf

University of Otago. (n.d.b). Quick Statistics: student facts & figures. Retrieved 10/06/16 from
http://www.otago.ac.nz/about/quickstats.html#4

University of Otago. (2015). Paper subject area headcount by level 2012-2015. Unpublished document.

University of Otago Library. (n.d.a). Collection development policy. Unpublished document.

University of Otago Library. (n.d.b). Facts and figures. Retrieved 6/12/15 from
http://www.otago.ac.nz/library/about/libraryinformation/otago040381.html#jandec2014

University of Otago Quality Advancement Unit. (June 2015). 2014 Support services survey: library report. Unpublished report.

Wilkinson, C. (2015). *An investigation into usage of, and attitudes towards, e-books for academic study among tertiary students in New Zealand.* Unpublished master's thesis, Victoria University of Wellington, Wellington, New Zealand. Retrieved from
http://researcharchive.vuw.ac.nz/handle/10063/4926

Wu, M., & Chen, S. (2011). Graduate students' usage of and attitudes towards e-Books: Experiences from Taiwan. *Program: Electronic Library and Information Systems, 45*(3), 294-30.
http://www.emeraldinsight.com/doi/abs/10.1108/00330331111151601

Wu, M., & Chen, S. (2014). Graduate students appreciate Google Scholar, but still find use for libraries. *The Electronic Library, 32*(3), 375-389.
http://dx.doi.org.helicon.vuw.ac.nz/10.1108/EL-08-2012-0102

Appendix a: Participant Information Sheet

SCHOOL OF INFORMATION MANAGEMENT
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LEVEL 5, RUTHERFORD HOUSE, PIPITEA CAMPUS, 23 LAMBTON QUAY, WELLINGTON
PO Box 600, Wellington 6140, New Zealand
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Participant Information Sheet

Research Project Title: Postgraduate Student Experience of Library EBooks

Researcher: Madelene Turnbull, School of Information Management, Victoria
University of Wellington

As part of the completion of a Master of Information Studies, the purpose of this research study is to explore the experience of using library eBooks from the perspective of postgraduate students, in order to identify factors which may be contributing to this service failing to meet student's needs. Victoria University requires, and has granted, approval from the School's Human Ethics Committee. If you have any ethics queries please contact the HEC convenor Associate Professor Susan Corbett, email susan.corbett@vuw.ac.nz, telephone 04 463 5480.

I am inviting postgraduate University of Otago students to participate in this research. Participants will be asked to take part in a 45-60 minute interview. Permission will be asked to record the interview, and a transcript of the interview will be sent to participants for checking.

Participation is voluntary, and you will not be identified personally in any written report produced as a result of this research, including possible publication in academic conferences and journals. All material collected will be kept confidential, and will be viewed only by myself and my supervisor Dr Chern Li Liew, School of Information Management. The research report will be submitted for marking to the School of Information Management, and subsequently deposited in the University Library. Should any participant wish to withdraw from the project, they may do so until 2 weeks after the interview has taken place, and the data collected up to that point will be destroyed. All data collected from participants will be destroyed within 2 years after the completion of the project.

If you have any questions or would like to receive further information about the project, please contact me at turnbumade@vuw.ac.nz or madelene.turnbull@otago.ac.nz or telephone 03 479 9780, or you may contact my supervisor Dr Chern Li Liew at chernli.liew@vuw.ac.nz or telephone 04 463 5213.

Madelene Turnbull

Appendix b: Participant Consent Form

SCHOOL OF INFORMATION MANAGEMENT
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Participant Consent Form

Research Project Title: Postgraduate Student Experience of Library EBooks

Researcher: Madelene Turnbull, School of Information Management, Victoria University of Wellington

I have been given and have understood an explanation of this research project. I have had an opportunity to ask questions and have them answered to my satisfaction.

I understand that I may withdraw myself (or any information I have provided) from this project, without having to give reasons, by e-mailing turnbumade@vuw.ac.nz by the 9th May 2016.

I understand that any information I provide will be kept confidential to the researcher and their supervisor, the published results will not use my name, and that no opinions will be attributed to me in any way that will identify me.

I understand that the data I provide will not be used for any other purpose or released to others.

I understand that, if this interview is audio recorded, the recording and transcripts of the interviews will be erased within 2 years after the conclusion of the project. Furthermore, I will have an opportunity to check the transcripts of the interview.

Please indicate (by ticking the boxes below) which of the following apply:

☐ I would like to receive a summary of the results of this research when it is completed.

☐ I agree to this interview being audio recorded.

Signed:

Name of participant:

Date:

<p style="text-align:center">Appendix c: Interview Guide</p>

Greet participant

Ask them to read over participant information sheet and read and complete consent form

Ask to complete brief questionnaire: select study discipline, level of study, indicate age range

Explain interview to be recorded, expect to take 45-60 min and that I may take some brief notes to help me with follow-up questions during interview. Explain that laptop is provided in case they would like to use it to demonstrate anything regarding eBooks, functions, use etc.

Check if they have any questions for me

Questions:

What course are you studying?

Have you ever studied at any other Universities besides Otago?

Do you find it easy or difficult to find the eBooks you need for your study? Probe for details, where do you look? How do you search?

Do you feel that the library is providing the eBooks that you need to use? If No, probe for further and specific detail

For what reasons have you used, or tried to use library eBooks?

Are there times when you would prefer to use either a print book or an eBook? For what reasons?

On the whole would you say that you find using eBooks easy or difficult?

What, if any, problems or difficulties have you experienced in using library eBooks? Probe for further and specific detail

Have you ever needed help in using a library eBook? If yes:

- Where did you go for help?
- Did you get the help you needed?

What library support for accessing and using eBooks are you aware of?

Do you feel that you need more support/training from the library to help you in using eBooks?

Are there any ways that you feel that library eBooks are failing to meet your study or research needs?

Is there anything you would like to see changed with regards to library eBooks at Otago?

Is there anything else you would like to share?

Do you have any questions about this research project and/or your part in it?

Turn off audio recorder

Thank participant for their time

Check audio recording and make any additional notes

Appendix d: Interview Question Guide for Participants

Postgraduate Experience of eBooks Research Project – question guide

- **Would you say that you find it easy or difficult to find the eBooks you need for your study?**

- **Do you feel that the library is providing the eBooks that you need to use?**

- **For what reasons have you used, or tried to use library eBooks?**

- **Are there times when you would prefer to use either a print book or an eBook? For what reasons?**

- **On the whole, would you say that you find using eBooks easy or difficult?**

- **What, if any, problems or difficulties have you experienced in using library eBooks?**

- **Have you ever needed help in using a library eBook? If yes:**

  Where did you go for help?

  Did you get the help you needed?

- **What library support for accessing and using eBooks are you aware of?**

- **Do you feel that you need more support/training from the library to help you in using eBooks?**

- **Are there any ways that you feel that library eBooks are failing to meet your study or research needs?**

- **Is there anything you would like to see change with regards to library eBooks at Otago?**

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Postgraduate Student Experience of Library EBooks

- **A Research Study**

1. **Please indicate your age:**
   - ○ 18-22
   - ○ 23-34
   - ○ 35-49
   - ○ 50-64
   - ○ 65+
   - ○ Prefer not to say

2. **Please indicate your gender**
   - ○ Male
   - ○ Female
   - ○ Prefer not to say

3. **What is your current level of study**
   - ○ Fourth year Honours
   - ○ Research Masters
   - ○ Course-work Masters
   - ○ PhD
   - ○ Postgraduate Diploma
   - ○ Postgraduate Certificate
   - ○ Other

4. **Which discipline(s) are you studying in**
   - ○ Humanities
   - ○ Sciences
   - ○ Health Sciences
   - ○ Business

Appendix f: Data Coding Schema

Initial themes identified	Initial themes as coded to broader themes identified	Broad Themes
From the interview questions: - Students perception of how easy or difficult it is to find the eBooks they need - Students perception of whether the library is providing the eBooks that they need	Students perception of how easy or difficult it is to find the eBooks they need Students perception of whether the library is providing the eBooks that they need Perception of ease of use of eBooks	**Students perceptions of library eBook service**
- Reasons for use of library eBooks - Preference for print books - Preference for eBooks	Preference for print books Preference for eBooks Reading from a screen	**Preferences for print or eBooks and why**
- Perception of ease of use of eBooks - Problems or difficulties experienced in using eBooks - Help with eBooks - Awareness of library support available - Need for further support or training from library - Ways eBooks are failing to meet needs - Suggestions for changes to library eBook service	Perception of ease of use of eBooks Problems or difficulties experienced in using eBooks Ways eBooks are failing to meet needs Suggestions for changes to library eBook service Comfort with technology Awareness of and experience of different eBook platforms Experiences with DRM	**Issues encountered when using eBooks**
Other themes from interview data: - Ways & places of searching - Comfort with technology - Awareness of and experience of different eBook platforms	Help with eBooks Awareness of library support available Need for further support or training from library Suggestions for changes to library eBook service	**Library help for using eBooks**
- Preference for PDF downloads - Desired eBook loan period - Comments about other library systems, search, website etc - Experiences with DRM	Ways & places of searching Preference for PDF downloads Desired eBook loan period Ways of accessing eBooks	**Ways of searching for and accessing eBooks**
- Ways of using eBooks - Reading from a screen - Ways of accessing eBooks	Ways of using eBooks Preference for PDF downloads Desired eBook loan period	**Ways of using eBooks**
- Negative impact of using technology - Preference for ejournals over eBooks	Comments about other library systems, search, website etc.	**Comments about other Library Services**