

Distance students: Finding information and help for coursework

by

Lucy Atkinson

Submitted to the School of Information Management,

Victoria University of Wellington

in partial fulfilment of the requirements for the degree of

Master of Information Studies

October 2015

**VICTORIA UNIVERSITY OF WELLINGTON
School of Information Management**

Master of Information Studies

IMPORTANT DISCLAIMER

with respect to a MIS Research Project (INFO 580)

Distance students: Finding information and help for coursework

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

being undertaken by

Lucy Atkinson

in partial fulfilment of the requirements of the degree of
Master of Information Studies,
School of Information Management, Victoria University of Wellington.

Topic Commencement: March 2015

1. Victoria University of Wellington and its Council, its members, staff, employees, students and agents undertake no duty of care in contract, tort, or otherwise, to users (whether direct or indirect) of the MIS Research Project and make no warranties or representations of any kind whatsoever in relation to any of its contents.
2. The MIS Research Project is only made available on the basis that all users of it, whether direct or indirect, must take appropriate legal or other expert advice in relation to their own circumstances and must rely solely on their own judgement and such legal or other expert advice.
3. Under no circumstances will Victoria University of Wellington and its Council, its members, staff, employees, students or agents be liable in any way whatsoever, whether in contract, tort (including negligence), for breach of any statutory or regulatory duty (to the fullest extent permissible by law), or otherwise, to any user (whether direct or indirect) of the MIS Research Project for any loss or damage whatsoever arising directly or indirectly as a result of the use in any way of the MIS Research Project.
4. Each exclusion in the clauses of this disclaimer and each protection given by it is to be construed as a separate exclusion applying and surviving even if for any reason any of the exclusions or protections are held inapplicable in any circumstance.

Contents

Abstract.....	4
Problem Statement.....	5
Definitions.....	6
Literature Review.....	7
Distance students at Otago.....	12
Research Objective.....	13
Research Questions.....	14
Research Design.....	14
Research Samples.....	15
The survey and interviews.....	17
Ethical considerations.....	19
Assumptions and Limitations.....	19
Results.....	20
Answering the Research Questions.....	23
Librarians Views.....	30
Discussion.....	33
Conclusions and Recommendations for further research.....	36
References.....	37
Appendix 1: Student Survey questions.....	42
Appendix 2: Timetable.....	46
Appendix 3: Participant Information– Student Survey.....	47
Appendix 4: Participant Consent – Librarian Interviews.....	48
Appendix 5: Tables of responses to student survey questions.....	49

Abstract

Advances in web technology continue to effect dynamic change in the delivery of tertiary Distance education and academic library services in New Zealand. Alongside this rapid evolution it is important to understand the corresponding changes to the course-related information needs of Distance students.

While increased online availability of information is beneficial for Distance students, their demographic profile and study mode can create unique challenges, requiring tailored support to ensure they are able to utilise resources to the same level as on-campus students.

This small-scale survey of Distance students and librarians at the University of Otago investigated provision, perceptions and use of course-related information resources. The results, although limited, contribute to knowledge about the information and library help-seeking needs of Distance students. The findings illustrate the value of both online library resources and the 'personal' nature of targeted support for students. Librarians collaborate with teaching staff to place library resources in virtual learning environments and to deliver targeted library instruction at appropriate points.

Areas identified for further research include the technological barriers that Distance students still face and how a personalised library service can be provided in response to student needs and as a measurable contribution to ensuring student retention and course completion.

Keywords: *Distance students; Academic Libraries; Information needs*

Problem Statement

As statistics show the number of students undertaking Distance education in New Zealand steadily increasing (New Zealand Ministry of Education, 2014) and academic library services evolve alongside rapid changes in technology, it is important to understand and respond to the changing information needs of Distance students.

Distance students are entitled to the same level of library support and services as on-campus students (Association of College and Research Libraries, 2014), however there are challenges in identifying and resolving issues in provision in appropriate ways, as technology and the nature of Distance learning changes (Needham & Johnson, 2007). For many distance students, the problem is simply that “...the library is invisible until he or she needs to use it.” (Casey, 2009 p.6).

Advances in web technology have led to improved access to academic library resources; for example, many academic library catalogue search tools now resemble a Google-type search (Debonis, O'Donnell, & Thomes, 2012). While increased online availability of resources can appear to improve accessibility for distance students, this may not always be the case, and distance students may still need dedicated, specific support if they are to benefit fully and in an equal way to on-campus students (Lamond & White, 2008). If library services are to be effective for Distance students, more information is needed about what kind of help they need and how it is delivered (Brahme & Walters, 2010; Pellegrino, 2014).

While there is ongoing, relevant research into Distance students use of library services in the US (Ritterbush, 2013) and some in the UK (Brooke, McKinney, & Donoghue, 2013) there has been less carried out in New Zealand. Recent examples include Beckwith's analysis of a Distance Library service at the University of Otago (Beckwith, 2014) and a 2008 study of library reference service communications at the University of Canterbury (Lee, 2008). Distance students are, however, the subjects of broader New Zealand-focussed studies, with recurring themes of student retention and engagement, and these studies offer useful insights (Brown, Keppell, Hughes, Hard, & Smith, 2013; Kahu, 2014).

This research project, focussing on the University of Otago, investigated Distance students' perceptions and use of library and other resources for course related information and help. The research also sought librarians views, to compare from both 'sides' how resources and services are used and provided.

The research aims to contribute to knowledge about the information and library help-seeking needs of Distance students in New Zealand and to identify areas for further research in how Distance

students seek information and use library resources. The research did not examine the place of Massive Open Online Courses 'MOOCs' in Distance learning and library support. Although the impact of MOOCs on how students learn online, seek and use information is only likely to increase, affecting how libraries support these students (Gore, 2013), there are still grey areas around these students' access to both teaching and library resources (Association of College and Research Libraries, 2014). In New Zealand it is still early days, with only a few institutions involved in MOOCs (Shrivastava & Guiney, 2014).

Definitions

Distance Students

Distance learning has been defined as "any program of instruction in which students and instructor are not simultaneously present in a single on-ground classroom on the campus of a college or university" (Garten, 2009). For the purposes of this research, Distance students are 'extra-mural', domestic (resident in New Zealand) students enrolled in Distance-taught courses at a Tertiary Education Provider, as defined by the New Zealand Ministry of Education: "universities, polytechnics, colleges of education, wananga and private training establishments" (New Zealand Ministry of Education, 2014).

Libraries and Resources

'Otago Libraries' refers to all University of Otago library branches and library websites.

'Otago Library resources' includes all services, resources and tools available to Distance students through Otago libraries, for example:

- Online resources e.g. search tools and online requesting, databases, ebooks, ejournals, subject and referencing guides and instructional videos available via library websites;
- Research and study support provided by librarians and other library staff in person, online or by 'phone.

Literature Review

The New Zealand context

There is a very little literature focussing specifically on New Zealand Distance students' experiences and use of university library resources, however there is a wider range of studies with themes of student retention and engagement – “students' involvement with activities and conditions that are likely to generate high-quality learning” (Radloff, 2011, p. vi) which are either about or include New Zealand Distance students and so are useful in providing context for students interactions with institutions (Brown et al., 2013; Kahu, 2014; Poskitt, Rees, & Suddaby, 2011). Whatever level students are studying at, their 'Distance' location places them in a unique cohort whose study mode and support needs are often quite different to on-campus students. Studies highlight the need for tailored and specific support that recognises the needs of these students and their connections - to their study, their fellow students and to the institution (Kahu, 2014; Lamond & White, 2008; Poskitt et al., 2011, Pratt, 2015).

A 2005 survey of Distance students at Otago examined their computer literacy and the information technology support they had for their study at Otago (Fisher, 2005). The technology environment at that time meant that most students used dial-up internet services. Additionally, many students were unsure of their own digital literacy skills, struggled with anything other than basic digital technology and did not use the Freephone ITS helpline when they encountered technical problems. Fisher's study is useful for its context of the technology used in Distance education at that time and the evidence of the lack of dedicated support that Distance students received in coping with the digital requirements of their courses. Although the assumptions now are often that the 'digital divide' no longer exists and that students will have the hardware, software and skills to cope in the current e-learning environment, recent New Zealand studies still refer to students' difficulties with technology and the barriers these create to fully engaging with their study (Brown et al., 2013; Kahu, 2014; Pratt, 2015).

The theme of support for Distance students continued in 2008 with one of the few library-focussed studies - a survey of Distance students at Canterbury University to determine preferences for receiving reference help from the library (Lee, 2008). The pace of technology change is evident, with references to resources such as 'virtual reference'. Although there was a very low response to this survey, the results showed that Distance students still preferred email contact rather than a 'live chat' situation, for reference help, even though internet access was still an issue for some students using dial-up services or coping with problematic connections in rural areas (Lee, 2008).

A survey of first-year students, including some at Massey University a few years later looked at the interactions of students with support services (Brown et al., 2013). Although this study focussed on student retention and general support provided to first year Distance students, library services were included and the study's value is in its detailed observations, through video diaries, of student experience of distance study and the many factors that affect their use of support services. Online library resources were highlighted as a valuable resource. The researchers indicated that Distance students need to be thoughtfully and carefully supported in ways appropriate to their choice of study mode if they are to fully benefit from, and persist with, their studies (Brown et al., 2013).

Close study of Massey students continues, with another recent study utilising video diaries for an in-depth look at first year Distance students' connections to and engagement with university (Kahu, 2014). Kahu examined the study experiences of older Distance students at Massey University and sought to understand the nature of their engagement with their studies during the first year. While not directly examining students connections to and use of library services, the wider themes of retention and engagement of Distance students, particularly those who are working, studying part-time and with family responsibilities, are relevant (Kahu, 2014).

The Open Polytechnic also pursued the theme of engagement in a recent report, looking at the "...relationship between library use and successful study" (Clarke, 2011, p. 261). Clarke was able to analyse library statistics against student completion of courses in a way that suggests the positive link between the use of library services and resources, and completion of study.

There have also been a few studies investigating or reporting on librarian's views and experiences. Chisholm and Lamond reported on 'embedding' information literacy instruction directly into online courses at Massey University, with results demonstrating value for both teaching staff and students (Chisholm & Lamond, 2012). More recently Fields examined the "practice of embedding live librarians" (Fields, 2014, p.46) into online courses, again commenting on its contribution to supporting student engagement, while acknowledging the need to take into account factors such as the variation in students information and digital literacy levels (Fields, 2014).

The wider context

The scope of relevant research is more extensive outside New Zealand, providing valuable insights into research methods and the key issues faced by Distance students and libraries. Recent literature reviews highlight the growing importance of this area, for example Herring's analysis of research articles on studies of Distance library services describes a general increase, between 1999 and 2009, in the number of articles and the variety of research methods used (Herring, 2010). The comparison

of common research themes in recent studies was the purpose of a literature review by Ritterbush, who noted, amongst other things, the differences between how libraries provide information about resources and how Distance students actually learn about resources, and the need for further research to help close the gaps (Ritterbush, 2013).

The US Association of College and Research Libraries (ACRL) Standards for Distance Learning Library Services have been revised to reflect the changing nature of this learning mode and to reinforce the “access entitlement principle” for all learners to library services (Association of College and Research Libraries, 2014). The standards provide a reference point for researchers examining access to and provision of services (Brahme & Walters, 2010; Brooke et al., 2013; Needham & Johnson, 2007), in planning service provision (Casey, 2009; Hensley & Miller, 2010), or looking at the use and impact of technology (Brumfield, 2010).

Improved access to broadband internet, and the consequent increase in online resources, would imply that access has improved for Distance students. However it seems that awareness of library services can still be issue, affecting how and why students use library support (Brooke et al., 2013; Hensley & Miller, 2010).

Help-seeking

Several studies have included the help-seeking aspect of Distance students’ interactions with libraries. Needham and Johnson in their discussion on “ethical challenges encountered in providing library services to distance learners” (Needham & Johnson, 2007, p. 117), created guidelines for ensuring that Distance students have access to library services in the same way that on-campus students do. Their discussion notes the importance of library use and support in the acquisition of information literacy skills and the difficulties that Distance students encounter as a result of their absence from campus (Needham & Johnson, 2007, p. 122).

Brooke’s UK survey of Distance students and librarians found that many students were not aware of library services tailored to their needs and would often go to faculty members, friends or colleagues first for help (Brooke et al., 2013). The need to create greater awareness of library services, and for continuous communication with Distance students, was highlighted by Hensley and Miller in their 2009 survey. This study set out to identify how students used library services and provided some useful observations, particularly for the need to communicate regularly with students through a variety of channels. The researchers found that while some services – e-reserves and e-journals, were well used, other services supporting research were not, and that this reflects students’ level of awareness of these services. (Hensley & Miller, 2010).

Information-seeking

The information-seeking behaviour of Distance students and their use of online tools has been included in several recent studies.

Mussell and Croft, in their 2011 study, explored the use of 'discovery layers'- a recent innovation at that time – by Distance students. They found that while many students still started with 'Google', as library search tools became easier to use they were increasingly used alongside the more familiar general web search engines (Mussell & Croft, 2012). The researchers also noted that students appeared to be happy to "outsource the relevancy" of search results by using these fast, unsophisticated general search tools (Mussell & Croft, 2012, p. 33).

The need for an easily searchable library website was echoed by Wahl, Avery and Henry, as one of the changing priorities for Distance students, in their ongoing survey. The researchers noted that as technology improved, making information available faster, in a more user-friendly way became more important, as did the need for the library to be pro-active in placing library information at relevant points (Wahl, Avery, & Henry, 2012).

A contrasting view was found by Brahme and Walters, studying the search habits of doctoral students. In this study, comparing residential and Distance students, it appeared that library resources were the preferred option for finding information, and that students started their searches "from the library website, using the library's research tools" (Brahme & Walters, 2010, p. 501). The researchers noted the divergence of this result from existing literature and acknowledged the need for further research.

The use of web search engines, or library search tools, including databases and catalogues, can depend on the skill levels of students and how they receive information literacy instruction, if any. Lamond and White's discussion of information literacy and Distance students states that these skills are particularly important for Distance students who have no physical access to the library, and there is a corresponding challenge for libraries to give emphasis to the teaching opportunities for Distance students (Lamond & White, 2008). A survey of the information needs of graduate students by Ismail found that students' information-seeking skill levels related both to the students level of library instruction and the teaching staff's familiarity with current library resources (Ismail, 2010).

Byrne and Bates also noted the importance of librarians being actively involved in information literacy teaching (Byrne & Bates, 2009, p. 137). Their study of Distance students looked at what information sources students used, and they found that most used the internet, with library and

online course content following behind. They also noted the importance of specific, tailored instruction for Distance students and the need to work with faculty to provide library information within courses (Byrne & Bates, 2009).

Librarians Views

Views from the librarians' side are less common than studies of student behaviour, however the literature does reveal some key ideas. Brooke's recent survey of students and librarians is important for its analysis of the gaps between students and librarians perceptions of Distance students' confidence and the challenges they face. The findings revealed that Distance students had "... high levels of confidence with using libraries" contrasting with librarians who felt that Distance students suffered from "a lack of information literacy skills...." (Brooke et al., 2013, p. 630).

A 2007 survey of Distance librarians by Cassner and Adams sought information on service provision for Distance students. The findings illustrated increasing recognition of the need to work with teaching staff to integrate library resources into online course material, and highlighted both the rapidly changing nature of Distance education and the role of librarians (Cassner & Adams, 2008).

Edwards and Black's case study of an embedded librarian set out to assess the value to Distance students of this way of providing library services. While this was a small study, the findings confirmed the value of embedded librarians; however the researchers affirmed that the process must involve detailed planning to curriculum needs and with teaching staff to ensure success (Edwards & Black, 2012).

The importance of engagement with faculty and providing services 'at the point of need' are themes that appear more often. Ismail surveyed students and faculty, to understand these users' needs for library services and was able to make connections between how faculty use library resources and teach library skills, and how this impacts on students' ability to use library services. The findings revealed a need to create a stronger awareness of library services within faculty, and to communicate more effectively (Ismail, 2010, p. 730).

Pellegrino's small study of "help-seeking behaviour" highlighted the importance of placing library resources "at the point of need" (Pellegrino, 2014). This emphasis is repeated by Lamond and White, asserting the importance of easily accessible library services for students "...where they are and....when they need it" (Lamond & White, 2008, p. 8).

Summary

The literature shows that while there are detailed studies of New Zealand undergraduate Distance students, looking at the general support they receive; there are few New Zealand studies that focus on library resources and services, both from the students and librarians perspectives. There is a plethora of studies available from elsewhere, particularly the US, where the results from student and librarian surveys help to identify potential improvements in providing course-related resources, both through libraries own tools and services and through collaboration with teaching staff.

This small-scale research study aims to contribute to what is known about the information and help-seeking resources that New Zealand Distance students use for their coursework. The research also aims to provide some views from the librarian's perspective. Through the survey and by identifying further areas for future research it is hoped that a continuous picture of library support for Distance students can be built.

Distance students at Otago

Distance study at Otago covers a wide range of subjects and teaching formats, in 120 programmes including Health Sciences, Education, Theology and Social work, and an online MBA (University of Otago, 2015). Qualifications are offered at undergraduate, Masters, Postgraduate certificate and Diploma level. Some courses include on-campus blocks or residential weekends.

Otago's Distance students are likely to have a similar profile to those studying at other New Zealand universities: slightly more females than males and studying part time, often towards a work-related qualification (Poskitt et al., 2011). They are also more likely to be "...balancing the pressures of family, study and full-time employment than campus-based students" (Poskitt et al., 2011, p. 72). Importantly, nearly all students now have access to broadband internet, with rapidly increasing use of mobile devices. The University's Distance Learning website links to social media sites and other support services for students (University of Otago, n.d).

Library resources and support

Distance students have access to most of the same resources as on-campus students, including:

- Requesting books online via Library Search I Ketu to be sent to their home address;
- A Distance Library service for students to request books, scans of book chapters or journal articles and access information about library resources and services;

- Postgraduate Distance students are supported by subject librarians, and the library also offers postgraduate library workshops for off-campus students – for example using Adobe Connect;
- The ‘Library Liaison’ subject guide on the library website has a section for Distance students and some course specific subject guides have a link to the Distance Library service.

Research Objective

Studies exploring Distance students’ perceptions and awareness of library resources and what they actually use to find information for their assignments, have highlighted the need for libraries to better understand these students’ needs. Alongside information-seeking and use, the literature examines how Distance students find and use research and study help and how this kind of support needs to be tailored to their study mode. Some studies have partnered the analysis of student behaviours with views from the librarians’ side, an approach which helps to create a better overview of where opportunities might exist to improve resource provision and library communications with students and teaching staff.

The research aims to contribute to understanding the information and help-seeking needs and behaviours of Distance students by investigating:

- The course-related information and help-seeking needs of Distance students;
- The resources Distance students use to find information and help for their assignments and research;
- How Distance students learn about Otago library resources and how they prefer to learn;

The research also aimed to explore Otago librarians’ provision of support for Distance students and their perceptions of Distance students’ use of library resources, providing a “diversity of views” (Bryman, 2012, p. 633). By viewing the student experience of library resources from both ‘directions’, the research contributes to knowledge which can help to identify potential opportunities to increase the effectiveness of library support for Distance students.

Research Questions

- How do Distance students find information for course assignments and research?
 - What online resources do they use?
 - What physical libraries do they use?
 - What are their perceptions and use of Otago library resources?
 - How do they learn about Otago library resources?
- How do Distance students get help to find information for course assignments and research?
 - What resources do they use?
 - How do they prefer to get help?
- What are librarians' perceptions of how Distance students use library services?

Research Design

Mixed methods strategy

The research strategy most closely resembles a “convergent parallel mixed methods” approach (Creswell, 2014, p. 15). A survey of service users (Distance students) complemented by qualitative interviews with service providers (librarians), informed the research questions. Although the survey and interviews were carried out with different groups, the inclusion of open questions within the survey to students represented a qualitative element, which alongside the quantitative structure of the survey also aligned the research to the mixed methods model (Creswell, 2014, p. 17).

The benefit of a mixed methods approach is in the combining of data from two ‘ends’ of the service, and has been used in previous studies evaluating services for Distance students. Edwards and Black used an array of methods including online surveys of students, field notes from librarians and semi-structured interviews with librarians, for evaluating services (Edwards & Black, 2012). Brooke used mixed methods to compare needs, views and perceptions of students with how librarians perceived student needs and behaviour (Brooke et al., 2013).

The strategy is convergent in some aspects as the student survey and librarian interviews were derived from the same research questions and carried out over the same period of time (Leedy & Ormrod, 2013, Chapter 10). A quantitative element, through a survey to students, is suitable for a large sample group and allows for the results to be generalised, enabling broader application of the outcomes (Leedy & Ormrod, 2013, Chapter 4). The qualitative elements provided opportunities for more in-depth exploration of specific questions in interviews with librarians and through open questions in the surveys.

Edwards and Black, and Brooke also used this approach to triangulate some of their findings: using quantitative and qualitative data collection with the same population sample to confirm findings (Leedy & Ormrod, 2013, Chapter 4). Triangulation of data from the student survey, by following up with a small number of qualitative interviews, was desirable in this research study however the limited timescale made this an unrealistic addition.

Cross-sectional design

The research takes a cross-sectional design approach as described by Bryman. This classification includes surveys that use questionnaires and interviews to collect the data – in this case from many individuals - at a “single point in time”, where the data can be both quantitative and qualitative (Bryman, 2012, p. 59).

The research focussed on Distance students enrolled at the University of Otago and librarians from University of Otago libraries. The university also provides an example of how Distance students interact with academic library services, and it was available to the researcher. These facts combine to provide elements of a representative case study design – “the detailed and intensive analysis of a single case.” (Bryman, 2012, pp. 66–70).

Research Samples

The scale of the research project meant it was not feasible to include all domestic tertiary students enrolled in Distance Learning courses, or all academic librarians in New Zealand providing services for Distance students. Instead, the survey was limited to a ‘convenience sample’ of Distance students and subject librarians at Otago, as they were available to the researcher (Creswell, 2014, p. 158).

The research followed a non-probability sampling approach, using samples from known and available populations. For the student survey, selection criteria were applied to a large potential pool of individuals reducing the random element of selection. The librarians were essentially self-selecting from an invitation and so there was no random selection (Denscombe, 2010, p. 25).

Students

The sampling design for the student survey was “single stage” in that the selection was made once only by the University of Otago; (Creswell, 2014, p. 158). Students were selected from those currently enrolled in a Distance course at the start of Semester two, 2015.

New Zealand Ministry of Education statistics indicate just over 28,000 domestic students were studying extramurally (Distance) in the tertiary sector, at degree level or higher, in 2013 (New Zealand Ministry of Education, 2014). The research sample consisted of 300 students selected from enrolled, domestic Distance students at the University of Otago. It was desirable to apply a range of selection criteria, including current enrolment status, the type and number of papers being studied and student location (i.e. ensuring they are truly 'Distance' students). This type of 'purposive sampling' is used to ensure that the research being undertaken is relevant to the participants (Bryman, 2012, p. 714).

The survey process

The quantitative survey sample of enrolled Distance students at Otago were sent an email from Otago Student Services with a link to a web survey created using the VUW Qualtrix software. One follow-up email was sent after three weeks to help improve response (Wahl et al., 2012) and the survey remained open for six weeks. Web surveys have been used successfully in similar research, however, responses can be low (Hensley & Miller, 2010; Ismail, 2010) so the use of an incentive was considered as this can positively affect response (Mussell & Croft, 2012).

Using email with a web survey link, in preference to a postal survey, was considered in the light of previous surveys and improved access to the required technology. Fisher's 2005 survey was sent as a postal questionnaire, generating a 43% response (Fisher, 2005). More recently, researchers have discarded the postal route and have addressed potential drawbacks with using email surveys in a number of ways, for example Wahl et al put links to their web-based survey on the library web page, sent reminders and offered incentives (Wahl et al., 2012); Mussell and Croft ensured their online survey was open for a sufficient length of time and also offered an incentive for completion (Mussell & Croft, 2012).

Librarians

The librarians volunteered to take part in the research and can best be described as a 'purposive sample' as they represented a specific group of people with specialist knowledge relevant to the research objectives (Denscombe, 2010, p. 35).

The survey and interviews

Questionnaire for students

Driven by the research questions, the questionnaire for students was structured into themes. Question development was informed by the literature and previous Otago surveys, including the library section of the Student Opinion survey (Quality Advancement Unit, 2014) and the Distance Learning Office Technologies Access Survey (Distance Learning Office, 2012). Previous surveys, in particular those by Brooke, Hensley and Miller, and Mussell and Croft, provided excellent examples of questions (Brooke et al., 2013; Hensley & Miller, 2010; Mussell & Croft, 2012). The draft questionnaire (on paper) was reviewed by some Otago staff. The survey in Qualtrix was tested for usability and comprehension with Otago staff, non-library users and with a few Distance students to ensure relevance and reduce the potential for misunderstanding or assumptions caused by terminology.

Information-seeking questions:

- Online course pages; links from course pages to the library website;
- Independent searching; the need to do independent searching for assignments;
- Online search tools used including general web-based and library-based and frequency of use;
- Library visits and use; other (non-Otago) libraries used and reasons;
- Otago libraries: introduction; awareness of resources; use of and usefulness of resources;

Help-seeking questions:

- Source of help for information, preference and frequency of use;
- Learning about library resources: source of information and preference of information source;
- Confidence in finding relevant information for course assignments.

Demographic questions:

- Level of study/Subject area;
- Age band;
- Years of study at Otago/years of study as a Distance student.

Question Format

Several factors influenced the formatting of the questions and the questionnaire in the web-based survey:

- **Usability:** Questions were designed for simplicity, using as few variations in answer types as possible, and were mostly closed-ended, with some nominal type and some ordinal (scale) type questions. A few open-ended questions offered the opportunity for respondents to give free-text answers on specific topics where a qualitative approach is more helpful in answering the research questions (Dillman, Smyth, & Christian, 2014, Chapter 7).
- **Survey design requirements:** Dillman suggests that “a questionnaire should be organised much like a conversation”, starting with an easy question, more difficult, important questions in the mid-section and less important questions at the end (Dillman et al., 2014, p. 230). For a web-based survey, the order and appearance of questions is particularly important, requiring logical progression and page breaks in appropriate places, and the web survey design was carefully considered within this framework.
- **Data analysis:** The questions were designed to enable meaningful analysis of the variables and the relationships between them to answer the research questions (Bryman, 2012, p. 351).

Librarian interviews

Interviews with subject librarians followed a qualitative model, with questions designed to enable the librarians to comment on and inform the research objective (Creswell, 2014, p. 190). Views from the librarians are important in creating a more complete picture of how students use library resources and support.

Focussing on the research questions, interview themes included:

- How librarians perceive Distance students awareness and use of Otago library resources;
- How students contact librarians, what common questions are asked;
- How librarians provide library resources and help to students.
- What librarians see as the challenges that Distance students face, and the challenges that they themselves face in providing services for Distance students.

Ethical considerations

As the research involved collecting personal views and demographic information, there was a need for “informed consent” and a “right to privacy” (Leedy & Ormrod, 2013, p. 104). Ethical approval was sought for the survey and interviews from Victoria University of Wellington (Victoria University of Wellington Research Policy Group, n/d). In addition, Otago Student Services required all responses to the student survey to be anonymous and this was achieved through Student Services facilitating the survey and the use of Qualtrix survey software to anonymise responses.

Data collected from interviews with subject librarians was transcribed and confirmed with participants, and anonymised before inclusion in the research report.

Assumptions and Limitations

Assumptions

- It was assumed that the students who were sent the survey would be able to complete it: that they would have sufficient experience of using one or more Otago library resources, and alternative online resources, for their study.
- It was assumed that the students would be familiar with the terminology used in the survey regarding Otago library resources.
- The research design also assumed that a number of Otago librarians were involved in providing services to Distance students and that a minimum number would be willing to participate in the research.

Limitations

- The student survey was initially tested for comprehension by Otago staff and non-students. It was intended to follow this up with a pilot survey to a small number of Distance students, and two librarians sent invitations to students for this purpose. Only a few responses were received and although these contained some extremely useful comments, the limited feedback may have meant some improvements to the survey were overlooked.
- The number of questions in the survey was kept as low as possible - a shorter survey potentially generating a higher response. However, on reflection some extra demographic data would have provided more depth to the student profile and enabled closer comparisons to other surveys.

- The very basic mailing selection criteria may have impacted on the response rate. Application of more specific criteria, including previous Distance study, and stratification by discipline, may have provided a more suitable pool of students to draw from.
- The use of an incentive may have increased response, as in previous studies.
- Surveys provide only surface detail, taken at one point in time, about individual behaviour. Follow-up qualitative interviews or focus groups with students would have provided a deeper level of understanding of their information behaviours and needs.
- There was a low response to the invitation to Otago librarians to be interviewed. The researcher's lack of experience, the structured nature of the interviews and the variation in library activities across the disciplines meant that this aspect of the research was not fully explored.

Results

Student Survey

The survey was distributed via a link in an email from Otago Student Services, to 300 Distance students selected at random from the pool of enrolled Distance students at the start of Semester 2, 2015. A reminder email was sent three weeks later. The response rate following the reminder email was much lower than the initial response rate. The survey closed after six weeks. 53 responses were received. Of these, 44 were counted as complete and were included in the data analysis.

The list of questions is shown in Appendix 1.

Analysis of responses

Responses to the survey were analysed in Qualtrix, which codes all data and presents results in graph and table format. Responses from the final free text comment question were exported to an Excel spreadsheet for separate analysis. Some questions had the option to describe or name a different resource to those listed in the question and these were noted where relevant.

Tables of counts of responses to questions are shown in Appendix 5.

Demographics

The majority of respondents were between 26 and 60 years of age – with a fairly even split between the four main age groups (Fig. 1)

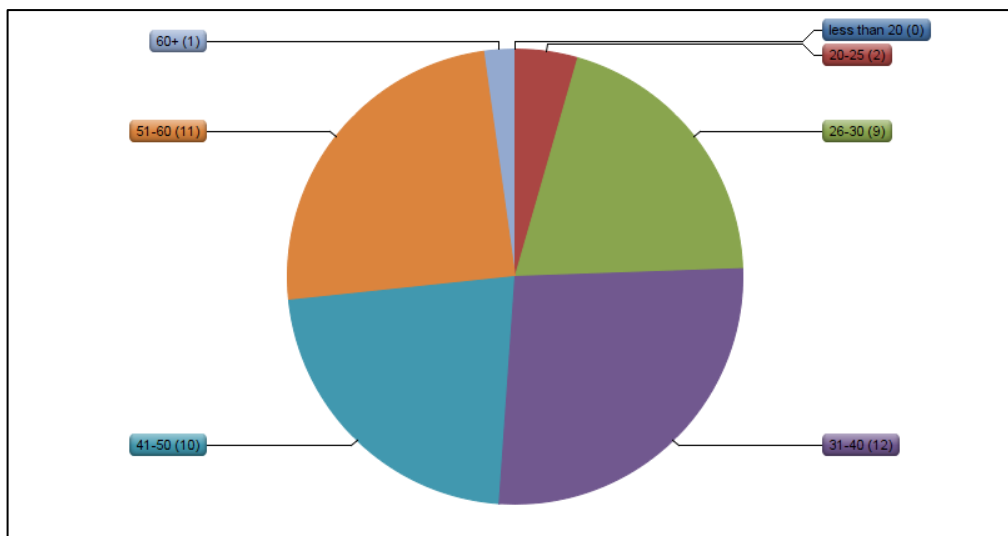


Fig. 1:
Numbers of
respondents
in each
age
group.

- Almost 80% ($n = 35$) of respondents were female.
- Over 90% ($n = 40$) had been studying at Otago for one year or more – 60% ($n = 26$) for more than three years – this included those studying at undergraduate level.
- Almost 60% ($n = 26$) had been studying at Otago as a Distance student for between one and three years. Only six students had been studying by Distance for less than one year (these were all Health Sciences postgraduates). Some of this group had studied at Otago previously, although not by Distance.
- Almost 90% ($n = 38$) were studying at postgraduate level, with the majority studying for a certificate or diploma, and just a few at undergraduate or PhD level.
- The results showed the majority studying Health Sciences, with a third taking Humanities, Education or Social work courses. None of the respondents selected Sciences or Commerce options in the question.

The information context

The first few questions in the survey aimed to establish what library information resources the students were provided with through links in their 'Virtual Learning Environment' (VLE) (Fig.2) and the amount of independent research students had to do for their assignments.

- Most students' courses use Blackboard, a few use Moodle, as the VLE.
- The most common links to library resources from the VLE were the Library home page and the Distance Library Service web page. Links to other resources, such as subject and referencing guides, were less common. A few respondents indicated no links to Library resources, or described as 'other' links which were in fact library resources or course material.
- Nearly all students had to 'find further information' themselves, for some or all of their assignments, most for all.

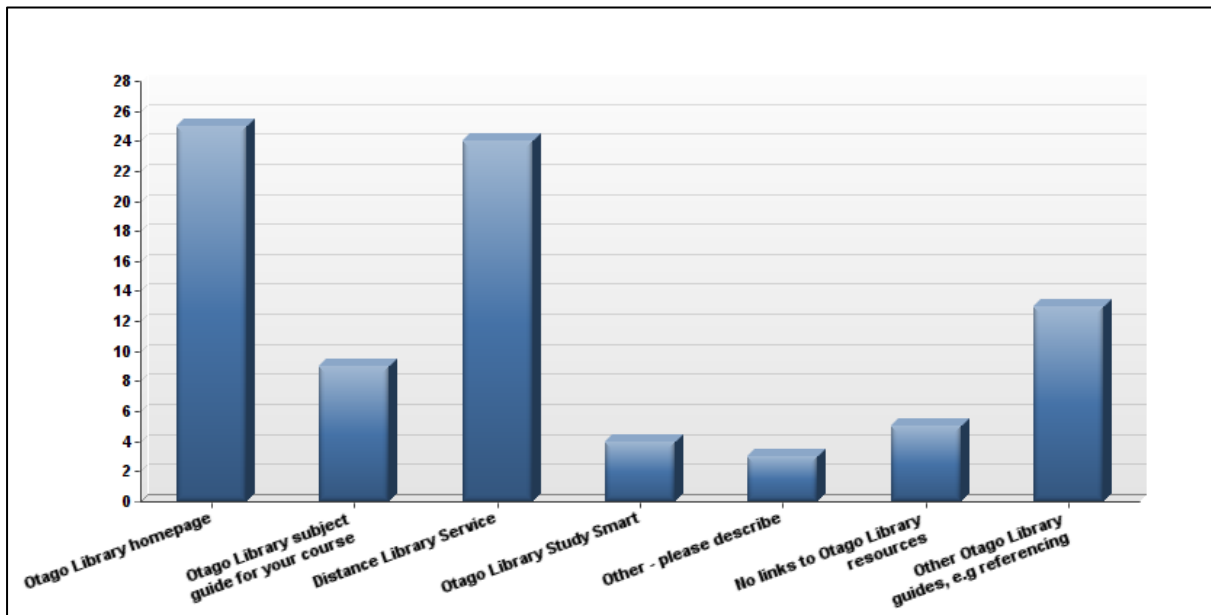


Fig 2: Links from the VLE

Answering the Research Questions

How do Distance students find information for course assignments and research?

- *What online sources do they use?*

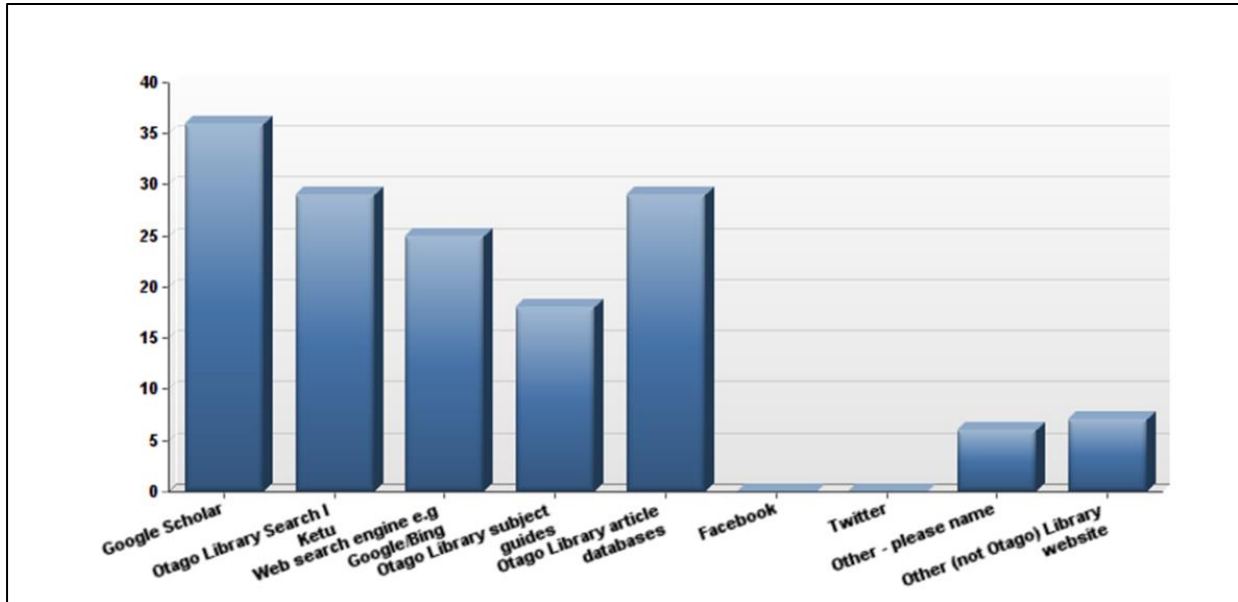


Fig 3: *What online information sources do student use?*

Respondents could select any number of sources in this question. The graph (Fig. 3) shows that Google Scholar, databases and Otago Library Search I Ketu are all being used more than basic web search engines. There is a link to Google Scholar from the Library website, however the survey didn't ask if the students were using this link or searching via Google. The high use of tools to access scholarly journals is indicative of the largely post-graduate cohort.

The next question asked about the *frequency of use* of these sources.

- There was a marked preference for Library Search I Ketu, used 'all of the time' most often, against web search engines and Google Scholar.
- The top 'all of the time' used sources were Library Search I Ketu and article databases followed by Google Scholar.
- The top 'often' used sources were web search engines and Google Scholar, followed by subject guides and article databases.
- Social media is not being used as an online source of information for coursework.

The graph below (Fig. 4) illustrates the combined effect of sources that were most used, showing that Library Search I Ketu is the most used, closely followed by Google Scholar and library article databases. Students are not ‘just Googling’ but are using Library resources in preference, with the web as a secondary source.

The ‘other’ responses came from eight students, and consisted mostly of specific databases and websites.

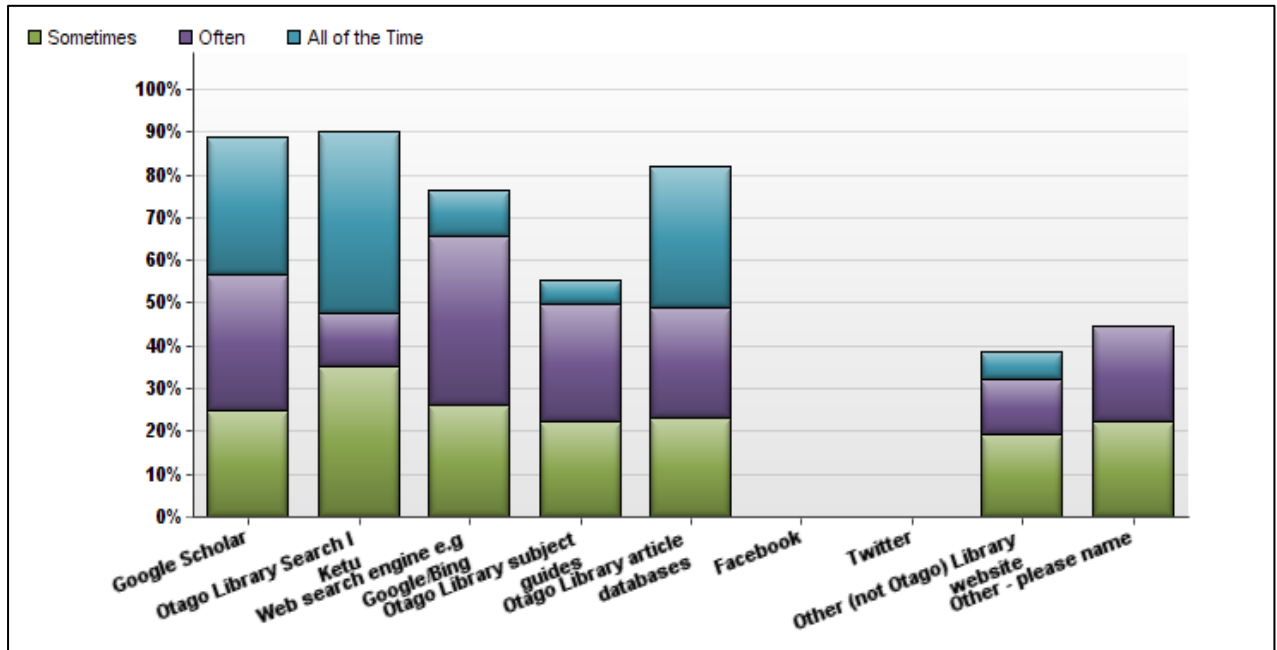


Fig. 4: Frequency of use of online information sources

What physical libraries do they use?

The responses (Fig. 5) indicate that only a few students visit libraries for finding information for their course. Ten students ‘sometimes’ visit an Otago library; while only one or two visit libraries ‘all of the time’. The majority of students never visit a library for information for their assignments.

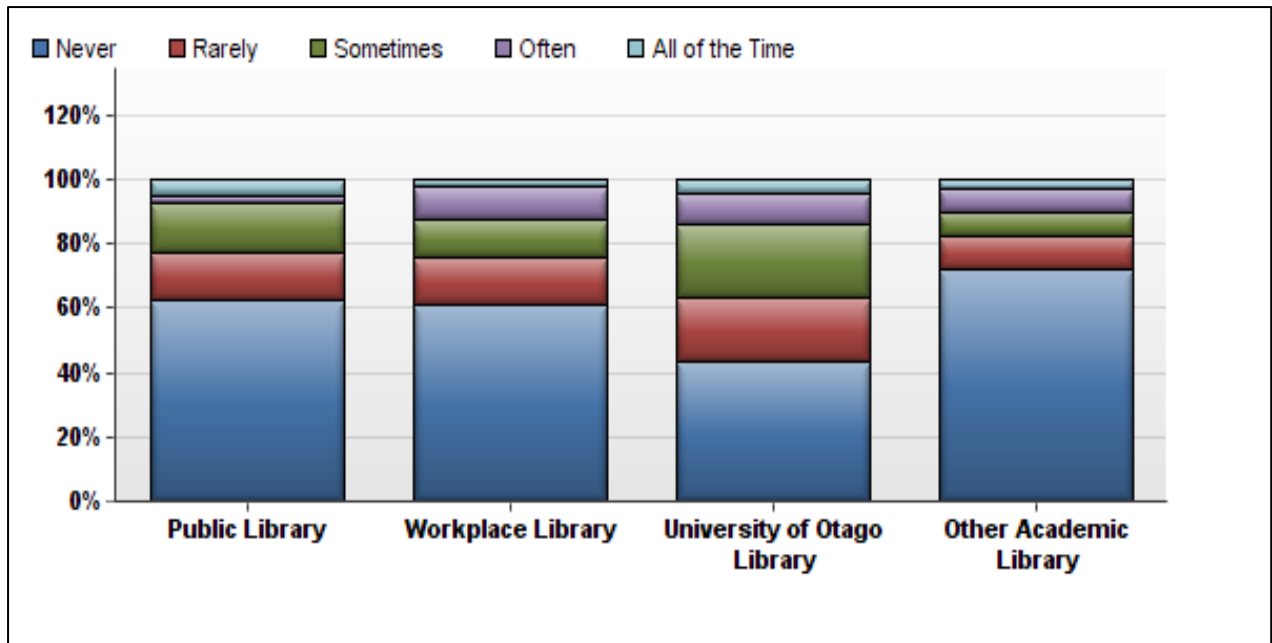


Fig. 5: Visits to libraries

Participants were asked in a free text question the main reason why they visited a library for information for their coursework and 23 students responded. Over 60% ($n = 14$) cited access to books. This, and access to print versions of journals and articles were the main reasons. Only two respondents cited the location of the local library as a reason for going, and another two wrote about the help they received from librarians.

What are their perceptions of Otago library resources?

The survey then focussed on Otago library resources, and this section began with a question to establish what kind of library introduction (if any) students had been given, for the course they were currently doing.

- Almost half of the students ($n = 21$) had received an introduction to the library, either from a librarian or course tutor. Introductions were either in the library or by video.

Students were asked what library resources they thought were important, and how well the resources met their information needs.

For a clearer picture of the importance of each resource, the graph (Fig. 6) stacks up the top three 'levels of importance' to show overall, how important students perceive these resources as being.

- Three resources, Google Scholar, Article Databases, and E-Journals, show how vital online sources of scholarly articles are to many students.

- The Distance Library service, which provides a dedicated library support, posting and scanning service for Distance students, is also revealed as a resource of high importance.

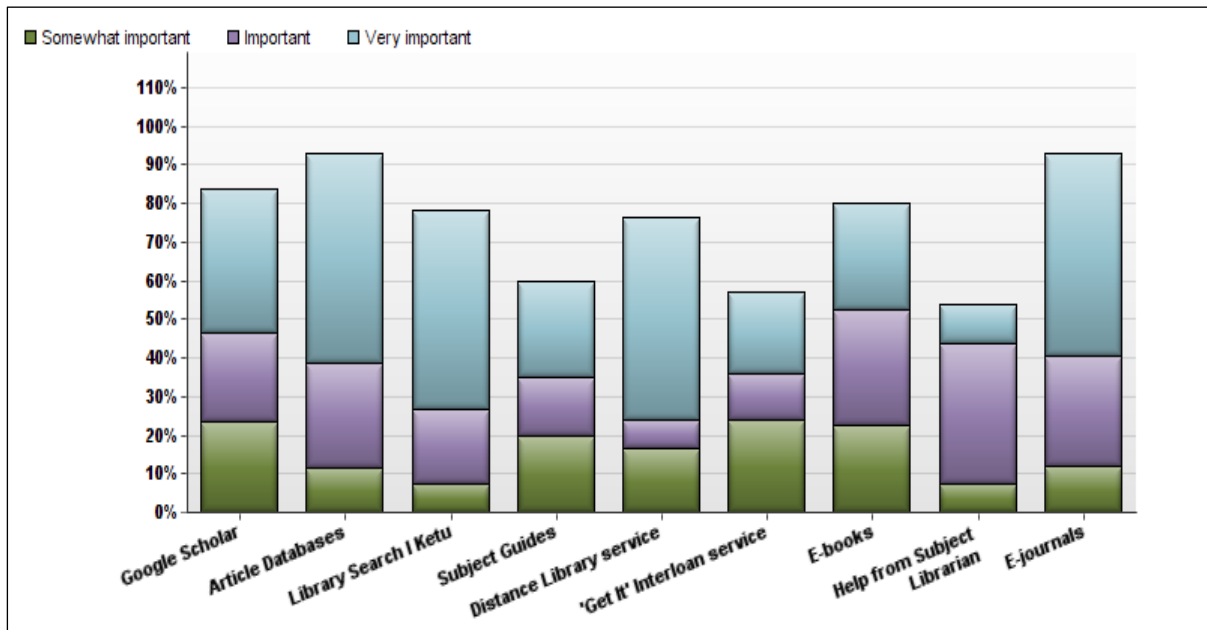


Fig. 6: Importance of Library resources

The next question asked about how well the resources met the student's information needs (Fig. 7). The most important resources are also those where needs are largely being met; just a few resources are perceived as rarely meeting needs. The Distance Library service is the resource that meets needs most often, closely followed by e-journals.

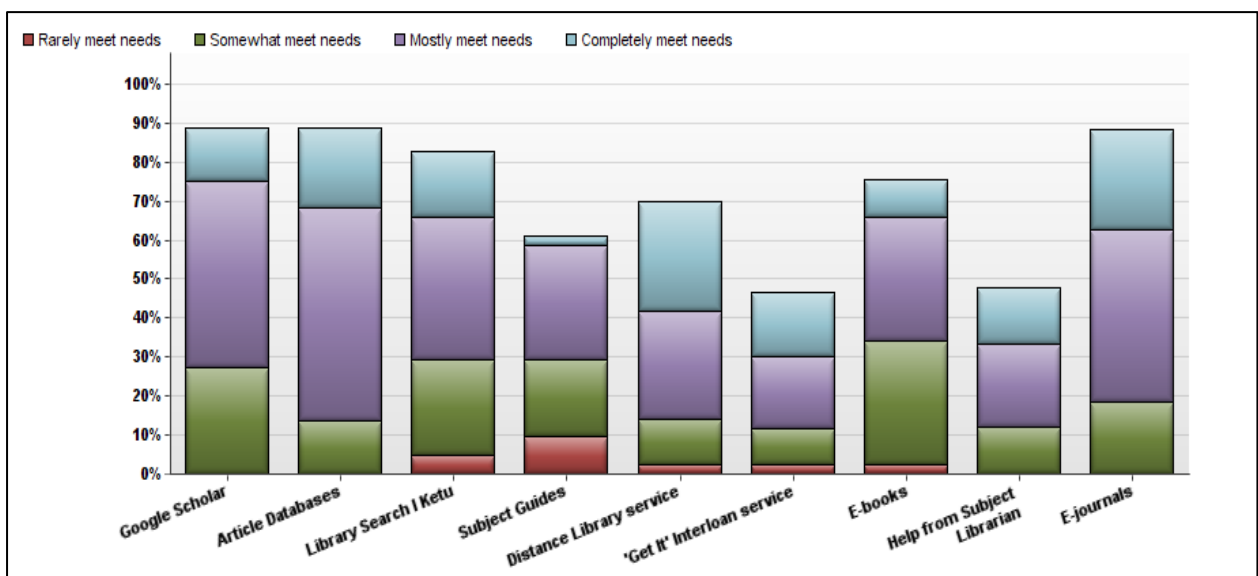


Fig. 7: How well Library resources meet needs

The data presented in a slightly different way (Figs. 8 and 8a) shows the relationship between the importance of resources and how well they meet the needs of students:

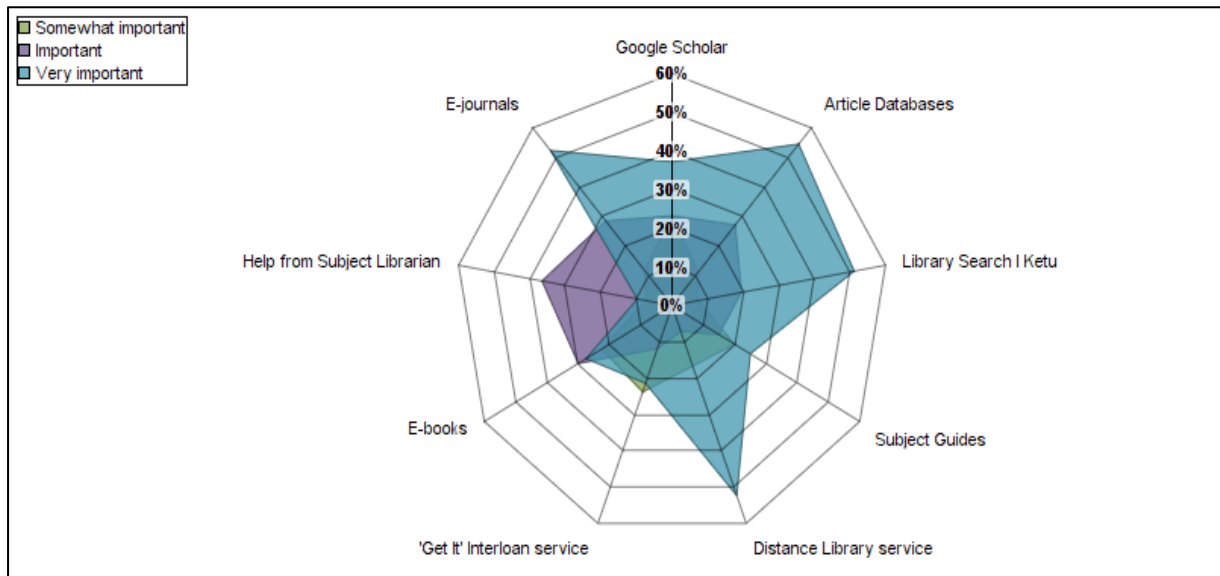


Fig. 8: 'Spider' graph of the importance of Library resources

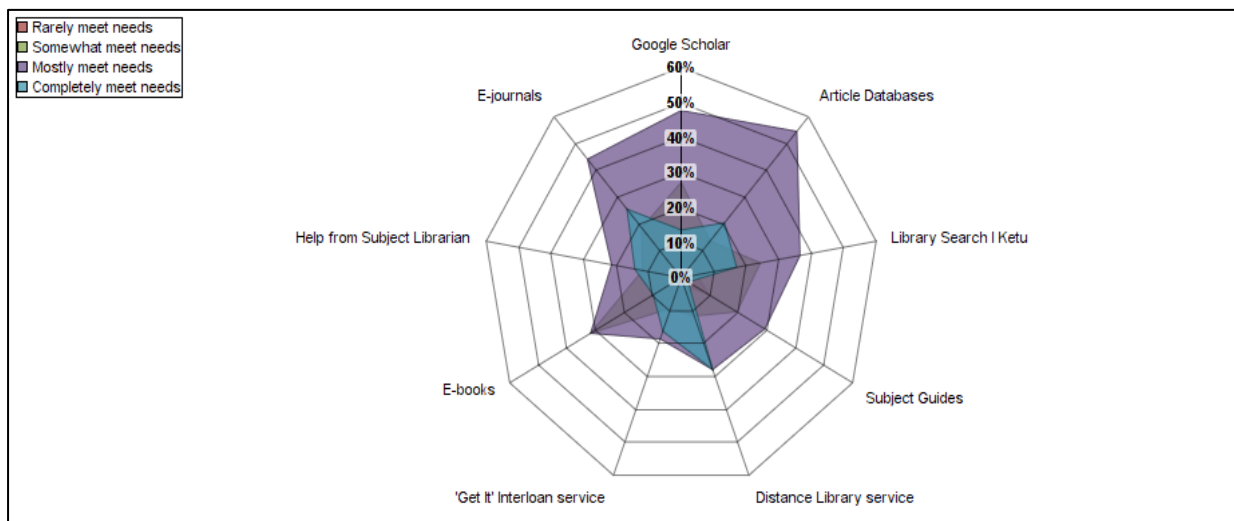


Fig. 8a: 'Spider' graph of how well Library resources meet needs

The most important resources – E-journals, Databases, Library Search and the Distance Library service, are also all mostly or completely meeting the needs of students.

- **How do they learn about Otago library resources?**

The next two questions focussed on learning about resources. Unsurprisingly, most students use a variety of ways to learn about library resources, including, for 80%, ($n = 35$) being self-taught. The library website also features highly (65%, $n = 29$) as a source of information, as does the lecturer or

course tutor, and library workshops, where 30% ($n = 13$) of students learned about resources. Social media is still mostly unused as a source of information. For the few that mentioned other sources, one to one conversations with librarians featured (Fig. 9).

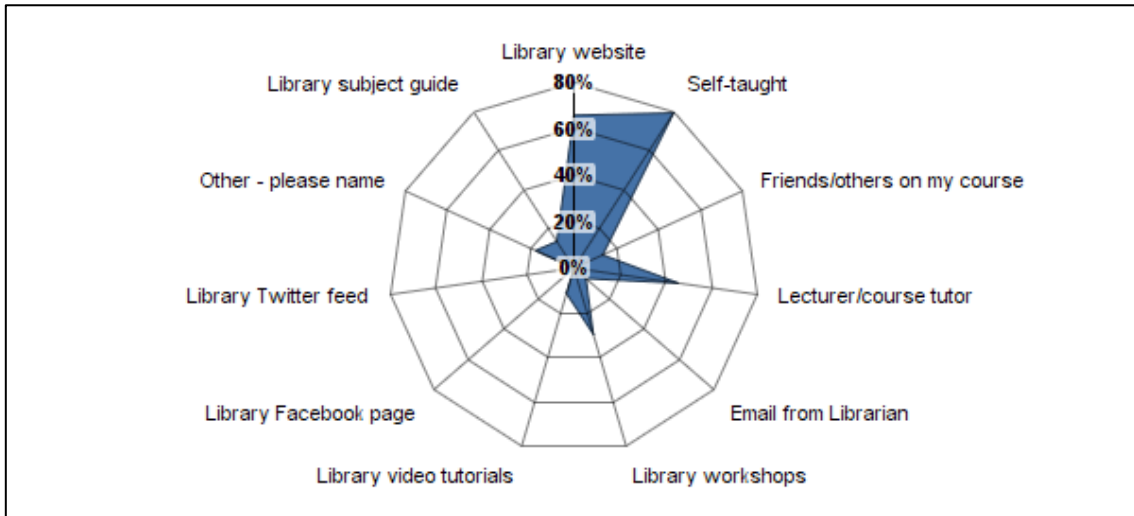


Fig. 9: How students learn about Library resources

Comparing these responses with those to the next question raises an issue of interpretation of this question – are students thinking about how they ‘learn how to use’ library resources, or how they ‘learn about their existence’?

This contrasts with students preferred ways to learn about new library resources (Fig. 10), where the most strongly preferred route is via the Library website. However, many students also prefer to learn about new library resources from their course lecturer/tutor, or from library sources including video tutorials, emails from librarians and subject guides. Interestingly, while social media is hardly used as a source of information about new library resources, it is creeping in to preferred channels.

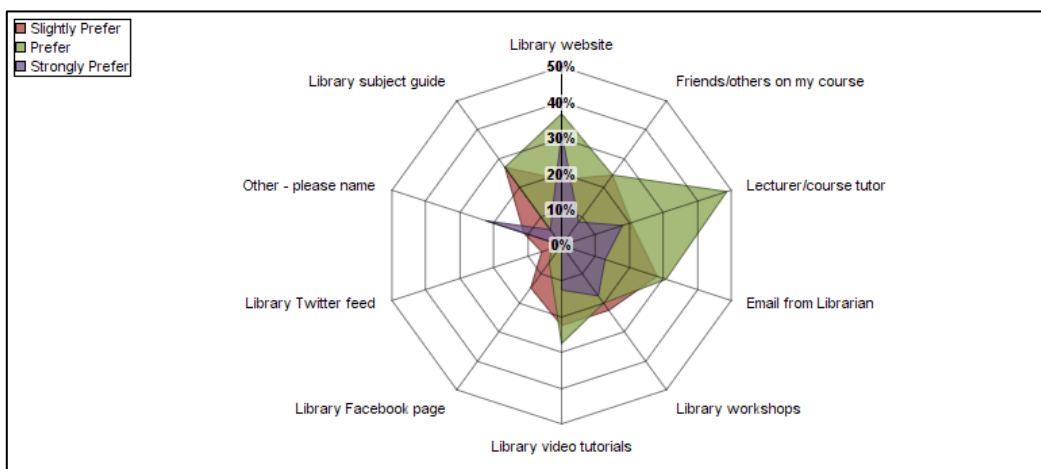


Fig. 10: How students prefer to learn about new Library resources

How do Distance students get help to find information for course assignments and research?

- **How confident are students in finding information?**

This question asked students to rate their confidence, from 1 (not confident) to 4 (very confident). Perhaps unsurprisingly, most students rated themselves as either quite confident (50%, $n= 22$) or very confident (15%, $n = 15$). No students rated themselves as having no confidence.

What do students do when they need help?

Students most commonly ask their lecturer/tutor or ask others on their course for help finding information for their assignments. However, other sources are also important, including emailing or phoning a subject librarian, or using subject guides (Fig. 11).

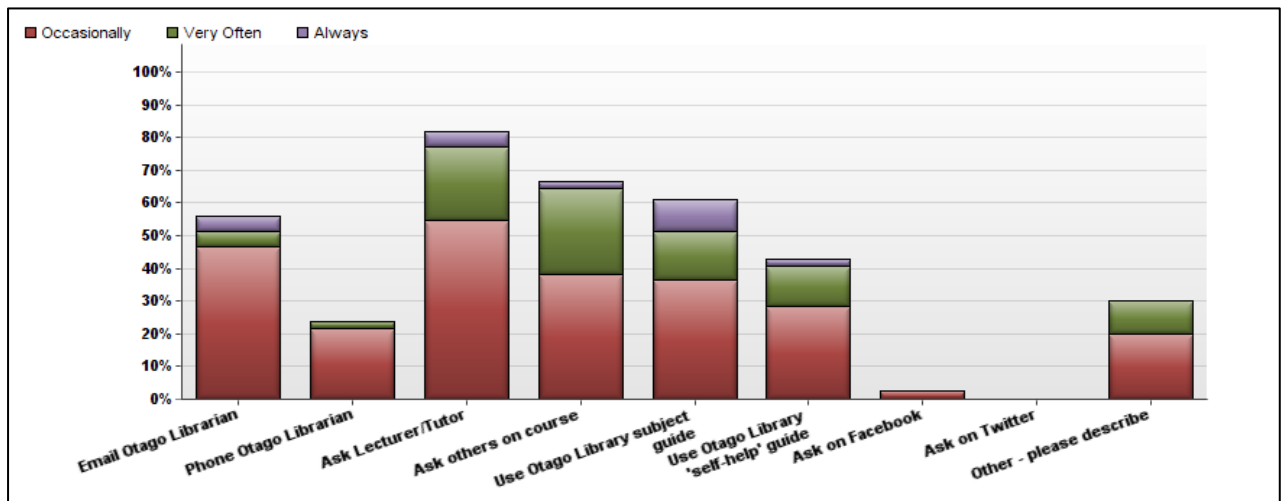


Fig. 11: What do students do when they need help?

- **Final comments from students**

Sixteen students responded to the invitation to make further comments on Otago Library resources for Distance students (Fig. 12). These were analysed for keywords relating to six categories, derived from the comments:

Resource accessibility	Resource usefulness	Distance Library Service	Librarians	Concerns	General Library support
Sometimes time consuming to get to the articles	Excellent	Fantastic	One on one. Helpful. Patient. Provided resources	Felt unprepared	Would have liked a lot more support as a Distance student
Easy	Good	Helpful Quick	Obliging, helpful, fantastic	Needs a one on one tutorial.	Out of hours needed
Good	Excellent	Very valuable	Helpful Efficient	Need courage to ask [for help]	Fantastically helpful staff
Blackboard links not working			Excellent Helpful One on one Skype	Could not find video tutorials	Interloan valuable
Library site baffling, unclear results			Would love a one on one tutorial		Out of hours support needed
Library search easier than OVID					

Fig. 12: Comments on Otago Library resources

Librarians Views

Three Otago subject librarians who provide library support to Distance students were interviewed. Between them they represented the humanities, science and health science disciplines. The interviews were structured, with question themes based on the student survey. Interviews were transcribed by the researcher; transcript summaries and the draft report were provided to the librarians for comment.

Responses to questions varied considerably between the librarians, illustrating the differences between the disciplines, collaboration with academic staff and the librarians' individual preferences for connecting students to library resources. However there were also common themes, which echo conclusions from other studies. The profile of the postgraduate Distance student as older, often with family responsibilities, and working while studying, was mentioned by each of the librarians. The consequent time pressure on these students was also highlighted. Technology, perhaps overlooked as an issue for today's students, was identified as potentially challenging for the Distance cohort, particularly for those returning to study after a long absence or coping with inadequate equipment, software, or connections.

What came through clearly is that the librarians interviewed strive to respond appropriately to the specific needs of Distance students. Using their extensive knowledge and experience and working

with academic staff as far as possible, they work to provide library help and support in ways that are relevant and timely for each group of students.

Library Resources and the VLE

In many cases there is a standard set of course-related links on the VLE to library resources including the Distance library service, subject guides and contact details. Often this will be tailored, for example including links required by course co-ordinators or with specific information for students who may be undertaking an on-campus block for their course that will include a library workshop or teaching session. Librarians emphasised the need to keep things simple, and content will vary between undergraduate and postgraduate papers.

Delivering library introductions and instructions to students

Again, this is an area where librarians are responding to different levels of students' needs and academic engagement, resulting in considerable variation in content, format and delivery across disciplines.

For students who attend on-campus blocks, library introductions are carried out either during workshops or as part of introductory lectures and Adobe Connect is sometimes used for this. For some courses the workshop has pre-class tasks designed to provide basic familiarity with resources and this is often helpful for those students who have been away from study for some time. One librarian has tested a discussion forum for students in one paper, an initiative that has worked well – students feel comfortable asking questions on the forum and find it easy to use.

Even providing a 10 minute overview of library services, as part of an introductory lecture, can make a difference, as one librarian commented “...it just means that students...hear and see somebody...[they are]...making a connection with someone”.

Student confidence

The librarians were asked how confident they thought students would be in finding information for their coursework. The responses suggest that in many ways, Distance students are seen as similar to on-campus students in that they consider themselves, mostly, to be fairly confident in information-finding. However, one librarian commented that Distance students “tend to be more realistic” about their skill levels, but also sometimes need more feedback, or reassurance.

Common questions and challenges

The librarians' responses indicated that Distance students are probably similar to their on-campus counterparts in that their questions are frequently around which search tools to use and constructing search strategies. Similarly, referencing and referencing software queries appear often.

When discussing the challenges that Distance students face, librarians indicated that these were often around their mode of study and the barriers this can create. The technology they are using – possibly new and unfamiliar, and for some who are 'making do', perhaps inadequate for the tasks – is a hurdle to be negotiated even before they start to deal with the complexities of the VLE and library system. Technical support is there, but is also 'at a distance' and not always available when required.

Isolation was also mentioned as a challenge for students, both in terms of lack of opportunities to share knowledge, issues and information with fellow students and also relating to the difficulty of communicating. The flexibility of Distance learning, which has many benefits, can also create barriers to communicating with librarians, who have little 'out of hours' flexibility, and with other students.

Challenges for librarians

For the librarians, some of the challenges they face are similar to those they consider students face. Dealing with technology issues when communicating with students was indicated as a common problem. Often "everything takes longer [as there are]...no visual cues". One librarian reported often turning the camera off during Adobe Connect sessions, as it slowed everything down and became a distraction. Trying to demonstrate resources by 'phone is challenging, and creating resources that can be used on multiple platforms by Distance students can also be difficult.

Flexibility, for students one of the benefits of studying by Distance, can also be a challenge for librarians who support them, and was highlighted by one librarian. Out of hours availability of librarian support was difficult to provide, although some workshops for postgraduate courses had been held in the evenings and at weekends.

Discussion

The objective of the research was to contribute to understanding the course-related information and help-seeking needs and behaviours of Distance students, by investigating the general resources they use to find information and help and how they use and learn about Otago library resources. The researcher also sought to explore Otago librarians' views – how they provide information and support to Distance students and what their perceptions are of the challenges for Distance students.

The survey and librarian interview responses together help to create a snapshot of what a small number of students and librarians are doing and how they are using the tools and resources available to them. Due to the small number of student and librarian responses, it is not possible to generalise the findings.

The demographic profile of Distance students influences the way that they engage with study and support services (Brown et al., 2013; Kahu, 2014; Poskitt et al., 2011) and their mode of study, while offering the benefit of flexibility, can also create additional constraints (Brooke et al., 2013; Kahu, 2014).

In their analysis of results from the Australian Survey of Student Engagement (AUSSE), Poskitt et al showed a higher proportion of older students, and slightly more female students studying by distance than on-campus (Poskitt et al., 2011). The profile of the Distance student as being older, female, in work and possibly with family responsibilities was also mentioned by the Otago librarians and is also commented on by other researchers (Casey, 2009; Guiney, 2014).

The respondents to the survey for this research project were mostly over 30, and mostly female, indicating a similarity to the AUSSE pattern. It would have been ideal to have included more demographic questions to compare usefully with the AUSSE profiles and particularly with regard to the work-related nature of their study.

The profile of the Distance student may also affect how they search for information and what sources they use – one of the Otago librarians talked about the barriers that students “who have been out of the system the longest” may face, including the rapidly changing nature of the technology they are required to use for their course work. Brooke noted that “...balancing studying with other commitments is the greatest challenge for DLs [Distance Learners]” and for librarians: “meeting the needs of DLs with increasingly diverse backgrounds, previous educational experience and levels of information literacy” (Brooke et al., 2013, p. 629).

While this study did not question students about their use of technology, it was mentioned by the librarians as one of the challenges for students, sometimes seen as a barrier. The increasingly digital nature of Distance learning (Guiney, 2014), with the associated provision of library resources online, places more pressure on Distance students in terms of their digital literacy and IT resources (Lamond & White, 2008).

The largely postgraduate level of study is congruent with the types of information and information sources that the respondents are using. Postgraduate students are required to do more independent research than undergraduates and to use a wide variety of information sources, particularly journals for health science students. Alongside this there is considerable variation in library content links from the VLE for courses, as noted by the librarians. Survey respondents indicated that they see the links to the Otago library home page and Distance library service most often in the VLE, with subject guides seen less often. The question remains about whether students are using these links in the VLE or finding library resources independently. One librarian commented on the “blurring” between where the library begins and ends on the VLE – students may not always know what they are using is a library resource.

The responses to the initial questions about sources of information echo to a large extent those found by other researchers; that students are using library search tools more often as they come to resemble web search engines (Brahme & Walters, 2010; Mussell & Croft, 2012). It would be useful to compare these results with a similar group of on-campus postgraduate students and to investigate how relevant students find the results from these ‘discovery layers’.

A few students visit libraries for their research. Even though this group was a small proportion of the respondents, their comments suggest that they may be unaware of library services to provide books and journals. However, students also visit libraries for access to study space, computers, and help from a librarian – much the same as they might do if they were on campus.

The question about a ‘library introduction’ is a difficult one for a quantitative survey, and generated a few queries about wording and format during the testing of the questionnaire. Given the range of ‘introductions’ discussed by the librarians, it’s possible that some respondents were not clear about the question, which would have benefited from further testing in the pilot survey. Librarian’s comments indicated that they are responding to the needs of students and academics to provide the most appropriate resources, often on a paper-by-paper basis. The introduction of a discussion forum worked well in a paper with few students and perhaps the class size was beneficial: this mode of

'embedding' the librarian into a paper was commented on in recent research by Fields as being a useful tool, albeit not without its limitations, particularly when used for large classes (Fields, 2014).

Students' perceptions of Otago library resources again illustrated their preferences for online information – with e-resources scoring highly both in terms of importance and meeting needs. The dedicated Distance library service is both important and meets needs more than other services and the value of the personal approach can be seen in the comments from students: "The distance team has been fantastic..." and "I love the distance service offered at OU..".

Students are still largely 'self-taught' when they learn about library resources, but prefer library routes and learning from lecturers or tutors when it comes to finding out about new library resources. The reliance by students on teaching staff for library information reflects the findings of Hensley and Miller – many "learning about the library" from their instructor (Hensley & Miller, 2010, p. 677) and confirms the need to ensure that library tools and resources are accessible by students in course web pages. Byrne and Bates also commented on the increasing complexity of online course-related information through the VLE and library and the need for students to be adequately supported in "navigating ...through this information space" (Byrne & Bates, 2009, p. 139).

Survey respondents choice of sources of help with assignments – often choosing to ask the lecturer or tutor - also reflect findings from Brooke whose survey respondents would often go to course tutors first for assignment help (Brooke et al., 2013, p. 625). This preference, alongside other choices of emails from the librarian, asking others on the course, and subject guides, highlights the mix of library and course-related sources of help. These choices perhaps endorse the need for continual collaboration with teaching staff to place library support as close as possible to the student's learning experience (Fields, 2014; Lamond & White, 2008).

The students who responded to this survey mostly reported reasonable confidence levels with finding information. The small number (seven students) who indicated lower confidence showed few differences in their use of information sources; however they relied more on their lecturers and the library website for information and most had not had an introduction to the library. It would be useful to gain more information from this group about how their confidence levels could be increased and what resources they would find useful.

The challenges for librarians and the differences in their responses, may have much to do with the differences in library resource use by discipline, as outlined by Fields in her study of embedded librarians (Fields, 2014). Arts and Humanities, for example, use more print resources than Sciences, and particularly for subjects such as Classics and Theology at Otago, where much of the material is

only available in print. Sciences and Health Sciences tend to have more of their resources online, commonly as e-journals.

Conclusions and Recommendations for further research

Distance students are already the subject of recent close study in New Zealand, with the focus on engagement in study and retention. Their use of library resources and services, the impact that appropriate support for their information-seeking needs has on achievement and completion, has been less studied. Students and institutions would benefit from continued research.

It is clear that Distance students have very different teaching, support and information needs than their on-campus counterparts. As course-related information becomes more readily available on an increasing variety of platforms, it is important to remember that often, “..the problem still remains that patterns of learner needs are still not adequately understood in the distance environment” (Brown et al., 2013, p. 72). The researchers concluded with: “Arguably, the key to improving engagement, retention and success among first-time distance learners can be found at the interface between student perceptions of what it means to be a distance learner and relevant support services....” (Brown et al., 2013, p. 72) It is this interface, with reference to the interaction of the student and the library, that needs to be examined to ensure that resource and service provision is appropriate, perhaps developing a more personalised service as hinted at by Brooke: “Services should become increasingly flexible, and methods of personalising them on a mass scale, similar to Amazon....” (Brooke et al p.632). Needham and Johnson’s proposed ‘ethical guidelines for providing library support to distance learners’ also included the requirement to “acknowledge the reality that distance learners may need library services that are more personalized than those for on-campus students” (Needham & Johnson, 2007, p. 119).

There are ways in which this personalisation is developing, through embedding library information and services and creating discussion forums in the VLE. Further qualitative research to learn more about Distance student’s information needs and behaviours would contribute in a more detailed way to what is currently known.

More research data could be used to better identify the ways in which dedicated and tailored support, through library channels and via the VLE in collaboration with teaching staff, both enhances students’ learning experience and contributes to the role of the library in student retention and course completion.

References

- Association of College and Research Libraries, (ACRL). (2014). *Draft standards for distance learning library services*. Association of College and Research Libraries. Retrieved from <http://distancelearningsection.wordpress.com/new-standards-for-distance-learning-library-services/>
- Beckwith, J. (2014). *Measuring use of a Distance library service* (Unpublished MIS research project). Victoria University of Wellington, 2014, Wellington, New Zealand. Retrieved from <http://hdl.handle.net/10063/3246>
- Brahme, M., & Walters, L. (2010). While technology poses as the great equalizer, distance still rules the experience. *Journal of Library Administration*, 50(5-6), 484–514.
doi:10.1080/01930826.2010.488595
- Brooke, C., McKinney, P., & Donoghue, A. (2013). Provision of distance learner support services at U.K. universities: Identification of best practice and institutional case study. *Library Trends*, 61(3), 613–635.
- Brown, M., Keppell, M., Hughes, H., Hard, N., & Smith, L. (2013). Exploring the disconnections: Student interaction with support services upon commencement of distance education. *The International Journal of the First Year in Higher Education*, 4(2), 63.
- Brumfield, E. J. (2010). Applying the critical theory of library technology to distance library services. *Journal of Library & Information Services in Distance Learning*, 4(1-2), 63–71.
- Bryman, A. (2012). *Social research methods* (4th edition). Oxford: Oxford University Press.
- Byrne, S., & Bates, J. (2009). Use of the university library, elibrary, VLE, and other information sources by distance learning students in University College Dublin: Implications for academic librarianship. *New Review of Academic Librarianship*, 15(1), 120–141.
- Casey, A. M. (2009). Distance learning librarians: Their shared vision. *Journal of Library & Information Services in Distance Learning*, 3(1), 3–22. doi:10.1080/15332900902794872

- Cassner, M., & Adams, K. E. (2008). The subject specialist librarian's role in providing distance learning services. *Journal of Library Administration*, 48(3-4), 391–410.
doi:10.1080/01930820802289441
- Chisholm, E., & Lamond, H. M. (2012). Information literacy development at a distance: Embedded or reality? *Journal of Library & Information Services in Distance Learning*, 6(3-4), 224–234.
- Clarke, P. (2011). Student engagement and library use. In J. Barrett (Ed.), *Open learning for an open world: Reflections on open and distance learning and teaching at the Open Polytechnic of New Zealand* (pp. 260–263). Lower Hutt, N.Z: Open Polytechnic.
- Creswell, J. W. (2014). *Research design: qualitative, quantitative and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage.
- Debonis, R., O'Donnell, E., & Thomes, C. (2012). (Self-) discovery service: Helping students help themselves. *Journal of Library & Information Services in Distance Learning*, 6(3-4), 235–250.
doi:10.1080/1533290X.2012.705648
- Denscombe, M. (2010). *The good research guide: For small-scale social research projects* (4th edition). Maidenhead, England: McGraw-Hill/Open University Press,.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed-mode surveys: The tailored design method*. (4th edition). Hoboken, NJ: John Wiley & Sons.
- Distance Learning Office. (2012). *Distance Learning Technologies Access Survey 2012*. Dunedin, NZ: University of Otago.
- Edwards, M. E., & Black, E. W. (2012). Contemporary instructor-librarian collaboration: A case study of an online embedded librarian implementation. *Journal of Library & Information Services in Distance Learning*, 6(3-4), 284–311. doi:10.1080/1533290X.2012.705690
- Fields, A. (2014). Engaging learner support: An investigation of faculty—library collaboration to provide live course-specific learner support in the online classroom environment. *Journal of Open, Flexible and Distance Learning*, 18(1), 46–57.

- Fisher, J. A. (2005). *Is IT a problem?: computer literacy and the distance student*. (Unpublished MIS research project). Victoria University of Wellington, Wellington, New Zealand. Retrieved from http://tewaharoa.victoria.ac.nz/VUW:64VUW_ALL:64VUW_INST21145105320002386
- Garten, E. D. (2009). Distance learning and virtual libraries. In *Encyclopedia of library and information sciences* (3rd ed., pp. 1615–1619). New York: Taylor & Francis. Retrieved from <http://dx.doi.org/10.1081/E-ELIS3-120043972>
- Gore, H. (2013). Massive Open Online Courses (MOOCs) and their impact on academic library services: Exploring the issues and challenges. *New Review of Academic Librarianship*, 20(1), 4–28. doi:10.1080/13614533.2013.851609
- Guiney, P. (2014). *Extramural Students' Participation and Achievement : Trends, Patterns and Highlights*. Wellington, New Zealand: Ministry of Education.
- Hensley, M. K., & Miller, R. (2010). Listening from a distance: A survey of University of Illinois distance learners and its implications for meaningful instruction. *Journal of Library Administration*, 50(5-6), 670–683.
- Herring, S. D. (2010). Research on libraries and distance education: An analysis of articles published 1999–2009. *Journal of Library & Information Services in Distance Learning*, 4(3), 137–146.
- Ismail, L. (2010). Revelations of an off-campus user group: Library use and needs of faculty and students at a satellite graduate social work program. *Journal of Library Administration*, 50(5-6), 712–736. doi:10.1080/01930826.2010.488957
- Kahu, E. (2014). Increasing the emotional engagement of first year mature-aged distance students: Interest and belonging. *The International Journal of the First Year in Higher Education*, 5(2), 45–n/a.
- Lamond, H., & White, B. (2008). Issues in equivalence: Information literacy and the distance student. In *DEANZ Conference 2008*. Wellington, New Zealand. Retrieved from <http://muir.massey.ac.nz/handle/10179/68>

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

Lee, L. S. (2008). *Reference services for students studying by distance: a comparative study of the attitudes distance students have towards three reference services ; phone, email and chat :* (Unpublished MIS research project). Victoria University of Wellington. Retrieved from www.summon.com

Mussell, J., & Croft, R. (2012). Discovery layers and the distance student: Online search habits of students. *Journal of Library & Information Services in Distance Learning*, 7(1-2), 18–39. doi:10.1080/1533290X.2012.705561

Needham, G., & Johnson, K. (2007). Ethical issues in providing library services to distance learners. *Open Learning: The Journal of Open, Distance and E-Learning*, 22(2), 117–128. <http://doi.org/10.1080/02680510701306657>

New Zealand Ministry of Education. (2014). *Tertiary participation statistics: Provider-based enrolments*. (Statistics). Retrieved from http://www.educationcounts.govt.nz/statistics/tertiary_education/participation

Pellegrino, C. (2014). A preliminary methodology, and a cautionary tale, for determining how students seek research help online. *Portal: Libraries and the Academy*, 14(2), 187–196.

Poskitt, J., Rees, M., & Suddaby, G. (2011). Engaging with university at a distance: the differences in levels of student engagement among extramural and campus-based students. In A. Radloff (Ed.), *Student engagement in New Zealand universities* (pp. 70–77). Wellington, New Zealand: Ako Aotearoa.

Pratt, K. (2015). Supporting distance learners: Making practice more effective. *The Journal of Open, Flexible and Distance Learning*, 19(1).

Quality Advancement Unit. (2014). *Student Opinion Survey*. Dunedin, NZ: University of Otago. Retrieved from <http://www.otago.ac.nz/quality/surveys/studentopinionsurvey.html>

- Radloff, A. (Ed.). (2011). *Student engagement in New Zealand's universities*. Wellington, New Zealand: Ako Aotearoa.
- Ritterbush, J. (2013). Assessing academic library services to distance learners: A literature review of perspectives from librarians, students, and faculty. *The Reference Librarian, 55*(1), 26–36.
doi:10.1080/02763877.2014.853274
- Shrivastava, A., & Guiney, P. (2014). *Technological development and tertiary education delivery: the arrival of MOOCs: massive open online courses*. Wellington, New Zealand: Tertiary Education Commission. Retrieved from
http://www.educationcounts.govt.nz/__data/assets/pdf_file/0003/146856/Massive-Open-Online-Courses.pdf
- University of Otago. (n.d). Distance learning. Retrieved May 18, 2015, from
http://www.otago.ac.nz/courses/distance_study/
- University of Otago. (2015). *Distance learning prospectus 2015*. Dunedin, NZ: University of Otago.
- Victoria University of Wellington Research Policy Group. (n/d). *Human ethics guidelines*. Victoria University of Wellington. Retrieved from
<http://www.victoria.ac.nz/research/support/research-office/ethics-approval/human-ethics>
- Wahl, D., Avery, B., & Henry, L. (2012). Studying distance students: Methods, findings, actions. *Journal of Library & Information Services in Distance Learning, 7*(1-2), 183–209.
doi:10.1080/1533290X.2012.705656

Appendix 1: Student Survey questions.

Online course information: Does your course use Blackboard, Moodle, or Ocean Browser to provide information online for assignments?

- Blackboard
- Moodle
- Ocean Browser
- My course doesn't use any of these

Is there a link to any of the following University of Otago Library resources from your online course information?

- Otago Library homepage
- Otago Library subject guide for your course
- Distance Library Service
- Otago Library Study Smart
- Other Otago Library guides, e.g referencing
- Other - please describe
- No links to Otago Library resources

Finding information for assignments: In addition to any readings and references provided in your course information, do you need to find further information yourself for assignments?

- For all assignments
- For some assignments
- For no assignments
- Not applicable - my course has no assignments

Finding information for assignments or research: Using online sources: Thinking about when you look online for information for assignments or research, which of the following sources do you use?

- Google Scholar
- Otago Library Search I Ketu
- Web search engine e.g Google/Bing
- Otago Library subject guides
- Otago Library article databases
- Facebook
- Twitter
- Other (not Otago) Library website
- Other - please name

How frequently do you use these online information sources for your assignments or research?

Never, Rarely, Sometimes, Often, or All of the time.

- Google Scholar
- Otago Library Search I Ketu
- Web search engine
- Otago Library subject guides or article databases
- Facebook or Twitter
- Other library website
- Other (please name)

Finding information for assignments or research: Going to a library: Do you go to a library to find information for your assignments or research?

- Public Library
- Workplace Library
- University of Otago Library
- Other Academic Library

If you go to a Public, Workplace or other Academic Library to find information for your assignments or research, what is the main reason?

[text box]

University of Otago Libraries (Otago Libraries): Have you had an introduction to Otago Libraries, for this course?

- In an Otago Library with a librarian
- In an Otago Library with a course lecturer/tutor
- Video tutorial with a librarian
- Other, please describe
- No

Using Otago Library resources: Thinking about Otago Library resources that you might use, how important are they for your assignments or research?

Not used, Not important, Somewhat important, Important, Very Important.

- Google Scholar
- Article Databases
- Library Search I Ketu
- Subject Guides
- Distance Library service
- 'Get It' Interloan
- E-books
- Help from Subject Librarian
- E-journals

Thinking more about these Otago Library resources, how well do they meet your information needs for assignments or research?

Not used, Rarely meet needs, Somewhat meet needs, Mostly meet needs, Completely meet needs

Learning about Otago Library resources: How have you learned about Otago Library resources?

- Library website
- Self-taught
- Friends/others on my course
- Lecturer/course tutor
- Email from Librarian
- Library workshops
- Library video tutorials
- Library Facebook page
- Library Twitter feed
- Library subject guide
- Other - please name

How do you prefer to learn about new Otago Library resources?

No preference, Slightly prefer, Prefer, Strongly prefer

- Library website
- Friends/others on my course
- Lecturer/course tutor
- Email from Librarian
- Library workshops
- Library video tutorials
- Library Facebook page
- Library Twitter feed
- Library subject guide
- Other - please name

Finding information and help for assignments or research: How confident are you about finding information?

Not confident to Very confident (scale of 1-4).

If you need help finding information for your assignments or research, what do you do? Please think about the resources that you use for help, and how often you use them.

Never, Occasionally, Very often, Always

- Email Otago Librarian
- Phone Otago Librarian
- Ask Lecturer/Tutor
- Ask others on course
- Use Otago Library subject guide
- Use Otago Library 'self-help' guide
- Ask on Facebook
- Ask on Twitter
- Other - please describe

Please indicate the age range you are in.

- less than 20
- 20-25
- 26-30
- 31-40
- 41-50
- 51-60
- 60+

How many years have you studied at the University of Otago in total?

- Less than one year
- Between one and three years
- More than three years

How many years have you studied at the University of Otago as a Distance student?

- Less than one year
- Between one and three years
- More than three years

What is your level of study?

- Undergraduate Degree
- Honours Degree
- Postgraduate Certificate or Diploma
- Masters Degree
- Doctorate

What is your gender?

- Male
- Female

What is your main area of study?

- Health Sciences
- Sciences
- Humanities
- Commerce (School of Business)
- Other - please name

Appendix 2: Timetable

Timetable	Start Date	Finish Date	February	March	April	May	June	July	August	September	October
Submit TAF		20/02/2015									
Literature Search	23/02/2015	4/10/2015									
Revise Proposal	23/02/2015	16/03/2015									
Send draft to Supervisor	27/04/2015	11/05/2015									
Prepare for submission	11/05/2015	22/05/2015									
Submit Proposal		22/05/2015									
Marking	22/05/2015	11/06/2015									
Ethical approval VUW (survey)	17/06/2015	29/06/2015									
Mailing selections, questionnaire set up and testing	29/05/2015	30/06/2015									
Survey emails sent (1 reminder) (survey open for 6 weeks)	8/07/2015	21/08/2015									
Data collection	8/07/2015	21/08/2015									
Ethical approval VUW (librarian interviews)	14/07/2015	30/07/2015									
Interviews with librarians	13/08/2015	25/08/2015									
Data analysis	20/07/2015	31/08/2015									
Draft final report	1/08/2015	28/09/2015									
Send to Supervisor for comment	28/09/2015	12/10/2015									
Final revisions	12/10/2015	16/10/2015									
Submit Report		16/10/2015									

Appendix 3: Participant Information– Student Survey



SCHOOL OF INFORMATION MANAGEMENT
TE KURA TIAKI, WHAKAWHITI KŌRERO
LEVEL 5, RUTHERFORD HOUSE, PIPITEA CAMPUS, 23 LAMBTON QUAY, WELLINGTON
PO Box 600, Wellington 6140, New Zealand
Phone +64-4-463 5103 Fax +64-4-463 5446 Email sim@vuw.ac.nz Website www.victoria.ac.nz/sim

Participant Information

Research Project Title: The information and library-help seeking needs of Distance students.

Researcher: Lucy Atkinson, School of Information Management, Victoria University of Wellington.

As part of the completion of my Master of Information Studies, this study is designed to contribute to understanding the information and help-seeking needs of Distance students in New Zealand.

The survey part of the study is designed to explore:

- The course-related information and help-seeking needs of Distance students;
- The resources Distance students use to find information and help for their assignments;
- How Distance students learn about Otago library resources and how they prefer to learn;

Victoria University requires, and has granted, approval from the School's Human Ethics Committee. I am inviting Distance students studying at the University of Otago to participate in an online survey. Participation is voluntary. If you would like to participate, you will be asked to complete an anonymous survey. Your participation in the survey is your consent to participate in the project. 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, Senior Lecturer. The research report will be submitted for marking to the School of Information Management, and subsequently deposited in the University Library at Victoria. All data collected from participants will be destroyed within two years of project completion.

I hope you will be interested in helping with this research. To take the survey, please click on the 'NEXT' button below. It should take about 10 minutes to complete.

Many thanks for your time and help,
Lucy Atkinson

If you have any questions, please contact me at atkinslucy@myvuw.ac.nz or telephone 0273341778, or you may contact my supervisor Dr Chern Li Liew at chernli.liew@vuw.ac.nz or telephone 04 463-5875.

Appendix 4: Participant Consent – Librarian Interviews



SCHOOL OF INFORMATION MANAGEMENT
TE KURA TIAKI, WHAKAWHITI KÖRERO
LEVEL 5, RUTHERFORD HOUSE, PIPITEA CAMPUS, 23 LAMBTON QUAY, WELLINGTON
PO Box 600, Wellington 6140, New Zealand
Phone +64-4-463 5103 Fax +64-4-463 5446 Email sim@vuw.ac.nz Website www.victoria.ac.nz/sim

Participant Consent Form

Research Project Title: The information and library-help seeking needs of Distance students.

Researcher: Lucy Atkinson, 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 atkinslucy@myvuw.ac.nz by Friday 18th September 2015.

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 review a summary 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:

Appendix 5: Tables of responses to student survey questions

Question	Sometimes	Often	All of the Time
Google Scholar	11	14	14
Otago Library Search I Ketu	14	5	17
Web search engine e.g Google/Bing	10	15	4
Otago Library subject guides	8	10	2
Otago Library article databases	9	10	13
Facebook	0	0	0
Twitter	0	0	0
Other (not Otago) Library website	6	4	2
Other - please name	4	4	0

Table 1: Frequency of use of online resources

Question	Never	Rarely	Sometimes	Often	All of the time
Public Library	25	6	6	1	2
Workplace Library	25	6	5	4	1
University of Otago Library	19	9	10	4	2
Other Academic Library	29	4	3	3	1

Table 2: Frequency of visits to libraries

Question	Somewhat important	Important	Very important
Google Scholar	10	10	16
Article Databases	5	12	24
Library Search I Ketu	3	8	21
Subject Guides	8	6	10
Distance Library service	7	3	22
'Get It' Interloan service	10	5	9
E-books	9	12	11
Help from Subject Librarian	3	15	4
E-journals	5	12	22

Table 3: Importance of Library resources

Question	Rarely meet needs	Somewhat meet needs	Mostly meet needs	Completely meet needs
Google Scholar	0	12	21	6
Article Databases	0	6	24	9
Library Search I Ketu	2	10	15	7
Subject Guides	4	8	12	1
Distance Library service	1	5	12	12
'Get It' Interloan service	1	4	8	7
E-books	1	13	13	4
Help from Subject Librarian	0	5	9	6
E-journals	0	8	19	11

Table 4: How well Library resources meet needs

Answer	Response	%
Library website	29	66%
Self-taught	35	80%
Friends/others on my course	6	14%
Lecturer/course tutor	20	45%
Email from Librarian	3	7%
Library workshops	13	30%
Library video tutorials	5	11%
Library Facebook page	0	0%
Library Twitter feed	0	0%
Other - please name	8	18%
Library subject guide	6	14%

Table 5: How students learn about Library resources

Question	No Preference	Slightly Prefer	Prefer	Strongly Prefer
Library website	5	7	14	12
Friends/others on my course	16	9	9	3
Lecturer/course tutor	5	8	19	7
Email from Librarian	11	11	12	5
Library workshops	16	9	8	7
Library video tutorials	15	9	11	5
Library Facebook page	27	5	2	0
Library Twitter feed	31	2	1	0
Other - please name	6	1	0	2
Library subject guide	15	10	10	2

Table 6: How students prefer to learn about new Library resources

Question	Never	Occasionally	Very Often	Always
Email Otago Librarian	19	20	2	2
Phone Otago Librarian	32	9	1	0
Ask Lecturer/Tutor	8	24	10	2
Ask others on course	14	16	11	1
Use Otago Library subject guide	16	15	6	4
Use Otago Library 'self-help' guide	24	12	5	1
Ask on Facebook	37	1	0	0
Ask on Twitter	39	0	0	0
Other - please describe	7	2	1	0

Table 7: What do students do when they need help?

Word Count excluding Contents, References and Appendices: 9,965