Identification of strategies to improve digital information literacy skills amongst frontline public library staff

by

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3   Abstract

Research Problem The purpose of this research was to discover ways to improve digital information literacy skills of frontline public library staff in New Zealand. Earlier studies have identified skill gaps in the area of digital information literacy skills amongst this population of the library workforce in New Zealand. Frontline public library staff are the interface between the library as an organization and the general public in a digital arena which is increasingly fluid and changeable.

Methodology A semi-structured interview technique along with some basic demographic information was used Nine staff were recruited from two different organizations, a Level One, and a Level Three public library service as defined by the Library and Information Association of New Zealand Aotearoa (LIANZA). Participants were those who spent more than thirty percent of their time serving the public. Kolb's model of experiential learning was the theoretical basis for this research.

Results For reasons of finance of access staff are unable to gain sufficient digital information literacy skills in their own time to keep current in the workplace. Participants' preference for hands on learning in the workplace and training by peers places them at the feeling end of Kolb's perception continuum.

Implications This report identifies the importance of using peer training mentors to provide regular team based digital information literacy training sessions and to provide workplace support after any formal classroom based training has been delivered.

4   Introduction Including Topic Statement

At the time of writing, libraries and information services are undergoing significant change. Traditional library services are increasingly delivered remotely and digitally and the technologies used to deliver these services to consumers are changing at a pace that is unprecedented. An analogy with the development of the printing press and the distribution of the Gutenberg Bible is not inappropriate. These innovations increased the people's direct access to knowledge and scripture which had previously been the domain of the clergy and aristocracy which had a revolutionary impact on the society of the time. The rise of the internet and mobile technologies is having a similar impact in our own lifetime.

Moore's Law (Moore, 1965), states that "the number of transistors on a chip roughly doubles every 2 years. As a result the scale gets smaller." This increase of capacity and complexity and the subsequent diminution of hardware have led to the development of an array of mobile devices such as net books, tablets, e readers, smart phones which allow consumers to be constantly online, and able to source information from virtually anywhere there is a 3G or wireless connection. Hand in hand with this explosion in hardware devices has been the development of touch screen technology and the rise of the "app" – or intuitive software application which allows users access to perform functions that previously had been only in the realms and abilities of programmers. Furthermore the success of failure of particular services or technologies are now subject not just to commercial decisions – see HP's release of and subsequent withdrawal of their tablet PC within the space of weeks, and Nokia's development and then abandonment of their alternative N9 smart phone, but also to those of users. For example Facebook's near total annexation of the social media sphere, eclipsing competing sites such as MySpace, Friendster and Bebo. The current situation is incredibly fluid and it can be increasingly difficult to predict which applications, services or technologies will be significant and which will quietly fade.

The ramifications for public libraries are profound. We have a veritable digital explosion happening around us and ideally public libraries would all be early adopters of technologies. However real world constraints ensure that this is often far from the case – budget considerations, existing hardware, internal policies, staff skills and organizational IT departments all operate on management decisions with the end result being a less than

ideal late adoption. Libraries are caught between the aforementioned rock of hardware, policies, skills, budgets and IT departments and the hard place of increasingly knowledgeable users. If public libraries cannot meet our user's expectations for whatever reasons we face the risk of becoming irrelevant.

This study examines just one of these factors, that of staff skills. Frontline public library staff are the face of the service. Often the lowest paid, least qualified of the workforce they are the ones doing the bulk of the customer service. These are the people who most need the skills to empower them to understand, troubleshoot and answer customer requests.

5 Literature Review

5.1 Introduction

The broad scope of this topic necessitated reading across a wide number of areas. The review of the literature which follows this introduction is divided into eight sections. The first three of these are concerned with the definition of terms involving digital literacy skills, information literacy and core competencies. The last half of the literature review covers package development, and delivery methods as experienced in overseas organizations, the theoretical framework in which this research is set, and finally the New Zealand experience.

5.2 ICT Skills

One of the difficulties encountered was to find a clear and unequivocal definition of an ICT skilled individual. The International ICT Literacy Panel (2007) defined ICT literacy as "using digital technology, communications tools, and/or networks to access, manage, integrate, evaluate and create information in order to function in a knowledge society." And further: "thus ICT can be viewed as a set of activities and technologies that fall into the union of IT and telecommunications. Whilst useful this does not encompass the sharing and troubleshooting aspects of a librarian's role.

5.3 Information Literacy

The term "information literacy" has received much use, however for the purpose of this study it is deemed to be too narrow a definition of the skills required by frontline public

library staff in New Zealand. Information literate people will demonstrate "an awareness of how they gather, use, manage, synthesize and create information and data in an ethical manner and will have the information skills to do so effectively" Sconul (2011), while according to Koltay (2011) information literacy deals with the "retrieval and selection of information available". However library staff need not just to be able to search, assess and retrieve information. There is also a need for them to understand the hardware, software and applications which are involved in the storage and creation of information in order to be able to help patrons troubleshoot problems.

The National Library of New Zealand's 2006 Strategic Framework for public libraries describes information literacy as" the skill of searching for information across a range of databases and the internet" and digital literacy as "the skills needed to use the technology, whether that is a computer, a handheld device or some other technology used to access content." Again, this does not include problem solving and trouble shooting skills.

Hegarty et al. (2010) describe   digital information literacy as a subset of information literacy and define it as: "the ability to recognize the need for, access, and evaluate electronic information. The digitally literate can confidently use, manage, create, quote and share sources of digital information in an effective way…..The digitally literate demonstrate openness, the ability to problem solve, to critically reflect, technical capability and a willingness to collaborate and keep up to date prompted by the changing contexts in which they use information." Hegarty et al. concluded that digital information literacy is an evolving concept.

For the purposes of this study the definition given by Hegarty et al. would appear to be the most useful, coming as it does from a New Zealand context. The broad scope of the definition, including aspects such as usage, technical ability, creation, problem solving and collaboration is the most descriptive of the range of operations carried out at NZ public library front desks.

5.4   Core Competencies

Much has been made of the concept of "core competencies" or lists of specific skills which are perceived by authors to be critical skills for library staff. Eells and Jagusewski (2008)

describe the development of a set of core IT skills at the University of Minnesota. Gutsche (2009) supplies an exhaustive list of competencies for every area of librarianship, from acquisitions, to personal skills, technology skills and more. Thompson (2009, p.5) describes core competencies as the underlying understanding which enables users to build skill sets, and suggests they be written into job descriptions. Houghton-Jan (2010, p.33) describes skills lists as a "moving target" changing every "month or two" and recommends yearly reassessment of lists, at variance with Thompson's suggestion they be written into job descriptions. Lists of specific competencies whilst useful as a needs assessment tool could be viewed as a narrow and prescriptive approach to digital information literacy skills.   Rapid development and adoption of emerging technologies ensures that the goalposts will always be shifting with respect to lists of competencies, and that such lists will become ever longer. A concern with this approach is that some staff may not respond accurately, as some staff may not feel confident with technologies, and may not wish to appear less able than others. Farkas (2006) is much nearer the mark with her very broad categories – she describes the "ability to embrace change, comfort in the online medium, ability to troubleshoot new technologies, ability to easily learn new technologies and ability to keep up with new ideas in technology and librarianship (enthusiasm for learning)." The beauty of these broad categories is that they can be applied to any level of staffing, from frontline to management and are more of a big picture approach than detailed lists. These big picture categories would be more appropriately added to job descriptions and recruitment strategies. Hegarty et al (2010) found that capabilities rather than check box skills are fundamental, echoing Farkas's message.

## 5.5	Training Package Development

Research so far would indicate that tailored delivery packages are more effective than "off the shelf" models.

Koltay (2010) argues for the need to differentiate between amateur (predominantly public library) and professional (academic and special library) IT and digital literacy skills. Koltay's definition of amateur includes what is widely known as Web 2.0 and Library 2.0 applications.

King, McMenemy and Poulter (2006) report on a survey of staff reactions to a UK-wide ICT training programme (the European Computer Driving Licence). The survey posed three main questions of respondents:

1. *"what types of ICT queries were staff faced with on a regular basis?*

2. *How sufficient had the ICT training undertaken by staff been?*

3. *What should future ICT training incorporate to be more effective?*

The survey was delivered creating a webpage and the link posted on UK professional mailing lists. Findings were that: 91% of staff responding either had or were receiving the training, and although relatively effective, there were some drawbacks to using an off-the-shelf package. Notably, the lack of trouble shooting training was highlighted - the ECDL being seen as more of a "how-to" programme. Respondents recognized that some of the most effective training was by trial and error whilst solving queries for customers, and that there was a need to follow up formal training with time to practice skills learnt. However, training in the basics did give staff the confidence to problem solve, and a set of skills to build on. In their conclusions the authors note the need for a tailored package to deliver ICT skills to frontline library staff.

Eells and Jagusewski (2008), describe the assessment process used in 2005 by the University of Minnesota to develop a training package for their 300 plus library staff working across all areas of the library service. A staff task force was formed which evaluated the existing training programme. The details of the existing programme are not described, but it was evidently found to be lacking as the decision was made to develop a more specific package. Lists of core competencies to identify real as opposed to perceived training needs amongst staff were developed. Much effort was put into achieving staff buy-in during the process of identifying competency lists. Once developed the competency list was circulated to all staff as an online survey. Response to the survey was 52% with the majority of staff confirming the list as relevant. The authors go on to describe the competencies as "skill sets" which could then be assigned to "roles" or "containers of skills". These roles comprise of Core, Intermediate Desktop, Advanced Desktop and IT Support. The role of Advanced Desktop was likened to a "peer consultant" a regular staff member who has better than average IT

skills who is able to share knowledge, train and support other team members on an informal basis. All staff were assigned to one of the roles before the finalized assessment was rolled out. An online assessment tool provided by New Horizons Computer Learning Centres was used in the assessment process which was able to provide both organizational wide and individual level quantitative data. Results from these reports were used to identify organizational training strategies and in individual performance appraisals. Whilst the authors found much to recommend in the process used, it was notably both time consuming and labour intensive. At time of writing the University had identified needs but these were not yet matched to a specific training schedule.

Blowers and Reed (2007) take the process one step further and describe the programme developed by them at the Public Library of Charlotte and Mecklenburg County in the USA, consisting of four levels of core competencies – Core I (basic competencies of hardware and software knowledge, internet, email and word processing basics). Core II (competencies utilized in assisting the public) Core III (specialized location dependent software competencies – e.g. computer booking system) Core IV (audiovisual set up, public technology training skills). Building on this they developed a learning programme based on Web 2.0 skills named Learning 2.0, which is online, self paced learning with an emphasis on fun. Much of the programme involved anonymous blogging, allowing staff members to express themselves in a non-threatening way. As motivation a new MP3 player was given to every staff member who completed the programme as well entries into a draw for a new laptop and PDA. Out of 352 staff that commenced the programme, 266 completed it and received the MP3 player - effectively a 75% completion rate. The programme ran for 9 weeks and since launch has been made publicly available through a Creative Commons Licence – at the time the article went to print a further 24 libraries had either enquired about or used the programme themselves. Whilst very little quantitative data is provided by the authors regarding efficacy, the completion rate by staff and adoption by a number of other libraries attest to the workability of the approach used.

5.6   Delivery Methods

Training programmes may be delivered by a number of approaches. Houghton-Jan (2010) details these as follows: 23 things (a self paced exploration of any one specific technology,

commonly Web 2.0, but can be troubleshooting, of MS Office tips and tricks) peer training, lunchtime sessions, technology petting zoo (opportunities to experiment, play with and learn new technologies in a one-off training day), online training and train the trainer. Both Blowers and Reed (2007) and Houghton-Jan (2010) report favourably on the use of incentives to encourage participation in staff training initiatives. Hegarty et al. (2010) in a recent New Zealand study sponsored by the Ministry of Education, and various New Zealand tertiary level institutions reported considerable success using supported and collaborative learning and the ability to play.

5.7   The New Zealand Situation

Both Brookes (2009) and Cherrie (2009) have identified skill gaps with respect to digital information literacy skills amongst NZ public library staff and have identified further training needs in this area. The Library and Information Association of New Zealand Aotearoa includes information and communication technologies in its continuing professional development scheme under 'body of knowledge' 7: "application of information and communication technologies to library and information products and services."

In response to the need for more training to allow librarians to fulfill their continuing professional development requirements LIANZA has begun a series of nationwide workshops focusing on various areas of the body of knowledge. These include body of knowledge 7; however the offerings could be considered somewhat ad hoc due to a lack of consistency of offerings from year to year. This does not allow individual librarians to plan ahead for training courses with the expectancy that a particular course will be offered every year. Cherrie (2009) considers that the BOK scheme is not sufficiently rapid to up skill the existing workforce to the level required. He argues for a "continuous, effective, available, work-based learning around agreed skill sets." The Strategic Framework (2006) recognizes that the workforce requires up skilling and strategies are needed to ensure that this occurs, but given that this document was originally published in 2006 very little has been put in place. Chawner (2008) in a survey on information managers describes barriers to technology adoption in New Zealand as falling into three categories – institutional, technological and personal. In this research it is intended to examine how these barriers affect frontline library staff.

6   Theoretical Framework:

In 1984 David Kolb, Professor of Organzational Behaviour at Case Western University, published his treatise on Experiential Learning in which he theorized that learning is "the process whereby knowledge is created through the transformation of experience." (Kolb, 1984, p.41).

Visually the theory appears as a quadrant which is based on two continuums – that of perception or thinking and feeling, and that of processing or doing and watching. Any individual will have a learning style which falls somewhere in this quadrant, based on whether or not they have a predominantly cerebral, or a predominantly practical learning style. Past experiences, inherited factors and present circumstances all influence individual learning styles.

Figure 1: Kolb's Model of Experiential Learning
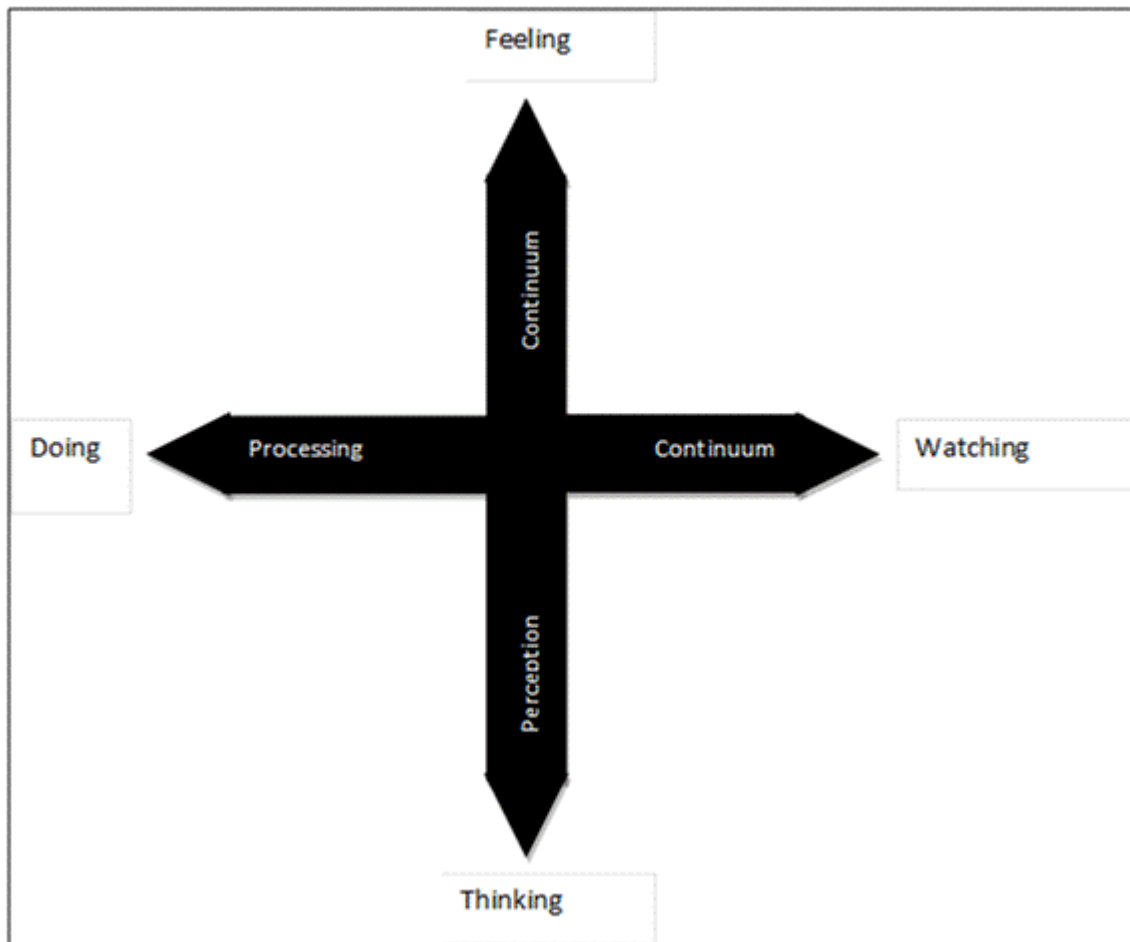
Adapted from Kolb (1984)

However, learning is also an iterative process, which is moulded by circumstance and experience. By viewing learning as a continual process the quadrant then becomes a cycle with four discrete stages which allow the learner to transform their experiences. These are:

1. Hands on experience,
2. Self reflection on experience,
3. Formation of concepts based upon self reflection,
4. Testing of any concepts formed.

Generally speaking, this process begins at the hands on experience stage but, in reality, may begin at any one of these stages depending on an individual's learning style.

Figure 2: Kolb's Experiential Learning Cycle
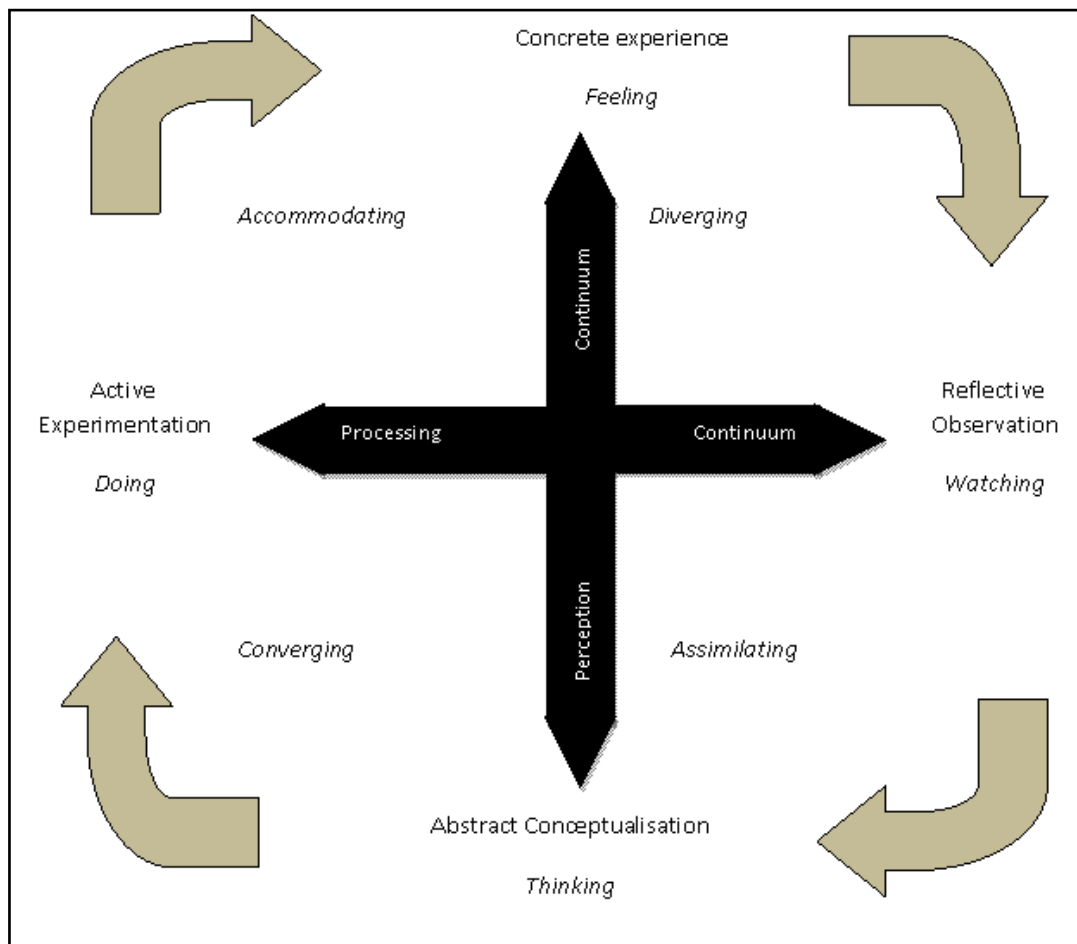
Adapted from Kayes et al (2005)

Much of the learning in the workplace occurs as experiential learning through trial-and-error or problem solving techniques, play, or peer support. The advantage of experiential learning is that it may occur as an integrated part of the learner's workflow. Experiential learning through play may also occur as a part of the learner's out of work activities, which may then reflect in increased skills in the workplace. Examples of this could be the discovery of useful apps on a home iPad to recommend to patrons, knowledge of Linux operating system and open source software programmes which may be run on public internet PCs in the library, and discovery of new and interesting blogs and websites to recommend, through the use of Stumble in a staff member's own time.

This investigation sought to determine, among other things in what ways librarians were learning their digital literacy skills, whether that be predominantly in the workplace, or at home, and if there was any crossover of skills learned between these environments.

7   Research Questions

After analysis of previous research and a broad review of the existing literature, the following overall research question was formulated for this research study. What are the strategies needed to improve the digital information literacy skills for frontline public library staff in New Zealand?

In order to obtain a comprehensive picture of factors affecting staff's methods of learning and general perceptions and attitudes, the following sub-questions were formulated:

1. What are staff's experiences of learning digital information literacy skills in NZ?

2. What do frontline public library staff in NZ perceive as a person who is skilled in digital information literacy?

3. What types of digital information technologies do NZ frontline public library staff use in their own time?

4. What are the barriers to improvement of digital information literacy skills for frontline public library staff in New Zealand?

Questions 1 and 2 are adapted from those proposed by Bruce (1997, p.80).

8   Methodology

A qualitative, interpretivist approach was taken with this research study as described by Bryman (2008, p. 366) in order to provide a small, but rich picture of participants' experiences of gaining and improving digital information literacy skills

8.1   Qualitative Research Methods

To gain a deeper, more thorough understanding of staff's experiences, barriers and perceptions, face-to-face, semi-structured interviews were used instead of a more traditional quantitative, survey based approach.

A multi-site case study (Bryman 2008) p.60 was employed to allow contrast and comparison between two sites, with contrasting urban/rural mixes and population size differences The

rationale behind examining training experiences of staff in more than one organization was to gain a wider understanding of staff perspectives and experiences, and to increase the validity and generalizability of any conclusions reached, as opposed to using a single case study which may also be subject to influences specific to a single organizationTo further increase validity of results participants were also recruited from different sizes of organizations. Staff were recruited from a Level One (serving populations over 50,000) and a Level Three (serving populations under 30,000) library service, as defined by LIANZA's Public library special interest group's (PubSig) annual library statistics (LIANZA 2011)

A convenience sampling approach was taken for this study. Nine participants in total were drawn from frontline library staff spending more than 30% of their total allocated hours working in direct contact with the public in any capacity.

8.2   Ethical Considerations

This study was approved by the Human Ethics Committee, School of Information Management, Victoria University of Wellington and conducted in accordance with University regulations.

8.3   Recruitment Method

Once permission was gained from managers (Appendix D) of the respective library services involved, recruitment of participants in the level one library service an invitation to participate was run twice in the staff newsletter (Appendix E). As this resulted in no replies a direct approach was taken and individual staff members were invited to participate by another staff member from that library service. Participants from the level three library service were invited to take part either by their branch manager or by the author (Appendices D and E).

Appropriate incentives such as movie or coffee vouchers were used to encourage participation in this study.

8.4   Data Collection Procedure

Once participants were identified mutually agreeable interview times were organized and participants were emailed a list of interview questions beforehand to allow time for them to

reflect on the questions to be asked.   All interviews took place at the participants' workplaces.

Data was collected through a semi structured interview process (see Appendix B for list of interview questions). At the beginning of each interview, participants were asked to sign an informed consent form (Appendix F) and the data collection, storage and analysis process was explained to them. Participants were also asked to complete a short questionnaire to gather basic demographic information (Appendix G) which, when integrated with interview data allowed formation of a more comprehensive account of participants' views and circumstances.   As interviews were conducted they were recorded via a digital recording device (iphone) with a microcassette recorder as back up.

8.5   Data Analysis

All qualitative data was transcribed as soon as possible after each participant interview had taken place in order to ensure accuracy. Data was transcribed from audio files into Microsoft Word files. As each participant's data transcription was completed it was returned to them via email for validation. A period of ten days was allowed for responses from each participant, and non-response after this time was considered agreement. Five of the nine participants read and approved their transcripts, the remainder did not reply within the ten days.

Once data were transcribed and validated, the transcripts were read and analyzed for general themes. Relevant responses from each participant to each interview question were cut and pasted from the interview transcriptions into a spreadsheet (see Appendix H for examples). This provided an overview of all responses. Significant themes from each participant's answers were then further cut and pasted into summary columns against each question. Once the spreadsheet was completed these summaries were cross checked back against the original transcriptions to ensure accuracy. Examination of the summary columns allowed participants' answers to be easily compared and contrasted.

9 Results

9.1 Introduction

The outcomes of this research study are described, firstly with a portrayal of participant demographics. Study results are then organised into sections based on each of the major research questions. Each research question has a number of interview questions which relate directly to it. Findings from these interview questions are presented under their related research question.

9.2 Participant Demographics

The participants in this study came from both a level one and a level three library service as defined by the Library and Information Association of New Zealand Aotearoa's public library statistics. The level one library service staff were recruited from the main city library and the level three participants from three much smaller rural or semi-rural branches (as defined by Statistics New Zealand urban rural profile categories 2001). All participants were female and aged between 40 and 64. Three participants were aged 40 - 45, one, 45 - 50, four fell into the 50 - 55 age group and one participant was over 60.

Participants had worked in the profession for a range of years, one for less than four years, four for 5 - 9 years, one for 10 - 14 years, one for 15 - 19 and two for over twenty five years.

Participants had worked for their respective library services for a range of times, three participants worked for their library service for less than five years, four participants from 5 - 9 years, one from 15 -19 years and one for over twenty five years.

Three participants had dependent children, two in the 5 - 9 year old category, one aged 10 - 14 years, and one 15 - 19 years.

All participants spent time using digital technology in their own time ranging from less than one hour (one person) to ten plus hours (four people). Three participants spent less than $100 in the last three months on digital hardware, whilst five spent between $200 - 300, one person spent over $500. Spends on digital software fell almost exclusively into the under $100 category with only one participant having spent between $100 - 200.

All but one of the participants had either studied toward, or completed some sort of library qualification, this ranged from one paper at Masters Level, study towards a Level 5 diploma of LIS, up to an MA (Library and Information Studies) and an MLIS. The largest group of participants (four) had completed the Diploma of library and information studies. The only person who had no library qualification had completed two Bachelor's degree qualifications in unrelated subjects.

9.3   The Questions

Interviews ranged from 25 to 70 minutes in length. A standard series of questions were asked, around which discussions were based, allowing additional questions to be added to allow further elicitation as appropriate. Interview questions were designed to directly gather information on each of the four following research questions. All interviews were conducted at the participants' workplace.

9.3.1   What are staff's experiences of learning digital information literacy skills in New Zealand?

In order to gather a complete picture the following five interview questions were asked about staff experiences:

1. How have you gained the bulk of your digital information literacy skills?

2. How has digital literacy training been delivered to you by your organization? For example: Formal courses? Peer training? Online? Any other methods?

3. How effective have you found each of these methods?

4. How enjoyable have you found each of these methods?

5. Do you have any suggestions for ways in which you would enjoy learning digital skills?

These questions will be discussed together to fully describe staff' experiences and directly respond to the first of the research questions.

Interview data indicates that staff are learning their digital information literacy (DIL) skills via two predominant methods. The first method was for information literacy skills to be

learnt "on the job", including but not limited to in-house training. The second method was for digital information literacy skills to be learnt as a result of activities conducted outside work time. Participants who cited this method considered themselves "self taught."   For several participants this was not an either/or response, and a combination of both methods was cited. Notably the two participants with Masters level qualifications both referred to written material as well as learning by hands on methods.

There appears to be very little difference in the training methods delivered by the different sized organizations. The level three library service used similar methods to the level one library service; the only significant difference was that the use of webinar training was cited three times by participants from the smaller level three library service. This may be due to the wide spread and rural nature of this service, or it possibly that this training had been delivered recently and therefore was relatively easily recalled by participants. Otherwise the two predominant methods of training delivery were formal courses and peer training. Formal courses were defined as being those delivered in a classroom style situation. Peer training was defined as that which occurred in the day to day nature of doing one's work – that is hints, tips and either small group or one on one sessions that arise as a result of (usually) problem solving in the workplace. Notably three participants from across both library services cited the lack of training plans as being a significant issue for them. These participants felt that training was "hit and miss" meaning that training was not sufficiently planned and tied into individual performance appraisals.

Staff considered that peer training was the most effective method by which to receive training, one person also cited email lists as being a further method of peer training. The words "hands on" and "seeing and doing" featured strongly amongst responses to this question. Two participants found that formal courses were most effective for them. Criticisms of formal type training were ones of "timing" – either there was perceived to be too big a gap between receiving the training and then receiving the product that the training was for, or that there was no time at all in a busy work day to practice skills learned in formal courses.

The most enjoyable methods of learning digital information skills were "seeing and doing" "hands on" "peer to peer" and "participatory" . A strong theme which emerged from

answers to this question was how much staff enjoyed a collaborative, iterative and practical approach to training. Short sessions and training within one's own team were seen to be enjoyable.

Understandably, suggestions for further training reflected staff's enjoyment of these methods. Peer training featured strongly as well as "hands on", "regular small bits of training in teams" "small workshops" "collaborative, team learning" and "two part courses" being cited as suggestions for the future.

9.3.2   What do frontline public library staff in NZ perceive as a person who is skilled in digital information literacy?

The following three questions were designed to provide a broad description of an individual who is skilled in digital information literacy from the perspective of a frontline public library staff member:

1. Give a description of a person you would consider to be digitally literate?

2. What sorts of skills would this person have?

3. How digitally literate would you consider yourself?

There were a range of answers, but several distinct themes emerged in the responses to the first question - a methodical and patient demeanour, a passion for the subject, an openness to new ideas methods and experience, and an understanding of hardware and software. The skill set that this person would have elucidated very similar answers to the first of the questions, however good communication skills were an additional response here.

Four participants felt that they were above or slightly above average when it came to their own DIL skills, but the majority f felt they were average to below average when it came to DIL skills. Interestingly, not one participant used the same words they had used to describe a person who was skilled to describe their own skills – which were methodical, enthusiasm, and an open mind. Only two people used the word "interest" in their responses - one person described herself as being *"a lot more interested and a lot keener than I think I have the skills"*

9.3.3 What types of digital information technologies do NZ frontline public library staff use in their own time?

The following questions were designed to discover if any "cross-pollination" of skills was occurring between home and the workplace:

1. What kinds of digital technologies do you use for recreation?

2. How have you learned to use these technologies?

3. What effect, if any, does this have on the digital skills you use in the workplace?

Participants used digital information literacy technologies in a variety of ways in their own time which reflected their own personal interests such as music, global positioning systems mapping, email, internet surfing, Trade Me, Facebook and photography among others. Only one person could be actively described as a "content creator" having built a website and producing newsletters for a local club. One person only owned a dedicated ereader. Only three out of the nine participants specifically mention Facebook.

All participants describe themselves as self taught with three participants referring to the appropriate manuals if necessary. One participant who had an arts degree had training in Photoshop.

There was a strong feeling among participants that what they did at home had a positive influence on their DIL skills in the workplace. Two participants felt that the situation was reversed and that the skills they learned at work informed their leisure activities at home. One person that it could "complement either way"

Two participants with younger children reported that family commitments limited the amount of time they could spend on DIL activities in their leisure time. These participants also cited lack of money as a barrier to using DIL skills at home. One rural participant had no cellphone access at home, and had only recently gained access to broadband internet. One level one library participant was still on dial up internet access for financial reasons.

9.3.4 What are the barriers to improvement of digital information literacy skills for frontline public library staff in New Zealand?

Four questions were designed to explore any barriers to participants' improvement of digital information literacy skills:

1. What kinds of organizational barriers make it difficult for you to improve your digital literacy skills in the workplace?

2. What kinds of technological barriers make it difficult for you to improve your digital literacy skills in the workplace?

3. What kinds of personal barriers make it difficult for you to improve your digital literacy skills in the workplace?

4. Which of these barriers would you consider to be the biggest, and why?

Organizational barriers to improvement of DIL skills were mainly lack of training time and lack of time to practice skills. Access to devices/sites/software/up to date equipment was also heavily cited as a barrier to improving skills. Lack of training and lack of planned training was also mentioned by four participants. These responses cut across both levels of library service.

Technological barriers were predominantly those of access again, whether to wireless connections, sites or to pieces of software. Again there was no significant difference in responses to this question from participants at either level of library service.

Personal barriers quoted were mainly time to practice skills through having to balance day to day workload against learning new skills, working part-time and missing out on training opportunities either formal or peer.

Slow or non-existent home internet connections and having commitments such as a young family were also barriers to learning.

The two most significant barriers to staff improving their DIL skills were regarded as time and access.

10   Discussion

A previous New Zealand study by Brookes (2009) indicates that librarians look to their employers for training for their DIL skills. Participant comments in Chawner's (2008) study of information manager's use of Web 2.0 in New Zealand also confirm this view.. If the majority of DIL training is to occur in the workplace the two major barriers of time and access found in this research study must be surmounted.

10.1   Time

The theme of time (or lack of it) pervaded all participants' responses. The difficulty of finding time away from customer service duties and from routine workplace tasks was significant.

> *"I think it's not having the time and probably the big one is not having the time to practice and play when you're working in quite a busy situation."*

> *"I have half an hour in the morning before the public come in when I'm off desk and then I'm on desk for three and a half hours so there's no actual space, I don't have any rostered time off to have time to do a lot of stuff."*

One participant spoke of her guilt when she pursued professional development activities:

> *"So sometimes you know even when I'm reading journals and things I feel guilty. …….I should be…… there's requests, there's reports to write, there's procedures manuals to update, there's stuff to file…..."*

Finding creative ways of freeing up staff for professional development sessions will go a long way towards improving digital literacy skills of frontline public library staff in New Zealand. Massis (2008) suggests the use of a "substitute librarian" to release full time staff for attendance at training courses. Whilst this is a constructive suggestion, the constraints of salary budgets may not practically allow for this option.

10.2   Access

The second theme arising from this research was that of access. Access issues were wide ranging. Access (or lack of it) to technology covered both software and hardware. Problems mentioned were lack of good internet connections, wireless internet, firewalls and filters

blocking sites and software downloads and slow processing speeds on older equipment were all described as barriers to learning:

> *" so the barriers to my digital literacy development are lack of exposure probably to the devices that our customers are using."*

> *"Oh I suppose it was that thing about not having the kind of software we were just talking about before. With the IT department, what they allow you to use…But then I think, I went home and downloaded it myself to borrow a book myself to put on my computer, and just doing that helps you understand what you need to do."*

If librarians are to keep current with digital information literacy skills access to appropriate hardware and software to enable professional development is crucial. Open dialogue and collaboration, and a degree of flexibility, is required between libraries and organizational IT departments to enable this.

10.3   Formal Training Courses

Many participants interviewed appreciated the opportunity to attend formal training courses:

> *" I really like those you know in depth person -directed training courses directed by someone who actually knows their subject inside out and backwards "*

> *"it's nice to be able to come away from the day to day and be totally focussed on learning something that is new"*

One of the major criticisms of formal training was the "gap" between receiving the training and being able to use it with the purchased product, or having no time to practise the skills learned because of either the day to day workload, or the lack of time away from serving library customers:

> *"tricky to then integrate the results of the training into your day to day work".*

> *"it's important to keep using it so that you remember it."*

The inability to practice any new skills learned in formal training courses has the additional consequence that those skills are not "embedded" and participants (and correspondingly

the organizations) don't receive as much value as they could do from attending.   In the words of one participant:

> *"I don't think formal training in that sense works, because we don't have enough time to then practice on and a lot of our other courses that we've had, they're sometimes not timed right."*

Participants often found it difficult to apply what was learned in training courses to day to day workplace practices of the trainee's institutions.

> *"You get the best thing since sliced bread stuff occasionally from vendor training"*

The skills taught were presented as a "best case" scenario related by the participant above, or were so different from the participants' day to day workplace that considerable adaptations were needed to be made.

10.4   Workplace Learning

By far the most training delivered by libraries is on-the-job and delivered peer to peer. Allan and Moran (2003) consider workplace learning to be important to libraries for the following reasons: learning is "contextualized" and is directly related to organizational needs, all staff are able to be involved, it is flexible, and savings may be made on travel time and course fees. The fact that all staff are able to be involved is of especial value when as stated above, over 50% are part time. For rural libraries the savings on travel time are particularly relevant, as this may also involve overnight stays at another location, considerably adding to costs of training undertaken outside the workplace. The ability to contextualize learning is of particular value, given the criticisms of formal training mentioned by participants.

Crumpton (2011) considers that in house training may foster a learning culture within the organization and should be seen as an investment in the current workforce in difficult economic times.

Participants' recognition of the value of peer training is reflected by Billett (2001) – "learning and working are interdependent". Billett considers that skills learned in the workplace are unlikely to be learned through educational institutions, in other words "this is the way we do things here." Oud (2005) surveyed 111 new academic librarians (those with less than

three years experience) in Canada about the training they received. 46% of respondents received informal training and many participants suggested more "hands on" training. Jain (1999) reported that the majority of respondents in his survey of 64 Botswana librarians asked for "hands on training" and perceived it to be an important method of improving productivity and professionalism.

10.5 Learning as Play

Kolb (2010) considers that "play" encourages learning in a number of special ways – allowing learners to organize themselves assists deeper learning, process is valued as equally as outcomes, and by practicing over and again, all stages of the experiential learning cycle are achieved. According to Hegarty et al. (2010) in their New Zealand study:

> *"Dedicated time and supported 'play' (provided by facilitators and peers) with a range of ICT tools in the workplace and for study, and permission to continue the endeavour outside formal workshops was essential for developing digital information literacy."*

Participants in this study used the word "play" to refer to time spent practicing skills learned on courses or by peer training:

But because it is enjoyable it doesn't feel like work and there's a level of guilt attached for example:

> *"..but you know if you're sitting here reading a blog and people walk by, it's not a good look……. . So effectively I'm working, but it doesn't feel like work – it's interesting and the thing is you don't know if you're gonna read anything that's relevant anyway."*

10.6 Learning Styles

Interview data suggest that participants fall strongly towards the feeling end of Kolb's perception continuum. Participants' preference for concrete experience would suggest that they fall into either of two learning styles – that of accommodating or diverging.

The accommodating learning style uses concrete experience and active experimentation "hands on" learning. Accommodators tend to jump in and experiment – as evidenced by the "tinker and try" approach that participants take to learning, especially at home.

Divergent learning styles also learn by concrete experience, however instead of active experimentation divergers reflect and observe . It could be suggested that the side by side watch and learn aspect of peer training is a divergent learning style. Kayes et al. (2005) describe divergers as liking to work in teams, which reflects the collaborative nature of peer training and learning.

In terms of Kolb's learning cycle staff are receiving "reflective observation" or watching, whilst attending the course combined with "abstract conceptualization" or thinking but are missing out on the "active experimentation" (doing) which allows them to fully embed the learning which then results in "concrete experience" (feeling). From a management perspective, this would suggest that libraries as organizations could improve the value for money received from training if time were made available in the weeks following formal training courses, for staff who attended, to get together and practice skills learned. This could make certain that maximum benefit from learning was obtained, and consequently that all stages of Kolb's learning cycle were attained . In other words, having the opportunity to reprise the learning, and then reflect on, conclude and evaluate it, will then embed that learning experience.

10.7   Coordination of Training

Criticisms of lack of structure and a lack of coordination regarding training are not confined to New Zealand librarians. Oud (2005) reported that most Canadian libraries surveyed had an unstructured approach to training new staff. A real or perceived lack of training plans was identified by three participants as being a barrier to development of their digital information literacy skills. Whilst this was by no means a majority response, it is significant in that it cut across both library services. Identification of an individual's digital information literacy "capabilities" – Farkas (2006) and weaknesses at time of yearly performance appraisal and agreement on action plans may allow for more efficient and targeted training

Whilst LIANZA has developed an all encompassing continuing professional development scheme which includes eleven different capabilities or "bodies of knowledge" there were no courses being offered on the LIANZA website in many of these areas at time of writing. For organizations to be able to assess staff training needs, the ability to predict up and coming outsourced training from LIANZA and other organizations would be useful. In house training

programmes could then be developed to cover areas missed by outside organizations, or to enhance that which is offered. Organizationally, the ability to forward plan training needs ensures more efficient use of resources in times of economic constraints, especially given the small size of training budgets in many NZ libraries.   Examination of public library statistics for 2010/11 reveals that many libraries in New Zealand have very small training budgets– some less than one percent of total salaries.   Libraries' ability to train staff is being directly affected by financial pressures in times of recession, making the ability to forward plan, share, and creatively use in-house resources all the more crucial.

10.8   What's happening at Home?

According to questionnaire results over half of the participants are spending more than nine hours a week at home using digital technologies for recreation. In comparison, interview results indicate that, it cannot be automatically assumed that staff are able to explore digital technologies in their own time and that the majority of participants regarded themselves ad average or below average when it came to DIL skills. Indeed responses from participants indicate that they feel the onus is on the library as employer to provide any relevant training. However, participants did express the opinion that any exploration of digital technologies occurring in their own time was generally considered to be valuable, and had the spin-off of understanding of patron behaviour. There are a number of possible reasons for this disconnect between interview and questionnaire data:

1. The reported crossover of skills between home and work is not occurring or is occurring to a far lesser extent than reported.

2. Digital information technologies used at home are used predominantly for familiar operations such as Facebook posts or sending and receiving emails which are no longer learning activities.

3. Participants are over estimating the amount of time spent using digital information technologies at home.

Possible explanations are: stage of life, time, money, and access to technology.   For those staff members who have younger children at home - time to themselves to "play", to read blogs and to follow up on their personal interests is at a premium.   For others access is still

a major issue – one participant in this study is still on dial up internet access (mainly for financial reasons) and another has only just been able to subscribe to broadband internet as it has only recently become available in her district. Although this was only openly stated by two participants, lack of access to technologies for financial reasons has a major impact on participants' ability to use new digital information technologies at home. Eight out of nine participants spent less than $100 in three months on digital software, with amounts spent on hardware similar but slightly higher, with all apart from one participant spending less than $300 in three months. This level of spending is not suggestive of early adopter behaviour. Chawner (2008) also reports passive use of Web 2.0 tools by the majority of information managers in New Zealand.

According to the most recent LIANZA remuneration survey, 2010, the most junior of library assistants have a FTE mean salary of $37,579, a senior library assistant $42,800 and a professional librarian earns on average FTE means salary of $49,149 per annum.   The same survey records that 58 % of public library staff are employed part time. According to Statistics New Zealand household economic survey for the year ended June 2011 the average annual personal income for New Zealand wage and salary earners was $44,353. Library assistants and senior library assistants receive less than the average NZ wage and are likely to be working part time, resulting in their actual take home pay being considerably less than the amounts stated. Although this data is from 2010 the situation it is assumed that this is unlikely to have changed radically

11   Conclusion and Recommendations

11.1   Conclusions

Responses from staff surveyed in this study adhere to Kolb's theory of experiential learning – that learning is hands on or "experiential", cyclical and not focussed on specific "outcomes". The majority of staff expressed a preference for "peer training" – that hands-on peer-to-peer tutoring which occurs daily in library workrooms in response to collegial requests to find solutions problems and improve workflows. This was found to be by far the most effective and enjoyable method of skill improvement by the majority of participants. These findings were commensurate with Jain (1999) and Oud (2005))Formal training courses

were perceived has having their place, however their effectiveness was questioned, particularly in regard to the efficacy of the learning. Whilst staff enjoyed the break from routine and "breathing space" that these courses offered, the majority of staff expressed feelings of disappointment that the training was too generic in that it did not conform to their real life work practices and realities, instead was delivered by vendors on an "idealized" situation. Time was also a factor in that staff felt they often didn't have time to practice skills learnt in formal training back in their day to day workflows, which negated the value of any formal training received. Time between being given training and installing the product which was being trained on was also cited as a barrier to effective learning of digital information literacy skills leading to frustration. More than one participant suggested having a follow up to formal training which allowed staff to return to the training environment to embed those concepts which were learned in the form of two part courses, or refreshers after a short period of say three weeks. The ability to revisit training would ensure that the "reflective observation" and "abstract conceptualisation" portions of Kolb's experiential learning cycle are fulfilled.

Inability to access the latest hardware, software or sites affected participants' ability to keep current, this was either for personal (mainly financial) reasons or because of organizational barriers such as lack of wireless access The inability to access particular library-related software or sites reflects the essential differences in philosophy between organisational IT departments and libraries. Whilst the former focus on preserving security of networks and information, libraries are dedicated to openness of access and freedom of information as enshrined in the UNESCO public library manifesto (UNESCO 1994).

There is a distinct need for employers to provide opportunities for staff to use and evaluate new technologies Aharony (2009) found that the more empowered librarians were the more likely they were to use Web 2.0 tools. Research by Morgan (1997) and Brock and Kirby (2001) observed that extending librarians' technological skills improves overall library services and encourages further professional development of librarians.

11.2   Recommendations

The following strategies to improve digital information literacy skills for frontline public library staff have been identified as a result of this study:

11.2.1   Identify Digital Leaders from Amongst the Existing Workforce

Invite volunteers from those individuals who have a demonstrated fascination with new technologies. The invitation to volunteer would go some way to negate any jealousies which may arise from "selection" by management. These individuals would then act as peer trainers or technology mentors. However, for this process to be effective a number of provisos apply.

- A clear understanding of roles and expectations needs to be included in the job description,

- Release from some other duties to allow for "space" to research, to practice skills and to develop training materials,

- Budget to purchase hardware specifically for trial and evaluation,

- An acceptance of a certain amount of "failure" – in terms of both tools and time

- Dissemination of information – training of other staff, provision of links to FAQs, blog posts and technology updates.

According to participants perceptions of digitally information literate individuals, these peer trainers should have the following qualities:

- o Good communication skills

- o Passion for digital technologies

- o A calm and methodical approach to problem solving

It may be that more than one peer trainer is required in large or widely distributed library services. One of the critical factors for this strategy to work is availability of access to the peer trainer. Lack of access to individual peer trainers would result in silos of knowledge, negating the effectiveness of this approach. Ideally the peer trainers would be team members with a special responsibility for training the rest of their teams and would be "embedded" in teams as opposed to working from an office in a separate part of the

building. Use of remote access technology to mentor and provide software support from a distance would allow for efficient use of staff in larger or geographically distant regions.

When recruiting new staff, consideration should be given to the above capabilities and skills.

11.2.2   Multi-part Courses

For any kind of formal training, workshop or classroom type training - make the training two part –give the training, then allow a break for staff to reflect on skills learned and to practice skills, then return to the training environment to refresh and embed skills, and to garner answers to questions which will have arisen from the process of applying those skills to particular work environment. This technique applies equally to specialized training courses as to organization-wide training. The second portion of training may be delivered by peer trainers rather than using a third party provider, with the proviso that these individuals are given time and space between times to practice skills which they can then pass on to the rest of the team, or the wider workforce.

An extension to this concept is the provision for regular, dedicated small chunks of training time within teams, for example at meetings or at scheduled times during the week.

11.2.3   Self Directed Training and Use of Incentives

Programmes such as "23 things" have proved worthwhile approaches. The use of incentives to take part in such programmes could prove to be a cost effective alternative to sending staff to off - site training, especially for rural libraries. "Digital leaders" within organizations are ideally placed to lead this kind of training.

11.2.4   Coordination of Training

A significant proportion of staff interviewed felt that training could be better tied in to yearly performance reviews and professional development plans.

Rather than using competencies which are written into job descriptions as suggested by Thompson (2009), an alternative approach would be to divide these into Farkas' (2006) capabilities and list specific competencies below these on the yearly performance appraisal form. Staff could self assess and then discuss with their manager at the yearly performance

interview. Mutual agreement on the course of action to the benefit of both the organization and the employee could then take place.

From an organizational perspective it is difficult to develop individual and organization wide staff training plans and marshal resource without advance knowledge. There is a distinct need to have advance awareness of upcoming training courses organized by national or international organizations, and further coordination of this at national level. Whilst great improvements have been made over the past three years, with an increased number of training courses being organized by LIANZA and held in regional centres there is still a need for circulation of a yearly schedule of training at the beginning of the financial year. This would improve management's ability to plan for appropriate training courses as identified in individuals' yearly performance appraisals, and allow for a more strategic approach to the allocation of training budgets.

11.3   Limitations of this Study

The results of this study are limited by the nature of the sample. The following limits restrict the generalizability of these results:

- The participants were entirely female, and ideally 15% of participants should be male to adequately reflect the gender breakdown of library of New Zealand librarians.

- Participants were drawn from one geographic region of New Zealand.

11.4   Further Study

Repeating this research with a quantitative methodology (survey based research) would allow for inclusion of a wider gender base and a larger sample size covering a wider geographic are. This would more accurately reflect the New Zealand library workforce and would increase the generalizability of results.

More detailed investigation into existing methods of in house training and needs assessment being used in New Zealand libraries would be helpful for libraries in this country wishing to create in house training programmes.

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Appendix A   Information Sheet

TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI

VICTORIA
UNIVERSITY OF WELLINGTON

Information Sheet

Identification of strategies to improve digital information literacy skills amongst frontline public library staff.

This study is partial fulfilment of the requirements of the researcher's Master of Information Studies degree.

Researcher: Robyn Robertson, BSc RLIANZA, School of Information Management, Victoria University of Wellington. **Email:**robertroby1@myvuw.ac.nz.

Background Information: Libraries and information services are undergoing significant change. Traditional library services are increasingly delivered remotely and digitally and the technologies used to deliver these services to consumers are changing at a pace that is unprecedented. Previous New Zealand research has indicated that there may be gaps in digital literacy skills amongst frontline staff in New Zealand public libraries. It is the intention of this research study to identify practical ways to improve digital literacy skills amongst frontline library staff.

What Is Required of You? Approximately one hour of your time to fill out a brief questionnaire and attend an interview. You will receive a movie voucher at the conclusion of the interview as thanks for your participation. Transcripts of your interview will be emailed to you for any correction. Ten days will be allowed for any responses, if no response is received at the end of this period, this will be considered as approval.

Data Collection and Storage. Any data collected during this research study will be held for two years after the finish of the study and then securely destroyed. Data will be stored electronically as secure encrypted files and backed up to CD held in a locked safe.

Withdrawal from Study. You may withdraw from this study at any time before the data analysis phase begins on 28 April 2012. Any data you have provided will be destroyed on withdrawal.

Publication: The final report and any publication resulting from this research will not identify participants and their employers. The results of this research may be presented at professional or academic conferences, or published in one or more journal articles.

Confidentiality: Any information provided by you will remain confidential. Neither participants or library services will be identified in the research report or any publications resulting from this study.

Ethical Considerations. This study has been approved by the School of Information Management Human Ethics Committee.

Project Supervisor. Dr Brenda Chawner, School of Information Management, Victoria University of Wellington. **Email:** Brenda.chawner@vuw.ac.nz. **Ph:** 04 463 5780

SCHOOL OF INFORMATION MANAGEMENT
FACULTY OF COMMERCE AND ADMINISTRATION

Appendix B   Interview Questions

1. *What are staff's experiences of learning digital information literacy skills in NZ?*
   1.1. *How have you gained the bulk of your digital literacy skills?*
   1.2. *How has digital literacy training been delivered to you by your organization? For example: Formal courses?   Peer training? Online? Any other methods?*
   1.3. *How effective have you found each of these methods?*
   1.4. *How enjoyable have you found each of these methods?*
   1.5. *Do you have any suggestions for ways in which you would enjoy learning digital skills?*

2. *What do frontline public library staff in NZ perceive as a person who is skilled in digital information literacy?*
   2.1 *Give a description of a person you would consider to be digitally literate?*
   2.2 *What sorts of skills would this person have?*
   2.3 *How digitally literate would you consider yourself?*

3. *What types of digital information technologies do NZ frontline public library staff use in their own time, and what skills do they develop as a result of this?*
   3.1 *What kinds of digital technologies do you use for recreation?*
   3.2 *How have you learned to use these technologies?*
   3.3 *What effect, if any, does this have on the digital skills you use in the workplace?*

4. *What are the barriers to improvement of digital information literacy skills for frontline public library staff in New Zealand?*
   4.1 *What kinds of organizational barriers make it difficult for you to improve your digital literacy skills in the workplace?*
   4.2 *What kinds of technological barriers make it difficult for you to improve your digital literacy skills in the workplace?*
   4.3 *What kinds of personal barriers make it difficult for you to improve your digital literacy skills in the workplace?*
   4.4 *Which of these barriers would you consider to be the biggest, and why?*

Appendix C   Information Poster

tagxedo.com

Technology

Does it ever make your head spin?
Find it hard keeping up?

If you spend more than 30% of your working hours in the library in direct contact with the public I'd really like to hear from you. I'm conducting a small research study investigating strategies to help frontline library staff keep current with digital technologies. I would need approximately one hour of your time (for which I can offer a free movie pass).

Email: robertroby1@myvuw.ac.nz

Appendix D   Request for Approval to Interview Staff - Email to Managers

Dear…….

I am currently undertaking study towards an MIS degree through Victoria University of Wellington. As part of this degree I am required to undertake a small research study. As a local systems administrator for Symphony LMS and a branch manager I am particularly passionate about staff training, particularly in the IT area.

This research study intends to examine the best IT training methods from the point of view of frontline public library staff. The full title of the study is:

Identification of strategies to improve digital information literacy skills amongst frontline public library staff.

Frontline public library staff are the face of the service. Often the lowest paid, least qualified of the workforce they are the ones doing the bulk of the customer service. These are the people who most need the skills and confidence to empower them to understand, troubleshoot and answer customer requests. Recent New Zealand studies have identified skill gaps in this area amongst public library staff.

To this end I would like to ask permission to interview approximately five of your frontline library staff. Each interview would last up to an hour. With your permission I would like to be able to recruit participants via email, and poster in your staff tearoom.

No libraries or individuals will be identified in the final report or any publications resulting from this research.

My research supervisor for this study is Dr Brenda Chawner at the School of Information Management, VUW. Her contact details are:

E: brenda.chawner@vuw.ac.nz
T: 04 463 5780

Please do not hesitate to contact either myself or Dr Chawner should you need any further information.

Regards
Robyn Robertson

Appendix E   Request for Staff Participation in Interviews - Email to Staff

Hi,

Are you a in a frontline customer service role?

Do you spend more than 30% of your time working with the public?

Can you help me? (There's a movie ticket for you if you can!)

My name is Robyn Robertson and I am a library manager who's also interested studying part time for my Masters in Information Studies at Victoria University Wellington. As part of this degree I need to complete a small research study.

I'm really interested in looking at how to improve digital information literacy skills amongst frontline library staff. I need to interview approximately five people about their experiences of learning digital information literacy skills. Each interview would take place separately and would take approximately an hour. And as a thank you for your participation I'll give you a voucher for a movie ticket.

Please be assured that all responses will be confidential. No libraries or individuals will be identified in the final report of any publications resulting from this research.

If you can help please contact me:

Email: robertroby1@myvuw.ac.nz

Thanks!

Robyn

Appendix F   Consent Form

TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI

VICTORIA
UNIVERSITY OF WELLINGTON

Consent to participate in research

- *I have read and understand the information sheet for the above research study*
- *I have had an opportunity to ask any relevant questions and have had them answered to my satisfaction*
- *I understand that my participation is voluntary and that I may withdraw from this study at any time before the data analysis phase begins on 28 April 2012 without needing to provide a reason and without penalty. Any data provided by me will be destroyed if I should withdraw from this study.*
- *Any information provided by me will be kept confidential by the researcher and the supervisor of this research study.*
- *Neither I nor my employer will be identified in the research report, or any other publications resulting from this study.*
- *Any interview recordings will be wiped electronically at the end of this study.*
- *Any data collected from me during this research study will be held for two years after the finish of the study and then securely destroyed.*
- *I will have the opportunity to verify interview transcripts before commencement of data analysis. I will be given ten days to confirm accuracy, after which any non response will be taken as confirmation.*
- *I agree to take part in this research study*

Name of participant: Date:

Signature:

Email address (for confirmation of transcripts and report summaries):

Appendix G   Questionnaire

TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI
VICTORIA
UNIVERSITY OF WELLINGTON

Name
Job title
Library Service

Age(please circle)   15-19   20-24   25-29   30-34   35-39   40-44   45-49   50-54   55-59   60-64
        65+

Sex: (please circle one) M   F

Years working for this library service (please circle one) 0-4   5-9   10-14   15-19   20-24
        25+

Years in profession (if different)   0-4   5-9   10-14   15-19   20-24   25+

Number of dependent children: 0 1   2   3   4   5   5+

Ages of dependent children (please circle all that apply): 0-4 5-9   10-14   15-19

Approximately how many hours of your own time do you spend per week using digital technologies? 0-1   1-2   2-3   3-4   4-5   5-6   6-7   7-8   8-9   9-10   10+

Approximate average household spend over the last 3 months on digital technology hardware? $0-$100 $101-200 $201-300 $301-400 $401-$500 $500+

Approximate average household spend over the last 3 months on digital technology software? $0-$100 $101-200 $201-300 $301-400 $401-$500 $500+

Do you have a specific library qualification?   Yes   No

If Yes please specify:

If No what is your highest qualification? (please tick one)
- *no qualification*

- *NCEA level 1   level 2   level3*

- *Bachelors or higher*

- *Other (please specify)*

Appendix H   Sample - Analysis of Themes

Microsoft Excel non-commercial use - Analysis of interview datav05.xlsx

Column1	Column2	Column3	Column4	Column5	Column6	Column7	Column8	Column9	Column10	Column11
Question	Participant	Two	Three	Four	Five	Six	Seven	Eight	Nine	Summary
Do you have any suggestions for ways in which you would enjoy learning digital skills?	Learning by doing	written and playing	Yeah, he, that's why conferences are good because they re energize you, they make you think "change is vibrant - change is what keeps us going yeah, change is revitalizing for us," so you know going back to that why is outside training kind of a good and valuable piece of our whole professional development that happens, you kind of get that charge again ....we've talked about but have done very little of umm smaller groups in our own library and we thought about	Either, either one on one with you know somebody or online or doing online and then being able to come back and ask questions....Umm I do like hands on that's probably what I most (Peer training?) Yeah but it just doesn't seem like there's a whole lot of time to do that sort of thing.	I think quite often I feel as though we're learning retrospectively instead of proactively. And I know that the digital forum is expanding so quickly that there's no way we can actually foresee what's happening or in all phases. It just it kind of feels like we're on the back foot a lot of the time and I suspect that if we had more regular, even mini sessions, little	I think a lot of it actually is down to the presenter and how they approach the delivery and um you know the more interactive the better really I think. Instead of just standing up and saying you know "this is it, this is the way it goes." I think it's really important to have lots of examples and um to yea be quite outgoing I think which sometimes isn't particularly, IT people necessarily aren't that.	Umm I spose I really like it if you've got a few people learning in a room and we're all working on the same thing and you've got that feedback from other people. So you may have someone at the front who's interactively working with you and it's coming up on the screen and you can watch and	peer training definitely! I think seems to work the best.....yeah I think two part courses maybe? Do it and then maybe 6 weeks later a tiny refresher, get together, chat, don't know. ....24 things course.	Peer training probably.....I mean and also what I was saying about our professional development sessions which are us as a team. They work very well too....Well somebody presents, because they're more sort of informal, and you know people ... just good discussion,	hands on... Written and playing...regular small bits of training in teams......peer training if time, one on one or online...mini sessions, small workshops....lots fo examples, good presenter (formal?)...collaborative, team learning....peer training definitely,two part course,24 things...peer training, professional development in team = 2 instances of regular small "bites", one of regular PD in team, one of team, 3 of peer,
Give a description of a person you would consider to be digitally literate	Methodical, look at alternative ways of	someone who likes playing and trying	Oh Steve Abrams would be a good example	Oh anybody who's probably under thirty!	Ok. Somebody hmmm, at this stage an awful lot of them I	somebody that knows about computers and can not only just	they would have um a good understandin	And I'm not saying that I am, I'll take back that I think I am	And it's quite straight forward - it's just the same as information	methodical, experience, look for alternative ways....playing, trying out, seeking new ways, trying things from peers, using as

Sheet1 Sheet2 Sheet3

EN 9:08 p.m. 6/06/2012