Electronic Book usage amongst Academic Librarians in South Africa

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A mini-thesis submitted in partial fulfillment of the requirements for the degree Masters in Information Science in the Department of Library and Information Science, University of the Western Cape.

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Key words: * Electronic books *Academic librarians *Subject librarians *Reference librarians *Faculty librarians *E-books *E-book Usage *User Preference *User Studies *South Africa

ABSTRACT

Amongst university libraries e-books are gaining wider interest since the introduction of portable electronic reading devices and software-based readers. With the growing electronic environment within universities, a need for competent and knowledgeable librarians has come to the forefront of information seeking and use. The research question addressed in this study is to what extent are e-books being used among academic librarians in their work environment?

The purpose of this study was to investigate the usage of e-books amongst academic librarians; in particular which e-books are available to academic librarians, why they choose this format, what impact e-books have on librarians' professional practice and what the usage patterns of e-books are amongst academic librarians.

The methodology used to collect the data is survey research. An electronic questionnaire was distributed on the Library and Information Association of South Africa (LIASA) mailing list. The population sample for this study was the subject and reference librarians at South African university libraries who all subscribe to the LIASA mailing list.

A user study is the theory that frames this research. The purpose of the user study was to obtain an overview of users' habits, preferences, and conventions when interacting with in this case, e-books in a work environment.

The majority of user studies concerns clients of the library such as students or academics and how they search for information or what they want from a library service. This particular study is different. The academic librarians are the users in this instance and their use of e-books in their professional work the focus of the study.

The results revealed that academic librarians (48% of respondents) would often select the e-book version before print materials if available within their institutions. The results reflect more a

gradual trend towards e-book uptake. There is still a preference for print or a "bit of both" – print and electronic. This is because of the high costs of e-books using the subscription model as the predominant e-book acquisition model and the lack of sufficient e-books in all subject fields. E-books are used for "browsing for information" and are selected for functionalities such as having the ability to search the document, anytime access and automatic citation. Major problems identified with e-books are (1) the cost of the equipment to read e-book formats, (2) the cost of the e-books especially if the subscription purchasing model is used, (3) the reliability of the internet and (4) the lack of training in how to use e-books. The study concludes by making recommendations for further research.

Declaration

I declare that "***Electronic Book usage amongst Academic Librarians***" is my work, that it has not been submitted for any degree or examination in any other University, and that all the sources I have used or quoted have been indicated and acknowledged by means of complete referencing.

Natasha Langdown ***September, 2010***

Signed: ……..

Dedication

This thesis is dedicated to my wonderful parents, Roy and Judy, who have raised me to be the person I am today. You have been with me every step of the way, through good times and bad. Thank you for all the unconditional love, guidance, and support that you have always given me, helping me to succeed and instilling in me the confidence that I am capable of doing anything I put my mind to. Thank you for everything. I love you!

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My parents, for their never-ending love and support in all my efforts, and for giving me the foundation to be who I am. Thank you, Mom and Dad.

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CHAPTER 1

INTRODUCTION

Librarians have always been very quick to adopt useful and new technologies. The traditional strengths of librarianship translate well to the electronic environment (Sharp, 2000: online).
The librarian job description is, in brief:

- to identify and/or create records of information, particularly authoritative or trustworthy information
- to gather and organize the metadata
- to provide public access to the information resources.

Therefore the skills of a librarian are, in fact, just as relevant to the electronic environment as they are to that of print. The digital environment has led to the changes in the creation, storage, access and delivery of information. The digital information environment has changed the way in which information is created, collected, consolidated, and transferred. Library services became automated and information services have become electronic. Librarians have had to learn new knowledge and skills in order to meet ever expanding user needs for new information services using ICT (Information Communication Technologies) and e-resources.

The work of academic librarians is increasingly varied as it expands to keep up with the flow of information. Academic librarians work with students and professors at universities, where information is concentrated in different subject specific areas. Academic librarians therefore may now use a variety of electronic sources for articles, including e-books. Some define an e-book as text that is available in an electronic format such as Word document (.doc), text (txt), Hypertext Markup Language (HTML) or Extensible Markup Language (XML) (Hawkins, 2000: 16). Rao (2003: 85,86) defines an e-book as “text in digital form, or book converted into digital form, or digital reading material, or a book in a computer file format, or an electronic file of words and images displayed on a desktop, note book computer, or portable device, or formatted for display on dedicated e-book readers”. The electronic information usage of

academic librarians is linked to librarians' ICT usage. According to Adekunle, Omoba and Tella (2007: online), who did a survey to study the attitude of selected librarians in Ibadan, Nigeria, toward information communication technology (ICT), for a librarian to make use of ICTs or new electronic sources:

- the attitude should be positive;
- there should be no fears of ICT as this widens the digital divide.

According to Mugwisi and Ocholla (2003:195) "Librarians who perform cataloguing duties, connect most readily to electronic information services to provide themselves with information on books and other resources."

As digital technology has gained greater status in teaching and learning activities, the needs, expectations, and relationships of all stakeholders (faculties, students, librarians, administrators, etc.) have changed significantly. Avet (2006: 155,156) discusses the use of internet search engines as a reference tool for librarians and claims that the contribution of library and information professionals to reference work has increased, rather than the reverse, as electronic information sources have proliferated. Key issues related to academic librarians' use of literature e-books include:

- the investigation into availability of resources (Myers, Wilson and Lienhard, 1993: 30F);
- the inclusion of these resources into reference sources and catalogues (Radcliff, Du Mont and Gatten, 1993: 15, 16) as one of the attractions of e-books is that they come with prepared Machine Readable Catalogue (MARC) records that free the libraries from having to make their own catalogue entries;
- identifying specific professional needs of librarians e.g. Dewey Decimal Classification System (DDC22), Internet (Ladner and Tillman, 1992: 4, online); and
- creating new resources and new methods of formatting, storing, searching for and retrieving information (Dillon et. al, 1993:57).

The increasing the role of technology in libraries has had a significant impact on the changing roles of librarians. New technologies, such as e-books, are dramatically increasing the accessibility of information, and librarians are adapting to the evolving needs of users that

emerge from the adoption of these new technologies. The rationale for this study is based on the new developments of e-books and e-readers. This thesis set out to determine if academic librarians have adapted to the new formats of information, such as e-books, which present both challenges and opportunities in promoting them to library patrons.

THE RESEARCH PROBLEM

New ICTs are being introduced into the academic environment on an increasingly regular basis. Whilst previous research focussed more broadly on the use of search engines and faculty usage of electronic databases, this specific investigation of librarians' knowledge and use of e-books would provide new insights into academic librarian e-book usage. The research question addressed in this study is to what extent are e-books being used among academic librarians in their work environment?

The sub-problems that can be derived from the research question are:

1. Which e-books are available to academic librarians in the workplace?
2. What are the usage patterns of e-books among academic librarians in the workplace?
3. Why do academic librarians choose this format?
4. What impact do the e-books have on librarians' professional practice?

RESEARCH METHODOLOGY

The methodology used to collect the data is survey research. Internet Surveys are a method of collecting information by sending surveys via email or Electronic Online format. Participants return the completed forms to the researcher or an outside vendor. "Surveys may ask the respondents to rate items on a scale (e.g., Likert scale of 1-5)" (Meyers, Gamst and Guarino, 2005: 192). Some surveys also allow respondents to write their feelings or attitudes about a particular event or to elaborate in more detail on an item, or to express suggestions, etc. Both quantitative and qualitative methods were employed in the survey through the use of close-ended and open ended questions.

The survey was constituted as an electronic questionnaire (Appendix A) that had been distributed on the Library and Information Association of South Africa (LIASA) mailing list.

The population sample for this study is the subject and reference librarians at South African university libraries who all subscribe to the LIASA mailing list. Subject librarians have special knowledge of a particular subject or subjects and provide an information service in their specialist fields covering all formats, including e-books. Reference librarians make extensive use of databases and electronic information sources in answering reference queries. Electronic survey tools are faster than telephonic surveys. An email survey is "push technology" that allows researchers to directly communicate with prospective respondents. Email also affords the technical ability to track whether the delivered email survey was opened, responded to and/or deleted as well as if the survey was undeliverable.

DEFINITIONS:

- **Academic librarians** work in universities managing and mediating access to information for students, researchers and academic staff. (Feather and Sturges, 2003: 370, 594, 624)
- **E-books**- In the broadest sense, any books published in digital form. Commonly used for digital versions of printed books in formats that allow reading and browsing, but not manipulation or analysis for reading, for instance, on a Pocket PC. But there are also more innovative e-books that make much more powerful use of digital resources, by combining text with images (moving or still) and/or sound in multi-media systems. These may be the e-books of the future (Lynch, 2001: online).
- **E-Publication** -In the broadest sense, anything made public in digital form. Thus a personal web page or a [we] blog could count as an e-publication. However, since 'publication' usually implies a process of editorial quality control, often including peer-review, the term e-publication is probably best reserved for materials that can lay claim to this. In the context of the current debate, 'e-publications' usually refers to digital

versions of conventional forms of printed output: e-journals, e-monographs, etc (Wikipedia Contributors, 2008c: online).

- **E-Theses** -electronic versions of doctoral and masters theses, increasingly made available by institutions through institutional repositories or other Open Archives.
- **E-publishing**- Electronic publishing, or e-publishing, uses new technology to deliver books and other content to readers (Merriam-Webster, 2008: online).
- **E-reader/E-device**. - An **electronic book device**, sometimes also called an **electronic book reader**, is a device used to read e-books. It may be a device specifically designed for that purpose, or it is intended for other purposes as well. The term for an electronic device is restricted to the hardware devices, not software programs (Wikipedia Contributors, 2008b: online).
- **LIT**- Microsoft Reader is available for download from Microsoft as a free program. It uses Clear type Technology for easy reading on small PDA screens. It displays books in the .LIT file format (The ".LIT" stands for "literature"). This format is based on Microsoft Compressed HTML Help format. These books can be purchased and downloaded from online stores, including Amazon.com (Answers.com, 2008: online).
- **PDF**- The **Portable Document Format** (**PDF**) is the format originally made by Adobe Systems, in the year of 1993, for the exchange of images and documents sources through electronic means. The PDF is used as a format for documents without a device and a "display resolution-independent fixed-layout document format" (Wikipedia Contributors, 2009b: online and Adobe, 2008).
- **Reference librarians** help people doing research to find the information they need, through a structured conversation called a reference interview. The help may take the

form of research on a specific question, providing direction on the use of databases and other electronic information resources; obtaining specialized materials from other sources; or providing access to and care of delicate or expensive materials. (Wikipedia Contributors, 2008d: online)

- **Subject librarians** (also called faculty librarians) have special knowledge of, and responsibility for, a particular subject or subjects. They work in academic libraries providing information services in specific fields e.g. sociology, anthropology, economics, etc. (Feather and Sturges, 2003: 624)
- **Web 2.0** was derived from Tim O'Reilly (2005: online) who determines that it is information made available through social contexts giving access to it on the web. It is also about sharing and creating information for others through social interaction.

ETHICS STATEMENT

The survey form which was distributed on the LIASA mailing list informed potential respondents that

- participation is voluntary and a participant has the right to withdraw at any time without prejudice;
- information obtained from respondents would be treated confidentially and the identities of individuals and institutions would remain anonymous; and
- the research findings would be disseminated in a LIASA publication and/or a LIASA congress.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

As electronic access to information increasingly becomes attractive, media such as books are moving to digital formats. There are two main types of electronic books (e-books): those which are born digital, materials which may have originated from a digital source e.g. some electronic records (WordSpy, 2008: online) and those which have been digitized i.e. the process of creating digital files by scanning or converting analogue materials. The latter being a digital copy or digital surrogate (Wentzel, 2007: 6). E-books are relatively new technologies which have only existed since 1971 (Wikipedia Contributors, 2008a: online).

An e-book is described in the literature as "a device which is specialised for displaying an electronic reading material or is software designed to display any reading material" (Looney and Sheehan, 2001: 40). Davies, Fitzsimmons and MacLeod, (2001: online) refer to an e-book as "a handheld device that is specialised for displaying electronic versions of books". Appleton (2004: 247) on the other hand refers to an e-book as representing content that has been made available digitally via an Internet connection and displayed on a computer screen and allowing pages to be printed and downloaded locally. Wikipedia Contributors (2008a: online) attempt to standardise the use of the word stating that an “e-book is an electronic (or digital) version of a book. The term is used dubiously to refer to either an individual work in a digital format, or a hardware device used to read books in digital format”.

The main contribution by these authors and web-based resources in defining e-books are as a digital object which electronically represents a book and an electronic reading device.

E-book reader software can be grouped by the main e-book formats for example:

- Adobe PDF,
- HTML and,
- LIT which is the Microsoft equivalent to Adobe software (Reid, 2002: 31)

There is evidence that the e-book market has been prospering of late. A recent two-part feature in *Library Journal* (Golderman and Connolly, 2003: online; Golderman and Connolly, 2004: online) examined 15 services in a range of disciplines, commenting favourably on their functionality and coverage. An outbreak of new product developments was highlighted in the Information Today's *NewsLink* (Hane, 2004: online) service, including *Amazon's* innovative A9 service (A9.com, 2007: online) which incorporates full-text retrieval from over 120,000 e-books in its search results.

Coyle (2003:online) in a review of the e-book industry notes increased sales, lots of technology developments and exciting prospects for the next decade. New services continue to emerge, notable recent examples being the e-book series from Elsevier, the publishers of science and health information such as Science Direct (2008: online). Amazon is leveraging its technological capability to offer an array of new services, one of which is enabling users to lend electronic books stored on their own digital libraries to their friends (Edwards, 2006: online).

There appears to be very little research done on librarians' ability to implement the technology. Most of the research that focuses on librarians as users of technology investigates the librarians' attitudes toward technology in general (Stover, 2000a: 39). In reviewing how librarians utilize the Internet to answer reference queries, a study determined that reference librarians are still in conflict regarding the relative value of electronic databases versus the print resources (Garnsey and Powell, 2000:245).

In 2007, Ebrary, a leading e-content services and technology provider conducted a Global Survey whereby it wanted to determine the experience of university faculties with electronic resources and print materials. Their focus was upon the usage, attitudes, strengths and

weaknesses of e-books in an academic community. One of the questions asked was of the advantages and disadvantages of electronic resources. It was determined that the primary advantage reported amongst faculty was accessibility. Of 333 responses 164 cited the important advantages as ease of searching, finding, retrieving and distributing. The disadvantages were usability which was based upon difficulty of reading and lack of portability (Ebrary, 2008a). According to the end result of the survey, over 50% of faculty prefers electronic resources especially electronic journals (88%) and electronic books (65%). Most librarians (73%) were in fact in agreement that the Internet, especially Google and other search engines, was useful in their daily work (Stover, 2000b: 472; Ebrary, 2008a).

2.2 Electronic Books

2.2.1 Defining E-books

The importance of e-book collections continues to grow amongst academic libraries. Dowdy, Parente and Vesper (2001: online) noted that it is difficult to define e-books because its environment is constantly evolving. Mason and Rennie (2008: 98) define an e-book as essentially a portable device that has various functions that are supported by the different readers. In the context of this study, e-books are defined as the electronic versions of books that are generally accessible via the Internet or the electronic version of traditional print books that can be read by using a personal computer or by using an e-book reader.

In the broadest sense, any books published in digital form are e-books, which are texts in digital form or books converted into digital form or a computer file format displayed on a computer screen, laptop, or a dedicated portable device. The e-books are comparatively new technology, easy to store and to read due to the lighting situation. The e-book reader contains technology whereby the reader lights up around and behind the text to enable better visibility. The user is able to search and interact with the text in the reader and to also easily access other e-books made freely available through the internet. The market for e-books is seen by libraries as a way to facilitate access.

E-books are commonly used for digital versions of printed books in formats that allow reading and browsing, but not manipulation or analysis for reading, for instance, on a Pocket PC. But there are also more innovative e-books that make much more powerful use of digital resources, by combining text with images (moving or still) and/or sound in multi-media systems. These may be the e-books of the future.

2.2.2 Types of E-books

In addition to e-book reading devices, general-purpose software book readers have also been developed which are used on personal computers or laptops. E-books have developed new identities; they have become more than just a media by which to read a book instead becoming a new resource which is linked to other resources and applications. In relation to the academic libraries, e-books are used in selected formats and on hardware readers for ease of use and accessibility to the users. The main preference of e-book format usage is HTML or PDF, as these can be made use of across campuses and easily transferred or uploaded onto the institutions Online Public Access Catalogue (OPAC).

There are two main components:

- Hardware-devices called readers (desktop, laptop, handheld, PDA)
- Software - running a software program that displays book on screen.

2.2.2.1 Hardware Readers

The delivery of e-books through a CD-ROM format and the Internet is the most popular mode. In 1998 another type of e-book medium was launched to the public called: dedicated readers or hand-held devices. The materialization of the electronic book has resulted in many companies manufacturing electronic reading devices (dedicated readers) used for displaying, reading and storing electronic information. The very first dedicated, handheld e-reading device was called the Rocket e-book, and it made its appearance in 1998. According to Siracusa, (2009: online)

> The very thing that motivated the creation of all those book-like dedicated reading devices is the same the thing that kept customers from buying them. Businesses couldn't see past the physical connotations of the word "book," leading them to produce book-like hardware

devices. And customers, when presented with said devices, compared their value proposition to the obvious physical analog, paper books, and decided that they sure as hell were not going to pay triple-digit prices for such a thing when they could get a paperback for less than $10.

The most popular readers are:

- **Sony Reader** (265mb memory, holds about 150 books.)
- **iRex iLiad** (8" display, bigger than Sony. £399)
- **Hanlin eReader** (6" screen, 512MB memory, no online store.**)**
- **Bookeen Cybook** Gen3 (6" screen, light weight French machine)
- **Kindle** (Amazon, 6"and 9.7" screen, 256MB, takes various formats – kindle format.azw, text.tst, Mobipcket.ie, Mobi, and some others.)
- **iPhone** (Only 3.5" screen. Free Stanza eBook reader)
- **Skiff Reader** (11" display, 3G enabled and 4GB memory and built in audio.)

According to Woll and Nathan (2006, 286) "the reader has evolved and become multifunctional" we can see this with the Kindle 2 and Kindle DX as you can now do wireless transfer from the Amazon Kindle store and RSS Feeds for blogs, with an experitmental web browser and the ability to support multiple formats and enable users to listen to audiobooks whilst reading the book (Amazon.com, 2008: online; Amazon.com, 2009: online).

Amazon Kindle (Amazon.com, 2009: online), now in its second generation (March 2009), is appreciated for the ability to buy and download books wirelessly. According to Bell, (2009: online) a partnership was arranged between Amazon and several universities to test the new Kindle DX for e-textbooks. This was essentially to create a personalised library for each student. This has helped in the retention of textbooks (Freedman, 2009: online). Available currently worldwide, a wide selection of books is available in the Kindle format mentioned above, with support for other non-Digital Rights Management/secure formats like HTML and TXT. As of March '09, you could buy and read Kindle-format e-books on the iPhone/iTouch without having to purchase a Kindle (Rosso, 2009: online).

The French company Bookeen introduced its own e-book reader to the market called the Cybook Gen3, based on E Ink's technology (Bookeen, 2009a: online). This device, the Cybook Gen3, is using e-paper technology; like its predecessors, it can read many open formats like HTML, Txt, PRC, PalmDoc and PDF. The Cybook supports the Mobipocket secured e-book format. This encrypted format enables the user to get access to one of the biggest catalogues of modern and academic titles copyrighted titles with publishers like Harper Collins, Oxford University Press, Simon and Schuster or Wiley-Blackwell. The Cybook supports all these different document formats directly and without any conversion necessary. To transfer your documents to the Cybook, you just need to connect your Cybook with your USB cable and copy your data in the Cybook memory. You can also use a SD card and copy your data in it (Bookeen, 2009b: online).

The Cybook Opus is the newest e-book reading device from the company that has pioneered the e-book reader market since 1998 - Bookeen. This pocket sized reader can be held in one hand and fits perfectly in any purse, briefcase or pocket. With the new technology the screen has the ability to switch from portrait to landscape mode automatically (Bookeen, 2009c: online).

Kozak, (2003:6, online) discusses the general benefits of the e-book reader. Although the e-book only gained popularity in the past two years, in effect there are already many e-book readers and with those four main advantages such as:

- the ability to store multiple books on a single device,
- compact and lighter in weight than print books.
- versatility, and
- instant accessibility,

The convenience of having a backlit screen is to enable reading in the dark. Other conveniences are being able to electronically bookmark a page, highlight passages and search for words and phrases.

According to Kozak, (2003:8, online) the main e-reader devices' limitations are that e-readers represent yet another device that the user must purchase and learn to use. E-books are still in development, so an e-book cannot be readable by another unless converted or the reader has those specific formats in their reader's format.

He says that the other limitations are obsolescence and the need for technical support by the users especially if the device breaks and you require a replacement. The readability factor is about how the individual reads the book on the devices. This may be an obstacle some users will need to overcome. The user needs to know how to expand and minimise the size of the text. The size and the screen quality of the device may also be a limitation. A major limitation is 'user satisfaction' (Kozak, 2003:8, online). Some users find that e-readers are awkward and uncomfortable to use because the screen images scroll up and down instead of left to right like a conventional book.

An important factor in today's world is the "go green" policy in which the environmental burden impacts our society in many ways. In South Africa the rising cost of electricity impacts on how much digital equipment/technology is used. Other opinions suggest that "going green" would be beneficial to the environment.

2.2.2.2 E-book Software Readers/formats

Paper has been used by mankind for many years as a material carrier of knowledge. The e-book has only been around for a few years but already it is making an impact. There needs to be a standardized format for e-books to be used across the board but for now there are a wide range of formats, the simplest of which is plain ASCII-standard text. However, this format is tremendously unappealing to read, cannot preserve formatting and cannot handle graphics.

The types of formats are:

- Adobe Acrobat's **P**ortable **D**ocument **F**ormat (PDF);
- Microsoft Reader's **Lit**erature (LIT);
- **R**ich **T**ext **F**ormat (RTF);
- Kindle / .azw are based on Mobipocket technology. In March 2009 Kindle books could also be read on the iPhone ,

- Adobe Acrobat e-Book reader (.ebx);
- Palm Document Format (.pdb);
- Palm Reader Format (.prc);
- OEBPS (OeBF) based on XML, HTML,CSS;
- Markup Language (e.g. HyperText Markup Language - HTML, Standard Generalised Markup Language - SGML, eXtensible Markup Language - XML);
- Software for PDAs such as AportisDoc for Palm Pilots and Pocketbooks, Palm Reader and MobiReader for Palm Handheld, Handspring Visor, and Window CE devices.

The e-book market has many competing formats, although the two most popular device usage formats are PDF and LIT because they have been created to mimic a book. According to the Highwire Press survey (Newman and Bui, 2010:26, online) librarians prefer PDF formats, though given an option as the technology changes their preference might change. As a result a reader has to be bought or downloaded to enable the user to read the book, article. As a result of all this new and different formats, conversion software has been created by different companies to enable users to convert formats such as Microsoft reader, HTML, PDF, and Word Documents (Ms Word 2000, 2003, 2007). One such software that converts HTML into a readable book like format is produced by Spacejock Software called the yBook. The yBook is designed to emulate the look and feel of a book on your computer screen. There are five kinds of files you can read: TXT files (like those on the Gutenberg archive) HTML files (Web Pages), RTF files, PDB and PRC text files (Handheld formats).

2.2.2.2.1 Portable Document Format (PDF)

According to Lee, Guttenberg and McCray (2002:233, 234), users can view the 'book' in the format that they would want without the need for other applications or platforms in order to read or create the file. PDFs can contain a multiple number of pages, images, and hyperlinks. An advantage of Portable Document Format is that the most basic readable format viewer is available from Adobe Acrobat and can be downloaded to be used over various platforms such as Windows XP, Vista and Linux. Another advantage is the ability to correctly print to any printing device. A further advantage of the latest version is that it can be read out loud to you, but you have to select the passage you want read. The main disadvantages are that it is owned

by the Adobe Systems Incorporated Company and that to have full access to all the capabilities of the reader you have to buy the application (Adobe Systems Incorporated, 2009a: online).

Another free PDF reader produced by Adobe Systems Incorporated called Adobe Digital Editions came into effect in 2008. If users download a PDF from a Website it will be automatically loaded into the software and you will have a viable gadget which will enable the user to add bookmarks or search for text within the book and most especially open the book on the page where you had left off reading (Adobe Systems Incorporated, 2009c: online).

2.2.2.2.2 Microsoft Reader (LIT)

The Microsoft reader uses a minimum interface to enhance the reader's capabilities. There is a navigation bar to enable users to search, add notes, images, and highlight text and bookmark selected chapters. The reader is made freely available online with the option to activate the Digital Rights Management (DRM) software which is enforced for better downloads of online e-books from various websites with the exception of Amazon.com and it certifies that the copy of the Microsoft reader can view and access protected content.

The reader is also able to be used via Windows platforms including Windows Mobile and Windows XP Tablet. A major advantage of the Microsoft reader is for the ability of text to speech capability which can be used especially by blind users to enable audio on the books bought. E-book technologies have adapted features for those with special needs. Microsoft Reader Interface is one of only two companies that provide text to-speech synthesizer allowing access to people with print disabilities (Sajka and Kerscher, 2000: online). The evolvement of reading thought a text to speech technology it gives especially blind users the ability to access the latest books without having to wait for it to be reprinted in Braille. The Microsoft reader can be updated manually and uses a special clear typographic technology which enables better viewing capability for the user (Microsoft, 2009: online).

With the onset of this new technology copyright has to be initiated. Digital Rights Management (DRM) means that some of the supported formats have created technology which allows a publisher to protect copyrighted material such as e-books and to authenticate the downloaded e-

book. It goes beyond just delivering the e-book to instituting restrictions on printing, copying and pasting. This is done to protect the author by controlling who has access to the content, for example The Adobe DRM Activator is a website that allows you to activate your computer or PalmOS device for viewing e-books and protected documents. For example, with Ebrary, users can only print five pages of an Ebrary book at one time. Digital Rights Management (DRM) places the restrictions on activities that are allowed by the Copyright Act (Stamp, 2003: 102; Adobe Systems Incorporated, 2009b: online).

2.3 Advantages and Disadvantages of E-books

The e-book has been around for a few years and it has caused a stir. It has many advantages and disadvantages in contrast to the printed book.

2.3.1 Advantages

The main advantage of e-books is that it is mobile. E-books help to move the library into the new century of digital Library 2.0 and virtual library capability, cheaper, space saving, offers 24/7 access and availability, remote access, full text search capability, as well as copying and pasting. In this social networking age with websites like Shelfari, Library Shelf and applications on Facebook, users are able to chat and transfer the their preferences for certain books.

More advantages of e-books:

- Never lost or damaged this means that e-books are not physical items which can be lost of physically damaged as they physically cannot break as they are electronic resources.
- Human Saving, this means that essentially we are saving on time and access meaning that individuals do not have to wait two weeks in order to have access to a book. They therefore all have access via the electronic resources to the items.
- Low Security risks as they cannot be stolen,
- Computer Viruses cannot be transferred via e-book formats,
- Hacking attacks from outside sources through e-books are limited and non-existent as the e-books cannot be hacked due to digital rights management.

In terms of retrieval and usage, e-books are relatively simple to retrieve, convenient for resource sharing, and have lower compatibility requirements. Major advantages for e-books are that they have the ability to be accessed by more than one user at a time. The multi-user capability has great implications especially for libraries whether public or academic which work with many users. E-books have the capacity to merge multiple technologies such as speed technology, Bluetooth 2.0, clear type technology, read aloud text to speech capability and many more other new technologies which will enable users' better usage of the books.

The e-book in general has innumerable advantages but the one advantage for those that require reading glasses is the adjustable text, i.e. the ability to enlarge and shrink text as needed by the user (Pavlik, 2008: 220). Another benefit would be that "many e-books include different multimedia effects, such as written text, oral reading, oral discourse, animations, music and sound effects" (Korat and Shamir, 2007: 248). This creates interactivity between the user and the book.

E-Books offer accessibility, flexibility, and searchability in ways print cannot - in addition to providing a fundamental method to knowledge discovery. E-Books can benefit you whether you're a librarian, researcher, or student.

2.3.2 Disadvantages

The e-book has many advantages although there are still a few deficiencies and vulnerabilities. There is a restriction on electronic equipment, internet reliability, fragment reading, compatibility of software, and the initial cost. Other disadvantages are navigation implications on an e-book device and unreliable life span in terms of long term digital storage (Bennett and Landoni, 2005: 10). The concept of the reader's first edition will be lost due to the fact that one digital copy cannot be visually different from the next (Wikipedia Contributors, 2009a: online). When the electricity is out and the battery runs flat, you cannot read your book(s). If a certain format is discontinued, you may not be able to acquire the new titles, especially if your reader is locked into that format. However, a change of software can sometimes fix that. It's usually extremely difficult to purchase electronic books without a credit card or PayPal account. Most

handheld reading devices still cost too much. But you can still use your desktop computer or laptop or even your Pocket PC.

2.4 E-book Acquisition

The largest vendors of e-books are NetLibrary, EBSCO, Ebrary, Knovel, Safari, and Books 24 x 7, and, Gale (Wicht, 2006: 15). The pricing and access models vary. E-books are available for purchase or subscription. In the last 3 years there has been a significant increase in publishers and vendors having e-book options which within the last year has developed into the cornerstone of the e-resources and is essential in the migration of print to electronic media for virtual libraries.

In the subscription model an annual fee is paid to the vendor in order to have access for 12 months to the selected contents or subjects. The University of Hong Kong Libraries (HKUL) has access to a variety of e-book suppliers such as the notable Ebrary, and NetLibrary in their collection. In the selection of e-books they favoured mainly the information needs of the staff and students. An e-book study that HKUL conducted examined the purchasing model of e-book acquisition.

Based on their study they determined that the subscription model of e-books was highly unfavourable due to the cost difference of the ever increasing subscriptions and outright ownership of the journals (Chan and Lai, 2005: 205,210). In concurrence with the HKUL Survey, the Ebrary survey alludes to the fact that the preferred acquisition model was tied between these two preferences, 59% purchasing model and 55% subscription model. While globally there is a tie in preference, it was determined that the preferences for the acquisition of e-books are between the two models namely the content (Purchase Model) and quantity (Subscription Model) models (Mckiel, 2007: 5, online).

According to Mckiel, (2007: 5, online) a majority of the respondents on the Ebrary survey noted that they prefer not to duplicate the purchasing of print and electronic titles, although the status quo remains that most libraries purchases both electronic and print titles for their

collection. Note has to be taken that although these librarians order duplications, according to this survey, they only purchase these duplicates if usage is high.

2.4.1 E-book Aggregators

2.4.1.1 NetLibrary

OCLC NetLibrary provides E-books and E-content to libraries, corporations and government organisations. NetLibrary has developed different packages for different institutions. The program is made available online which provides wide access across multiple facilities in accessing institutions' collections. (NetLibrary, 2009: online)

One of the advantages of NetLibrary is that it is possible to search for a term in the entire full text of the book. One disadvantage is that NetLibrary works on a system of single user access or one book per user at a time, so if a book is in use by one patron another user cannot access that resource (NetLibrary, 2009: online).

2.4.1.2 Ebrary

Ebrary offers multi-user access to its collection, which includes aspects such as business, computers, humanities and many more. Information tools have been developed by Ebrary to enable users to access not just the institution's collections but search related content resources across the Web. Subscriptions are either individual or premium title purchases. In order to view, copy, or print from an e-book, you must download and install the Ebrary Reader plug-in (Ebrary.com, 2009: online).

The selection of Ebrary enables libraries to benefit from numerous advantages, including the following:

- Anytime/anywhere access.
- Ebrary InfoTools networks every word in the book with other online resources.
- Multiple options for searching and navigating.

- Individual bookshelves automatically stored links to highlights, notes, and much more, providing an archive of research. Folders can be emailed to peers.
- Automatic cited when text is printed or copied and pasted into Word or any text applications. Citations include a URL hyperlink back to the source.
- Highlighting and annotating.
- Ability to alter the text into a hyperlink to a URL of the end user's choice.
- Text to speech and other keyboard shortcuts help to assist the end-users with special accessibility needs.
- COUNTER-compliant usage statistics.
- Free on-demand MARC records.
- On-site or live, web-based training with a real person. (Ebrary.com, 2009: online)

2.5 ICT Usages Studies

According to Dastgerdi, (2009: online) the librarian's role has forever been changed as a result of the development and use of ICTs. With the ever developing ICTs the library users have begun to expect more from librarians. The author concluded that as a knowledge society grows so should the librarians' skills in terms of ICTs, and cultural awareness. The use of ICTs in the research process places an additional emphasis on the skills required for planning, searching and evaluating information.

A study done in Kerala, India (Mohamed Haneefa, 2007: 23) investigated users' satisfaction of ICTs. The second most used resource by librarians was the World Wide Web (WWW). Usage of ICTs has become more important as the bases of the library collections are becoming more and more digital. As the libraries switch to these digital (ICT based resources) resources such as e-journals, e-books, online databases, and other web-based resources, they are quickly replacing traditional resources. According to Mohamed Haneefa (2007: 24), the special libraries in Kerala subscribe to all these databases, e-books and other e-resources. The users, including librarians, still use print media the majority of the time rather than e-resources due to the fact that the infrastructure is inadequate. Though the users require the e-resources they are unable to use them effectively.

The differential usage of ICTs as a learning tool by New Zealand teachers was studied. Ward (2002: 1502, online) discusses the impact of teachers using these tools and the effect on the student populations within and across different schools. The rapid development of information technology has created an unconscious dependence on ICTs; therefore libraries have had to adjust to newer functions in a Web literate world due to the trend of quick 24/7 access and exclusive portability.

As discussed in chapter 1, Adekunle, Omoba and Tella (2007: online) studied the attitudes of librarians towards the use of ICTs and examined the relationship between the librarians' attitudes towards IT and other technologies. They had targeted librarians in libraries in Oyo, Nigeria; the results revealed that there was a positive attitude towards ICTs in the libraries. The results indicated that training and knowledge of ICTs influence the attitudes of the librarians towards it. A similar study conducted on the use of ICT tools by librarians in the Indian state of Tamil Nadu resulted in finding that most people that were surveyed used some kind of ICT tool whether it was e-mail, internet or mobile phone. A further discovery was that women scored higher than men in terms of the usage of the ICTs. Therefore based on the study the respondents strongly believed that ICT tools play an important role in supporting their roles as librarians (Dhanavandan, Esmail and Mani, 2008: 7, Online).

2.6 Academic Librarians and E-books

As e-books become increasingly popular in today's modern library, librarians are discovering new challenges in finding the best ways to acquire, catalogue, access and read the format information. The demands of the knowledge society require a librarian to have new skills. Librarians need skills in knowledge management, information science, and use of information and communication technologies. Librarians as professionals are more often than not the earliest adopters of new technology. Changes to the librarians roles appear to be transitional, a continual process, constantly evolving. As these emerging technologies are created there has begun a change in the role of the librarian as mediators to the users to effectively enable our users especially in an academic library to use newer technologies or resources. The librarians have to be the interface by which these users employ the technology (Griffiths, 1995: 129).

Similarly to Griffiths, Engel and Robbins discuss the evolving roles for electronic resource librarians in Yu and Breivold's (2008: 105,106) book, beginning firstly by defining the core competencies of a librarian. The core competencies are knowledge, attitude and skills to execute the job effectively. Furthermore, part of the official job description of electronic or digital resource librarians is to teach not just patrons but librarians themselves about how to use new e-resources (Yu and Breivold, 2008: 114).

The core competencies come to play in this official description because librarians as mentioned earlier are the "adopters of new technology". With constant communication between librarians and users for example, Radford (1999: 25) elaborates how librarians interact through building a relationship between users through conversation and mutual understanding. The librarian can keep current with these technologies, and through this knowledge there is an adjustment in attitude leading to the further development of skills for the librarian and the users. Katsirikou and Sefertzi, (2000:708) discuss in their conclusion that with these new innovations (e-books) librarians can have a major impact on the academic community in terms of embracing innovation and learning how to change in order to better their skills and support for the users .

Hardesty and Sugarman, (2007: 196, 197,198, 203) suggest that to be knowledgeable about latest trends is critical for academic librarians to be successful. They further discuss the use of new technological advances to keep up to date in librarianship. This survey acknowledges that the librarians using such new methods has created a "new librarian", one who is technologically advanced and keeps up to date with these technologies via Web 2.0 such as blogs and webcasts. As with e-books, the use of blogs and RSS feeds to keep up to date were least popular with the survey takers at the time of the survey. Blynko (2007: 22) provides in her study a general summary of what are e-books are, and describes their uses by libraries. The survey reported that over 81% of responding librarians worldwide believed integrating electronic resources into their collections to be "very important" (Blynko, 2007: 22).

Academic librarians who know and use e-books see them as useful tools. The desire for users to use e-publications has grown exponentially with computer usage. The academic library has

been inundated with opportunities to create collections of e-book materials for their users. According to Silipigni-Connaway and Wicht (2007: online), user studies have shown that the academic community at large wants full text content and that they can easily get this information via the World Wide Web.

Silipigni-Connaway and Wicht (2007: online) further investigated the librarians' perspective on e-books based on the Ebrary survey where they discuss Mckiel's analysis of how the users are accessing the e-books which in turn was detrimental to the progress of usage as it was viewed via the online public access catalogue (OPAC). The overall usage of e-books was good but usage inhibitors were lack of awareness, difficulty in reading and especially lack of training (Mckiel, 2007: 4, online). According to Renner's study (2007: 1, online), in which the cost and benefits to academic libraries is discussed, it has been determined that library policy is a key factor in the implementation of e-books within libraries.

In this study librarians acknowledged that e-books were an opportunity to increase existing collections and enhance user's research experiences. Although they acknowledge this they say that e-books are still a developing market. They discuss how the introduction of e-journals into collections have laid the foundation for developing better usage amongst users for e-books as they have already become used to this technology (Renner , 2007: 5, online).

A new type of reading has emerged in terms of reading an e-book, which has been chiefly influenced by the younger generation that uses multimedia based information gathering. With the ever increasing growth of the computer or multimedia literate, electronic access is expected. Librarians need to stay current with the new technologies, and in particular, handheld readers for e-books. At the International Digital Publishing Forum in 2006 (Rogers, 2006: 25, 26), William Endhoven of iRex Technologies said that despite the high number of hours individuals spend in front of computer screens, people still do not want to read at length on their computer.

He explains that these readers who skim read eventually end up printing the necessary text for their use. According to Endhoven, e-books have to develop their own identity. User Studies

have evaluated e-books usage across different areas, either from the users' or library's perspective. Most studies today are comparisons in the virtual "fight" between e-books and print books, the differences, advantages, uses, and disadvantages of both sides (Sprague and Hunter, 2008:151,152), although with this (my) study the focus is upon librarians themselves as users of the e-book.

According to the JISC (Joint Information Systems Committee, 2008: online) National e-Books Observatory Project conducted in the United Kingdom (UK) in 2007, the academic population are using online books for their scholarly work. The UK National E-Books Observatory study looks more deeply into this dimension of e-book use, asking survey respondents about their e-book reading behaviour.Woodward and Edward (2001a: online and 2001b:5) outline the work of the UK JISC in the area of e-books. They further discuss how in an Ebrary survey librarians were asked why they had not bought more e-books, and the top answers were prices were too high, little from which to select and better e-book access models are required.

Ultimately they discuss what librarians really want from an e-book. According to the JISC E-book working group (CHEMS, 2006: online), a report on the feasibility study of the acquisition of e-books by Higher Education (HE) libraries and the role of JISC, they essentially want current titles, multiple user access, easier access, a more systematic way of searching for e-books and finally the flexibility of choice between subscription and outright buying options.

The Fernandez, (2003: 1, 25, 30, online) masters study compares library usage of monographs in both print and electronic formats at the University of North Carolina at Chapel Hill. Comparing the usage data, the overall trend showed that on the average, print books were used more than their electronic counterparts, and therefore the findings suggest that the users were equally comfortable with both formats, and may use either as suits their reading needs. This is a logical conclusion, as both formats have their own inherent advantages. Ultimately, the electronic book collection may serve well as a complement to the traditional print collection.

In his final point he suggests that ability to chose which format to access is a considerable advantage for library users, as they can exercise preferences so as to better meet their

information needs. Ball, (2009:22) suggests that e-books have become very important in the academic sphere and are part of a "professional media mix". The last few years has seen books, journals and databases converged into a major electronic medium.

Veldsman, (2008: online) describes what challenges are being faced by libraries. Adekunle, Omoba and Tella (2007: online) concluded that the attitude towards ICTs is highly important in bringing acceptance and usage of a new technology. Another study of e-books in the UK suggested that librarians and publishers have technophobia (Armstrong and Lonsdale, 1998: online). Veldsman (2008: online) describes the attitude towards e-books as requiring a paradigm shift from skepticism to acceptance. Importantly, she talks about e-books for use rather than reading. In her view e-books are a resource for professionals and academics who use the information to produce research. In her opinion librarians 'only' provide the information. The 2007 Global Librarian E-book Survey, conducted to better understand e-book usage, purchase drivers and inhibits, and digitization and distribution needs of libraries was completed by 583 respondents, 48% non U.S. and 552 institutions (Mckiel, 2007: 1 and 2, online).

A Springer survey (2009: online) on the end user perspective asked the question why librarians are so quick to adopt e-books. The results indicate that the librarians supposed that e-books enhance user access and book functionality while providing superior access to more content. The survey also found that the librarians value especially the space saving capabilities and the greater security by using electronic resources which reduce book losses and damage. They then discussed how e-books have begun to be "engaged in horizontal information seeking and power browsing" in other words the users bounce from one resource to another skimming the material in order to gain the research they require (Springer, 2009: online).

Springer's findings on the usage of e-books are consistent with the JISC study in the UK, which found that 60% of users surveyed had used e-books. The impact of the e-books upon libraries and librarians has created many opportunities and challenges. The opportunity for usage of e-books would be the full text access combined with searching capabilities. With the onset of e-readers the ability to access these "books" from anywhere and to have quick and

easy access to new and updated revisions of textbooks and other necessary reading is in evitable (Chakrabarti and Gurey, 2009:419, online ; Springer, 2009: online).

Another survey called the CARLI E-book Survey was conducted in March 2009 to better understand the members' needs, management of the resource and plans in the near future. From this survey they were able to deduce that libraries expect a variety of features such as integrated links to Google Scholar, RSS Feeds and the ability for federated searching. The conclusions noted from the survey were that the Digital Rights Management limitations were unacceptable and the main finding was that the librarians as a whole were satisfied with the usage and the contents of the e-books (CARLI, 2009: online).

Librarians manage with what can now be considered to be "traditional" electronic books, minute attention is paid to the prospective breadth and diversity of e-books. The surveys show that the librarians are only partially aware of students' acuity about electronic books and that there are conflicting the priorities among students, faculty, and librarians. (Soules, 2009: 9, 10, 19)

Bennet and Landoni, (2005) provide an analysis of e-books' slow uptake from various approaches such as librarians, authors and publishers. The ultimate findings based on the study was to discover that although users were taking advantage of the e-books, there seemed to be a lack of usage amongst librarians and other faculty staff and to enable usage amongst these different spheres of knowledge, better promotion needed to take place.

Bronshteyn (2007:560,561), reports about her paper on using Netlibrary e-books at the reference desk. The study was conducted to encourage librarians to utilize e-books for their professional needs. In doing so the paper notes that e-books were well used by the patrons and in effect offered numerous conveniences.

In 2005, the University of Denver's Penrose Library had conducted a survey of its users to determine their degree of knowledge of electronic books, how and why they use them, and their level of satisfaction with the format. As e-books gain footing in the academic research

endeavour, librarians need to know not only which e-books users read, but why and how they read them. Based upon the usage statistics the e-books were relatively well used and most respondents indicated a preference for print although a larger number of respondents benefited from the flexibility of using both (Levine-Clark, 2006:285,291.297 and 298).

2.7 Chapter Summary

Access to books via a digital medium is an enhanced way to give everybody access to resources. The studies all revealed that librarians have great expectations about the electronic formats. Given that e-books to date have been given mixed reception as more publications are "born digital", e-books and e-book readers are advancing as dramatically as the cell phone, it would be in the interests of librarians to keep track of the e-book future developments.

CHAPTER 3

Methodology

In this chapter, the research methodology of this study is addressed. The research approach and plan, theoretical framework, and limitations of the study are discussed. The population for this research was academic librarians. The sample emanated from those who had access to the LIASA email discussion forum. The Library and Information Association of South Africa (LIASA) is a professional organisation for librarians in South Africa. The questionnaire (Appendix A) was trialed and changes were made based upon the responses.

3.1 Research Approach and Plan

The reason for using a quantitative research approach for this study is to gather evidence to explain how and to what extent the academic librarians in South Africa make use of e-books. The 2007 Global Librarian E-book Survey conducted a global online survey to determine e-book usage, purchase drivers and inhibitors, digitization and distribution needs of libraries (Mckiel, 2007: 2, online). A Springer survey (2009: online) on the end user perspective study asking the question why librarians are so quick to adopt e-books was also distributed online to European Institutions' namely:

- Centrum voor Wiskunde en Informatica (CWI), Centre for Mathematics and Computer Science, Amsterdam, The Netherlands
- University of Illinois at Urbana-Champaign, United States
- University of Muenster, Germany
- University of Turku, Finland
- JRD Tata Memorial Library Bangalore, India (new participant in 2008).

The methodology used to collect the data in this study is survey research. Surveys in general are about the collection of pertinent information from the participants in a structured format.

Surveys are part of quantitative research methodology where the researcher studies the relationships between two variables such as e-books and academic librarians (Malhotra and Grover, 1998: 409). The survey addressed electronic books in general.There are four main components of survey research, namely survey design, sampling, implementation and analysis and reporting.

Survey design is about how the actual survey is designed for the participants. Sampling is the process in which the researcher selects a population from which they require their information. Implementation can be via telephone, in-person, internet, mail or mixed mode for example, telephone and email (Fowler, 2002: 4, 5, 6, 10). In analysis, according to Punch (2003:45, 72), there are three steps namely, summarising and reducing the data accumulated from the survey; descriptive analysis of the different variables across the sample for the survey and a relationship analysis between the different results from an analysis. Reporting is the presentation and interpretation of the research findings of the survey.

Surveys are used widely amongst researchers when asking questions with reference to beliefs, emotions or attitudes. This type of approach enables the researcher to understand each participant's unique perspective. Internet Surveys are a method of collecting information by sending surveys via email or electronic online format. On-line surveys can be conducted through e-mail or they can be posted on the web and the URL provided to potential respondents.

Participants return the completed forms to the researcher or an outside vendor. Surveys may well ask respondents to rate items on a scale for example a, Likert scale of 1-5 (Meyers, Gamst and Guarino, 2005: 192).

The major advantages of on-line surveys are:

- very low financial resource implications,
- short response time,
- researcher's control of the sample ,
- data can be directly loaded in the data analysis software, thus saving time and resources associated with the data entry process.

The major disadvantages of online surveys are:

- Sampling is restricted to an online community of users thereby not reflecting an entire population.
- Access issues in terms of web-based surveys it is assumed that respondents have access to a computer.
- Web-based surveys require that the responses are to be entered electronically, which may exclude physically disabled populations.
- Pricing issues are related to the numerous amounts of web survey websites and software which offers researchers and other users at cost the use of their web survey services. An example of such a website would be Survey monkey. This means that that some researchers may be put off from using online surveys due to the cost involved.

Some surveys also allow respondents to put in writing their feelings or attitudes about a particular event or to elaborate in more detail on an item, or to express certain suggestions.

The survey contains both open ended and closed-ended questions and the responses are analysed using accepted qualitative techniques. It can therefore be considered a quantitative study with qualitative elements. Close–ended questions are when all possible answers are included and the participant marks those that are applicable. Questions that ask a respondent to select from a list of pre-coded answers (e.g., "Yes" or "No;" "Excellent," "Good," "Fair" or "Poor") are considered close-ended. Partially closed questions are when a participant fills in a response that is not included with the answers offered usually denoted as “other” in questionnaires. Open-ended questions give the participant free reign over their answers.

The first set of questions in the present study concerns background information of each participant such as gender, age and type of institution. In addition respondents are asked questions pertaining to the individual’s skills in terms of the internet and the computer. The second set of questions concerns the understanding of e-book information. An essential part of this is how the librarians define an e-book and their underlying understanding of the technology

and the usage thereof. The first two sets of questions concern mainly background information about e-books and the participant. This information is essential to understand why and if the participants use e-books. The third and final set of questions deals with the purchasing of e-books.

The use of the internet for social science research in general is becoming increasingly common. A study outlines practical, methodological, and ethical issues for researchers to consider when using Web-based questionnaires (Fox, Murray and Warm, 2003: 167,168, 179). An electronic questionnaire (Appendix A) was distributed on the Library and Information Association of South Africa (LIASA) mailing list. The sample for this study is based on the subject and reference librarians at 23 South African University libraries who all subscribe to the LIASA mailing list. Subject librarians have special knowledge of a particular subject or subjects and provide an information service in their specialist fields covering all formats, including e-books. Reference librarians make extensive use of databases and electronic information sources in answering reference queries. Electronic survey tools are faster than telephonic surveys. An email survey is "push technology" that allows researchers to directly communicate with prospective respondents. Email also affords the technical ability to track whether the delivered email survey was opened, responded to and/or deleted as well as if the survey was undeliverable.

3.2 Theoretical framework

A user study is the theory that frames this research. The purpose of the user study is to get an overview of users' habits, preferences, and conventions when interacting with, in this case, e-books in a work environment. Increasingly, our daily activities are supported by networked computing devices. User studies are the investigations of the use (including non-users and potential uses and users) of documents, information, communication channels, information systems and information services in an Institution, community and so on.

On the theoretical side, user studies have also been employed to understand human behaviour and to help in building models of human–computer interaction. User studies are one of the most researched and important topics in library and information studies, but it remains the most elusive as there is no distinct definition available of it (Hjørland, 2007: online).

The majority of user studies concern clients of the library such as students or academics and how they search for information or what they want from a library service. This particular study is different. The academic librarians are the users in this instance and their use of e-books in their professional work the focus.

Wilson (2000: 51) and Ellis (1989: 318) helped establish a conceptual basis for user studies. In Wilson's (1980: 5-7) definition, he focuses on information seeking behaviours of distinct professional groups because these differences among various user populations determine how they organize information for retrieval. Generally speaking, user studies concerns the way the user behaves in the search for information to meet his or her needs.

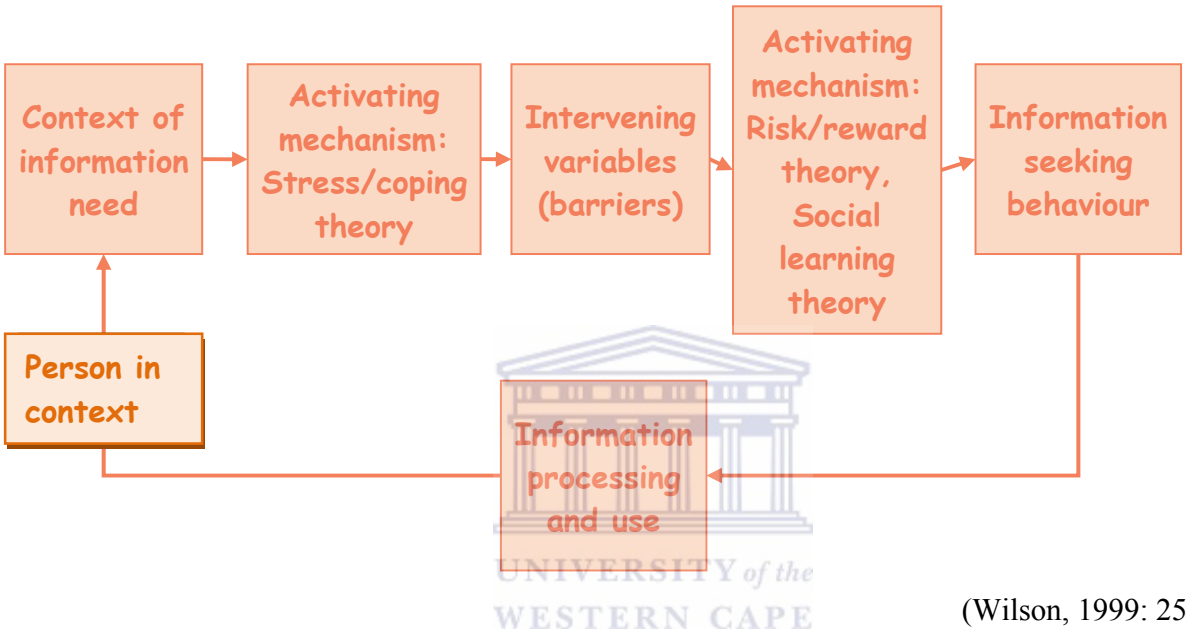
Similarly to Wilson's definition of information behaviour, Morgan and King (in Wilson and Walsh, 1996: online) describe it as a need that emerges from physiological, "unlearned" (curiosity), and social motives. Wilson (2000: 50) discusses information use behaviour which consists of physical and mental acts involved in incorporating the information found into the person's existing knowledge base. It may involve physical acts such as marking sections in a text to note their importance or significance, as well as mental acts that involve for example the comparison of new information with existing knowledge.

Wilson's (1997: 552, 1999: 252) information behaviour models developed the concept of information needs related to the role of information in a user's everyday life and work. A model may be described as a framework for thinking about a problem and may evolve into a statement of the relationships among theoretical propositions.

The majority of the models in information behaviour are statements, in the form of diagrams that describe an information-seeking activity, the basis and consequences of that activity, or the

relationships of the information-seeking behaviour (Wilson, 1999: 252). Usability is the measure by which a product meets a user's goal successfully. User studies use a very wide range of research approaches and methods, from small-scale qualitative studies to broad surveys.

Wilson's Generalized Model of Information Behaviour.



(Wilson, 1999: 257)

Wilson incorporates the notion of multi-directionality; and identifies ways in which an individual may navigate 'the gap' using different modes of information behaviour. The diagram above describes an information seeking process. The start of the process begins with an Information need in terms of individual characteristics such as physiological, emotional and mental. Information seeking will come up against barriers. Information processing and use offers a feedback loop affecting the individual and the context of that information need. Both library and information science (LIS) and human-computer interaction (HCI) research often address the effects of user attributes on information use. For example, a researcher in LIS might research the effects of gender and socioeconomic status on a user's experience in a library. Information seeking is a fundamental activity indulged in by all people and manifested through a particular behaviour. The academic work is of most interest to academic librarians who endeavour to develop collections, services, and organizational structures that smooth the progress of information seeking (Wiberley and Jones, 1989:638).

User-studies have looked for relationships and differentiation among the users in terms of their backgrounds like “status, age, experience, education, specialisation, field of research, discipline, etc” (Sridhar, 1987: 45, online). In some cases, users are partitioned into groups, such as novice users and expert users. Sridhar’s, (1987: 45, online) groups were discussed by some of the interview subjects; although some felt that this view was overly simplistic.

Another divergence in the users’ views concerned the relationship between prior knowledge, learning and change. A number of users’ described how they are constantly learning and changing, and stated that it is difficult for researchers and designers to keep up with these changes.

The emphasis on the importance of adapting research and practice to meet users’ changing needs. Smith, (2002: 93) suggested that the role of the modern library is to adapt to these users and to develop services that support their information needs.

Information need is often understood in information science as developing from an indistinct awareness of something missing and as end in locating information that contributes to the understanding and meaning (Kuhlthau, 1993: 6). Wilson indicates that there must be a reason when a person experiences an information need (Wilson, 1997: 552).

This (my) study investigated the use by South African academic librarians of a potentially valuable new information resource format (e-books) in their workplace.

3.3 Data Collecting Procedure

To realize the study objectives, a questionnaire (Appendix A) was used as the main data collection method. Firstly the questionnaire was placed Online via Google Documents (May 2009). For a 4 week period in May 2009, the e-book survey was online and a notification was

sent out several times to LIASA members via the LIASA Listserv. Visitors to the website were asked to respond to a Web-based questionnaire . Responses were automatically added to a linked spreadsheet in the Google Documents Account.

The enlistment of participants was completed in two phases. Phase 1 dealt with the pre-notification and invitation. An email was sent out across the LIASA Listserv to all librarians registered on this listserv, inviting them to participate in an E-book Survey via the web. The email message notified the addressees that the hypertext link would open a web browser to the site where the survey was hosted. Accompanying the URL was the explanation of what the survey was about and an ethics statement.

3.4 Limitations of the Study

The limitations that need to be acknowledged and addressed regarding the present study are:

1. The placement of the questionnaire on the web or on a server. The limitation is that those who did not have internet and email access were unable to answer the questionnaire or even have knowledge thereof.
2. All heads of university libraries may belong to LIASA, but not all academic librarians are individual members. Therefore librarians not registered with the LIASA would not have access to the Listserv on which the information about the survey was posted.

CHAPTER 4

RESEARCH FINDINGS, ANALYSIS AND INTERPRETATION

4.1 Introduction

In this chapter the questionnaire findings are presented, discussed and interpreted to show the user behaviour of academic librarians in relation to e-books. The questionnaire (Appendix A) was distributed over the LIASA Listserv and 25 completed questionnaires were received. Of the 25 responses, 20 came from the different universities, 3 from the research institutes and 2 other (not specified). To increase the response rate notifications were sent out via email seven times over a 4 week month period. The structured questionnaire was devised to produce wide-ranging data and information.

The findings of the survey are divided into three main sections: Section (A) focuses on the background information, section (B) focuses on e-book information and section (C) examines e-book purchasing. In analysing each question the number of respondents is indicated in each figure or table by the "number of respondents" or by 'N' e.g. N-9.

4.2 Results, Analysis and Interpretation

4.2.1 Section A: Background Information.

Survey respondents were 88 percent female and 12 percent male academic librarians (See figure 1). Librarianship has been a female-dominated industry for a number of years (Piper and Collamer, 2001: 406). This phenomenon is depicted in the female to male ratio in the survey. The highest return rate came from librarians aged between 50 and 59 years. There is a significant correlation between the relatively older group and the high levels of employment

areas within their institutions. Diversity is important in libraries and covers many aspects such as culture, age, and gender. Lenzini (2002: 88, 89) calls librarianship the "greying profession" as most of the librarians are of the "baby boomer" era, namely between the ages of 40-59. Relatively speaking, librarianship is a profession that has few young librarians.

Fig. 1: Gender and age of respondents.

Data	Respondents	Percent
Gender		
Male	3	12%
Female	22	88%
Total	25	100%
Age		
21- 29	1	4%
30-39	4	16%
40-49	4	16%
50-59	16	64%
60 or older	0	0%
Total	25	100%

Number of respondents: 25

A majority or 48 percent of the returns were from historically advantaged universities. See figure 2. The other types of institutions were 20% from universities of technology, 12% from historically disadvantaged and another 12 % from research institutes or councils. Eight (8) percent was from other types of institutions. Linking the types of institutions and the respondents' ages we can determine that the majority of the 50-59 year old respondents come from historically advantaged institutions.

The respondents' fields of expertise are wide-ranging and include arts and humanities, science and technology, medicine and health, social sciences, law, engineering, and

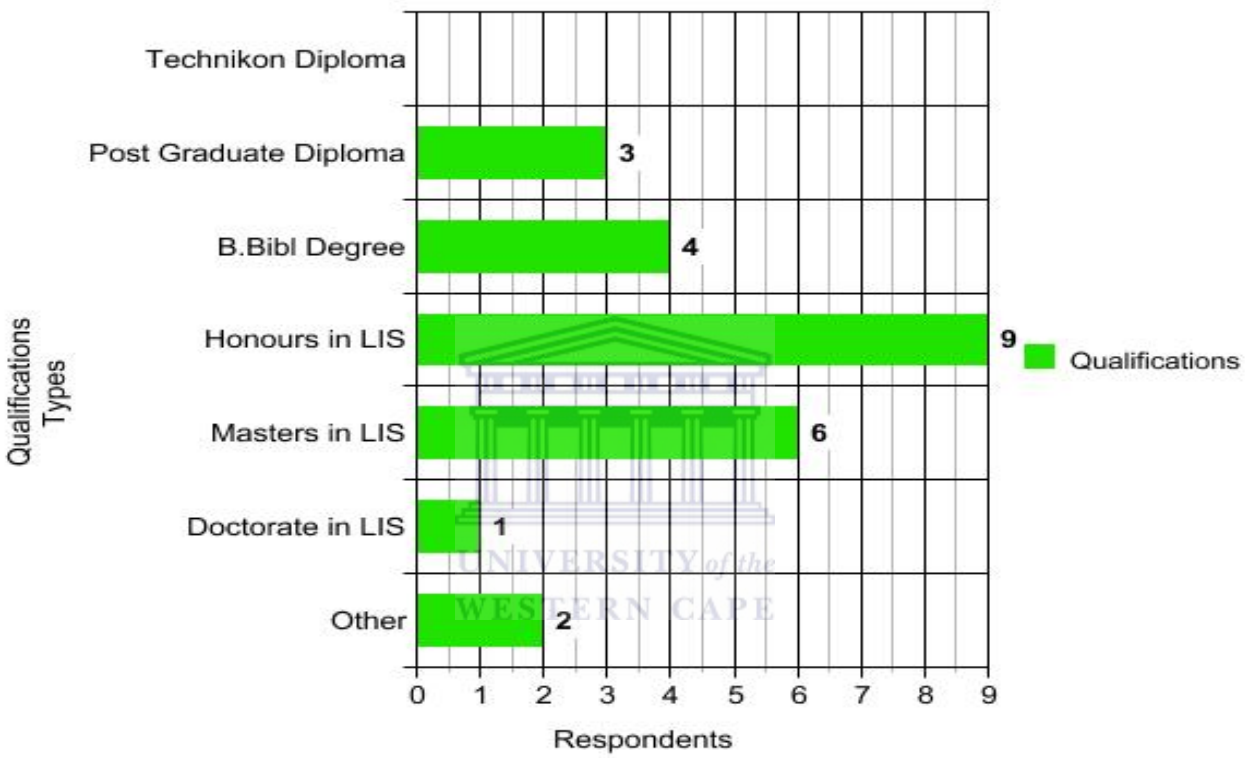
business/economics. The highest response rates came from arts and humanities. In the last decade arts and humanities research has been very interested in digital technologies. The arts and humanities face difficulties in finding conventional publishers and may benefit from electronic publications. The transformation of old text has been made accessible via e-publication and has created an immense importance for the arts and humanities research through established resources such as JSTOR and Google (Heath; Jubb and Robey, 2008: online).

Fig. 2: Institutions and Field of Expertise	Data
Type of Institution	
University of Technology	5
Historically Disadvantaged	3
Historically Advantaged	12
Research Institute/Council	3
Corporate	0
Other	2
Total	25
Field of Expertise	
Arts and Humanities	7
Science and Technology	2
Medicine and Health	5
Social Sciences	2
Law	1
Engineering	1
Business/Economics	2
Other	5
Total	25

The majority of respondents have either an LIS Honours degree (36%) or an LIS Masters degree (24%). Sixteen (16) percent have B.Bibl Degrees and 12% have Post Graduate

Diploma's in LIS. One respondent has a Doctorate in LIS and two others have non-LIS qualifications (See figure 3). Respondents reporting the highest level of education have either an Honours degree or a Masters Degree which were reasonably consistent. Respondents in the 50-59 years age group age have higher qualifications than younger age groups

Fig.3 Qualifications



Question A.5 asks respondents what type of work they do. The following responses were given, mostly in the form of a job title:

(The number in brackets indicates the number of respondents who felt the same way. Responses with no number mean one respondent felt that way)

1. "Head of Library and Information Services or Manager" (6);
2. "Systems Librarian" (3);
3. "Information Librarian" (3);
4. "Librarian" (3);
5. "Cataloguing Librarian" (3) ;
6. "Subject librarian" (2);

7. "Information Specialist" (2);
8. "Senior Librarian";
9. "Inventory controller: identify discrepancies in information resources and databases; submit report on percentage and total costs of missing items to internal auditors";
10. "I am the liaison librarian between industry and NGOs and the university";
11. "Manage the finance of the library, including capital, income and expenses, as well as manpower to certain extent for student assistant salaries for all 9 campuses";
12. "Metadata Specialist";
13. "Collection Developer".

It is interesting to note that there are a variety of different job titles for librarians in academic institutions. Towards the end of the 20th century, the term librarian has developed into a variety of different job titles such as Information Specialist, Systems Librarian and Meta Data Specialist. The largest number of respondents is in the management areas of their institutions and therefore the main decision makers.

Question A.7 and **A.8** asks respondents to describe their level of computer literacy and internet skills. Academic librarians require these skills and competencies in their work. In figures 4 and 5 below respondents determined that their skills are at the "intermediate" or "expert" levels. This means that respondents are very positive of their abilities to use the internet and computers. Computer usage has become a worldwide trend.

To use e-books you need to be computer literate. To use a basic e-book you are required to use a computer, PDA or a dedicated e-book reader to download and read the information. The e-book format must be compatible with the reader, and the reader must be compatible with the hardware operating system.

The internet is used by millions of people around the world connecting through the global world wide web of computer networks. The number of internet users is increasing every day (Albanese, 2006: 32).The skills needed for using an e-book depends on the type of e-book. The internet is growing in popularity within librarianship as users are using the web to find

their information. Users need to have both computer and internet literacy abilities to access and search for electronic resources.

Avet (2006: 155-156) discusses the use of internet search engines as a reference tool for librarians and claims that the contribution of library and information professionals to reference work has increased, rather than the reverse, as electronic information sources have proliferated. Figures 4 and 5 below illustrate that the majority of respondents feel that they are experts in both internet searching and computer literacy. It is significant that no respondent considers him/herself to be a novice. This result correlates positively with the high educational expertise of the majority of respondents who have many years of experience and training in using technology. The respondents' internet skills responses correlate well with the next question (A.9) where they describe their searching abilities.

Fig. 4 Computer Literacy (N=25)

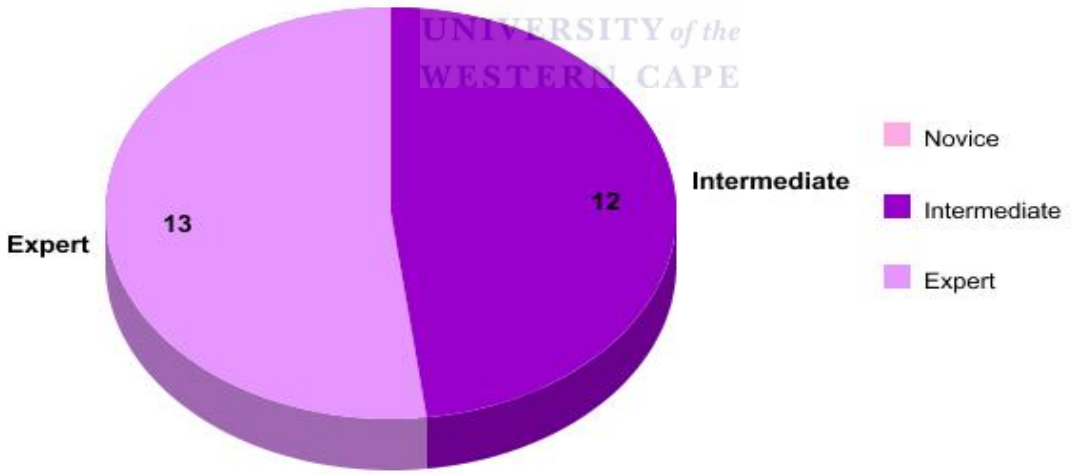
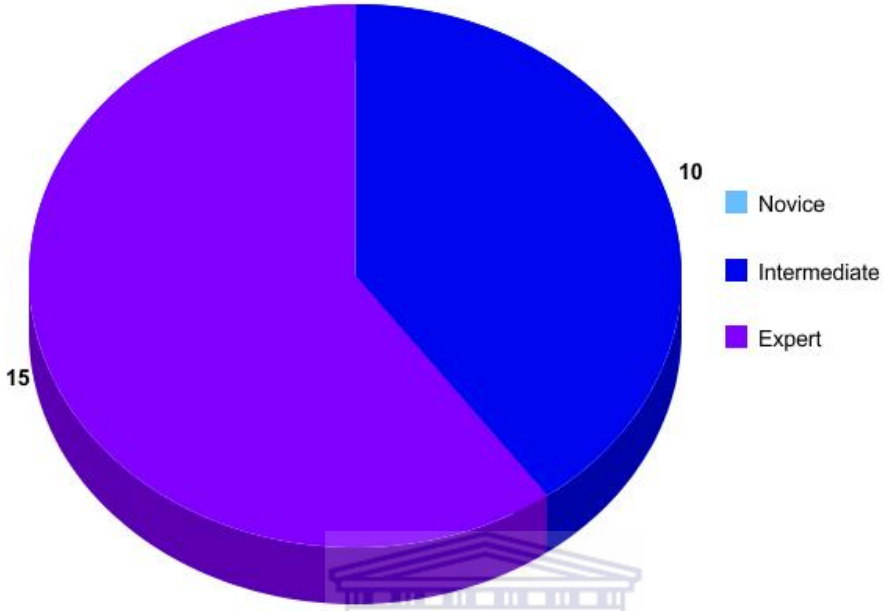
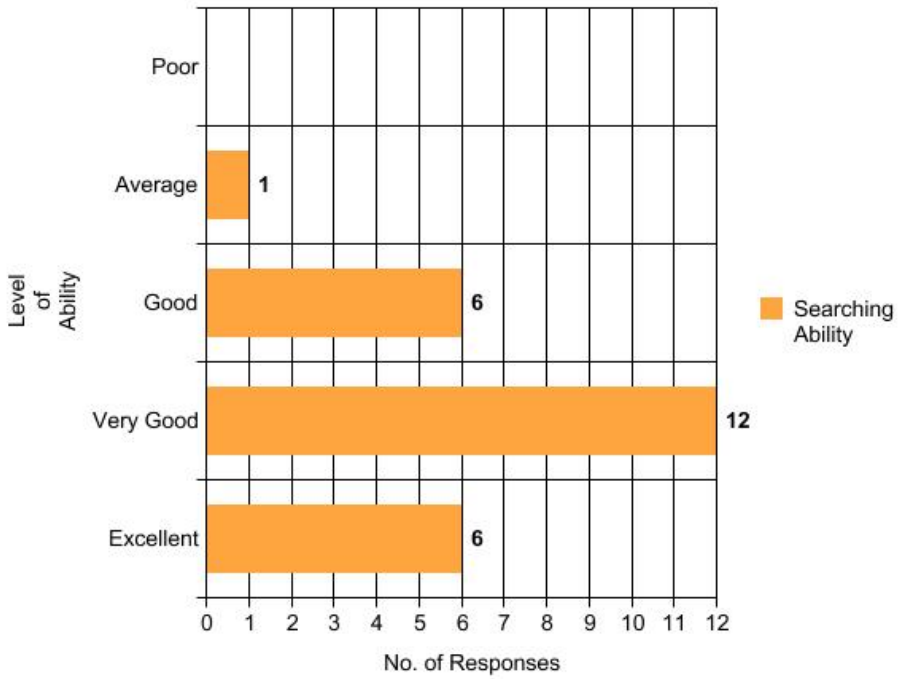


Fig. 5 Internet Skills (N=25)



Question A.9 asks respondents to describe their ability to search the internet. The figure below illustrates this:

Fig. 6 Search Ability (N=25)



Librarians in the 21st century need to be able to find information across databases and the internet. Therefore it is important to note that the respondents consider their internet search skills to be mostly good, very good or excellent. The amount of resources online has increased greatly in the last 5 years. The internet has grown and expanded and the numbers of databases that enable librarians to help students and other faculty members find information have also expanded. For example, Google Scholar provides access to article abstracts and online digital repositories provide resources from institutions across the world.

According to Stover (2000b: 472) and Ebrary (2008a: online) librarians are more than likely to use the internet for their daily work. According to Brown and Swan (2007: online) researchers across disciplines have adapted to the availability of electronic information accessed directly at their desktops. The move from print to electronic journals, databases and e-books has witnessed a major shift in the importance of e-collections as an indicator of support for research. The availability of electronic journal titles and significant backsets from publishers such as Science Direct and JSTOR has enabled all academic libraries to provide access to significant collections of scholarly resources outside of what is possible in the print only environment (Kling and Mckim, 1998: online).

4.2.2 Section B: E-book Information

This section deals with electronic book information. There was a need to identify whether the respondents know about e-books and how and why they use it. These questions ranged from defining e-books to time spent reading and the advantages and disadvantages of e-books.

Question B.1 asks the respondents to define electronic books. The many detailed responses show that this group knows what an e-book is. Rao (2003: 85-86)) defines an e-book as "text in digital form, or book converted into digital form, or digital reading material, or a book in a computer file format, or an electronic file of words and images displayed on a desktop, note book computer, or portable device, or formatted for display on dedicated e-book readers."

The respondents have various sound definitions of an e-book. Definitions by the librarians range from "digital copies of a book" to "a book which is available on the internet or

database." The majority of the respondents all have a similar definition of an e-book corresponding with the literature. The overlapping definitions of e-books suggest there are multiple ways of describing e-books. Mason and Rennie (2008: 98) define an e-book essentially as a portable device that has various functions that are supported by the different readers.

This (my) study determines that e-books are defined as the electronic versions of books that are generally accessible via the internet or the electronic version of traditional print books that can be read by using a personal computer or by using an e-book reader. The focus is on different aspects of e-books but the underlying factor amongst all these definitions is that any book published in digital form is an e-book, which is text in digital form or a book converted into digital form or a computer file format displayed on a computer screen, laptop, or a dedicated portable device.

The respondents defined it as:

Fig. 7 Librarians' understanding of electronic books (excerpts)

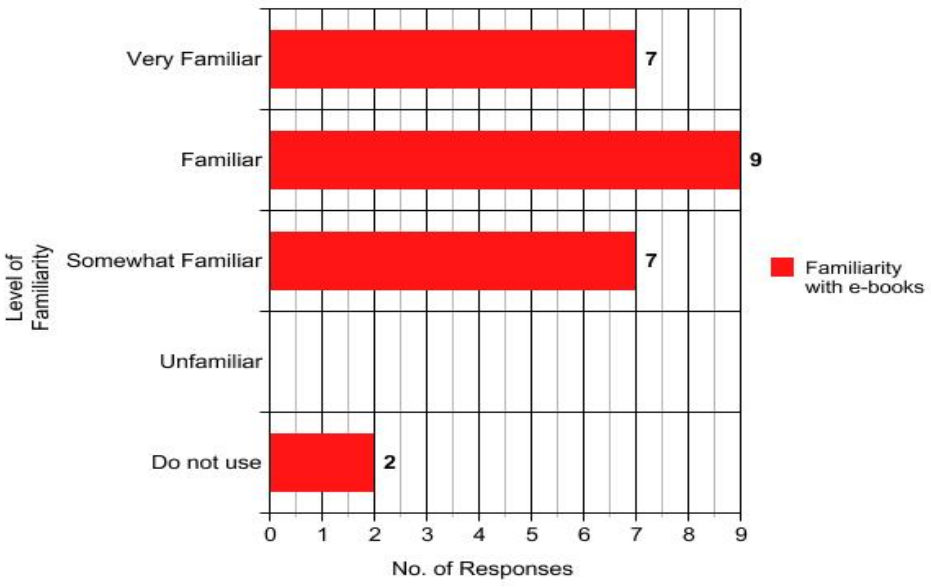
1. "An electronic/digital copy of a book, either online or other format"
2. "Information that are published in electronic format that has the added advantage of using search, storage and printing capabilities."
3. "Book available on the internet or electronic database that can be read electronically or printed into hard copy."
4. "Digital equivalent of a printed book"
5. "It is the same as a conventional (paper format) book, but in electronic format. An e-book can be read via the internet, or downloaded (and read from the computer terminal). Alternatively it can be printed and read in the traditional way."
6. "The digital version equivalent to the print version. E-content is usually read on PC's or can be downloaded. It is electronically searchable and can be used at own leisure as well as available remotely. Available in PDF and HTML format, meaning it is portable. Actively links to the PDF of some references. "
7. "Electronic books refer to books that are available in digital format. The advantage of having the book accessible via the Web is that you don't have to come into the library

to read it. The books may also be searched by keyword."

8. "An electronic book allows the reader to access the full-text of a free or commercially published, copyright protected book online. This includes reference works such as dictionaries, encyclopedias, etc. Access is sometimes free (the choice of the author or the work has passed into the public domain) or the access must be purchased."
9. "A Book in a digital format, full text searchable with additional features such as note writing etc. and you need a PC, or other device or internet access or be subscribed to have access to the book."

Question B.2 asks how familiar respondents are with their library's e-books. Of the 25 respondents the majority claim to be either familiar or very familiar with e-books. Although 2 respondents selected that they have not used e- books, no one respondent claims unfamiliarity with their library's e-books. According to Wathen and Burkekk (2002, 137), individuals search for look-a-like print versions in the web environment. Users prefer print and look for the web equivalent which they find in e-books. Respondents in the survey who are familiar with their library's e-books are more likely to read electronic books or buy them.

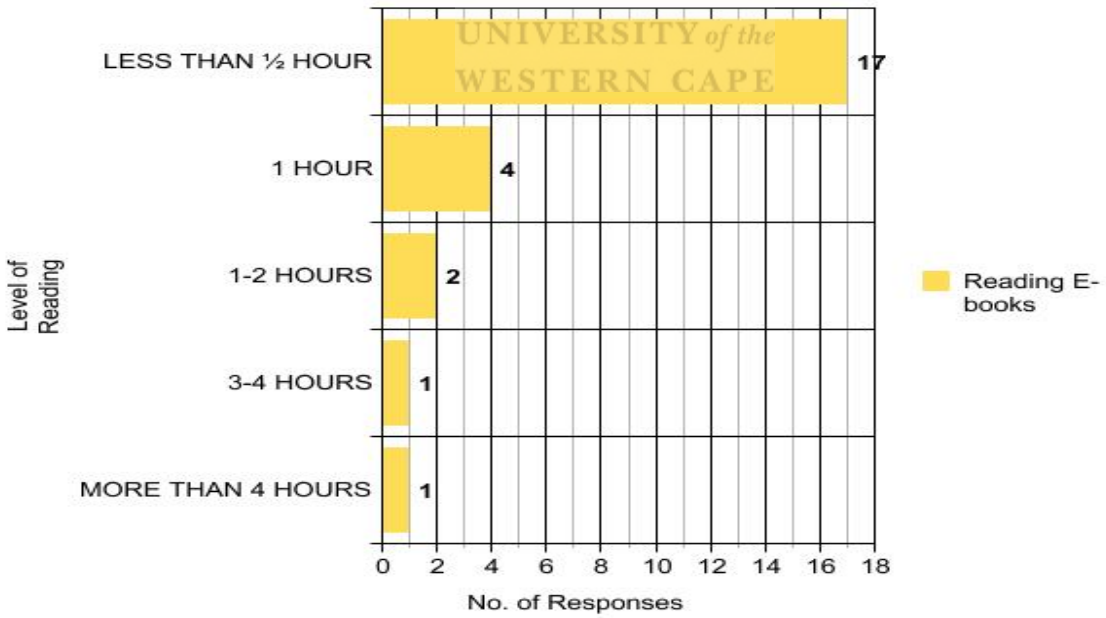
Fig. 8 Familiarity of their Library's e-books. (N=25)



In **Question B.3** the respondents were asked about the length of time spent reading e-books. The majority answered "less than a half an hour". This can be because the respondents assist students and other researchers in obtaining information and guiding users in the right direction. Veldsman (2008: online) alludes to this in her discussion of e-books and their usage thereof by academics. She believes that they are not aimed at librarians as librarians are the conduits of information to the academic researchers.

An alternative explanation is that users do not necessarily want to read at length on the computer (Rogers, 2006: 25, 26). In the present survey, of the twenty five participants, seventeen spend less than half an hour reading an e-book. The time spent on e-books could be associated with how much content is actually read. The results in figure 9 are linked to the results in figure 20 in that the respondents read their e-books in two specific ways: they either "dip in and out of several chapters" or they "skim read the text". The following figure gives a breakdown of their answers:

Fig.9 Length of Time Spent on e-books. (N=25)

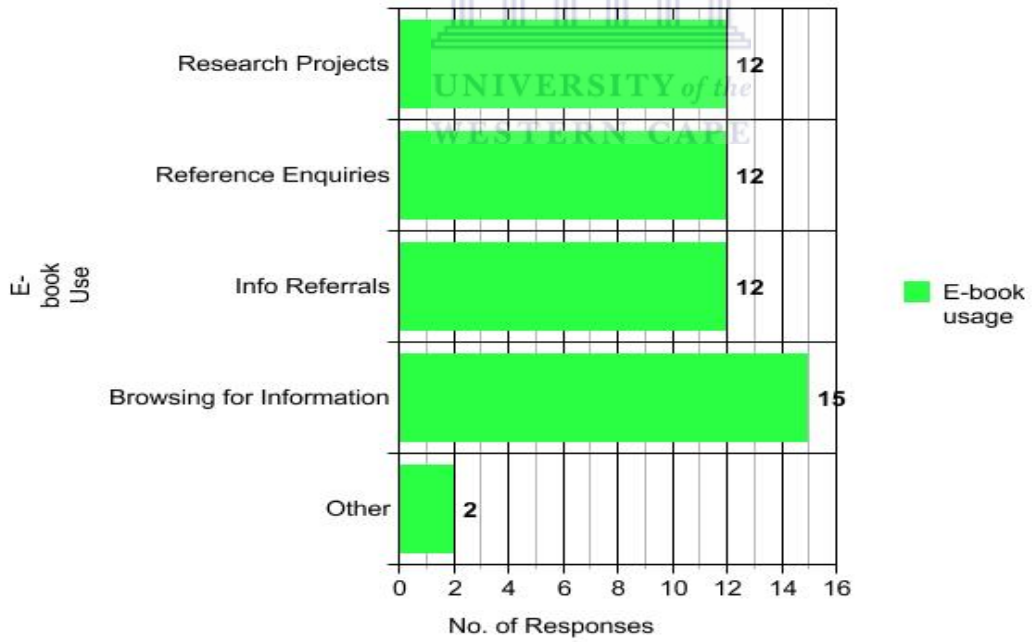


Question B.4 asks for what purpose respondents use e-books? Respondents could choose from 5 categories. See figure 10 below. The category chosen most often is "browsing for

information". The second category chosen most often is "research projects", "information referrals" and "research enquiries". According to Anuradha and Usha (2006: 54), the types of e-books their respondents were interested in reading were reference materials and technical books. The majority from the Anuradha and Usha (2006:48) study responded that they used e-books in an academic capacity. The study focused upon users of the Indian Institute of Sciences, namely researchers and faculty which included librarians.

In my survey, the reasons for respondents using e-books are linked to the types of e-books used by them (see figure 17). Veldsman (2008: online) describes the attitude towards e-books as a paradigm shift from skepticism to acceptance. She talks about e-books for use rather than reading, which essentially means that e-books are for professionals and academics and are not necessarily aimed at librarians because the academics use the information to produce research where in her opinion librarians' 'only' provide the information.

Fig.10 Purpose of using E-books (N=25)



In question **B.5** the respondents are asked what the benefits and advantages of using e-books are. (See figure 11).There are numerous advantages of e-books but the focus for this survey was on

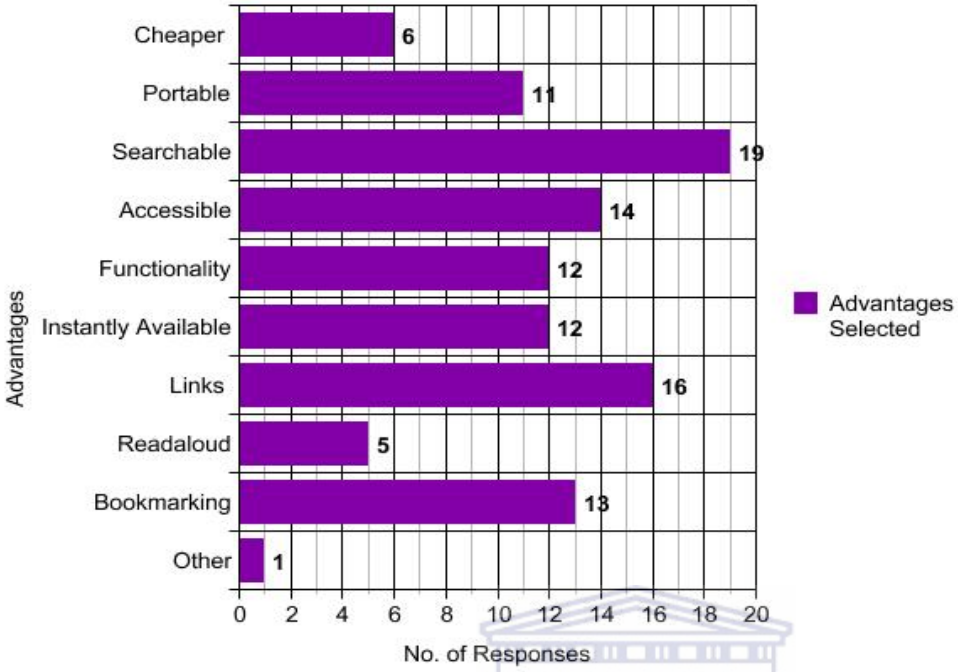
which advantage they determine to be the most relevant and important in having e-books in their collections. The searchability of e-books is considered as the most important characteristic by the respondents. In 2007, Ebrary, a leading e-content services and technology provider conducted a Global Survey in which it wanted to determine the experience of university faculties with electronic resources and print materials. Of 333 responses 164 cited the important advantages as ease of searching, finding, retrieving and distributing (Ebrary, 2008).

Almost as prominent an advantage, respondents chose linking in my study. A good example would be Ovid databases from Wolters Kluwer where e-books are linked to e-journal articles and vice versa. Links are created within the actual text of the e-books which can link to other relevant articles or books within the Ovid databases. Librarians value anytime accessibility, multiple users' access and searching and browsing capabilities because librarians are able to provide their patrons with more content with less shelf space. E-books help librarians connect to information that is needed without having to search the shelves or request searches or even inter-library loans.

The advantages least selected in my study are "e-books readers can read your book out loud to you" and "cheaper than print books." The reasons why these read-a-loud advantages are lower are because the applications are not necessary in general academic circumstances. If reading were for leisure it would be relaxing to listen to a book but as these librarians are working in an environment where they have to concentrate and evaluate information, an active research environment, reading a book aloud would be counterproductive.

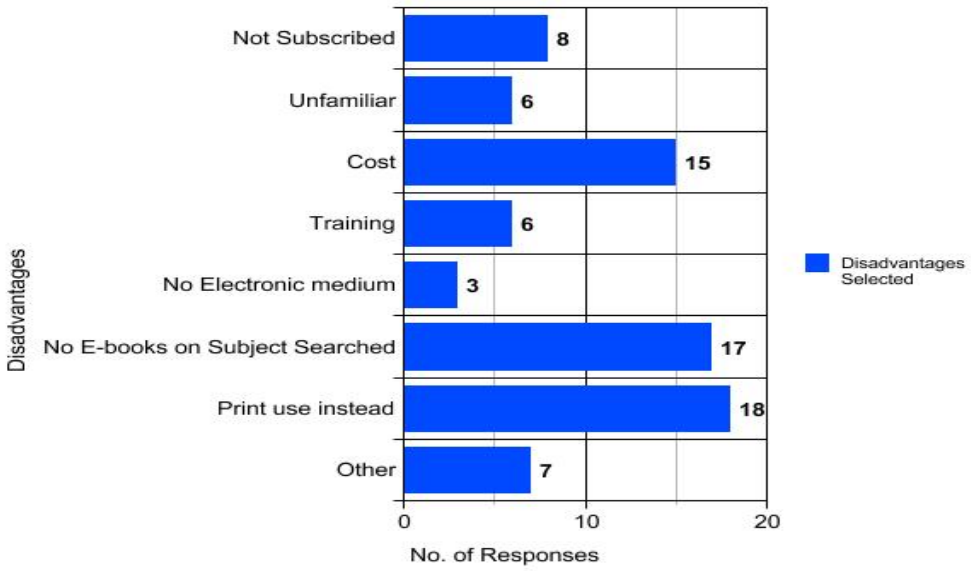
The least selected "cheaper than print" option could be due to the environment in which e-books are purchased more often as collections than as individual titles. See responses to question C1. The reasons some participants provided for e-books not being purchased at all are lack of computer access, faculty selection of e-books not taking place and with some of the institutions the budget also plays a role in the selection of e-books and e-journals. As the majority of respondents purchase on a subscription basis, they can decrease or increase their selections each year to accommodate their budgets.

Fig.11 Advantages of E-books (N=25)



Question B.6 is related to the barriers to and disadvantages of using e-books. Figure 12 below gives a breakdown of what the respondents perceive to be a barrier or a disadvantage. It appears from the responses that librarians still prefer print to e-books. It also seems that the variety of e-books per subject is still limited. Cost as a disadvantage is rated highly and corresponds positively with the low rating respondents gave cost in the previous question (B5). According to an Ebrary study (2008a, b) the disadvantages identified were usability which was based upon difficulty of reading and lack of portability. In my study the respondents' also preferred print.

Fig.12 Disadvantage of E-books (N=25)



Question B.7 pertains to the satisfaction and usage of e-books. Respondents could make multiple selections. The participants evaluated how important they perceive features of e-books. The data that was obtained are presented in figure 13. The number 1 feature is "e-book search ability" (80%) followed by "anytime access" (71%) and "off campus access" (60%). Clearly the main attraction is that e-books are more accessible, using them anytime, anywhere.

In 2007 Ebrary, a leading e-content services and technology provider, conducted a global survey where it was determined that of the 333 responses 164 cited the important advantages as ease of searching, finding, retrieving and distributing (Ebrary, 2008a, b). The ability to access e-books anytime, from anywhere means that individuals do not have to travel to the library to find the necessary text, book or article.

The ability to retrieve information within the actual books by searching is very popular too. The Adobe PDF even has the ability for the user to search individually from terms within a book for a specific chapter or paragraph. This is illustrated by the 21 respondents indicating that searching for information is “very important”.

Another important assessment topic is the “automatic citation” feature. This feature, provided by some of the aggregators such as Ebrary, allows for efficiency and accuracy of referencing.

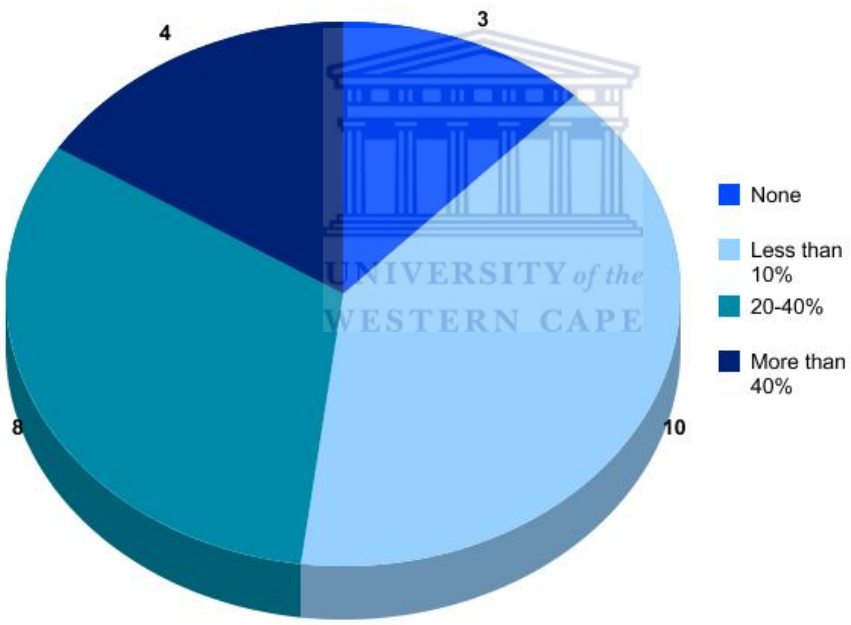
Fig. 13: Satisfaction and Usage Assessment towards Electronic Books

Assessment Topic	Very Important	Somewhat Important	Not Important
How important is the searching feature to e-books?	21	4	0
How important is the anytime access feature to e-books?	20	5	0
How important is the Off campus access feature to e-books?	16	8	1
How important is the ability to use one or more e-book at a time?	11	13	1
How important is downloading e-books to a laptop?	9	14	2
How important is the Copying and Pasting feature to e-books?	9	12	4
How important is the printing feature to e-books?	11	10	4
How important is the zoom and scale feature to e-books?	10	11	4
How important is the Automatic Citation feature to e-books?	15	9	1
How important is the ability to email text feature to e-books?	10	12	3
Are E-books important for use within you library section that you work in?	6	15	4

Question B.8 pertains to what percentage of e-book data respondents include in their research, information referrals and reference queries. Although 10 respondents claim they use e-books "less than 10%" of the time, a significant 12 respondents use e-book data more than 20% of the time (8 between 20-40% and 4 more than 40%). Academic libraries have long had a commitment to supporting the research activities of their institutions.

Dastgerdi (2009: online) says that the librarians' role has forever been changed because of ICTs. Ismail and Zainab (2005:11) found that students within their survey had made use of e-books within their projects and assignments fifty percent of the time.

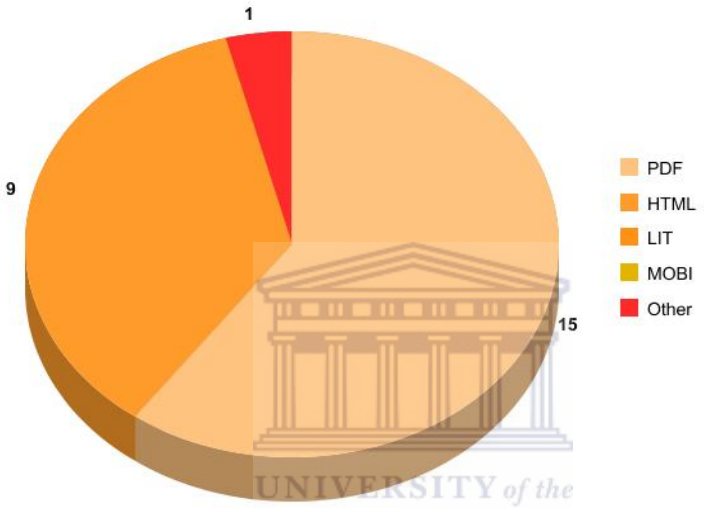
Fig. 14 Percentage of e-book data used (N=25)



Question B.9 asks respondents in what format they generally read e-books. The predominant formats used, according to the results, are hypertext markup language (HTML) and Portable Document Format (PDF). See figure 15. This finding corresponds well with the literature. According to Newman and Bui (2010:26, online) the main preference of e-book format usage is PDF.

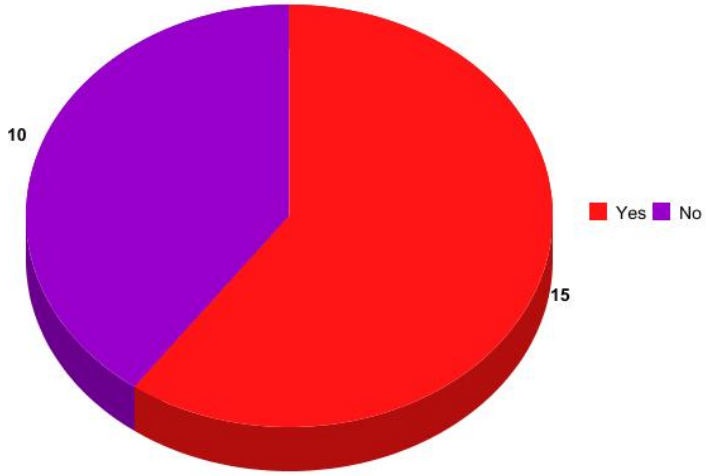
Forty one percent of the world wide respondents in the Highwire Press survey preferred e-books in PDF as these can be made use of across campuses and easily transferred or uploaded onto an institution's Online Public Access Catalogue (OPAC). The PDF mimics a book in an electronic format. PDF can be downloaded for free from Adobe Acrobat and can be used over various platforms such as Windows XP, Vista and Linux (Adobe Systems Incorporated, 2008: online).

Fig. 15 Format of e-books used (N=25)



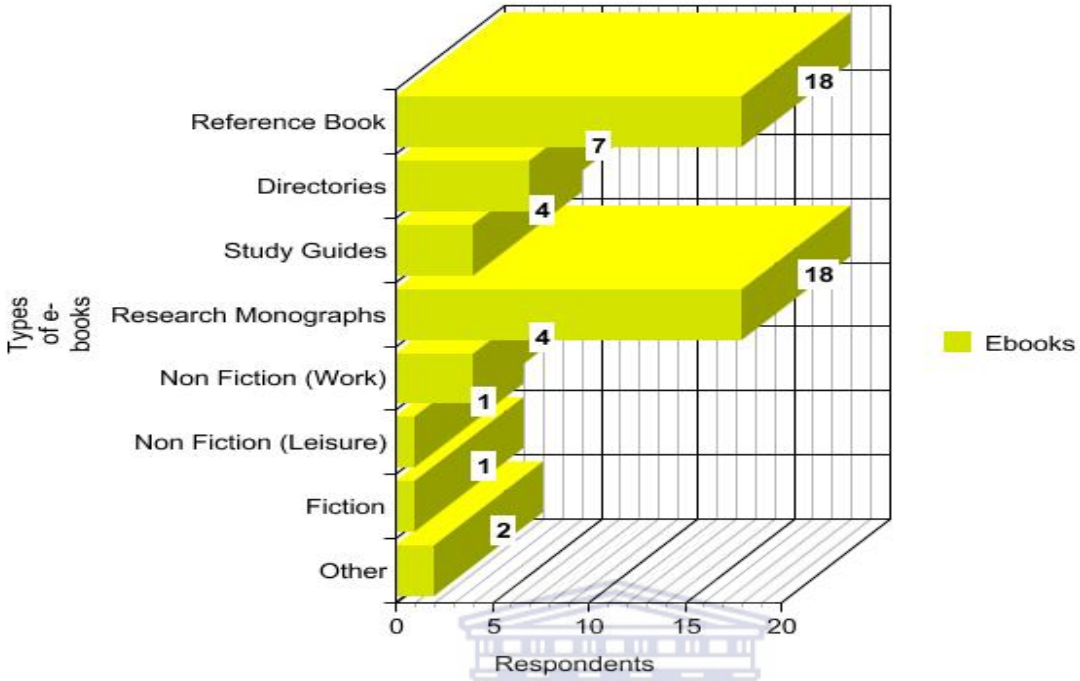
Question B.10 asks respondents if they actually find information they are looking for in e-books. More than half of the respondents (15) selected 'yes' for finding information they need from e-book content. The other 10 respondents said 'no'. The more users of e-books find relevant content, the more likely they will be inclined to try e-books again. Question B.6 of the survey discusses the disadvantages of e-books. A fair number (17) of respondents identified the limited number of e-books per subject as a distinct disadvantage. It appears that, despite the restricted e-books per subject, librarians are still able to locate pertinent information in e-books.

Fig. 16 Searching e-book content (N=25)



Question B.11 asks what type of e-books the academic librarians use. The result is a tie in usage between reference books and research monographs with directories coming in second (See figure 17). E-book readers such as the Kindle are only now being introduced to South Africa. Perhaps one of the reasons for e-books being less associated with leisure-time reading is the PC or laptop dominant reading devices. Reading a complete novel on a computer is not very comfortable. Librarians are not necessarily reading the content but searching or browsing for content for students or researchers. According to the Anuradha and Usha (2006) study, the use of e-reference books is high within institutions. What is surprising in their e-book study is that electronic monographs are used minimally because most institutions have larger e-reference books than e-monographs.

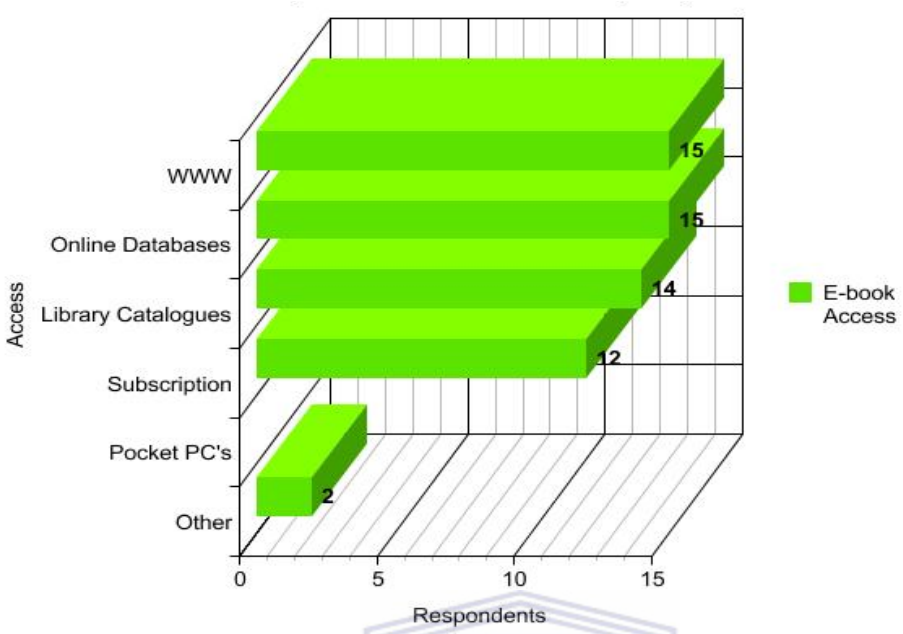
Fig. 17 Type of e-books used (N=25)



Question B.12 asks how the respondents access e-book information. From the results we can determine that two most used methods are online databases and the World Wide Web (See figure 16). Institutions subscribe to the databases directly either via Ebrary, NetLibrary or Science Direct. Alternatively e-books can be obtained via the Web (e.g. Google, online bookstores). Ebrary (2008b) determined from a survey of librarians how they access e-books. Of the 150 respondents from across the world most chose, in this order, the library catalogue"; "library website and "Google". In my study the "library catalogue" is ranked third. Internet search engines and the World Wide Web are utilized more readily by librarians today as reference tools (Avet, 2006:155,156; Stover, 2000 and Ebrary, 2008).

Twelve (12) respondents indicated that they access their information through subscriptions. This trend is contrary to overseas studies such as the HKUL study which determined that the subscription model of e-books was highly unfavourable due to the cost difference of the ever increasing subscriptions and outright ownership of the journals (Chan and Lai, 2005: 210).

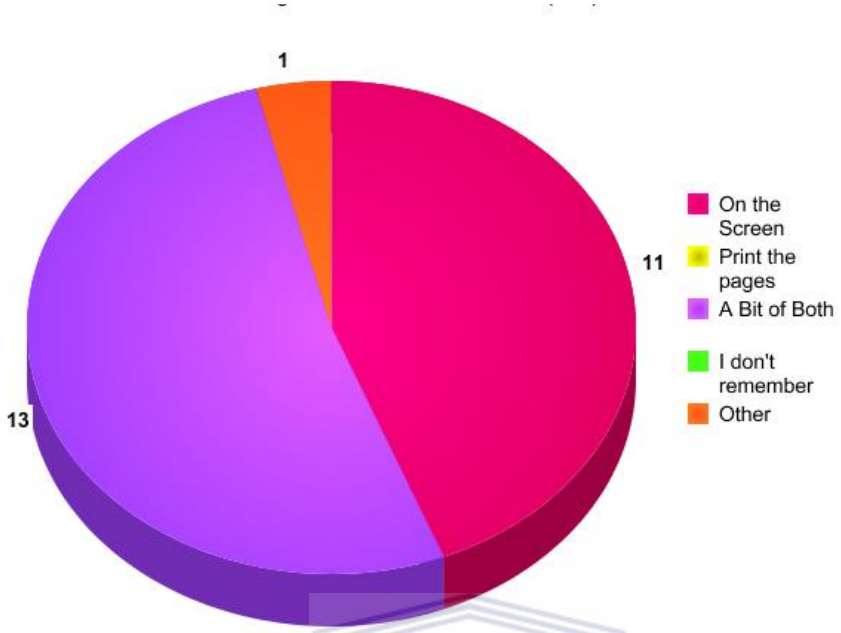
Fig. 18 Access e-book information (N=25)



Question B.13 asks how the respondents read the content of an e-book. The highest number of the respondents selected that they do "a bit of both" which means they print and read in print format as well as on the computer screen. A significant number also indicated that they read directly from the computer screen. The reason could be that the respondents find it more comfortable to print larger documents to enable better reading and read short articles or abstracts on the screen.

Rowlands, et al (2007: 498) studied the preferences between reading electronically on the screen, reading from the printed page and "a bit of both" in different age groups. According to the study the age groups between 46-55 and 56-64 years of age prefer reading "on the screen" and a "bit of both". This corresponds with the findings from my survey where the majority of respondents are 50-59 years, are more likely to do a "bit of both".

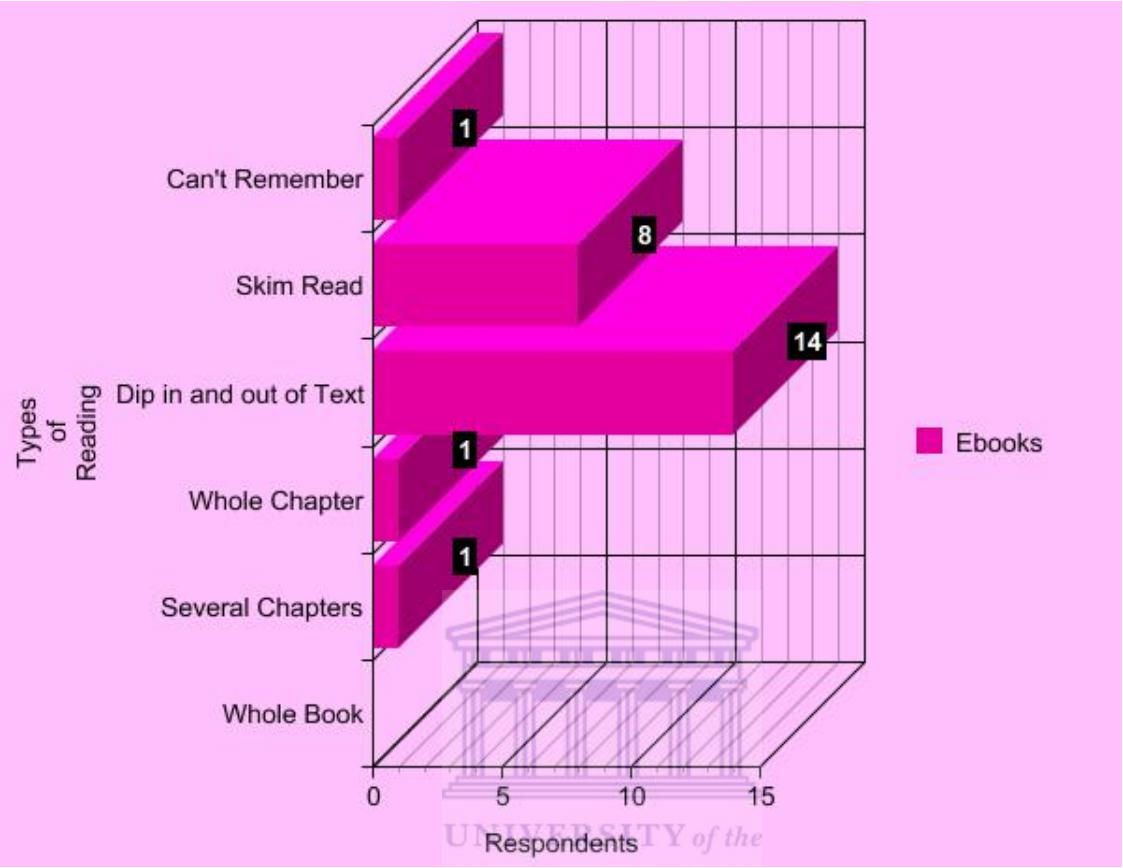
Fig. 19 How is the content of an e-book read (N=25)



In **question B.14** the respondents are asked how much of an e-book they read online. The figure 20 below illustrates the most selected choices by the academic librarians which are "I dip in and out of several chapters" (14 respondents) and "skim read" (8 respondents). CIBER (2008: 19, online) determined that this type of reading comes from a "Google generation trait". According to Rowlands, et al (2008: 295, 300, 306) the time spent reading is very short which has developed into a new reading behaviour. They further emphasize that as information is nowadays born digital, it would appear that this behaviour has become the norm amongst all users.

This can be seen in readers who are now skimming, dipping in and out of text and reading abstracts instead of the whole articles. The JISC National E-books Observatory Project's (2009:17, online) findings on the screen reading behaviour of users suggest that the user or reader gets the most satisfaction from "brief information and rapid fact extraction". The study also suggests that users prefer to print material to read later on and for making notes, which implies that e-books are an accompaniment to print materials. This is also substantiated by an earlier discussion on the time spent reading e-books, where a fair number of respondents (10) were reading more or less half an hour at a time.

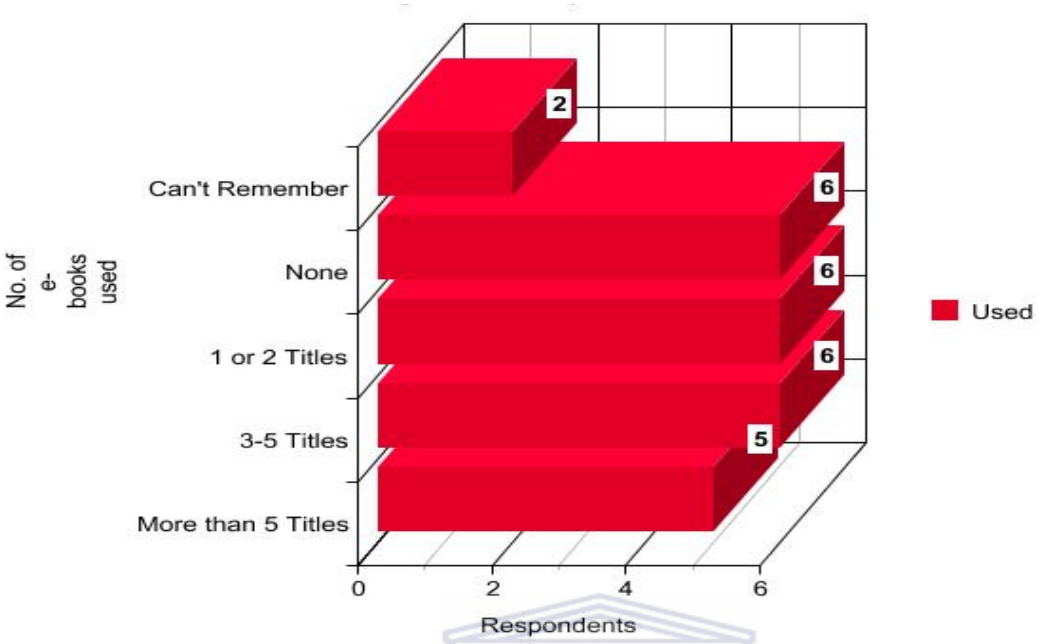
Fig. 20 How much content is read (N=25)



Question B.15 asks the respondents how many e-books they had used in the preceding month. The responses ranged from none to more than five titles. It is encouraging to see that 17 respondents had read one or more e-books. This indicates a gradual adoption of e-books amongst librarians.

Another way this can be interpreted is that those who read little or no e-books lack specific resources for the acquisition of e-books as will be discussed in question C1 (figure 24). There is a high correlation between those who purchase e-books and those who use e-books. Of the twenty five respondents six responded that they had read no e-books. When a comparison was made between those that had indicated “none” it was discovered that out of the six respondents four respondents indicated that their institutions or library were at that time not purchasing e-books.

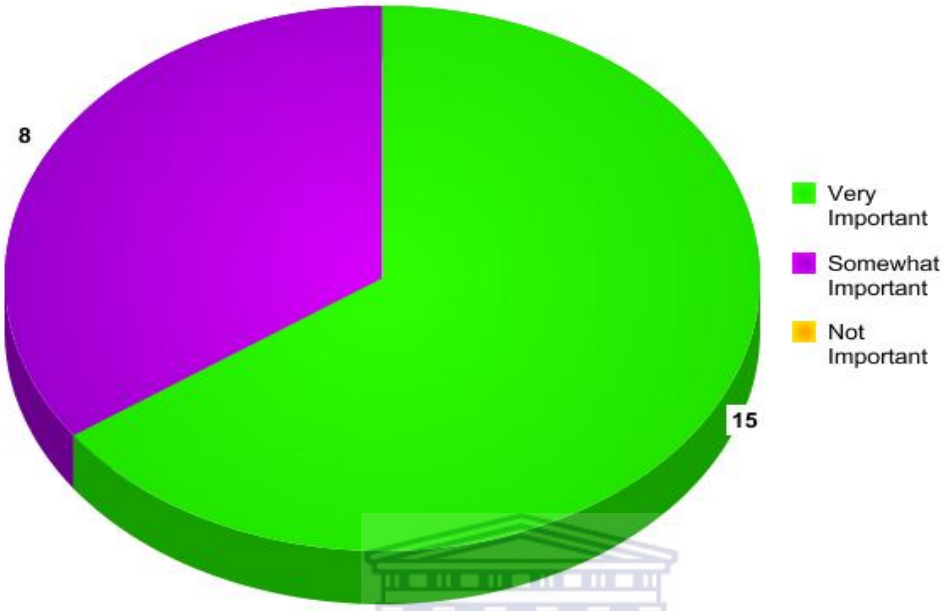
Fig. 21 How many e-books used (N=25)



Question B.16 asks the respondents if training was necessary in finding and using e-books. The number of respondents for this question is 23. Due to a fault on the online questionnaire, 2 respondents were unable to answer this question. According to the results of this study the respondents reacted positively towards the need for training in the usage of e-books. Importantly, most of the participants consider training "very important" for finding and using e-books. Due to the sophistication of some library online public access catalogues, training is necessary to find e-books.

As different databases organise their e-books either separately or inclusively amongst e-journals, it can take a novice user some time to find the necessary information. The attitudes of librarians play a role in their acceptance of ICTs. One of the results of a survey stated that training and knowledge of the technology can influence the librarian's attitudes and therefore the usage of technology (Adekunle, Omoba and Tella, 2007: online). According to Mckiel (2007: 4, online), the usage of e-books is definitely linked to training as one of the usage inhibitors was the lack of training.

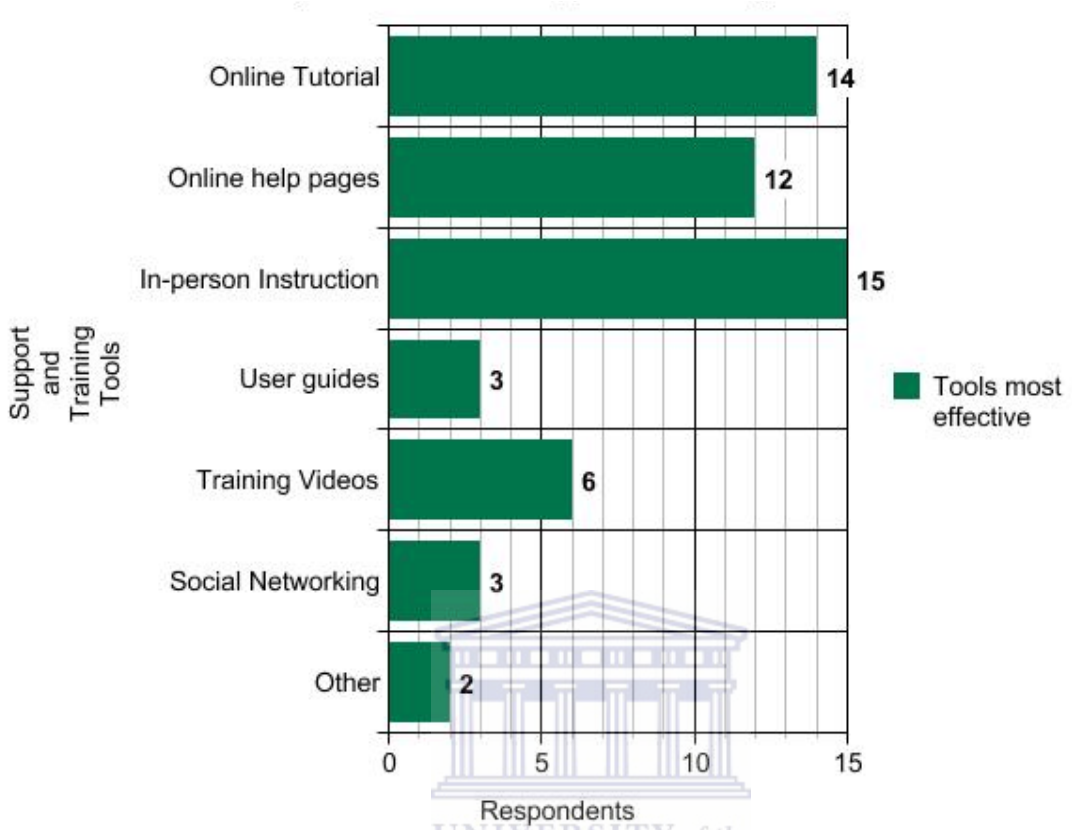
Fig. 22 Training (N=25)



Question B. 17 asks the respondents what they think are the most effective support and training tools for learning how to use and to find e-books. The most popular selections made by the respondents are in-person instruction (15) and online tutorials (14). This is closely followed by online help pages (12).

This suggests that, although participants enjoy learning on their own (online tutorials and online help), they still prefer human interaction. According to the Global Student E-book Survey's (Ebrary, 2008b: online) 147 respondents from the United States and Non-U.S. Countries, the two most effective support and training tools identified were online tutorials and in- person instruction. This is a very similar outcome to the present study. See figure 23 below.

Fig. 23 Most Effective Support and Training Tools (N=25)



4.2.3 Section C: E-book Purchasing

Introduction

Books are an important part of information searching and knowledge development. Libraries today are increasingly facing budget constraints as evidenced by the comments from this survey. A debate of another aspect of libraries is that of a physical library versus a virtual one. Libraries are ever expanding and require more and more space to store printed books and journals. With the onset of e-book technologies and integration into a federated search engine, users and librarians alike are finding it easier to find information at their finger tips.

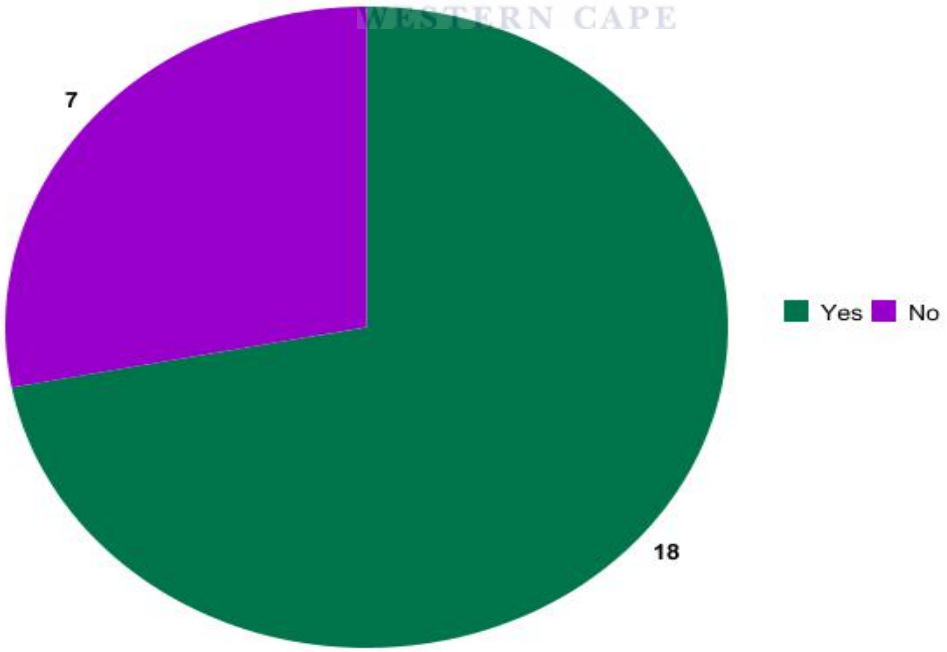
The largest vendors of e-books are NetLibrary, EBSCO, Ebrary, Knovel, Safari, Books 24x7 and Gale (Wicht, 2006: 15). The pricing and access models vary. E-books are available for purchase or subscription. In the last 3 years there has been a significant increase in publishers and vendors providing e-book options. In the last year e-books have become the cornerstone of

e-resources. What we are essentially seeing is the migration of print to electronic media for virtual libraries.

Both the HKUL (University of Hong Kong Libraries) and the Ebrary surveys revealed that the purchasing model (59%) and subscription model (55%) were almost equally popular. While globally there is almost a tie in preference, it was determined that the choices between the two models rested on content (purchase model) and quantity (subscription model) (Mckiel, 2007: 5, online). According to Mckiel, (2007: 5, online) a majority of the respondents on the Ebrary survey noted that they prefer not to duplicate the purchasing of print and electronic titles.

Question C.1 deals with whether or not the respondents' institutions are, at that time of the survey, purchasing e-books. Eighteen respondents selected 'yes' and seven 'no'. For this question the respondents had to elaborate on their answers. Two respondents did not elaborate on the answer of 'yes'. The respondents are more likely to purchase collections than individual titles.

Fig. 24 E-book Purchases (N=25)



Of the eighteen that responded ‘yes’ we find that purchase options vary. Some purchased by collections, agents, aggregators, or singularly. According to Wicht, (2006: 15) there are a variety of vendors around the world but the largest vendors which are also part of those selected by the respondents are Netlibrary, Ebrary, Books 24x7, Gale and Safari.

Amongst those e-book publishers that were mentioned by the respondents are:

E-book publishers:

- Blackwell Reference Online ;
- Cambridge University Press ;
- Elsevier ;
- RSC Publishing ;
- Taylor and Francis ;
- SAGE ;
- Springer ;
- Wiley InterScience Online Books (www.interscience.wiley.com/);

Amongst the e-book aggregators that were mentioned by the respondents are:

E-book aggregators:

- Books@Ovid (from Ovid Technologies Inc.);
- Credo Reference;
- Dawsonera;
- Ebook Library (EBL);
- Ebrary; Gale Virtual Reference Library (from Gale/Cengage Learning);
- MyiLibrary (from Ingram Digital Group) ;
- Knovel; (
- NetLibrary (from OCLC);
- Questia ; and
- Safari Books Online
- Mdconsult
- Books24x7

Those that commented ‘no’ have problems such as no access to computers, budget constraints within their institutions and non selection of e-books. These comments originate from across different institutions. The problems that these respondents mentioned can be linked to their expressed disadvantages of e-books in Question B 6. According to the Bennet and Landoni study (2005: 14), the main deficiencies and vulnerabilities were cost and electronic equipment.

Question C.2 queries what the 2008 budget allocation had been for e-books. Responses ranged from R0.00 (4 respondents) to between R50 000 - R300 000 (1 respondent). Six respondents gauged their allocation at between one and four million rand. Others indicated no actual figures but replied that their budget allocations were either unknown or not their responsibility (14). The adoption of e-resources by librarians is widespread. Brown and Swan (2007: online) highlight that most libraries have a modest budget by which to obtain resources and this does not necessarily mean they are able to provide all the needed resources. According to the librarians interviewed (in the Brown and Swan study) the natural trend towards e-book spending has reached 11% of their print spend and it was predicted that by the year 2011 will rise by 20 %.

Question C.3 queries what the projected budget will be for e-books in 2009. The annual budget for the respondents ranged from having no budget allocated for e-books to having between R50 000 and R6 Million. Some indicated no actual figures but replied that their budget allocation was unknown. Other replies included having no access to their institution's budget and stating that the budget for e-books would have to depend on the selection for the institution.

There has been a marginal increase in e-book budgets from 2008 to 2009. Two respondents who previously received no budget in 2008 were now allocated a budget in 2009. One institution went from a zero budget to R50 000 to purchase e-books. The most significant increase was from R4 million to R6 million for a historically disadvantaged institution.

Question C.4 asks from which part of the budget these funds will come (books, journals, e-resources, separate line item or other). The responses varied but for ten (10) institutions they have a special e-resources budget. Others indicated that e-books were funded out of the library materials budget (6); a separate item (3) and some did not know the source of their budget (3). The importance of a budget is essential to having a balanced collection within an institution. According to the Brown and Swan (2007: online) report, the budget for e-resources comes from the print budget. Chan and Lai (2005) mention in the HKUL study that respondents want

to increase their e-book subscriptions in line with their print subscriptions. The subscription of e-books in this study is called “electronic resources expenditures” although part of the budget comes from the institutions’ “library material budget” for print spend.

Question C.5 asks which purchasing models the institution/library likes the best. The pricing and access models vary as e-books are available for purchase or subscription. The subscription model of purchasing was favoured by most respondents (14). The one time purchasing model was the second preferred selection model (8). The HKUL study (Chan and Lai 2005) produced a different outcome. The subscription model of e-books was found to be highly unfavourable due to the cost difference of the ever increasing subscriptions and outright ownership of the journals (Chan and Lai, 2005: 219). The Ebrary (2007: online) survey alludes to the fact that the preferred acquisition model was tied between these two preferences, 59% purchasing model and 55% subscription model.

Another preference in my study is for the purchasing of e-books based upon the need of the institution. In the Ebrary Global Faculty E-Book Survey (2007) it is also emphasised that institutions’ individual selections varied from subscription to one time purchase based upon need. Two respondents in my survey indicated that they do not know or are not aware of the purchasing model preference in their institution.

Question C.6 asks the respondents if they buy a book in electronic form (either singularly or from an aggregator) how likely they are to also buy the same book in print. The study shows that the respondents are more likely to buy a book in both formats for their institutions, but this depended on demand and type of usage. There are eight (8) responses which claim it unlikely that they will buy both. Two (2) respondents could not answer as they did not know.

According to the Ebrary (2007) study there is a more than 70 percent chance that their respondents preferred not to duplicate the purchasing of electronic books with a print publication. South African academic librarians, if given the chance, would choose both options unlike the Ebrary responses.

Question C.7 queries which subject clusters respondents find to be an attractive and/or sensible purchase option for their library. The responses are summarised below. The number in brackets indicates the number of respondents who felt the same way. Responses with no number mean one respondent felt that way. The clusters range across different subject areas such as:

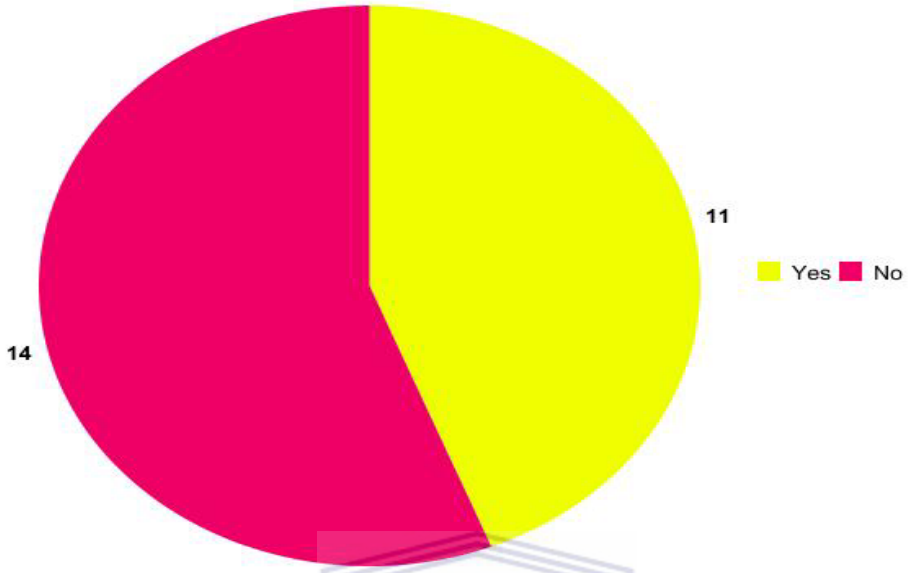
- Law (3);
- Science (Social Sciences, Physics, Environmental Sciences and Technology) (7).
- Business (Commerce, Economics and Finance) (6)
- Management (2)
- Medicine (Biomedical) (2)
- Engineering and Architecture
- Gender

Although with the subjects clusters selected, some of the respondents also say that they prefer to select titles than selecting subject areas. It was notable that the respondents' fields of expertise were wide-ranging and included arts and humanities, science and technology, medicine and health, social sciences, law, engineering, and business/economics. This is evident from the subject areas they had selected for their preferred purchases.

The highest response rates for their field of expertise came from arts and humanities, although interestingly the majority of the books that are preferred for purchase were science and business. The need for current information is essential with subjects such as business, management, technology and computers (Garrod, 2003: online). Publishers have produced many e-book titles in these subjects due to the need. As the need for different subject clusters increases it is highly likely that the publishers will produce to meet that need.

Question C. 8 asks if respondents would buy an e-book from an internet website. The respondents had to answer either yes or no. Figure 25 shows that eleven respondents said yes and fourteen respondents replied no. This result suggests that internet sites may not be deemed reliable sources of e-book purchasing.

Fig. 25 E-book Purchases on a Website (N=25)



The comments for 'yes' were varied but the underlying message was easy and multiple access, reliable sources, speed of delivery, and obtaining e-books at reasonable prices. One respondent commented that "if it was the only medium through which an attractive or useful book was available … I would seriously consider buying it".

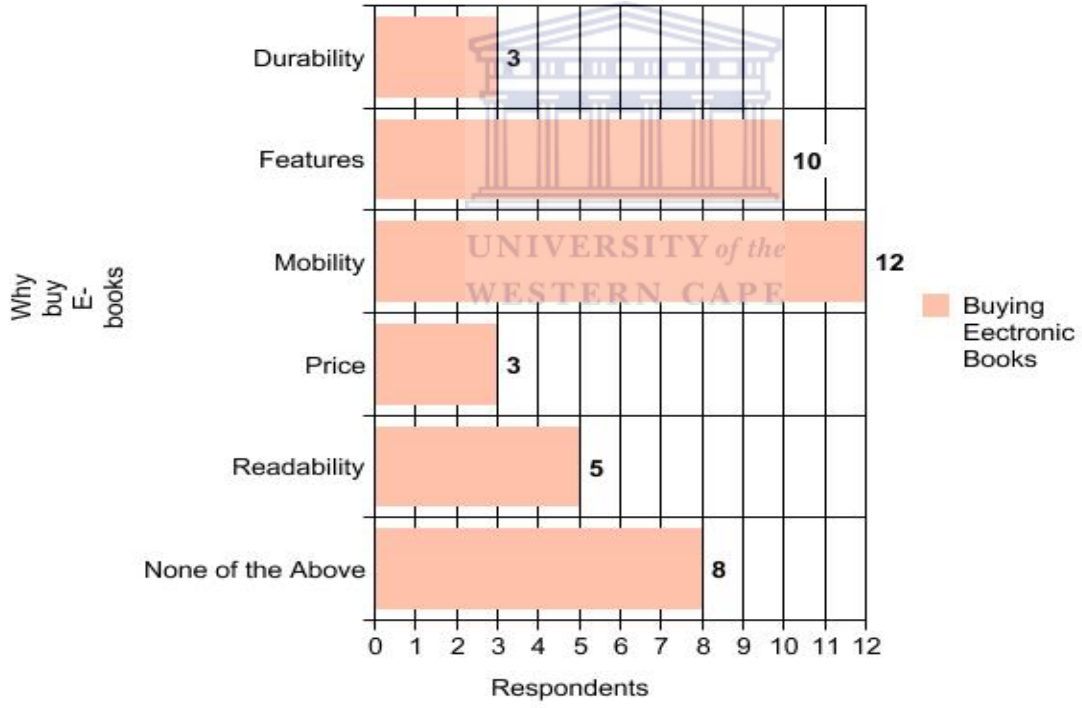
The respondents who commented 'no' give a variety of answers ranging from personal answers in the usage of e-books to what their institutions restrictions are. Some responses referred to the acquisition policies within their institutions where they can only obtain their e-books via bundles supplied by the vendors because they have more control over feedback from the supplier. Other responses claimed that to purchase individual or a package of e-books requires a credit card or a procurement policy where the supplier is approved by the institution.

Two respondents spoke in their personal capacity about obtaining e-books. One specified that she did not have the technology to use the e-books in her private capacity and another responded that she prefers a print copy to an e-book.

Generally, respondents believe that websites are untrustworthy or that they are susceptible to fraud.

Question C.9 asks the respondents what their reasons are for buying e-books. Responses were rated on a scale from 1(low) to 5 (high). See figure 26 below. The respondents rated "mobility" and the "features" (such as audio, bookmarks, highlighting etc) the highest. Their responses here correlate well with their selections of the advantages of e-books (see question B5). The literature also identifies e-books' mobility and "features" as prime advantages. "Many e-books include different multimedia effects, such as written text, oral reading, oral discourse, animations, music and sound effects" (Korat and Shamir, 2007: 248). E-books offer accessibility, flexibility, and searchability in ways print cannot - in addition to providing a fundamental method to knowledge discovery.

Fig. 26 Reason for Buying E-books (N=25)

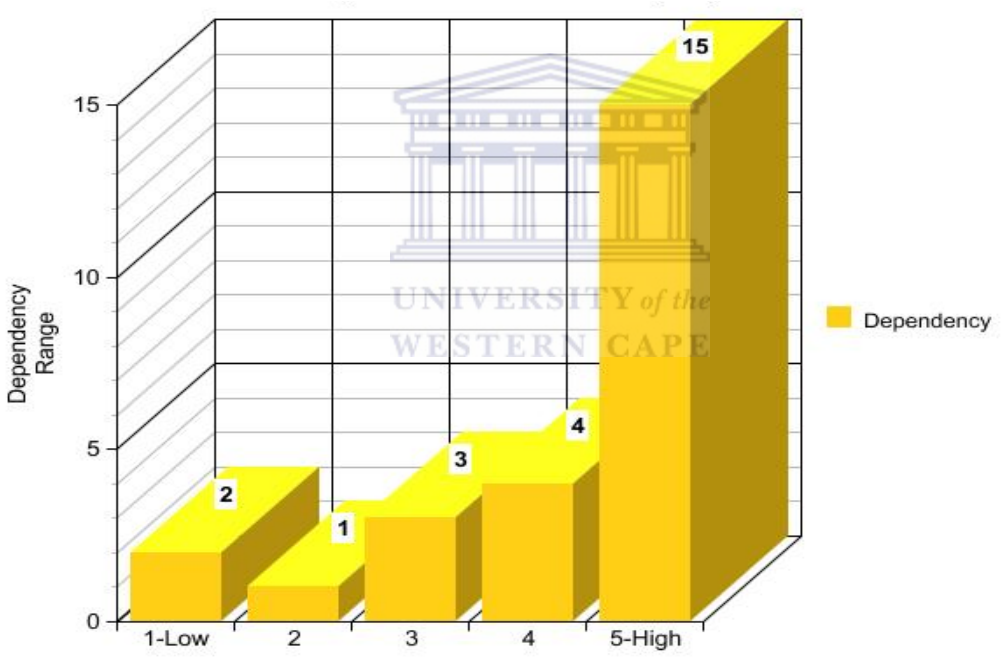


Question C.10.1 asks how dependent respondents are on library e-journals in the workplace. Figure 27 shows that 15 respondents consider that they are highly dependent on e-journals within their institutions. Odlyzko (1999: 163, 171) discusses journals and their evolution and impact on libraries. Around the world it is the norm that libraries have electronic access to journals. He notes that librarians use journals especially for inter library loans. Users'

information needs have grown and it has become a necessity to provide information by a faster method.

The gravitation towards electronic journals has cut down upon functions that were necessary before the electronic copies became available through the publishers. According to the Ebrary (2008) survey discussed in chapter 2, over 50% of faculty surveyed preferred the use of electronic resources, especially electronic journals (88%) and electronic books (65%). Most librarians (73%) were in fact in agreement that the internet, especially Google, Google Scholar and other search engines, were useful in their daily work (Stover, 2000b: 472).

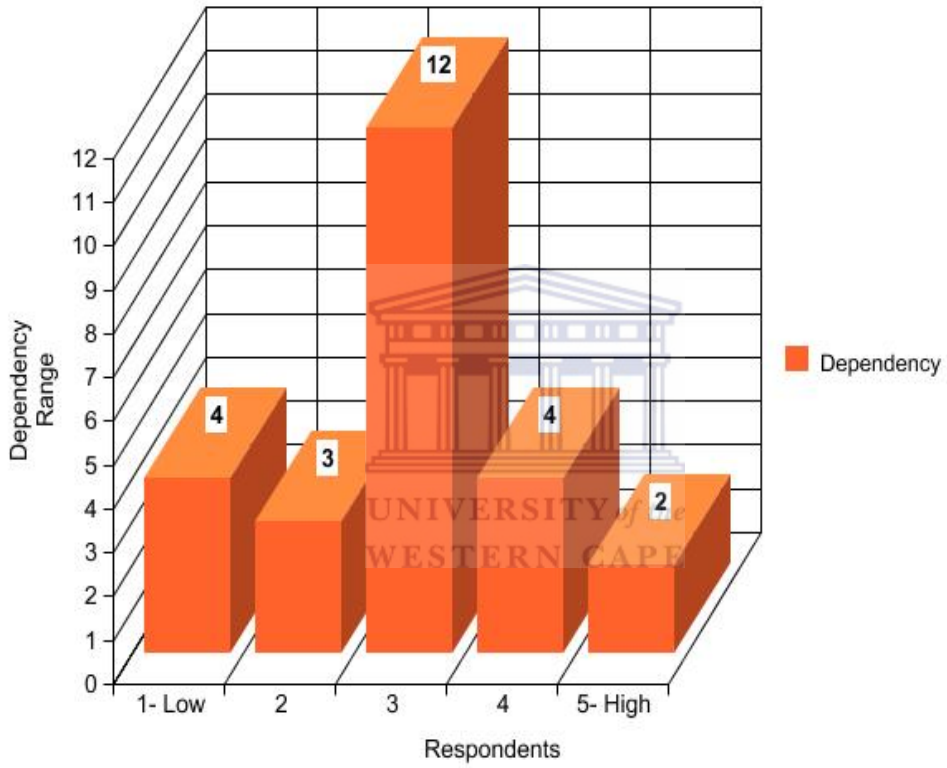
Fig. 27 Dependency on E-journals in the Workplace (N=25)



Question C.10.2 queries how dependent librarians are on free e-books online in the workplace. Figure 28 depicts that 12 of the respondents consider that they are somewhat dependent on free online e-books. Berglund, et al (2004: online) in their survey enquired about the use of free e-books. They defined a free e-book as a book which has no cost involved, can be printed, accessed, read and used for free. According to Garrod (2003: online) the books that are available free from websites such as Project Gutenberg and Google Books are usually

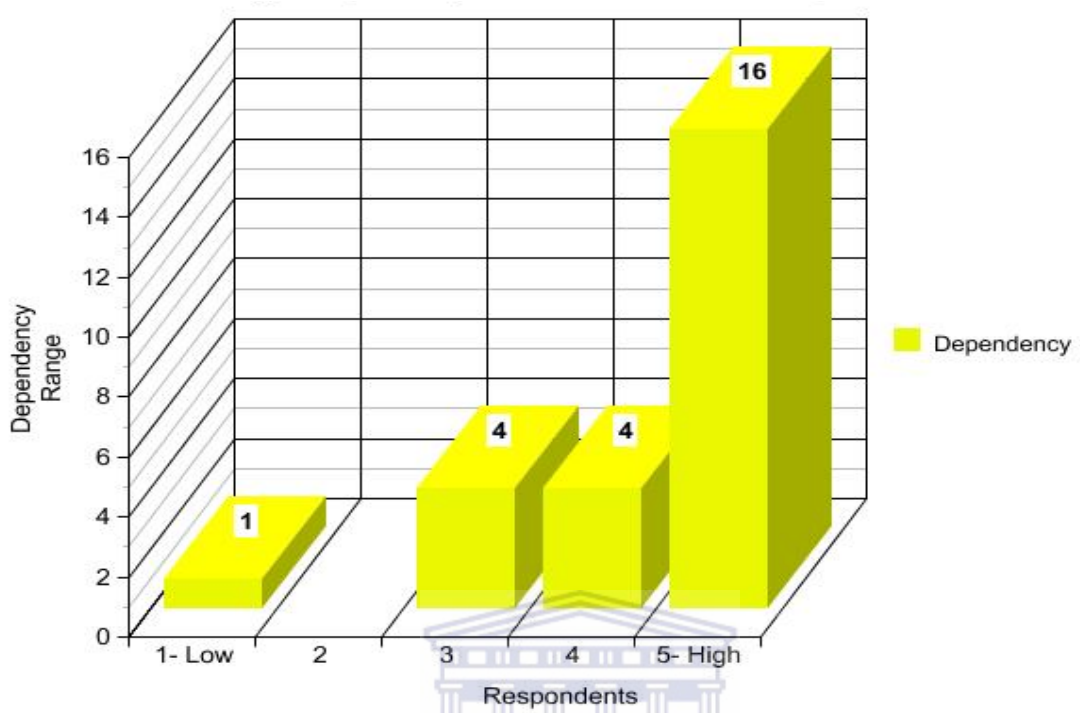
classic books such as Pride and Prejudice, Gulliver's Travels and academic books, and public domain books. It is further noted that these free collections add value to the electronic resources within institutions. As discussed in figure 26, Stover (2000b: 472) describes how in their daily work access to Google, its document provision websites likes Google Books and Google Scholar, was beneficial to librarians' information needs.

Fig. 28 Dependency on free e-books online in the Workplace (N=25)



Question C.10.3 queries how dependent librarians are on print materials in the workplace. Figure 29 depicts that 16 respondents are highly dependent on library print materials. According to Levine-Clark (2006: 287, 297 and 298) usage statistics indicate that e-books are relatively well used but most respondents indicated a preference for print although a larger number of respondents benefited from the flexibility of using both.

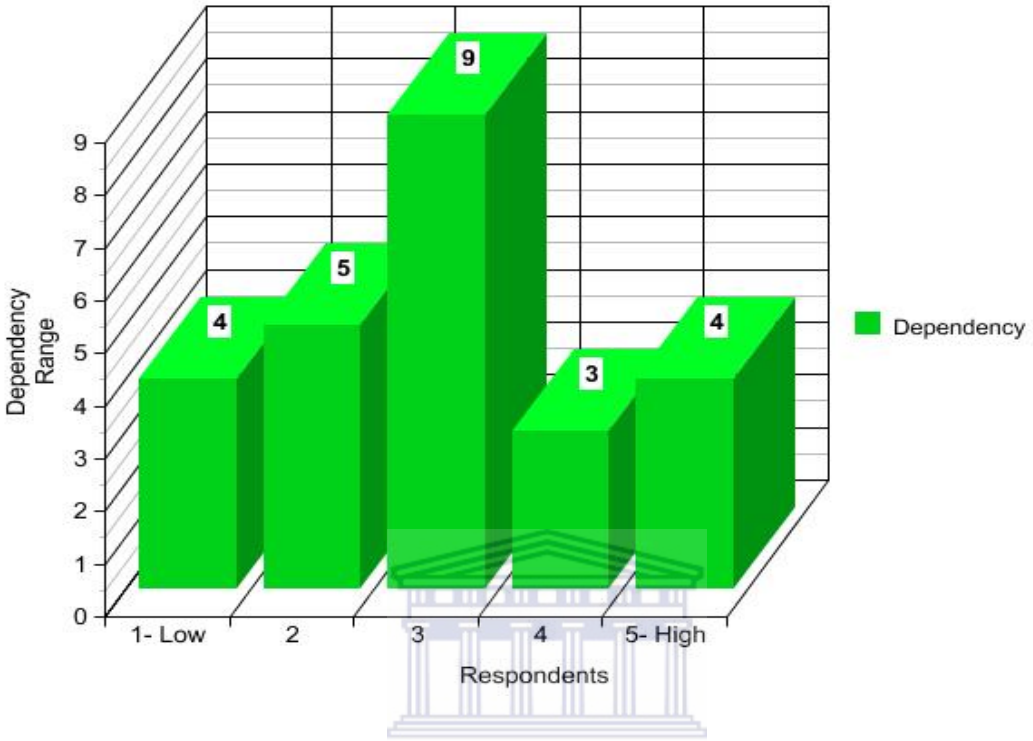
Fig. 29 Dependency on Print materials in the Workplace (N=25)



Question C.10.4 queries how dependent librarians are on library e-books in the workplace. Figure 30 shows 9 respondents consider that they are somewhat dependent on e-books in their workplace. This indicates a gradual shift in the usage of e-books as the electronic databases and journals help in providing information immediately and in a usable and mobile format. Academic librarians work with different users ranging from students to professors.

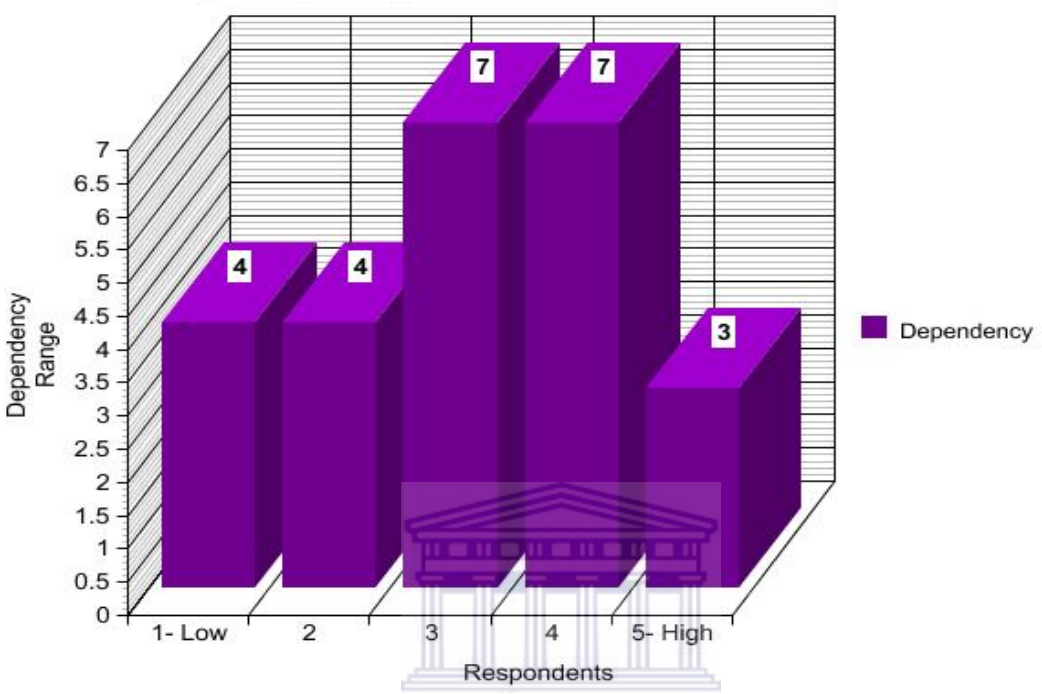
A study conducted by Garnsey and Powell (2000: 245) reviews how reference librarians were in conflict at the time about the use of e-resources over print resources. The Ebrary (2008b: online) study shows the gravitation towards e-journals and e-books. In my results depicted in figure 30 we can see the gradual shift towards the dependency on e-books. In my study librarians are much more dependent on e-journals than e-books.

Fig. 30 Dependency on Library e-books in the Workplace (N=25)



Question C.10.5 asks how dependent librarians are on CD-ROMS and DVDs in the workplace. Figure 31 shows that ten respondents are highly to very highly dependent on CD ROMs and DVDs. The delivery of e-books through CD-ROM and the internet is the most popular mode. CD ROMS are used in libraries that are unable to access online databases through the internet (Oduwole, 2000:365). Oduwole (2000:366) conducted a study of the Nigerian academic libraries' usage of CD-ROMS, the disadvantages and methods of improving access. Five (5) out of 8 of those that responded use CD-ROMs according to demand for information while the three others used it even more frequently, namely some daily or once a week. According to Armstrong, Edwards and Lonsdale (2002: 219) the provision of e-books was through other formats such as CD-ROMS between the years of 1998 to 2002 at Higher Education Institutions in the United Kingdom. They noticed a decline in use of certain formats and an increase of internet usage across the three years. In my study, South African librarians show that they still use CD-ROMs to access e-books.

Fig. 31 Dependency on CD-ROMS and DVDs in the Workplace (N=25)

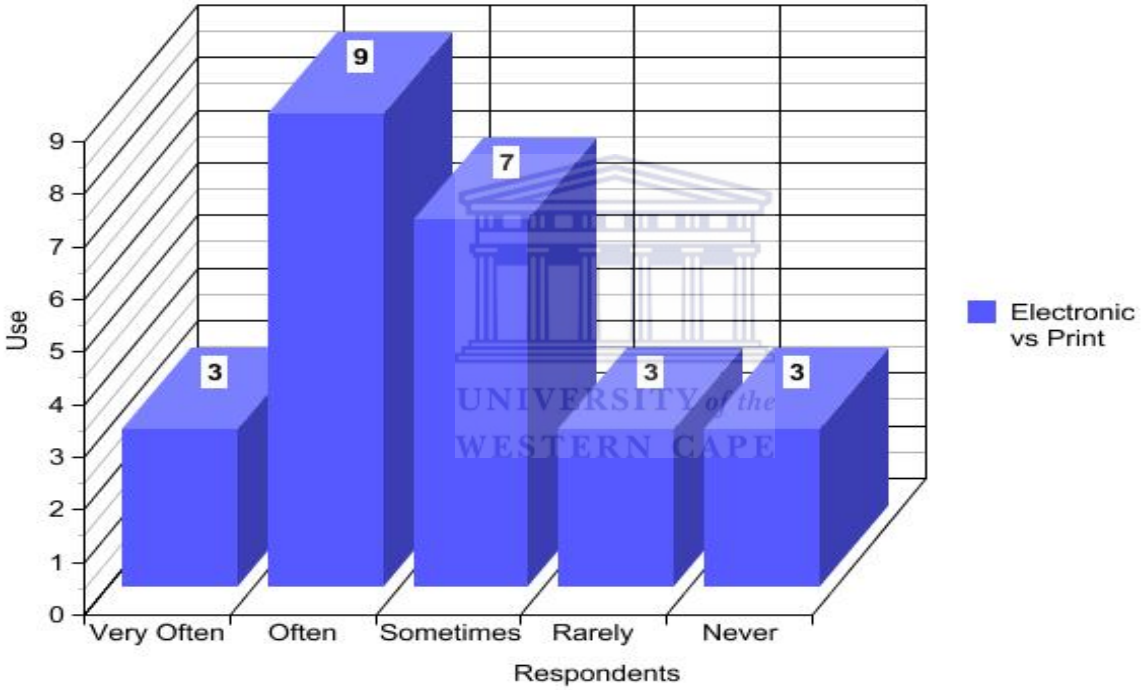


Question C.11 asks librarians what types of e-book sources they consider trustworthy (accurate and reliable) for their work. Respondents trust certain aggregators, reputable publishers (10 respondents) (e.g. Blackwell and Springer), online bookstores (Amazon) and organisations such as SANLIC (The South African National Licensing Consortia).

In **question C.12** respondents were asked how they determine if an electronic book source is trustworthy. Most of the respondents depended on the reputation of publishers, editors, vendors, SANLIC (The South African National Licensing Consortia) or aggregators. Input from the researchers or faculty of the institutions also play a role in trustworthiness. In the Ebrary (2008b: online) study the librarians first identified other librarians as trustworthy sources. This is not a view mentioned by respondents in my study. The second most selected option in the Ebrary study is the publishers' reputation.

Question C. 13 asks respondents, when they have the option of using either the print or electronic version of a book, how often they would opt to use the electronic version .The most popular answer was “often”. In a study where the difference between print versus electronic usage in studies done in 1998-2001 and duplicated to see the result differentiation in 2003, they discovered that the usage of print journals decreased as more options in usage came into being such as print only, electronic only or print and electronic access (Brady, McCord and Galbraith; 2006: 356, 360).

Fig. 32 Options of the use Electronic over Print (N=25)



4.3 Conclusion

Some of the librarians mentioned that the problems with e-books do not lie entirely with the e-books themselves. These respondents mentioned that while they themselves may not use e-books, they recognize their value within their institutions.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In chapter 4 the research findings were discussed and interpretations were given. The main thrust of this research was to investigate to what extent e-books are being used amongst academic librarians in their work environment. The investigation focused on four main aspects: Firstly which e-books are available to academic librarians in the workplace. Secondly what the usage patterns of e-books are among academic librarians. Thirdly the reasons why the academic librarians choose this format and fourthly what the impact is of e-books on librarians' professional practice. The following conclusions, based on these key sub-problems of the study, are presented in this section:

5.2 Conclusions

This study used the survey method to collect data. An electronic questionnaire (Appendix A) was distributed on the Library and Information Association of South Africa (LIASA) mailing list. The questionnaire (Appendix A), created using Google Documents, was made available via a link on the email sent to the LIASA Listserv. The assumptions that were made by the researcher was (1) that e-books are used only by the younger librarians; and that more of the younger academic librarians would therefore answer the survey; and (2) that the majority of the respondents would be female. The first assumption was proved to be wrong as most of those that answered were of 50-59 years, but the second assumption made was confirmed. This was to be expected as librarianship is a female dominated career.

Of the 25 respondents only three were male. Most of the academic librarians who responded were of a managerial position and indicated that they are using e-books. The majority of these managers had high levels of education and worked at historically advantaged institutions. It can therefore be accepted that the respondents' skills and qualifications play an enabling role in their use of e-books within their institutions. These institutions would also have better access to e-book collections.

The more computer literate and internet searchability skills they had, the more likely the respondents were to use e-books. The higher internet usage and e-book usage is because librarians could be directly linked to the expansion of the internet and the availability of more information. Librarians have become used to having information directly available at their desktop enabling them to access not only e-journals but also e-books online. We can conclude that while academic librarians have access to e-books within certain institutions they have a preference for print as it is still overwhelmingly available.

5.2.1 E-books available to Academic Librarians within their Workplace.

A variety of e-books are available to academic librarians. They access these e-books mainly via online databases and the World Wide Web within institutions. These databases vary between different institutions according to budget constraints. The respondents indicated that aggregators and publishers such as Netlibrary, Ebrary, Blackwell, Elsevier and Safari are used in their institutions when sourcing documentation for themselves and their users. The main access difference between respondents in my study and respondents from the Ebrary (2008b: online) study is that mine chose online databases first whilst theirs chose library catalogues. Library catalogues came third in my study after databases and the World Wide Web. South African academic librarians try online and databases first in order to have more success in finding information.

The problems encountered by librarians in trying to access e-books are multiple. Cost implications, preference for print, and the lack of availability of e-books for all subjects are

problems encountered. This is confirmed in the literature as the Ebrary (2008) study reported a similar finding especially in terms of the preference for print.

5.2.2 Usage Patterns of e-books

Findings from this study indicate that academic librarians use e-books. Twelve (12) respondents indicate that they would often or very often select e-books over print if the e-version is available. Seventeen (17) respondents read between one and five e-book titles per month (see figure 21). This illustrates a gradual uptake of e-books amongst librarians. Academic librarians choose to read e-books by "dipping in and out of several chapters" enabling them to read multiple documents at a time. Many readers have developed the "Google Generation trait" where they read in shorter intervals and tend to skim read. The reading behaviour of librarians has been adjusted towards the ability to read on the internet. This ability has impacted on how we read our books in print or electronic format. The diverse functionality of e-books enables the reader to apply habits formed from using the internet. Thus the preference for using either PDF or HTML format enables the user to apply these habits (bookmarking, searching, highlighting, linking and more) in order to find information within e-books.

The findings related to usage satisfaction revealed three main aspects: (1) e-book search-ability, (2) anytime and off campus access, and (3) automatic citation. The users of e-books want especially the searchability as this enables shorter time spent per search.

The results of this study confirm the literature findings that training is important in e-book usage despite the academic librarians' themselves having very good computer literacy and the internet skills. Academic librarians prefer training (in this order) through (1) in person instructions, (2) online tutorials and (3) online help pages. Therefore usage is linked to training especially as lack of it can be a usage inhibitor.

The problem associated with the usage of e-books is also related to cost in terms of purchasing e-books for the institution. This is further indicated by the fact that academic

librarians are highly dependent on print materials as well as free online e-books. Although many academic librarians are using e-books, constraints within some institutions determine that librarians are still using print mainly. When given a choice, 48% of respondents opted strongly for electronic over print media.

E-books are being used in research, information referrals and reference queries. This study shows a gradual adoption of e-books by academic librarians. Here 12 respondents are using e-book data more than 20% of the time (8 between 20-40% and 4 more than 40%) in their referrals and reference queries.

5.2.3 Why E-books are selected by Academic Librarians.

Libraries have the responsibility of providing quality information and resources for their clients. The results indicate clearly librarians' selection criteria are as follows: (1) trustworthiness of e-book sources; and (2) accessibility, flexibility, and searchability of e-books. A comment made by a respondent about purchasing e-books on a website indicated that if it was the only medium to use to purchase a particular e-book, they "would consider buying it" on the website.

The benefits to the librarians are multiple as e-books offer a different usage capability compared to print. The main appeal for e-books is the ability to access e-books anytime, anywhere. The ability to search for information within each book enables the reader to retrieve information quickly and efficiently. Academic librarians have committed themselves to providing support to their institutions. The problems associated with selecting e-books are (1) the cost of the equipment to read e-book formats, (2) the cost of the e-books especially if the subscription purchasing model is used, and (3) the reliability of the internet.

The usage of e-books shows that if the information is available then it would be used.

5.2.4 Impact of using E-books.

Librarians in the academic community embrace innovation and learning in order to better their skills and support their users. The literature reveals that e-books have had a genuine impact on librarians and their work environment. This is evident as academic librarians have changed the way in which information is handled.

According to the findings of this study we find that e-books have impacted on, (1) reading behaviour, (2) purchasing behaviour, (3) Information use behaviour and (4) collection development. A majority of 23 librarians working in academic libraries was familiar with the concept of e-books. The purpose of using the e-books by the respondents indicated that they "browse for information". Academic Librarians are selecting specific information in electronic books without the need to read an entire book.

Academic librarians have become somewhat dependent on e-books to find relevant information. Despite the limitations of e-book usage amongst academic librarians, they have accepted the resources as a vital part of their libraries. While frustration mounts with budget constraints in some institutions, we find that these academic librarians use free e-books available to add value to the institutions' electronic resources.

5.3 Recommendations

Based on the conclusions, I would like to make the following recommendations for further research:

- A longitudinal study into the usage of e-books;
- A more comprehensive coverage of libraries to include other types of libraries such as special, public and school libraries. Find out whether e-books are a part of these library collections and if not to discover why and how to improve on this exposure;
- Studying the user satisfaction in using hand-held devices to read e-books;
- Further studies may be warranted into librarians' reading behaviour;

- Collection development and purchasing behaviour especially in comparing print and electronic mediums; and
- Training in e-book usage, especially in determining which types of training and support methods are beneficial in increasing e-book usage.

5.4 Summary

The results of the study confirm that academic librarians use e-books within their work environment. As information resources have evolved in format so have the librarians' skills and abilities to access and use them. Therefore librarians are connected to their ever changing working environment and will evolve alongside it.

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Appendix A - Web Survey Questionnaire

ELECTRONIC BOOK QUESTIONNAIRE

ELECTRONIC BOOK USAGE AMONGST ACADEMIC LIBRARIANS

PURPOSE

THE PURPOSE OF THIS STUDY IS TO INVESTIGATE THE USAGE OF E-BOOKS AMONGST ACADEMIC LIBRARIANS; IN PARTICULAR WHICH E-BOOKS ARE AVAILABLE TO ACADEMIC LIBRARIANS, WHY THEY CHOOSE THIS FORMAT (E-BOOKS), WHAT IMPACT E-BOOKS HAVE ON LIBRARIANS' PROFESSIONAL PRACTICE AND WHAT THE USAGE PATTERNS OF E-BOOKS ARE AMONGST ACADEMIC LIBRARIANS.

I THANK YOU IN ADVANCE FOR YOUR TIME AND WILLINGNESS TO CONTRIBUTE TO MY RESEARCH AND I LOOK FORWARD TO HEARING FROM YOU SOON.

* Required

A.1 GENDER *
Background Information

- O MALE
- O FEMALE

A.2 AGE *
Background Information

- O 21-29
- O 30-39
- O 40-49
- O 50-59
- O 60 or older

A.3 TYPE OF INSTITUTION *
Background Information

- O UNIVERSITY OF TECHNOLOGY
- O HISTORICALLY DISADVANTAGED UNIVERSITY
- O HISTORICALLY ADVANTAGED UNIVERSITY
- O RESEARCH INSTITUTE/COUNCIL
- O CORPORATE
- O Other:

A.4 WHAT IS YOUR SPECIFIC FIELD OF EXPERTISE? *
Background Information

- O ARTS AND HUMANITIES
- O SCIENCE AND TECHNOLOGY

- ○ MEDICINE AND HEALTH
- ○ SOCIAL SCIENCES
- ○ LAW
- ○ ENGINEERING
- ○ BUSINESS /ECONOMICS
- ○ Other:

A.5 WHAT TYPE OF WORK DO YOU DO? (PLEASE DESCRIBE YOUR JOB IN DETAIL.) *
Background Information

A.6 WHAT IS YOUR HIGHEST EDUCATIONAL QUALIFICATION? *
Background Information

- ○ TECHNIKON DIPLOMA
- ○ POST GRADUATE DIPLOMA IN LIS
- ○ B.BIBL DEGREE
- ○ HONOURS IN LIS
- ○ MASTERS IN LIS
- ○ DOCTORATE IN LIS
- ○ Other:

A.7 HOW WOULD YOU DESCRIBE YOUR LEVEL OF COMPUTER LITERACY? *
Background Information

- ○ NOVICE
- ○ INTERMEDIATE
- ○ EXPERT

A.8 HOW WOULD YOU DESCRIBE YOUR LEVEL OF INTERNET SKILLS? *
Background Information

- ○ NOVICE
- ○ INTERMEDIATE
- ○ EXPERT

A.9 HOW WOULD YOU DESCRIBE YOUR ABILITIES TO SEARCH THE INTERNET? *
Background Information

- ○ POOR
- ○ AVERAGE
- ○ GOOD
- ○ VERY GOOD
- ○ EXCELLENT

B.1 HOW WOULD YOU DEFINE "ELECTRONIC BOOK" OR "E-BOOK"? *
E-book Information

B.2 HOW FAMILIAR THEY ARE WITH THE LIBRARY'S E-BOOKS'? *
E-book Information

- ○ VERY FAMILIAR
- ○ FAMILIAR
- ○ SOMEWHAT FAMILIAR
- ○ UNFAMILIAR
- ○ DO NOT USE

B.3 TYPICALLY, HOW LONG DO YOU SPEND READING AN E-BOOK ? *
E-book Information

- ○ LESS THAN ½ HOUR
- ○ 1 HOUR
- ○ 1-2 HOURS
- ○ 3-4 HOURS
- ○ MORE THAN 4 HOURS

B.4 FOR WHAT PURPOSE(S) DO YOU USE E-BOOKS? (MARK ALL THAT APPLY) *
E-book Information

- ☐ RESEARCH PROJECTS
- ☐ REFERENCE ENQUIRIES

- ☐ INFORMATION REFERRALS
- ☐ BROWSING FOR INFORMATION
- ☐ Other: [ ]

B.5 WHAT ARE THE BENEFITS AND ADVANTAGES OF USING E-BOOKS? (MARK ALL THAT APPLY) *
E-book Information

- ☐ CHEAPER THAN PRINT OR FREE
- ☐ E-BOOKS ARE PORTABLE.
- ☐ E-BOOKS ARE SEARCHABLE
- ☐ E-BOOKS ARE EASILY ACCESSIBLE
- ☐ ENHANCED INTERACTIVE FUNCTIONALITY
- ☐ INSTANTLY AVAILABLE
- ☐ E-BOOKS CAN INCLUDE LINKS TO WEBPAGES
- ☐ E-BOOK READERS CAN READ YOUR BOOK OUT LOUD TO YOU
- ☐ YOU CAN JUMP TO ANY CHAPTER OR BOOKMARK WITH JUST ONE CLICK, USING AN EASY MENU.
- ☐ Other: [ ]

B.6 WHAT ARE THE BARRIERS TO AND DISADVANTAGES OF USING E-BOOKS? (MARK ALL THAT APPLY) *
E-book Information

- ☐ LIBRARIES DO NOT SUBSCRIBE OR UTILIZE THE TECHNOLOGY
- ☐ UNFAMILIAR WITH ELECTRONIC BOOK MEDIA
- ☐ E-BOOK COSTS
- ☐ NEED TRAINING
- ☐ NO ELECTRONIC MEDIA (E-BOOKS OR E-JOURNALS) AVAILABLE
- ☐ NOT MANY E-BOOKS AVAILABLE RELATING TO THE TOPIC, SUBJECT, AREA, DISCIPLINE SEARCHED
- ☐ PAPER VERSIONS WILL CONTINUE TO CO-EXIST WITH E-BOOKS & MOST PEOPLE STILL PREFER PAPER FORMAT.
- ☐ Other: [ ]

B. 7.1 HOW IMPORTANT IS THE SEARCHING FEATURE TO E-BOOKS? *
E-book information

	1	2	3	
VERY IMPORTANT	○	○	○	NOT IMPORTANT

B. 7.2 HOW IMPORTANT IS THE ANYTIME ACCESS FEATURE TO E-BOOKS? *
E-book information

	1	2	3	
VERY IMPORTANT	○	○	○	NOT IMPORTANT

B. 7.3 HOW IMPORTANT IS THE OFFCAMPUS ACCESS FEATURE TO E-BOOKS? *
E-book information

	1	2	3	
VERY IMPORTANT	○	○	○	NOT IMPORTANT

B. 7.4 HOW IMPORTANT IS THE ABILITY TO USE ONE OR MORE E-BOOK AT A TIME ? *
E-book information

	1	2	3	
VERY IMPORTANT	○	○	○	NOT IMPORTANT

B. 7.5 HOW IMPORTANT IS DOWNLOADING E-BOOKS TO A LAPTOP? *
E-book information

	1	2	3	
VERY IMPORTANT	○	○	○	NOT IMPORTANT

B. 7.6 HOW IMPORTANT IS THE COPYING AND PASTING FEATURE TO E-BOOKS? *
E-book information

	1	2	3	
VERY IMPORTANT	○	○	○	NOT IMPORTANT

B. 7.7 HOW IMPORTANT IS THE PRINTING FEATURE TO E-BOOKS? *
E-book information

	1	2	3	
VERY IMPORTANT	○	○	○	NOT IMPORTANT

B. 7.8 HOW IMPORTANT IS THE ZOOM AND SCALE FEATURE TO E-BOOKS? *
E-book information

	1	2	3	
VERY IMPORTANT	○	○	○	NOT IMPORTANT

B. 7.9 HOW IMPORTANT IS THE AUTOMATIC CITATIONS FEATURE TO E-BOOKS? *
E-book information

	1	2	3	
VERY IMPORTANT	O	O	O	NOT IMPORTANT

B. 7.10 HOW IMPORTANT IS THE ABILITY TO EMAIL TEXT FEATURE TO E-BOOKS? *
E-book information

	1	2	3	
VERY IMPORTANT	O	O	O	NOT IMPORTANT

B. 7.11 ARE E-BOOKS IMPORTANT FOR USE WITHIN YOUR LIBRARY SECTION THAT YOU WORK IN? *
E-book information

	1	2	3	
VERY IMPORTANT	O	O	O	NOT IMPORTANT

B.8 WHAT PERCENTAGE OF E-BOOK DATA DO YOU INCLUDE IN YOUR RESEARCH, INFORMATION REFERRALS AND REFERENCE QUERIES? *
E-book Information

- O NONE
- O LESS THAN 10%
- O 20-40%
- O MORE THAN 40%

B.9 IN WHAT FORMAT DO YOU GENERALLY READ E-BOOKS? *
E-book Information

- O PORTABLE DOCUMENT FORMAT (PDF)
- O HYPERTEXT MARKUP LANGUAGE (HTML)
- O MICROSOFT READER (LIT)
- O MOBIROCKET (MOBI)
- O Other: [ ]

B.10 IN YOUR SEARCH FOR EBOOK CONTENT, DO YOU GENERALLY FIND WHAT YOU ARE LOOKING FOR? *
E-book Information

- O YES
- O NO

B.11 WHAT TYPES OF E-BOOKS DO YOU USE? *
E-book Information

- ☐ REFERENCE BOOKS
- ☐ DIRECTORIES
- ☐ STUDY GUIDES
- ☐ RESEARCH MONOGRAPHS
- ☐ POPULAR NON-FICTION (WORK)
- ☐ POPULAR NON-FICTION (LEISURE)
- ☐ POPULAR FICTION
- ☐ Other: [ ]

B.12 HOW DO YOU ACCESS E-BOOK INFORMATION? *
E-book Information

- ☐ THE WORLD WIDE WEB (WWW) (E.G PROJECT GUTENBURG)
- ☐ ONLINE DATABASES (E.G GALE)
- ☐ LIBRARY CATALOGUES
- ☐ SUBSCRIPTIONS WITH E-BOOK COMPANIES (E.G E-BRARY)
- ☐ POCKET PCS (E.G. MNYBKS.NET OR TX2PH.COM)
- ☐ Other: [ ]

B. 13 HOW DO YOU READ THE CONTENTS OF AN E-BOOK? *
E-book Information

- ○ I READ THE CONTENTS FROM THE SCREEN
- ○ I PRINT THE PAGES AND READ FROM THE PAPER
- ○ A BIT OF BOTH
- ○ I DON'T REMEMBER
- ○ Other: [ ]

B.14 HOW MUCH OF AN E-BOOK DO YOU READ ONLINE? *
E-book Information

- ○ CAN'T REMEMBER
- ○ I JUST LOOK AT IT VERY BRIEFLY (SKIM READ)
- ○ I DIP IN AND OUT OF SEVERAL CHAPTERS
- ○ I READ ONE WHOLE CHAPTER

- ○ I READ SEVERAL CHAPTERS
- ○ I READ THE WHOLE BOOK

B.15 HOW MANY E-BOOKS HAVE YOU USED IN THE PAST MONTH? *
E-book Information

- ○ CAN'T REMEMBER
- ○ NONE
- ○ 1 OR 2 TITLES
- ○ 3-5 TITLES
- ○ MORE THAN 5 TITLES

B.17 WHAT DO YOU THINK ARE THE MOST EFFECTIVE SUPPORT AND TRAINING TOOLS FOR LEARNING HOW TO FIND AND USE E-BOOKS? *
E-book Information

- ☐ ONLINE TUTORIAL
- ☐ ONLINE HELP PAGES
- ☑ IN-PERSON INSTRUCTION
- ☐ PAPER GUIDES (I.E. USER GUIDES)
- ☐ TRAINING VIDEOS
- ☐ SOCIAL NETWORKING (LIST SERVS OR TWITTER)
- ☐ Other:

C.1 IS YOUR LIBRARY OR INSTITUTION CURRENTLY PURCHASING ANY E-BOOKS? *
E-book Purchasing

YES

C.1.1 IF YES, SINGLY? COLLECTIONS? BY PLATFORM? BY AGGREGATORS? ALSO PLEASE SPECIFY WHICH COLLECTIONS, PLATFORMS ETC.
E-book Purchasing

C.1.2 IF NO, WHY NOT?
E-book Purchasing

C.2 WHAT WAS THE 2008 BUDGET ALLOCATION FOR E-BOOKS? *
E-book Purchasing

C.3 WHAT IS YOUR 2009 BUDGET FOR E-BOOKS? *
E-book Purchasing

C.4 FROM WHICH PART OF THE BUDGET WILL THESE FUNDS COME (BOOK, JOURNALS, E-RESOURCES, SEPARATE LINE ITEM, OTHER)? *
E-book Purchasing

C.5 WHICH PURCHASING MODELS DOES YOUR INSTUTION/LIBRARY LIKE THE BEST? (ONE-TIME PURCHASE, SUBSCRIPTION, TIMED ACCESS, ETC.) *
E-book Purchasing

C.6 IF YOU BUY A BOOK IN ELECTRONIC FORM (EITHER SINGLY OR FROM AN AGGREGATOR), HOW LIKELY ARE YOU TO ALSO BUY IT IN PRINT? *
E-book Purchasing

C.7 WHICH SUBJECT CLUSTERS DO YOU FIND TO BE AN ATTRACTIVE AND/OR SENSIBLE PURCHASE OPTION FOR YOUR LIBRARY? *

E-book Purchasing

C.8 WOULD YOU BUY AN E-BOOK FROM AN INTERNET WEBSITE? *

E-book Purchasing

YES

C.8.1 IF YES, WHY?

E-book Purchasing

C.8.2 IF NO, WHY NOT?

E-book Purchasing

C .9 WHAT ARE YOUR REASONS FOR BUYING EBOOKS? *

E-book Purchasing

- ☐ DURABILITY
- ☐ FEATURES (SUCH AS AUDIO, BOOKMARKS, HIGHLIGHTING E.T.C)
- ☐ MOBILITY
- ☐ PRICE

- ☐ READIBILITY (ENLARGED FONTS)
- ☐ NONE OF THE ABOVE

C.10.1 HOW DEPENDENT ARE YOU ON LIBRARY E-JOURNALS IN THE WORKPLACE? *
E-book Purchasing

	1	2	3	4	5	
LOW	○	○	○	○	○	HIGH

C.10.2 HOW DEPENDENT ARE YOU ON FREE E-BOOKS ONLINE IN THE WORKPLACE? *
E-book Purchasing

	1	2	3	4	5	
LOW	○	○	○	○	○	HIGH

C.10.3 HOW DEPENDENT ARE YOU ON LIBRARY PRINT MATERIALS IN THE WORKPLACE? *
E-book Purchasing

	1	2	3	4	5	
LOW	○	○	○	○	○	HIGH

C.10.4 HOW DEPENDENT ARE YOU ON LIBRARY E-BOOKS IN THE WORKPLACE? *
E-book Purchasing

	1	2	3	4	5	
LOW	○	○	○	○	○	HIGH

C.10.5 HOW DEPENDENT ARE YOU ON CD-ROMS AND DVDS IN THE WORKPLACE? *
E-book Purchasing

	1	2	3	4	5	
LOW	○	○	○	○	○	HIGH

C.11 WHAT TYPES OF E-BOOK SOURCES DO YOU CONSIDER TRUSTWORTHY (ACCURATE AND RELIABLE) FOR YOUR WORK? *
E-book Purchasing

C.12 HOW DO YOU DETERMINE IF AN ELECTRONIC BOOK SOURCE OF INFORMATION IS TRUSTWORTHY? *

E-book Purchasing

C. 13 WHEN YOU HAVE THE OPTION OF USING EITHER THE ELECTRONIC OR PRINT VERSION OF A BOOK, HOW OFTEN DO YOU OPT TO USE THE ELECTRONIC VERSION? *

E-book Purchasing

- O VERY OFTEN
- O OFTEN
- O SOMETIMES
- O RARELY
- O NEVER

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