

**CONTEMPORARY ISSUES IN
LIBRARY AND INFORMATION
SCIENCE**

Wan Ali Wan Mamat

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Editor

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5. USAGE OF E-BOOK AMONG UNIVERSITY COMMUNITY

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ABSTRACT

All these while, the concept of a book is that it is printed on paper, bound and portable. With the advent of computer technology and internet, a new form of book has developed, known as e-book. This is a trendy on the perception usage of e-book among selected group students in Malaysia and overseas.

5.1 INTRODUCTION

At its simplest an e-book is a book, or text, that has been created in, or converted to, a digital form. Many attempts have been made to classify the types of e-book. For example, Hawkins categorized eBooks into four different types according to their accessibility whereas Crawford identified nine types of e-books based on various facets including their formats, standard, and length of content. E-books can also be characterized in terms of how the e-book can be displayed or read: on a computer through a network; a stand alone desktop PC, notebook or PDA, using e- book reader software (e.g. Adobe Acrobat eBook reader); on a dedicated hardware device (e.g. an eBookman); or via the web; Chen, on the other hand, defines e-books in terms of four perspectives: media, device, delivery and content.

Some defined e-book as text that is available in an electronic format such as Word's doc, txt, HTML or XML (Hawkins, 2000; Ormes, 2002; McKnight and Dearnley, 2003; Vidana, 2003). Other definitions related to the conversion from print to electronic aspects of e-books, as printed text converted into digital form to be read on a computer screen (Saurie and Kaushik, 2001; Desmarais, 1994).

Some definitions combined both the electronic text as well as the electronic reader device that is required for e-book to be read (Abrew, 2001; Lynch, 2001; Goh, 2003; Grant, 2002). Connaway (2004) defined e-book as a publication that characterized an electronic format, utilizing Internet technology to make it easy to access and use. Studies on whether, e-books are readily acceptable by users is still in its infancy. The University of California library (UCL) in February 2001 surveyed its four campuses and reported that most institutions were still in the trial stage with their e-book subscription. In that year UCL indicated that the acquisition of e-books had little or no impact on their purchase of printed titles. Librarians commented that they felt the role of e-books was not to replace printed text but serve as a duplicate copy (Snowhill, 2001). In Great Britain, Lonsdale and Armstrong (2001) indicated slow acceptance of nearly all digital textual resources other than journals. Helfer (2000) indicated that the slow acceptance may be due to users wanting to use eBooks just as a reference resource, to look for the answers they want and sent the book back. Users of the SunShine library prefer to buy a copy of a book if they need it on an ongoing basis.

5.2 USAGE OF E-BOOKS

Mennonite Biblical Seminary reported negative impression of the e-library among its users, who tended to just check out the database but had not actually read any books. The study also indicated those who actually use the NetLibrary gave positive ratings (Saner, 2002). The reasons for the slow acceptance of e-books vary but a constant reason given was not being comfortable with reading using personal computers, laptops and palm pilots (Helfer, 2000; Andersen, 2001). Other reasons included finding it difficult to read on small screens, problems with browser, slow loading time and difficulties in navigating (Gibbon, 2001; Chu, 2003); preferring to read printed text (Ray and Day, 1998; Holmquist, 1997; Gibbon, 2001). Summerfield and Mandel (1999) indicated that library users at the University of Columbia would use e-book in some depth when they are required to do so by courses they are following. The studies above indicated that the degree of acceptance of e-books is on the rise but the preference for printed text remained.

A survey of 14 Malaysian academic libraries web sites revealed only 6 provided e-book services for their users (International Islamic University Library; University of Malaya Library; Universiti Sains Malaysia; Universiti Utara Malaysia; Universiti Tun Abdul Razak; Open Universiti Malaysia). The libraries subscribed to NetLibrary (2), Ebrary.com (4), Books24x7.com (1); and xReferplus.com (1). Although there are a number of Malaysian academic libraries providing e-books services, little information could be located to explain the current status and usage of e-books service. This study uses the case study approach in exploring the use of e-book among Information Technology students from the Faculty of Computer Science and Information Technology, University of Malaya, which is subscribed by the University of Malaya Library (UML). The e-books have been included in the UML service since 2001 and can be accessed via the Library web site at <http://www.umlib.um.edu.my>. As at 2004, the Library has shared ownership of 2,457 e-book titles from Books24x7.com and more than 12,147 Ebrary titles on multi-disciplines (Roesnita Ismail I and Zainab A.N., 2005).

A study was conducted which investigates the perception of e-books in term of its definition, the importance of e-books service at the UM Library and usage of e-books among IT students at the Faculty of Computer Science and Information Technology (FCSIT), University of Malaya (UM). The objectives of this study are (a) To identify students' perception and understanding of electronic book in terms of what an 'e-book' is, and how they come to know about the e-books service at the University of Malaya Library; (b) To determine the usage of e-books among undergraduates with special attention on their impression of using e-books, the gateways used to access the e-books, the place where students access the e-books, the time spent to access the e-books, the subjects of e-books most used by students, the purpose(s) of using the e-books, the extent of e-book cited in the students' works, and the reasons for using e-books; (c) To identify non-users among the undergraduates and their reasons for not using; and (d) to identify students' preference of e-book to printed book. The study population consisted of undergraduates studying in the second, third, fourth and fifth semesters for the academic year 2002/2003 at the Faculty of Computer Science and Information Technology (FCSIT), University of Malaya. They were selected for two reasons; firstly, it was assumed that the students have

basic information literacy skills as they have attended the Information Skills course, which was offered during the second semester of their first year of study. Secondly, being IT undergraduates, it was assumed that they were competent ICT users, would have little problems in handling a digital library environment and would more likely utilize electronic resources made available over the campus network (Ismail, 2005).

Out of the 206 respondents 81 (39%) indicated having used the e-book prior to the survey and out of this number only 17 (21 %) indicated that they found it either not very easy or not at all easy. About 41 (51 %) of users found e-book quite easy to use and the rest (27%, 22) found using it either easy or very easy. All 206 respondents were asked to give either negative, or positive ratings towards the eBook service and 79% (162) students rated "positive" or "very positive". Only about 2(1 %) gave negative impression and 41 (20%) were neutral. Those who gave negative reactions provided the following reasons for their impressions; they have used the e-book service prior to the survey and they still prefer to use printed text; they prefer to search for information via the Internet instead of using the e-book or they were not aware of the service or they were not interested or found it of no use to them. On the other hand, those students who have positive impression of e-book indicated that they found e-book services easy to access, easy to search for relevant information, convenient, economical, user friendly, time saving, and a good alternative service to library users. Seventy-two out of the 81 students who have used the e-books indicated that they were willing to recommend the e-books to their colleagues and friends.

Regarding the Total Level of E-book Usage the findings revealed that the majority of students (61 %, 125 out of 206) have not used the e-books before the survey. These corresponded with Chu's (2003) findings who that reported that only a minority (33.3%) of his respondents have used e-books in the past. There was no significant relationship between the total use or non-use of e-books and gender even though in general more male students (44.7%) used e-books than female students (34.8%) and the Frequency of e-book Use the students have not fully utilized the e-book service as the majority used the e-books service "occasionally" rather than weekly or monthly. This may be due to the inability to access the e-books on daily basis as the computer laboratories, the location where most students accessed the

e-book were often occupied for teaching purposes. Also, e-book use could be increased if librarians and lecturers refer students to e-books on their reading list and reference sources. The results also indicate that the frequency of e-books use among the users was significantly related to gender ($p = 0.016$), where males are more frequent users of e-books compared to female students. This result concurs with the findings of Monopolli et al. (2002) who found that more males used the e-journal services than their female respondents.

The following study describes a survey which forms one part of a larger study into the usability and use of e-books. For the purpose of this survey, e-books have been restricted to electronic forms of a book that can be viewed and read on a computer or portable device e.g. Palm. The relevant e-book formats have consequently been split into two broad categories:

- (a) computer-based e-books which can be viewed directly on a computer or downloaded as files for later reading, and
- (b) device-based e-books which need a specialised e-book reader (e.g. Sony Reader) or a PDA (e.g. Palm Pilot). This survey has also categorised e-books on the basis of their functions.
 - (a) textbooks which are used for formal study of a subject and which are often read in their entirety;
 - (b) reference books which are consulted to find a specific piece of information or a fact (e.g. a dictionary or an encyclopaedia); and
 - (c) manuals or instructional books which contain specialist procedures or instructions for a particular task (e.g. the Manual of Chemistry Analysis or a computer programming manual).

Usage reports from e-book providers usually provide relatively limited data as to how e-books are being viewed or consulted. Typically they provide reports on the number of accesses by subject or title and lists of the most popular e-books, i.e. they are details on what books are used for rather

than how they are used. As a result, assumptions are often made about features which readers find useful when viewing or consulting e-books. Therefore this survey should be beneficial in terms of obtaining a better understanding of e-book usage among students, and the reasons why students do, and do not, use e-books.

This survey has investigated e-book awareness among students in a British academic library and their level of e-book usage. The main objectives of this survey were to:

- (a) Assess students' awareness of the availability of e-books in their academic library;
- (b) Measure the level of e-book usage among the students; and
- (c) Identify the reasons why students do or don't use e-books. A self-selected sampling method was employed to generate a sample of students consisting of undergraduate and postgraduate students registered with the University of Strathclyde for academic year 2005/6.

The online questionnaire was designed using HTML coding and a CGI program as a front end to receive the survey data. It was then placed on a server in the department of Computer and Information Sciences at University of Strathclyde which also acted as the repository for all the collected data. The online survey was divided into two sections:

- (a) The first section was targeted at respondents that had used e-books before; and
- (b) The second section was for respondents that had never used an e-book. The reasons for splitting the questionnaire were to ensure that both types of respondents were directed to the appropriate questions and to facilitate data analysis. The online survey consisted of questions that required respondents to provide information on their demographic characteristics, with the remaining questions being

designed to measure the respondents' awareness of e-books and their usage levels. At the end of the online survey, respondents were also given the opportunity to supply any comments regarding e-books. In addition, the respondents were asked if they would be willing to participate in a follow-up survey *Students' Awareness of the Availability of e-Books in an Academic Library*. Given the definition of an e-book as "an electronic form of a book that can be viewed and read on a computer or portable device e.g. Palm", 72% of the respondents signified that they were familiar with the term e-book before the survey.

However a majority of them (57%) pointed out that they were not aware of the e-book availability from the library. This is in contrast with Bennett and Landoni's findings where 54% of their respondents were aware e-book holdings in the library. When asked about how they found out that the library held e-books, 50% indicated that it was from the library website, 22% from a lecturer, 13% from other sources and 8% from a librarian. It is interesting to note that respondents who answered "other" to this question indicated that they found out that the library held e-books from participating in the survey, friends or the library catalogue.

The findings revealed that a majority of the students (60%, 823 out of 1372) had not used an e-book before. This is in line with the findings of previous studies: Ismail and Zainab A.N reported that 61 % of their respondents had not used e-books before their survey; Chu found that 67% of respondents had not used e-books; Bennett and Landoni found that 61 % of their student respondents were not e-book users and Anuradha and Usha also found that 66% of their respondents had not used e-books on a trial basis.

Details of e-book usage of the 549 students who had used an e-book, 57% had read or used 3 or less e-books before the survey, with the most popular format being a computer-based e-book. This is probably because they are freely available from the library and from the internet, whereas device-based e-books (e.g. those for a Palm Pilot) represent an additional cost in terms of essential hardware. Of the three categories of e-books defined for this survey (textbook, reference book, and manuals or instructional books) the textbook was the most commonly used (68% of respondents). This is

probably because the majority of respondents were undergraduate students and this type of book is the dominant source of content for their studies. The most popular reading method was on screen (94%) although students also liked to print them out (35%). In both of the usage cases, respondents could select more than one option.

The study shows that the most common reasons for using e-books were "they are freely available in the library". This is in agreement with Chu's findings where his respondents tended to use freely available e-books (from the library or Internet) which did not require students to incur any additional expenses. The next most popular reason was "no equivalent printed book was available". Some students commented they have to use e-books through EEBO (Early English Book Online) simply because there was no equivalent printed book available. Students who selected the "other" option provided the following additional reasons for using e-books: they can be remotely accessed; they do not have to go to the library; they are available from the Internet; and e-books are easy to use and carry (Abdullah & Gibb, 2006; Chu, 2003) was one of the first to seek feedback from library users on e-books and surveyed just 27 non-randomly selected library science students in 2002. Only one third of these students had ever used e-books. The reasons for using e-books include availability around the clock and search ability. The main reasons for not using e-books included "lack of thought or exposure" to e-books, need for special hardware, and difficulty in reading on a screen.

Levin-Clark (2006) conducted a survey of library users at the University of Denver's Penrose Library to determine their degree of awareness of e-books, how and why they used them, and their level of satisfaction. It was found that half of library users used e-books, albeit only occasionally, and liked the online convenience and search ability, but preferred to read only small portions of e-books.

Walton (2007) found that at Southwest Baptist University, clients spoke of a perceived increase in learning difficulty when using e-books. E-books were less used than were print books, either to conduct research or study from textbooks, or for leisure reading. Advantages of e-books included the digital format, portability, search ability and scalability while disadvantages included e-books being hard on the eyes and not easy to read. The use of e-books was found not yet to be mainstreamed and to be

supplemental to print books.

Carlock and Perry (2007) held a focus group of only 6 participants at Arizona State University and found that e-book users had generally unsatisfactory experiences with e-books, citing unreliability, lack of usability, and the need for a steep learning curve to use multiple interfaces. A major e-book publisher, eBrary, ran the Global eBook Survey in 2008, with respondents from over 2,100 colleges and universities worldwide. Some of the results more pertinent to this study include: over half of the respondents described their awareness of electronic library resources as good or excellent; half of the respondents knew their library had e-books; but more than half had never used them, primarily because they don't know where to find them, or they preferred to read print books.

While Google was the most popular online resource, print books were considered the most trust-worthy for research and class assignments. A list of features including searching, anytime off-campus access, multi user, downloading, copying and pasting, printing, zooming, highlighting, automatic citations, e-mailing, annotating, book reviews, multimedia, note taking and more, were all considered important (Martin Borchert).

5.3 USER SATISFACTION STUDY

A number of studies and dissertations have applied the Technology Acceptance Model (TAM) as a tool to determine the usage of a particular technology based on the perceived usefulness and ease of use from a user perspective. The TAM was developed by Davis (1989) at the Massachusetts Institute of Technology. The use of TAM in a 2-year study by Gabbard (2004) found a relationship did exist between student satisfaction and the attitude toward accepting the technology used in an online community college environment. A study of computer usage comparing the intentions of student class room teachers with the intentions of experienced classroom teacher based upon the TAM also determined that perceived usefulness and ease of use are indicators to predict computer usage in the classroom setting (Smarkola, 2004). In addition to numerous studies using the basic TAM, there have been a number of studies that have extended the TAM. Boswell (2004) extended the TAM by including additional factors of perceived invasiveness and perceived objections to the acceptance of technology. This study did find

that invasiveness in technology could be perceived as to have a negative impact toward the usage of technology. Another example of extending the TAM is provided by Landry (2003) where the variables of computer background and student demographics were also considered in a study of Web-enhanced instruction used to supplement a traditional lecture course (Smith, 2008).

As expected, the majority of e-book users (71.6%) indicate that Computer Science and Information Technology as their favourite subjects for use compared to "General" subject (23.5%), Health and Medicine (1.2%) and Economics and Business (1.2%). This was found by Dillon (2001) whose respondents have also chosen more books in the same subject areas. These fields (science and technology) were attracting readers of e-books as in these fields current information is crucial and could be readily circulated through an electronic environment (UCONNLibraries, 2002). There was no significant difference in the types of subject use of e-book between male and female students.

5.4 CONCLUSION

The introduction of e-book as a new form of reading material creates apprehension to the general public, including students. However, it is slowly being accepted as an important tool for reading and research purpose.

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