

Utilization of E-Books among Undergraduate Medical Students at Lahore

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The purpose of this study is to report on a survey that was carried out to access the perception of the academic users, and their awareness about the use of e-books at existing level. The survey also seeks to find out the preferences of the users regarding the format for using books. A quantitative approach which employs a survey technique was used to collect information on e-books utilization habit among medical students. Statistical analyses were carried out on the data using Software Package for Social Sciences (SPSS). This study found that most of the undergraduate students have common habits as they read e-books for academic purpose and still preferred to read text books in print format. The factors; such as easy and round the clock access, non-consumption of energy through physical visit to the library and users friendly features offer a comfortable platform for the students to use the reference e-books. However, unreliable service, eye fatigue, requirement of username and password cause to feel uncomfortable with the service. Moreover, the role of librarian is perceived to be an important remedy for all the inconvenience incurred. Only 119 medical undergraduates participated in the study. Furthermore, these students are enrolled in 5th year MBBS in the oldest government sector medical colleges of Lahore. This study is important in terms of obtaining a better understanding of e-books utilization and to provide a rich insight from academic professional to enhance the e-books collection. This is believed to be the first published study

about the utilization of e-books by the medical undergraduate students’.

Keywords E-books, Utilization, Undergraduate students, Medical College

Introduction

Technology has become the main source of innovation over the past decades. The vice-president of Microsoft Technology and Development predicted that we would read ninety percent of everything in electronic form in 2020 (Yates, 2001). Technology innovation changed the concept of library from being storehouse to information portals through providing access to the resources in electronic form. E-book is one of the form of e-publishing. When e-books were introduced in market, publishers were confused regarding their acceptance and rejection. Some predicted that it had great potential to replicate printed books while others thought that it would remain stable. To the contrary, many publishers started the publishing of e-books and their market of e-books now is growing fast. The statistics reported by US e-book sales revenue indicates that overall sales revenue in United States of America has increased 3356.4 million dollars in 2014 as compared to the revenue collected in 2008. It is obvious that e-books have become an integral element of information delivery (Statista, 2015).

Researchers have defined the e-books in different perspective. Pell (2009) defined the e-books as a “digital object with textual and/or other content, which arises as a result of

integrating the familiar concept of a book with features that can be provided in an electronic environment. E-books, as Pell propounded, typically have in-use features such as search and cross reference functions, hypertext links, bookmarks, annotations, highlights, multimedia objects and interactive tools". Others have defined that e-book is the combination of electronic text and reading device (Joan, 2002; Chen, 2003; Roesnita, 2005). The term "electronic book" is defined by Andries Van Dam, a professor of Computer Science at Brown University in USA while working with a team of Brown University on the mainframe IBM 360 during 1967 and 1968. The major development began when Dr. Michael S. Hart, professor from the University of Illinois, launched the project Gutenberg in 1971 and started it through digitalization of the book: United State Declaration of Independence which later became the first e-book in the world.

When the e-books were introduced into the market of personal digital object, the sales rate of e-books was very low but with the passage of time it has been increased. According to the statistical report by Elsevier, there are top 40 academic and research institutes in the world which adopted e-books technology and provided their access to people through different websites and digital libraries. These statistics indicated that Malaysian Universities downloaded half a million (180,000) full text e-books since 2008 to year 2010 (Siwa, 2011). Most recently, Flood (2014) shared the current statistics of Self-published books in UK according to which seventy-nine percent rate of e-books usage had been increased in 2013. Similarly, Publisher Weekly (2014) drawing upon the Smash words survey that reviewed \$25 million sales rate of e-books in India suggested the growing inclination of the users towards the use of e-books. In Pakistan, medical colleges such as King Edward Medical College, Nishtar Medical College, Aga Khan University Medical College, Fatima Jinnah Medical College, Allama Iqbal Medical College and Quaid-e-Azam Medical College are among those colleges that provide e-book services in

their campus libraries. Moreover, Higher Education Commission of Pakistan is also promoting e-books through the National Digital Library Program (NDLP). It helped the local and government universities to subscribe the National Digital Library which provided the users the access to 45000 e-books (Warraich and Ameen 2008). This initiative strengthens the learning activities of students and faculty members who belong to the institutes of higher education in the country and it also helps to overcome the financial barriers to subscribe e-books individually.

Landscape of E-Books at Government Sector Medical Colleges in Lahore

Three Government sector medical colleges of Lahore, King Edward Medical College, Allama Iqbal Medical College and Fatima Jinnah Medical College, provide access to e-books through the mixture of publishers and suppliers. They also create a title wise list of medical e-books which they purchase. Yet there is the absence of policy towards the purchasing of e-books.

Objectives of the Study

The objectives of the survey were as follows:

1. To obtain an initial assessment of e-books utilization in terms of their awareness, purpose, frequency and level of e-books use among medical undergraduates.
2. To profile the general attitude towards the preferences of print and electronic books.
3. To identify the issues which they face when used e-books.

Literature Review

Academic libraries are considered as the leaders of technological innovation in academic organizations because they are at the central point of academic libraries which lead the patrons to understand the use of e-books. The existing literature on e-books includes the perception of the users, their awareness, utilization, format preferences and the reasons regarding the use of e-books. It also shows that e-books are more popular in some subjects and

less in others. Thus Strother, et al. (2009) ascertained the dental student's attitude about the use of digital textbooks at the Louisiana State University School of Dentistry. They found the highly disappointing attitude of dentistry students towards the use of e-textbooks.

One of more comprehensive survey conducted by Levine-Clark (2007) at the University of Denver to determine the patrons' awareness and level of satisfaction in using electronic books. A total 2,067 completed the survey. The results indicated that half of the users of campus community were unaware of e-books. Most interestingly, these students were confused between the difference of electronic journals and electronic books. In 2008, Global student's e-books survey was conducted by Ebrary with the collaboration of more than 150 college and university librarians throughout the world. Around 6,492 students from 400 institutions participated. The results disclosed that 57 percent of the students were unaware of e-books and only 17% of the students responded that their libraries were not offering e-books services (McKiel, 2008).

Great awareness was also reported by Borchert, et al. (2009). They explored quantitative and qualitative aspects of the user's awareness, acceptance and use of electronic books through online survey. They found unexpected high awareness rate of e-books among users at the University of Southern Queensland and Griffith University. In 2008 Raynor and Lggulden (2008) evaluated the project of anatomy and physiology teaching e-books that were subscribed on the platform of WileyPLUS. They concluded that the nursing students and lecturers had positive attitude about anatomy and physiology e-books as they were highly depending on them and wanted this effective tool to be consistently available in future. Schroeder (2012) found that the students of Michigan State University (MSU) libraries were more willing towards the use of e-books. They accessed them through ebrary, Rittenhouse's R2 Library, Wiley, and Wolters Kluwer=Ovid. In a recent study, conducted by

Lopatovska, Slater et al. (2014) in USA have found that graduate level library and information science students, despite the barriers in the process of e-books, used e-books. In the perspective of Pakistan, Usmani and Hanif (2013) reported that seventy-seven percent of the researchers were aware of e-books, eighteen percent of them had low knowledge of e-books and only six percent of them did not even know about e-books.

In an earlier study, conducted by Ji, Michaels et al. (2014) found that e-texts received mixed reviews from students. They explored that students preferred electronic reading to printed reading because of its overwhelming advantages. Woody, Daniel and Baker (2010) also reported about a study which compared the two reading modes of the same text (print versus screen) among 300 students and they also examined the factors that influenced their preference of e-books and textbooks. The found that total fifty-four percent of the students used e-books, however they still strongly preferred to use print books for learning. Their previous experience to use e-books did not increase their preference of e-books despite the special features. Another work published in 2008 (Croft and Bedi, 2004) reported the preferences of print vs. electronic books in the Royal Roads University in British Columbia, Canada. However, the authors disclosed a significant ratio of students (67%) still preferred to use printed books. The relationship of print and electronic books has been coexisting for a long time. Usually, the students preferred both; printed books to read textbook and; e-books for reference purpose. Moreover, the study showed that the science students were more willing to use e-books than the arts students (Zhang and Beckman, 2011).

The reasons which forced the students to use e-books were found in different references. The users liked e-books because of its online availability, easy downloadability and portability (Grudzien and Casey, 2008). Recently, a study conducted by Munir and Hawes (2012) had explored that the students used e-books for

different reasons; 24/7 access, its facility for searching and browsing, easy navigation, the option for copy and paste, others. Similarly, the results of Chong, Lim and Ling (2008) study, the favorite qualities of e-books were the ease of navigation, the consistent font size, tidy pages, legibility, visually appealing, attractive page layout, convenience, ease of navigation, ease of annotation and ease of reading. Simon (2011) also found that students preferred e-books as they enabled them to speedily extract the data both in textual and numerical form.

Methodology

The population of this survey comprised the fifth year MBBS students who enrolled in three public sector medical colleges in Lahore i.e. King Edward Medical College, Fatima Jinnah Medical College and Allama Iqbal Medical College. The questionnaires were distributed among these colleges through personal visit. The questionnaire was divided into two sections: the first section was targeted for those respondents who used the e-books whereas the second section was for those who had never used the e-books. The reason for splitting the questionnaire was to ensure to have the opinion of both types of the respondent.

Results and Discussions

Demographic Information of Respondents

A total 235 responses were received in the survey out of the target population of 300, representing 79% response rate. Target population registered in academic year 2009/14 in the oldest Government sector medical colleges in Lahore. The majority of respondents were female (80%) and 20% of them were male. The predominance of female respondents was due to the presence of one female medical college i.e. FJM in the population and it had 100% response rate.

E-Books Use

A benchmark question was formulated in order to know which undergraduates had the experience of use and non-use of e-books. Figure 1 indicates that 51% of the respondents pointed out that they had used e-books whereas 49% respondents were of the view that they did not use e-books. This contrast with Levine-Clark (2007) findings where 41% of the respondents did not use e-books. Overall, the use and non-use of e-books are almost equal among the respondents.

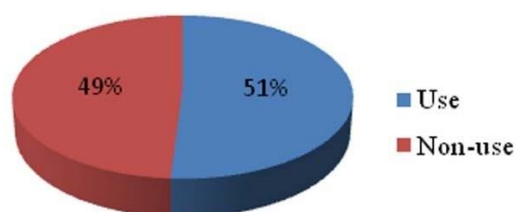


Figure 1. E-books use

E-Books Awareness

Figure 2 shows that the majority of the respondents (52 %) indicated that they were aware with the term of e-books through internet. 29% of them from the friends, 12% of them from librarians, 5% of them from the

teachers and only 2% of them from other sources got information about e-book. It is interesting to note that the respondents who respond "others" to this question pointed out that they had come to know e-books from the members of their family.

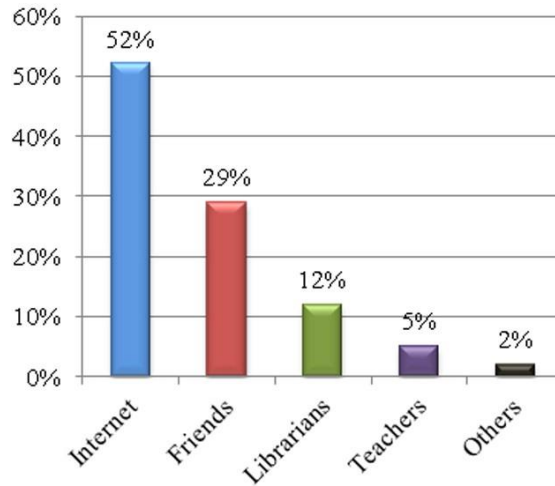


Figure 2. E-books awareness

Frequency to Use E-Books

The frequency to use e-books are presented in Figure 3 which indicates that the respondents have not fully utilized e-books as the majority of students used e-books “weekly and monthly” rather than “daily”. It indicated that (28%) of the

respondents used the e-books weekly. Whereas (27%) of them on monthly basis, (15%) of them bi-monthly and only 12% of them used e-books on daily basis. It is worth mentioning that the students who respond to the option; “other” pointed out that they used e-books seldom, rarely or on demand.

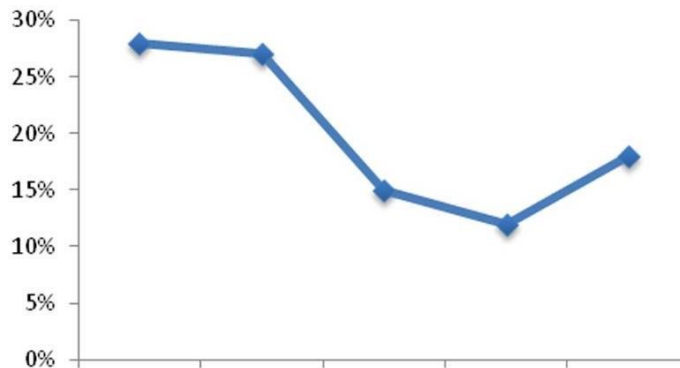


Figure 3. Frequency to use e-books

Purpose to Use E-Books

In the field of librarianship, one of the guiding principal of Sir Ranganathan is “to each book to its reader what kind of needs do e-books meet for academicians at medical colleges, in their professional or personal capacities?”. Three main purposes for which students used e-books have been showed in Figure 4. The results revealed that the students used the e-books

mainly for “academic purpose” with and “leisure reading” was the second most popular purpose. The least selected option was “other” which, according to the students, was mainly to get extra knowledge, to complete assignments and sometimes for both academic and leisure purposes. This corresponded findings of the research done by Anuradha and Usha (2006)

who reported that 58% of the respondents used e-books for academic purpose.

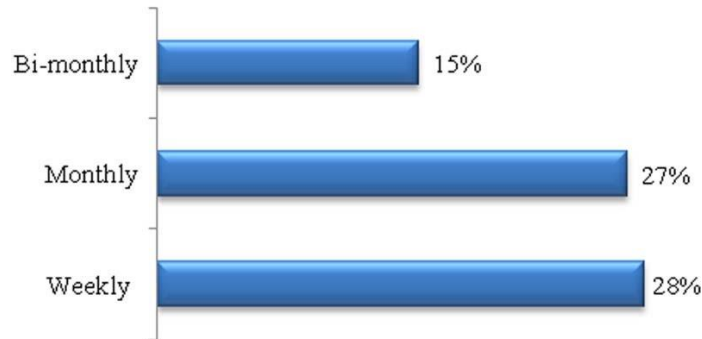


Figure 4. Purpose to use e-books

Gateways to Access E-Books

There are different gateways to access e-books. In order to find out the commonly used gateway, the respondents were given a check list for marking the relevant items. It shows that a significant number i.e. 99 (83%), of students indicated that Google books as the favorite

gateway to access e-books while the rest gained access through the publishers’ website (7%), HEC National Digital library (5%) and college library (5%). The respondents used Goggle books as the main gateway of e-books because they have the perception that Goggle and its related products are the best finding aides for them.

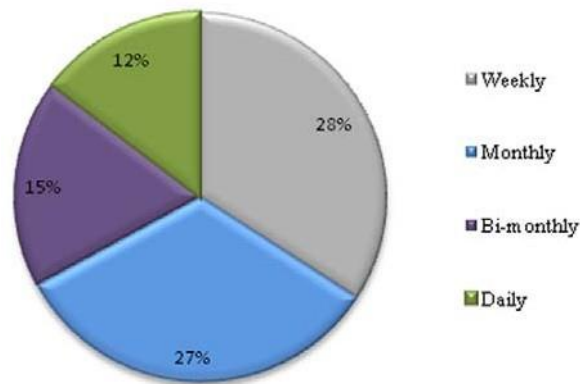


Figure 4. Purpose to use e-books

Types of E-Books Used

The particular types of e-books used are presented in Figure 5 which indicates that almost one third of the respondents (39%), used reference books (33%) of them used recreational books and (28%) of them used textbooks. It

confirms that reference books are clearly the most popular type of e-book in students. These results corresponded with the findings of the study suggested by Zhang and Beckman (2009) who proposed that reference e-books were frequently used among the student

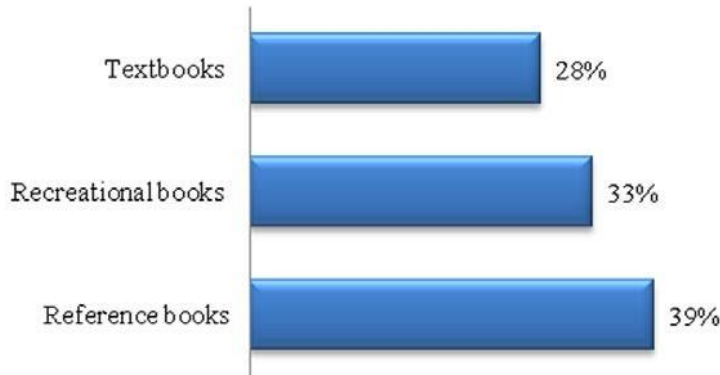


Figure 5. Types of e-books used

Format Preferences: Print Versus Electronic

A critical question to the utilization of e-books is the reading format preferences. Data revealed that more than half of the respondents (68%) preferred to use hard copy of book and only thirty-eight (32%) respondents preferred to use

electronic copy of book. It confirms the findings of Woody (2010), Croft and Bedi (2004) and Walton (2008) that the majority students still preferred to use printed books. It was because their habit to use printed books had been developed since their childhood. So, they feel convenient to read on printed books.

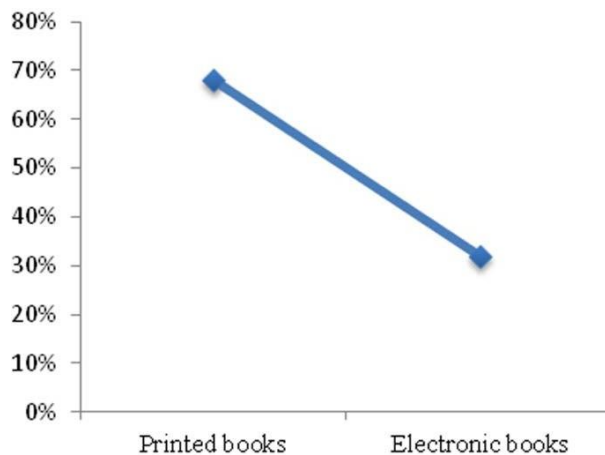


Figure 6. Types of e-books used

Format Preference of Course Related and other Books

The respondents were also asked by giving two options in this regard to mention their

preferences of format regarding related their specific course and for marking leisure time reading books. The descriptive statistics of their preferences are presented in Table 1.

Table 1

Format preference of course related and other books

Statement	Print	Electronic
A medical textbook (Harrison's/ Davidson's Medicine)	89(74.8%)	30(25.2%)
A surgery textbook (Baily & Love Surgery)	79(66.4%)	40(33.6%)
A pharmaceutical reference book (Goodman & Gillman's)	65(54.6%)	54(45.4%)
A gynecology textbook (Shaw's textbook of gynecology)	75(63%)	44(37%)
Reference books (Stedman's medical dictionary)	42(35.3%)	77(64.7%)
Leisure reading books (Novels, fiction, etc.)	62(52.1%)	57(47.9%)

The data reveals that a significant number (74.8%) of the respondents preferred medical textbook in print format followed by textbook of surgery (66.4%), pharmaceutical reference book (54.6%), gynecology textbook (63%)

and leisure reading books (52.1%). A majority of respondents (64.7%) preferred to use only reference books in electronic format. It is confirmed from the data that the medical students still preferred their textbooks in e-format.

Reasons to Use E-Books

As shown in Table 2 the most common reasons to use e-books were "Fast and easy access", "accessibility around the clock", "the provision of up to date information", the facility to "search and browse dictionary", "time saving" "user friendly" and "free online availability". The same reasons support the findings of (Muir and Hawes 2012), (Letchuman and Tarmizi, 2011) and (Simon, 2011).

Table 2

Reasons to use e-books

Statement	M	SD
Fast and easy access	4.02	1.033
Accessible round the clock 24/7	3.88	1.114
Provide up to date information	3.87	1.127
Can search and browse dictionary while reading	3.82	.988
Save time	3.82	1.191
User friendly	3.71	1.035
Free online availability	3.77	1.146
Easy to cut and paste the selected text	3.70	1.086
Ability to bookmark and highlight important text	3.69	1.148
Can personalize the format of book	3.65	.860
Ability to maintain my own collection in e-form	3.64	1.071
Portability	3.61	1.347

The respondents mentioned few problems which they encountered when they used the e-books. The encountered problem to their mean value has been presented in descending order.

Problems Encountered When Using E-Books

The range of mean value is between 2.5 to 3.5. However, the values of SD (standard derivation) are almost more than 1 which shows the variation found among the respondents' problems. The issue of "user name and password requirement" has the highest mean score; 3.45 and the "lost access to e-books" has the lowest

mean score 2.48. However, the findings reveal that the requirement of e-books user name and password appears to be a problem for the students during the process of using e-books. While the eye sore and incompatible links were the least of the issues faced by the students during the time they used the e-books.

Table 3

Opinion about the issues in using e-books

Statements	Mean	S.D
Requirement of e-book username and password	3.45	1.267
Eye sore	3.24	1.226
Different e-books from different sources are not compatible	3.13	1.119
Difficulty in downloading a relevant section or chapter	3.02	1.017
Difficulty in printing a relevant section or chapter	2.90	1.153
Slow downloading of pages	2.87	1.147
Lost access to e-books	2.48	1.064

Conclusion

E-books have gained widespread acceptance in medical institutes. This study revealed a significant level of use and non-use of e-books among the medical undergraduate students. The high usage rate was due to the advantages associated with e-books like their portability, 24/7 access, their serviceability for saving time, their quick support for retrieving information etc. The study further elaborated that the students who did not use e-books, they felt convenient to read on printed books because their habit to read printed book had been developed since their childhood and they didn't like to change it. However, the study demonstrated that use of e-books will double in academic institutes. The basic fact is that e-books have opened countless opportunities for medical students and for the investment of publishers and vendors as well.

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