2021

ACCESSIBILITY, USAGE, AND BEHAVIORAL INTENTION OF PRINT BOOKS AND EBOOKS BY MEDICAL STUDENTS

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ABSTRACT

The aim of the study was to examine the difference of ease of use, accessibility, and future prediction of print format books (p-books) and eBooks among MBBS students. The quantitative research method and survey design was used for this study. The population of the study was the all undergraduate medical students (MBBS) of Shalamar Medical & Dental College (SMDC) Lahore, Pakistan. For data collection the self-administered instrument was used and questionnaire was validated from field expert and Institutional Review Board of SMDC. For check the reliability pilot testing was conducted and Cronbach's Alpha value was 0.87. In SMDC the MBBS students were 600 from 1st year to final year and the data was collected from all enrolled MBBS students of SMDC. The data was analyzed for using of SPSS 23rd version.

It was found that the majority of MBBS students used eBooks and p-books for study purposes. The Prof. M. Akhtar Khan library has a rich collection of both format books. The researchers, students can access and utilized the eBooks and p-books round the clock 24/7. It has been examined that students got easy access to eBooks and usage of eBooks. The majority of students were satisfied with eBooks because they save their time, easy access, and availably on their desktop and android phones. The factor ease of use was significantly high in favor of the p-books. The student's future preference about both formats, the senior classes preferred p-books and junior classes in favor of eBooks. The majority of MBSS students were satisfied with both

formats but they preferred hybrid libraries due to the availability, usage, accessibility of both formats of books. The results show that the behavioral intention of the majority of MBBS students is motivated to use p-books in the future.

Key Words: Ease of use, accessibility, availability, behavioral intention, and preference of material, eBooks and p-books, medical students, Pakistan.

INTRODUCTION

Background of the study

Academic libraries provide information resources to the researchers, students, staff, and faculty. Information resources may be classified in two extensive methods specifically; electronic format resources and the traditional print format which based on information technology (Skaggs et al., 2006, p. 192).

Print history

The history of print is a part of librarian's education and research. These studies focus on the history of print and printers and reveal that this research is very vast. In many studies, the end of the print due to the advent of computers was predicted. The opposite of this was predicted in the theory of permanence which revealed that print would survive in spite of advancements in information technology. The theory of permanence laid down that new technology was always incorporated in the old and existing technology without eliminating it. The same situation is developing where information technology was supplementing and supporting print (Jelusic, 2011, p.16-17).

Growth of electronic resources and digital libraries

The researcher Makri et al., (2011) described that a reliable website that is used by the users to discover digital sources. Digital libraries are emerging within the educational libraries for the remaining three decades. These digital libraries provide rich sources to the users and allow them to get access to e-sources in a variety. The beginning of the e-resources has been proved as a precious supply for research and study (Arms, 2012; Gutierrez & Wang, 2001; & Noh, 2012).

History of e-book

According to McKnight (2003), "An e book is the content of a published book made available to the reader in electronic form" (p.235).

The popularity of e-books has full-fledged when e-books were introduced in the 1980s due to their effects on dissemination. Baker (1998) reported that media policy gives approval for the information to move from one platform to another by the changing nature of its user. According to Baker (1992), the nature of ebooks, use of philosophy in their use, categorization, and narration of different kinds of techniques are found in their production and design. These days there is amazing growth in demand for using e-books.

Availability and utility of e-books

Rafiq and Amin, (2014) revealed that the association of e-books by means of the libraries of educational organizations in Pakistan is not ordinary. That's why; Higher Education Communication (HEC), in 2004 National Digital Library Program was started to make available access to more than textbooks 40, 000 for reading to the students, faculty, and researchers of non-worthwhile educational institutes in Pakistan by, Springer digital books, McGraw Hill Collection and E- brary. The library services improved through the access of databases by The National Digital Library Program.

Additionally, Gibson and Gibb (2011) revealed that understudies similar digital books since they are effectively portable and approach e-gadget. Mostly students similarly like digital books because of most extreme storage, simple use, accessibility, and capacity at hyperlink. The researcher Blummer (2012) discovered that of academic and public libraries 95% in the USA provide access to e-books to their faculty, staff, and students.

The researcher Barbara (2011) conducted a study at the University of Pittsburgh an examination on students, staff, and educators in medical library framework from in the course of recent year's collection of digital books 2,000. The students, staff, researchers, and faculty have accessed e-books through Knovel and Springer in a variety.

Availability, utility and preferences of books in medical sciences

The researchers VENKATASUBRAMANIAN et al., (2018) reported the preferences of medical students about the selection of e-books as well as p-books. Khalid (2014) discovered that the medical student gives preference to the medical p-books rather than e-books. It has been concluded that the medical students also preferred hybrid libraries for their research purpose and study. Ugaz (2008) investigated that the format of e-books was adopted by publishers. Information technology can take place in spite of textbooks. This technology plays a vital role to understand and command over the medical subjects e.g., command on physiology, different chemical reactions of Biochemistry and organs in Embryology.

They enhance the quality of medical education, the Government of Pakistan gives the opportunity to access and read the medical literature, research work, books, and journals through HEC National Digital Library Pakistan. Therefore medical institutes are electronically linked with Pakistan Educational Research Network (PERN). In medical institutes, the libraries are well organized with the latest medical journals and books (Said, 2006; Ramzan, 2009 &HEC, 2012).

Shalamar Medical and Dental College (SMDC), Lahore is a medical institute that offers a five years MBBS degree program with around 600 enrolments every year. Professor Muhammad Akhtar Khan Library has the capacity to meet the needs of staff, faculty, and student. Electronic and print resources like databases, journals, textbooks, reference books, articles, and atlas, etc. are according to the PMDC and University of Health Sciences (UHS) criteria. This library has an annual budget to purchase the latest editions of print format textbooks, reference books, and medical journals to increase the collections and requirements of UHS and PMDC.

Problem statement

Many studies were conducted on focus, availability, adoption, and use of e-books among students (Ahmad, 2016 & Khan et al., 2016). A researcher Rafique and Warraich (2016) explored and examined on use and non-use of e-books amongst clinical

undergraduate students of Pakistan, So the little study was conducted on the utilization and preference of e-books and p-books (Cumaoglu et al., 2013; & Farid et al., 2018). However, there is no study available on perception, usage, availability, and expectations about e-and p-books of MBBS students. This phenomenon is important in Pakistani surroundings.

Research Objectives

1) To measure the difference of availability between e and p-books by MBBS students.
2) To discover the difference in usage of p-books and e-books amongst undergraduate clinical students.
3) To explore the level of expectations of MBBS students regarding the availability and usage of p- books and e- books.

Research Questions

1) What is the difference of availability of students for e-books and p-books amongst undergraduate clinical students?
2) What is the difference of usage of e-books and p-books amongst undergraduate clinical students of SMDC?
3) What is the expectations level of clinical students for availability and usage of e-books and p-books.

Rationale of the study

With the growth of technology, the adoption and usage of e-books are most common in this era. Most studies were also conducted on the usage, availability of e-books among faculty, staff, and students of the different subjects (Rafiq & Warriach, 2016; Wang & Bai, 2016 and Khan et al., 2018). As per researcher Farid et al., (2018) investigated that most of the students preferred the hybrid libraries for their research and study. The phenomenon of e-books is very important in the Pakistani environment (Khan et al., 2018), the researcher has investigated the usage and perception of both formats of electronic and print format books, which are most important in the Pakistani context.

Significance of the Study

The investigation will be useful in planning the strategies with respect to absorbing price range on both e-books or p-books maintaining in see the favorites of MBBS students as a result of this study. This investigation will likewise be valuable for library experts, specialists, and directors to detail approaches in regards to the acquisition of eBooks.

Delimitation of the Study

The study delimited to undergraduate MBBS students of Shalamar Medical & Dental College, Lahore only and other medical students and colleges are not part of this study. The study will also be delimited to currently enrolled 1st year to final year (600) undergraduate MBBS students.

LITERATURE REVIEW

Background of the study

Many studies have been conducted to examine the impacts of e-books and p-books on reading habits and to compare the accessibility, reading understanding, speed, ease of use, behavioral intention, and accuracy. To evaluate the logicality of e-books and p-books, researchers found varied results. In common, p-books were found to be more amiable and readers felt obscure when they read text on the screen. It was found that users have difficulty judging the extent of a sentence and they felt stiffness in reading the written material on tablets and portable devices, while these problems were not documented in p-books reading (Eveland & Dunwoody, 2001)**.**

E- Book?

"A digital form of outdated print book planned to be read on a personal computer or an e-book reader (a software application for use on a standard-sized computer or a book-sized computer used just as a reading device); one and the same with digital book, e-book, and online book" (Reitz, 2014a,. p. 17).

E-book origin

Libraries have usually been greeted and encouraged by the new era. The endorsement of the new generation provokes the usage of library automation. The researcher defensed that libraries advocated the brand new generation and it first digitized the catalogs which were accompanied by the abstracts, serials, periodical index, and substantial reference work. The very last evolutions become made by publicizing the e-books which very well took a long period to grow. The first e-book which seized the general public consideration become made as Riding the Bullet which changed into downloaded by way of 400,000 individuals in 24 hours in 2000 (Reitz, 2014).

Availability and utility of e-book and p-book

The study was organized to observe the experience, usage, and awareness of e-books among the undergraduate students at Regent University College of Science and Technology, Ghana. The paper-based questionnaire survey was used in this study. The study was organized by using the population of 2855 undergraduate students. Descriptive statistics of open-ended statements were used. The study obsessed/fascinated the following results. 89% of students identified about e-books and their usefulness. Around 34% of participants never used e-books and the majority of the participants were from junior classes. 89% of students who used e-books stated that they used it once or twice. In format selection, 93% of the students favored p-books for academic use, and nobody favored e-books for academic purposes. Only one percent of the participants endorsed e-books for easy reading only. The study revealed that the following dynamics determined the preference of p-books above e-books in a developing country like Ghana. Irregular power supply network frame, low speed, and high price were the serious problem of the internet in Ghana Asunka (2013).

Ahmad (2016) conducted a study at Edith Cowan University (ECU) on behavior about the endorsement of e-books among educationists, students, and staff. Survey design and quantitative methods were used for this study. The majority of the educationist, staff, and students of ECU were satisfied with the availability, usage, facilitation, and

authorization of e-books however the people of this institute favored the print format. The overall behavior of students, staff, and educationists towards e-books was satisfactory.

Wang and Bai (2016) discovered the students' attitude, usage, and awareness towards e-books in China at the Zhejiang University. The results detailed that there was an important change between students' usage and awareness of common e-books and educational e-books. There was a higher understanding but a lower endorsement of common e-books. Understanding and level of usage of e-books provided by the library were very low. A search engine is commonly used to retrieve e-books. Senior undergraduate and postgraduate students retrieved e-books from catalog and library websites. Students, specifically undergraduate students, used e-books commonly for ease. In comparison, the postgraduate students were disposed to use e-books more for academic use. The use of computer and mobile devices was favored for reading e-books, but for academic e-books, students favored print forms of e-books for reading. University students revealed a great favor for p-books. Academic libraries should place further exertions on advancement, motivating demands, and collaboration with teachers to develop the use of e-books.

Haugh (2016) designed a study at the Graduate School of Education USA on graduate students. The study organized on understanding and usage of e- books, e-resources, and journals. This study revealed that the students throughout the world were flowing in e- books, e-resources, and journals usage. This study also revealed p-books & e-books had been similarly useful for researchers. Khan et al., (2016) directed an examination on the use of digital books among students. A quantitative strategy was utilized. They favored digital books to upgrade the exploration and scholastic aptitudes. This investigation likewise reasoned that digital books have an indispensable job in the setup of scholarly libraries in Pakistan.

Rafiq and Warriach (2016) conducted research on the use of electronic books amongst medical college understudies of Lahore. The goal of this investigation was to move toward the awareness and assessment of digital books amongst MBBS students. The survey design was utilized in this examination. 119 understudies contributed to this

examination and a larger part of medicinal understudies have a general daily schedule to utilize the e-books for their academic reason since it's anything but difficult to approach without visiting the library to invest their time and strength. It also provides amiable fluffs and a secure platform to get entry to the text and reference books for the students. So the students were disagreeable with e-books owing to eye fatigue; user name and password are mandatory and non-accessibility of e- books. Many students desired the p-books as examine to e- books.

Behavioral Intention of e-books and p-books

Haugh (2016) designed a study at the Graduate School of Education USA on graduate students. The study was organized on understanding and usage of e-books, e-resources, and journals. This study revealed that the students throughout the world were flowing in e-books, e-resources, and journals usage. This study also revealed p-books & e-books had been similarly useful for researchers. Khan et al., (2016) directed an examination on the use of digital books among students. A quantitative strategy was utilized. They favored digital books to upgrade the exploration and scholastic aptitudes. This investigation likewise reasoned that digital books have an indispensable job in the setup of scholarly libraries in Pakistan.

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RESEARCH DESIGN AND METHODS

Research Design

The study carried a quantitative study technique. The survey research method was used. This study was meant to examine the usage of p-books and eBooks by medical students. The study also investigated the ease of use, availability, and behavioral intention of p-books and eBooks among undergraduate medical (MBBS) students.

Population and sample

Quantitative data was collected and analyzed. The population of the study was all MBBS students currently studying at Shalamar Medical & Dental College, Lahore. There are 600 undergraduate medical students from 1st year to the final year. Censuses sampling was applied for data collection, the researcher was being bounded to cover the entire population for this study, and data were collected through survey design. Alasuutari (2008) asserted "Censuses of the population provides essential information on the structure of the population and, in particular, the characteristics of small areas and also covered the whole population" (Alasuutari, Bickman & Brannen, 2008, p.524). "The research strategy where one collects data from all or a part of the population to assess the relative incidence, distribution and interrelations of naturally occurring variables" (Powell & Connaway, 2004, p.59).

Data Collection Instrument

A semi-structured questionnaire was developed after validation of field expert and the reliability value was 0.87Cronbach's Alpha determine through SPSS.
The instrument may be divided into three parts;

1) Demographic information
2) Questions about perception, availability, and usage of e-books.
3) In the third part, the researchers will distribute in three main domains like perception, usage, and expectations of the p-books and e-books.

Expert Review

Simon (2011) considered the expert review as one of the basic ways of evaluating strategy in the instrument. The expert review ensures the validity of content in both summative and formative instruments. With the help of relevant literature and instrument, the instrument will be developed. Some modifications and additions suggestions by the LIS expert and IRB panel of SMDC after studying the tool. The investigator will be accommodated the recommendations and changes in the tool.

Validation of the Instrument

DeVaus (1993) recommended not taking the risk and conducting pilot testing first. "The term pilot testing refers to a mini-study of full-scale study. Although, conducting a pilot study does not ensure success but it enhances the likelihood of success. It ensures internal validity of an instrument" (Teijlingen, & Hundley, 2002).

Data Collection Procedure

Data collection was started after reviewing the tool according to the requirement of the research. The investigator was gathered the data from MBBS students through a personal visits. The investigator was given common guidelines before filling the survey questionnaire.

Dealing with ethical issues

The researcher was ensured the ethical consideration and some arguments are mentioned below.

a) Researcher was ensured and got permission from the MBBS students.

b) Researcher was ensured that evade the personal questions.

c) The security of the gained data from the participants was guaranteed.

Data Analysis Plan

The researcher was the numeric data using the statistical package for social sciences (SPSS) version 23. According to the research objectives, the data was analyzed.

According to the research questions and objectives the descriptive statistics with frequencies distribution, paired sample t-test, and one way ANOA was used to analyze the quantitative data and explore the results

DATA ANALYSIS AND INTERPRETATION

The data was collected from 522 out of 600 respondents of SMDC, Lahore. The total reply rate was (87%). This study evaluated the variance of ease of use, availability, and behavioral intention of p-books and eBooks by medical students of SMDC.

Table 1

Demographic information of gender and classes

Variables	Levels	Frequency	Percentage
Gender			
	Male	285	54.6
	Female	237	45.4
Class MBBS (year)			
	First year	100	19.2
	Second Year	133	25.5
	Third Year	96	18.4
	Forth Year	96	18.4
	Final Year	97	18.6

Table 1 shows demographic information of gender and class. The males were 285(54.6%) and females were 237 (45.4%) in this study. The response rate of undergraduate medical students was 100 (19.2%) first year, 133 (25.5%) second year, 96 (18.4%) third year, 96 (18.4%) fourth years, and 97 (18.6%) final year medical students.

Table 2

Responses about access and usage of e-books

Variables	Levels	Frequency	Percentage
Access to e-books?			
	Yes	462	88.5
	No	60	11.5
Do you use e-books?			
	Yes	270	51.8
	No	251	48.2

Table 2 shows the results about access and usage of e- books among medical students. 462 (88.5%) students accessed and others 60 (11.5%) did not access the e-books. The results also show the usage of e-books among medical students. The majority of the students used e-books.

Table 3

Source of awareness, purpose and frequency of use of e-books

Variables	Levels	Frequency	Percentage
From whom come to know about e-books?			
	Teacher	46	8.8
	Friend	129	24.7
	Librarian	244	46.7
	Internet	103	19.7
Main purpose to use e-book?			
	Study Purpose	369	70.7
	Research	109	20.9
	Other	41	7.9
How often use e-books?			
	Daily	87	16.7
	Weekly	118	22.6
	Monthly	56	10.7
	Irregular	261	50.0

Table 3 shows the results from whom users came to know about e-books. The majority of the students got aware of e-books librarian 244 (46.7%). This table also shows the responses of the main purpose to use e-books. The results showed that 369 (70.7%) medical students used it for study purposes. Most of the medical students used e-books irregularly 261(50%).

Table 4

Where do you usually start search?

Variables	Levels	Frequency	Percentage
While looking for books where do you usually start Google search?			
	College Library	255	46.0
	HEC Digital Library	50	9.6
	Google Books	240	43.1
	Others	7	1.3

Table 4 shows that the search of e-books preferences. The results showed that 255 (46.01%) of medical students were searching e-books from the college library and 240 (43.1%) searched from Google books.

Table 5

Responses types of books generally used and how to use the e-books

Variables	Levels	Frequency	Percentage
What type of e-books do you generally use?			
	Text Books	219	42.0
	Reference Books	263	50.4
	Literary Books	40	7.7
How do you use e-books?			
	Download a chapter	192	36.8
	Read whole pages in sequence	194	37.2

on the screen		
Print out pages for further use	33	6.3
copy and paste sections to your own documents	103	19.7

Table 5 shows that the responses regarding types of e-books generally used by medical students. It was revealed that 219 (42.0%) students used textbooks and the majority of the students 263 (50.4%) used reference books. This table also showed the results that how these books were used. The Majority of the students read whole pages in sequence on screen.

Table 6

Comparison between accessibility of e-books and p- book among medical students

Accessibility	E-Book		Print Book		
	Mean	SD	Mean	SD	P
The books are accessible 24/7 round the clock	3.25	1.23	3.31	1.52	.522
The books are available everywhere	3.40	1.30	3.20	1.35	.029
Fast and easy access	3.26	1.18	3.38	1.38	.078
I am satisfied with available books in library	3.44	1.16	3.98	1.15	<.001
I feel difficulty to browse	3.48	1.19	3.97	1.23	<.001
I can't find the relevant book when needed	2.45	1.32	3.00	1.49	<.001

The comparison (Table 6) using paired sample t-test was conducted to find out the significant difference between availability of e-books and p- books. The results showed that there was a significant difference (p<.05) on the basis of accessibility of e-book and p-books. The e-book (mean=3.40, SD=1.30) is more available as compared to p-book (mean=3.2, SD=1.35). For the results of satisfaction level with the availability of books in the library, there was a significant difference (p<.05) between e-book and p-book. The users of p-books (mean=3.98, SD=1.56) were more satisfactory in terms of availability in the library as compared toe-books (mean=344, SD=1.16). It was noted that the search of p-books (mean=3.97, SD=1.23) was more difficult as compared to e-books (mean=3.48, SD=1.19). It was also was difficult to find the relevant p-books (mean=3.00, SD=1.49) as compared to e-books (mean=2.45, SD=1.32).

Paired sample t-test that there was no significant difference between accessibility 24/7 and fast and easy access of e-books and p-book among medical students.

Table 7

Comparison of perception about e-book and p-books among Medical students

Factors	1st Year	2nd Year	3rd Year	4th Year	Final	F	P
E-book accessibility	17.61	17.46	16.89	16.92	17.18	0.61	0.657
	(3.93)	(4.37)	(4.45)	(4.45)	(4.23)		
P- book accessibility	18.61	18.40	18.15	17.92	18.55	0.44	0.783
	(4.20)	(4.42)	(4.69)	(4.05)	(4.18)		
E-book ease of use	30.45	30.79	29.72	28.87	30.40	1.58	0.178
	(6.68)	(6.50)	(6.39)	(4.92)	(6.43)		
P- book ease of use	31.97	30.90	29.47	28.83	30.54	4.14	0.003
	(6.71)	(6.58)	(6.14)	(4.45)	(6.11)		
E- book behavioral intention	30.39	16.49	16.13	14.73	15.11	6.05	<.001
	(6.11)	(4.23)	(4.38)	(4.20)	(3.87)		
P-book behavioral intention	17.97	17.47	16.05	15.29	16.96	6.39	<.001
	(4.61)	(4.49)	(4.32)	(3.54)	(4.36)		

Table 7 shows the results of One-Way Analysis of Variance (ANOVA) that there was a statistically significant difference exist between e-books and p-books in ease of use of p-books. The first-year undergraduate medical students (m=31.97, SD=6.71), second-year (m=30.90, SD=6.58), third-year (m=29.47, SD= 6.14), fourth-year (m= 28.83, SD=4.45) and final year MBBS students (m=30.54, SD=6.11) with regard to ease of use of p-books which was (p<.05).The results show that there was a statistically significant difference exist in the behavioral intention of e-books. The first-year undergraduate medical students (m=30.39, SD=611), second-year (m=16.19, SD=4.23), third-year (m=16.13, SD=4.38), fourth-year (m=14.73, SD=4.20) and final year MBBS students (m=15.11, SD=3.87) with regard to behavioral intention of e-books which was (p<.05).The first-year undergraduate medical students with regard to the behavioral intention of p-books which was (p<.05).

Table 8

Results of POSTHOC test: Pair wise comparison of perception about e-books and p-book among medical students

Factors	1st Year	2nd Year	3rd Year	4th Year	Final	Significance Difference
E-book accessibility	17.61 (3.93)	17.46 (4.37)	16.89 (4.45)	16.92 (4.45)	17.18 (4.23)	
P-book accessibility	18.61 (4.20)	18.40 (4.42)	18.15 (4.69)	17.92 (4.05)	18.55 (4.18)	
E-book ease of use	30.45 (6.68)	30.79 (6.50)	29.72 (6.39)	28.87 (4.92)	30.40 (6.43)	1^{st}vs 3rd , 1^{st}vs 4th
P-book ease of use	31.97 (6.71)	30.90 (6.58)	29.47 (6.14)	28.83 (4.45)	30.54 (6.11)	3^{rd}vs 1st, 4^{th}vs 1st
E-book behavioral intention	30.39 (6.11)	16.49 (4.23)	16.13 (4.38)	14.73 (4.20)	15.11 (3.87)	1^{st}vs 3rd, 1^{st}vs $4^{th,}$ 2^{nd}vs 4th, 3^{rd}vs 1st, 4^{th}vs 1st, 4^{th}vs 2nd
P-book behavioral intention	17.97 (4.61)	17.47 (4.49)	16.05 (4.32)	15.29 (3.54)	16.96 (4.36)	1^{st}vs 3rd, 1^{st}vs 4th , 2^{nd}vs 4th, 3^{rd}vs 1st

Table 8 shows the results of the Post Hoc Tukey test. The findings revealed that 3rd-year undergraduate medical students have statistically significant and higher ease of use of p-books than 1st-year MBBS students as well as 4th-year medical students. They felt significant and higher ease of use of p-books than1st year MBBS students.

The results of the Post Hoc Tukey test revealed that 1st-year undergraduate medical students have a statistically significant and higher behavioral intention of e-books than 3rd-year MBBS students as well as 1st-year medical students also feel a significant and higher behavioral intention of e-books than 4th-year MBBS students. The results revealed that 4thyear undergraduate medical students have the statistically significant and higher behavioral intention of e-books than 1st-year MBBS students as

well as 4th-year medical students also feel the significant and higher behavioral intention of e-books than 2nd-year MBBS students.

The results of the Post Hoc Tukey test revealed that 1st-year undergraduate medical students have a statistically significant and higher behavioral intention of p-books than 3rd-year MBBS students as well as 1st-year medical students also feel the significant and higher behavioral intention of p-books than 4th-year MBBS students. The results revealed that 2nd-year undergraduate medical students have a statistically significant and higher behavioral intention of print format books than 4th-year MBBS students as well as 3rd-year medical students also feel the significant and higher behavioral intention of p-books than 1st-year MBBS students.

DISCUSSION AND CONCLUSION

Discussion and findings

The findings of the study about usage, availability, accessibility, and behavioral intention of eBooks and p-books, the 600 medical students participated in this survey and the response rate was 522. In this study, the male's response rate was high as compared with female students. The majority of the students used eBooks for study purposes and accessed text and reference eBooks from the college library. The library has a large collection of p-books and eBooks. In this survey, it was noticed that majority of participants have awareness about eBooks and the source of awareness was the librarian.

The construct preference and accessibility of print and electronic material has a serious issue to measure the user's behavior. In the evaluation between eBooks and p-books about the construct accessibility, the findings revealed that the majority of the participants were satisfied with library collection and availability. They borrowed the relevant p-books and accessed the eBooks was significant. The construct accessibility's means about p-books was higher as associated with eBooks among medical students. The findings indicated that the majority of participants get access to both formats of books easily but in some majority of participants favored p-books due to easy availability, accessibility, and usage and the results similar to other studies Miller (2014) concluded

that participants of University of the United State of America preferred p-books due to availably, regular usage, and relevant as compared with eBooks.

Tenopir et al., (2015) found that the majority of faculty members of US universities preferred p-books for their study and research purpose. Cummings et al., (2015) evaluated that majority of USA universities faculty members preferred p-books due to easily available, frequent usage, and accessibility. Similarly, Farid et al., (2018) evaluated that majority of Pakistani medical students preferred p-books due to easy availability and accessibility. Another Pakistani study conducted by Khan et al., (2018) concluded that the majority of undergraduates' students preferred p-books. Gregory (2008) conducted a study at public school of the USA and found that the student's opinion about e-book was mixed. Sampath and Kumar (2010) reported that the majority of faculty and students' participants of academic institutes used eBooks, e-journals, and e-resources for study purposes and getting information but they preferred print material and resources. Mawindo and Hoskins (2008) evaluated that MBBS students of the University of Malawi College of Medicine talked about p-books over eBooks. The majority of medical students had eye fatigue on studying e-books on-screen over p-books

The findings indicated that factor ease of use of p-books and eBooks has considered and results found similar as Sathe et al., (2002) who conducted the study on students of Federal University of Petroleum Resources Effurun, Nigeria. The researcher indicated that the faculty members preferred the p-book as compared to e-books. Particularly, accessibility of material, ease of use, and printing material were mostly preferred over electronic resources which could be easily readable, easy to carry, and clear resource in the citation of print format resources Tenopir (2010).

The preference of eBooks and p-books also similar to Rafiq and Warriach (2016) and the study also evaluated the results of preference of p- books over e-books and it was found out that most of the medical students preferred both format kind of books and liked the hybrid library. The results were matched with the study conducted by MacCall (2006) on medical students, who preferred both formats of books for their

clinical rotations and studies. The students of graduation are looking forward to electronic and print resources in the form of the hybrid library for academic and research purposes (Haugh 2016). The researchers were also found out in this study that the MMBS students of SMDC that the students preferred and predicted the use of p-books in the future. Similar, in the Pakistani context Rafiq and Warriach (2016), Farid et al., (2018), and Khan et al., (2018) concluded that the majority of medical, social sciences and engineering students preferred print format books for their information, study and assignments, the majority of participants also preferred hybrid libraries.

The first-year medical student's behavioral intention about e-books was higher as compared to the other four classes. The results of this study revealed that 1st-year medical students have a significant and higher behavioral intention of p-books than 3rd-year MBBS and fourth year. The results revealed that 2nd-year undergraduate medical students have a significant and higher behavioral intention of p-books than 4th-year MBBS students as well as 3rd-year medical students also felt the significant and higher behavioral intention of p-books than 1st-year MBBS students.

CONCLUSION

This study shows that undergraduate medical students used both formats of books for study purposes. The Prof. M. Akhtar Khan Library has almost all text and reference books in both formats (eBooks & print) for the utilization of medical students. The availability of the books remains round the clock. It has been sawing that accessibility and ease of use of factor indicated favor in p-books with the minor difference between senior and junior classes. The senior classes preferred the print format books in the future although the junior classes preferred the eBooks used in the future. Most of the students satisfied with both materials but they preferred hybrid libraries due to availability, accessibility, and usage of both formats 24/7 for their study.

The eBooks in research and academic institution are widely adopted in the setting of Pakistan. The majority of medical students knew about the usage, accessibility, and availability of eBooks and they were satisfied. The students knew about the eBooks from

the librarian. This research will be providing guidelines and valuable to the administrations, policy makers, and librarians for the selection and subscription of eBooks.

Recommendations

- Many copies of p-books should be available in the library.
- The circulation procedure should further be simplified and user-friendly.
- The budget for the p-books should be increased.
- There must be a free-cost printing facility in the library.
- For the purchase of p-books, the suggestion from the students must be included.
- Libraries should be subscribed to eBooks from publishers and databases for the advantage of students, researchers, faculty, and staff.
- The libraries must have a separated budget for eBooks to increase the collection of eBooks.

REFERENCES

Alasuutari, P., Bickman, L., &Brannen, J. (Eds.). (2008). *The SAGE handbook of social research methods*. Sage., pp.524.

Ahmad, P. (2016). Academic E-Book Usage: Expectancy Confirmation Model. *Pakistan Library & Information Science Journal*, *47*(1).

Arms, W. Y. (2012). The 1990s: the formative years of digital libraries. *Library Hi Tech*, *30*(4), 579-591.

Asunka, S. (2013). The viability of e-textbooks in developing countries: Ghanaian university students' perceptions. *Open Learning: The Journal of Open, Distance and e-Learning*, *28*(1), 36-50. doi:10.1080/02680513.2013.796285

Banneheke, H., Nadarajah, V. D., Ramamurthy, S., Sumera, A., Ravindranath, S., Jeevaratnam, K., ... & Peterson, R. (2017). Student preparedness characteristics important for clinical learning: perspectives of supervisors from medicine, pharmacy and nursing. *BMC medical education*, *17*(1), 1-9.

Barker, P. (1992). Electronic books and libraries of the future. *The electronic library*, *10*(3), 139-149.

Barker, P. (1998). The future of books in an electronic era. *The Electronic Library*, *16*(3), 191-198.

Blummer, B., & Kenton, J. (2012). Best practices for integrating e-books in academic libraries: A literature review from 2005 to present. *Collection Management*, *37*(2), 65-97.

Cumaoglu, G., Sacici, E., & Torun, K. (2013). E-Book versus Printed Materials: Preferences of University Students. *Contemporary educational technology*, *4*(2), 121-135.

Cummings, L. A., Larrivee, A., & Vega, L. (2015). Comparing electronic vs print book preferences between students in the social sciences, the arts and STEM. *Library Hi Tech News*, *32*(4), 1-4.

De Vaus, D.A. (1993), Surveys in Social Research (3rd edn.), London: UCL Press.

Eveland, W. P., & Dunwoody, S. (2001). User control and structural isomorphism or disorientation and cognitive load? Learning from the Web versus print. *Communication research*, *28*(1), 48-78.

Farid, G., Soroya, S. & Masooma. (2018). Perception and Behavioral Intention of Print and Electronic Books among Medical Students: A Comparative Study. *Pakistan Library & Information Science Journal,* 49 (1), 52-60.

Folb, B. L., Wessel, C. B., &Czechowski, L. J. (2011). Clinical and academic use of electronic and print books: the Health Sciences Library System e-book study at the University of Pittsburgh. *Journal of the Medical Library Association: JMLA*, *99*(3), 218-28.

Gibson, C., & Gibb, F. (2011). An evaluation of second-generation ebook readers. *The Electronic Library*, *29*(3), 303-319.

Gregory, C.L. (2008), "'But I want a real book': an investigation of undergraduates' usage and attitudes toward electronic books", Reference and User Services Quarterly, Vol. 47 No. 3, pp. 266-73.

Gutierrez, C., & Wang, J. (2001). A comparison of an electronic vs. print workbook for information literacy instruction. *The Journal of Academic Librarianship*, *27*(3), 208-212.

Haugh, D. (2016). How do you like your books: Print or digital? An analysis on print and e-book usage at the Graduate School of Education. *Journal of Electronic Resources Librarianship*, *28*(4), 254-268.

HEC (2012). National digital library: available resources, e- databases,available at www.digitallibrary.edu.pk/resources.php (accessed on 10 January, 2020).

Jelusic, S., &Stricevic, I. (2011). A Librarian's Guide on How to Publish. *Elsevier*, 14-16.

Khalid, A. (2014). Text Books: ebook Vs. Print. *Journal of Education and Human Development*, *3*(2), 243-258.

Khan, A., Bhatti, R., & Khan, A. (2016). E-books usage by agricultural, engineering and social science students in selected universities of Pakistan: An empirical assessment. *The Electronic Library*, *34*(6), 958-973.

Latham Skaggs, B., Welch Poe, J., & Weatherford Stevens, K. (2006). One-stop shopping: a perspective on the evolution of electronic resources management. *OCLC Systems & Services: International digital library perspectives*, *22*(3), 192-206.

MacCall, S. L. (2006). Online medical books: their availability and an assessment of how health sciences libraries provide access on their public websites. *Journal of the Medical Library Association*, *94*(1), 75.

Makri, S., Blandford, A., Cox, A. L., Attfield, S., & Warwick, C. (2011). Evaluating the Information Behaviour methods: Formative evaluations of two methods for assessing the functionality and usability of electronic information resources. *International Journal of Human-Computer Studies*, *69*(7), 455-482.

Mawindo, D., & Hoskins, R. (2008). Use of print and electronic resources by students at the University of Malawi College of Medicine. *Mousaion*, *26*(1), 89-110.

McKnight, C., &Dearnley, J. (2003). Electronic book use in a public library. *Journal of librarianship and information science*, *35*(4), 235-242.

Miller, L. N. (2014). Preference for Print or Electronic Book Depends on User's Purpose for Consulting. *Evidence Based Library and Information Practice*, *9*(3), 95-97.

Noh, Y. (2012, March). A study measuring the performance of electronic resources in academic libraries. In *Aslib Proceedings* (Vol. 64, No. 2, pp. 134-153). Emerald Group Publishing Limited.

Powell, R. A., &Connaway, L. S. (2004). Basic research methods for libraries () Libraries Unlimited. *Westport, CT*.

Rafiq, M., & Ameen, K. (2014). Standardization and sustainability of digitization projects in university libraries of Pakistan. *VFAST Transactions on Education and Social Sciences*, *3*(2), 23.

Rafiq, S., & Warraich, N. F. (2016). Utilization of E-Books among Undergraduate Medical Students at Lahore. *Pakistan Journal of Information Management & Libraries (PJIM&L)*, *17*, 191-200.

Ramzan, M., & Singh, D. (2009). Status of information technology applications in Pakistani libraries. *The Electronic Library*, *27*(4), 573-587.

Reitz, J. M. (2014a). Electronic book. In *ODLIS – online dictionary for library and information science*. Retrieved August 8, 2014, from http://www.abcclio.com/ODLIS/odlis_e.aspx#electronicbook

Reitz, J. M. (2014b). Digital library. In *ODLIS – online dictionary for library and information science*. Retrieved August 8, 2014, from http://www.abcclio.com/ODLIS/odlis_d.aspx#digitallibrary

Said, A. (2006). Accessing Electronic Information: A Study of Pakistan's Digital Library, International Network for the availability of Scientific Publications (INASP). Oxford, 95-115.

Sampath Kumar, B. T., & Kumar, G. T. (2010). Perception and usage of e-resources and the internet by Indian academics. *The electronic library*, *28*(1), 137-156.

Sathe, N. A., Grady, J. L., &Giuse, N. B. (2002). Print versus electronic journals: a preliminary investigation into the effect of journal format on research processes. *Journal-Medical Library Association*, *90*, 235-243.

Simon, M. K. (2011). *Dissertation and scholarly research: Recipes for success*. Dissertation Success, LLC

Tenopir, C. (2010). Online databases: Usage and functionality. *Library Journal*, 135(3), 21.

Tenopir, C., King, D. W., Christian, L., &Volentine, R. (2015). Scholarly article seeking, reading, and use: a continuing evolution from print to electronic in the sciences and social sciences. *Learned Publishing*, *28*(2), 93-105.

Ugaz, A. G., &Resnick, T. (2008). Assessing print and electronic use of reference/core medical textbooks. *JOURNAL-MEDICAL LIBRARY ASSOCIATION*, *96*(2), 145.

Van Teijlingen, E., & Hundley, V. (2002). The importance of pilot studies. *Nursing standard*, *16*(40), 33-36.

VENKATASUBRAMANIAN, H., RAVINDRAN, S., & ANIFA, M. (2018). Why Universities should push for E books? A means of University Reforms?. *Asian Journal of Distance Education*, *13*(2).

Wang, S., & Bai, X. (2016). University students awareness, usage and attitude towards e-books: Experience from China. *The Journal of Academic Librarianship*, *42*(3), 247-258.