

Perception and Usage Pattern of e-books among Library and Information Science Students in Selected Universities in Nigeria

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ABSTRACT

This study examined the perception and usage pattern of e-book among LIS undergraduate students from selected five universities. Questionnaire was used to collect data from the respondents. Five research questions were developed and answered. The findings demonstrate that LIS undergraduate students still use e-books more compare to print books. The results also reveal that LIS undergraduate students have positive perception of e-book as it enhance learning effectiveness, assist to finish course content/outline; makes reading faster; easy to use and with clear graphical illustrations. The usage pattern of e-books among LIS undergraduate students is majorly for research purpose and the majority is highly satisfied with reading e-books. The major problem encountered by the students with e-books is the difficulties reading on the computers or internet, followed by the cost of e-book reader. The study recommended based on these findings that university authority and library of the participating institutions should make e-books readers available in large quantity. Doing so is assumed will increase the use of e-books and further arouse the interest of the students .

Keywords: Perception; Usage pattern; E-books; Reading; Attitude; Undergraduates; Nigeria

1. INTRODUCTION

The term electronic book (e-book) is used to describe many different kinds of digital books. An electronic book is popularly called e-book, digital book, or e-edition of a printed book. E-book is a book-length publication in digital form, consisting of text, images, or both that are readable on computers or other electronic devices. Many academic institutions such as in Nigeria are already in the process of implementing the use of e-books within learning, teaching and research activities. Institutions that have implemented the use of e-books in Nigeria include Covenant University, Landmark and other universities. These make use of range of devices and platforms to enable learners have access and use e-books to support their learning and research activities. The functionality and accessibility of e-book service requires database. E-book databases are making its way into libraries through popular providers such as NetLibrary, Books 24x7, Questia & Ebrary¹.

E-books can be enhanced with other electronic features such as embedded hyperlinks bookmarks, annotation, text searching and the linking of complex multimedia objects which may also be of great assistance for those with disabilities². Due to the penetration of e-book, libraries such as academic libraries have traditionally played an important role in providing access to and disseminating information across learning and research communities. That role has now been extended to facilitating access to electronic resources such as

e-journals and e-books through innovative technologies. More so, libraries have begun to turn to provision of e-book services largely because of decreasing budget, limited shelving space, increasing cost of new building and resources, the rising cost of repair or replacement of printed books, increasing demand from users of electronic resources, rising cost of inter-library loan service and the demand to support distance or distributed learning needs³.

Furthermore, e-book is a technological advancement in which texts are prepared in digital environment that can be read on specially designed devices to enhance and support learning activities and transform the scholarly engagement. As these types of environments became popular and preferable by many; it is important to discuss its advantages and disadvantages. E-books have some advantages over printed books, such as settings and particular purposes. Fundamentally, two of the most popular advantages for using e-books include their 'searchability' and the availability 24 hours a day. E-book readers can find specific content more easily and more efficiently than in a printed book⁴. This is possible due to the fact that e-book comprises a digital body primarily of text with a defined scope. Considering the fact that students have to carry loads of books to school every day, but e-books have overshadowed this disadvantage as hundreds of books are stored on a flash disk. Studies have reported that carrying heavy school bags at early ages causes waist and joint disorders in the later years⁵.

Essentially, e-book enable individuals to easily find information and to determine whether a book's content is

appropriate without having to make a trip to the library, an e-book's time-saving benefits are clear on account of the ease with which users find the e-book. Gibson & Gibb⁶ pointed out that students like the lightness and portability of e-book devices, as well as navigation capability, ease of use, storage capacity, and the use of e-ink for displaying content on the screen. Considering the efficiency of e-book Kelly⁷ anticipated that, in the near future, 'all new works will be born digital'.

E-book which served as a medium for delivering information content online has become popular and has entered the mainstream consciousness of the general public. Sales of e-readers such as Kindles and I-Pads have been increasing rapidly. Through this expansion of sales, the general public including students has gained better understanding of what an e-book is, the advantages that the e-book can bring to reading, and the issues that can arise when using e-books and e-readers. Furthermore, the provision of e-books does not require unpacking, processing, shelving, and eliminate the extra time previously required to handle and process them before they can be used^{8,9}. Features for handling e-books are also becoming user friendly, making it fairly easy for readers to browse, navigate, able to view graphics, videos or submit keywords and undertake full text searching within a book or a collection of books¹⁰. Commercially produced and sold e-books are usually intended to be read on dedicated e-book readers, however, almost any sophisticated electronic device that have the features of a controllable viewing screen, including computers, tablet computers, and smart phones and boards can also be used to read e-books. At a basic level, e-books can be released in a plain text format, as was originally the case in 1971 at the start of Project Gutenberg. Snowhill¹⁰ confirms this in a report on an evaluation of e-books undertaken by a taskforce of the California Digital Library in 2000. Rao¹¹ provides background information on e-books, including their advantages and disadvantages in an educational context and describe how the publication of e-books on a commercial basis is gaining momentum in India. Therefore, it is incontestable that e-books are information materials that play a significant role in the life of individuals especially the undergraduate students based on the benefits earlier mentioned.

Basically, it is of great importance to also determine undergraduates' perception of e-books, which significantly judge and show the usage pattern. Perception is the insight, idea or opinion someone have about something which can be a negative or positive idea. For example, e-book readers have trouble estimating the length of sentences. There is also the perception that graphics or tables are harder to read on screen than on paper¹². Some studies have also indicated that the positive perception of e-books is associated with accessibility and availability^{13,14}. Talking about e-book usage by users, the level of perception of e-book by the user which could be negative or positive perception will have great effect and influence on the usage. Hernon¹⁵, *et al.* examined 'e-book use patterns' and found that students do not view an e-book in the same way that they viewed a printed book. The study indicated that moving from page to page on an e-book is tedious, and it is difficult to find specific chapters in the text or to locate particular words, and these difficulties have a negative impact

on students' perceptions towards the usage of e-books. Based on the understanding that e-book provides easy access for retrieval of information which is crucial to the survival of human existence, this study aims at examining the perception and use pattern of e-book among LIS undergraduate students in five different academic institutions in Nigeria

Several studies that focused on e-book usage discovered that despite increased awareness of the existence of e-book technology in general, it has been observed that perception and usage pattern in many academic libraries in Nigeria and African countries as a whole seem to be very limited. Whereas, determining the perception and usage pattern will enable libraries to know what efforts to put to improve collections on their e-books. For example, a study conducted by Ismail & Zainab¹⁶, proved that e-books, bibliographic databases and e-journals were at a very low level of usage by faculty members at the United Arab Emirates University. A number of findings point to the transitional nature of academic reading practices influenced by the emergence of e-books and e-readers. One of such finding illustrates a lack of established views/perceptions of the e-book or e-reader phenomena. Briddon¹⁷, *et al.* supported the finding and pointed to the fact that there is a need to understand 'how people perceive e-books and in what context they may have been (unknowingly) using them'. A cursory observation by the author of this study revealed that most of the studies mentioned above were conducted outside Nigeria and even Africa. This confirm that there have been limited studies that examined pattern of e-book usage among undergraduate library and information science students particularly in the Nigerian university context. For these reasons therefore, this study focused on the perception and usage pattern of e-books among LIS undergraduate students in five academic institutions in Nigeria.

2. OBJECTIVES

The main objective of this study is to examine the perception and use patterns of e-books by LIS undergraduates in five selected academic institutions. The specific objectives specific to LIS undergraduate student's are to:

- (i) Examine the perception of electronic book
- (ii) Determine preference for e-books
- (iii) Determine the use patterns of e-books among
- (iv) Find out the level of satisfaction of with the use of e-books, and
- (v) Identify the major problems encounter by when using e-books.

2.1 Research Questions

To achieve the stated objectives of this study, the following research questions LIS undergraduate student's will be answered.

- (i) What is the perception of electronic book?
- (ii) What is the level of preference for e-books?
- (iii) What are the use patterns of e-books among?
- (iv) What is the level of satisfaction of with the use of e-books?
- (v) What are the major problems encounters by when using e-books?

3. LITERATURE REVIEW

Chu's³⁸ after studying 27 libraries and information science students' use and experience with e-books reported that library and information science students were reluctant to use them, instead preferring printed books because it was considered easier to read and did not require specialized equipment and indicated that the primary reason for not using e-books was the difficulty of moving within an e-book. A study by Walters³⁹, with data collected from 2,067 university students, faculty, and staff, indicated that, although e-books are heavily used, students still report issues with reading materials on a screen for a prolonged period of time. Herson¹⁵, *et al.* examined 'e-book use patterns' and found that students do not view an e-book in the same way that they viewed a printed book – The study indicated that moving from page to page on an e-book is tedious, and it is difficult to find specific chapters in the text or to locate particular words, and these difficulties have a negative impact on students' perceptions towards the usage of e-books.

Briddon¹⁷, *et al.* used online survey, interview and observation methods to understand how e-books were used in a large university library in the UK. The authors found that e-book use among students was influenced by faculty (assigned/recommended readings), and also by such e-book features as accessibility and ease of use. E-book adoption by business faculty, undergraduate and graduate students was examined by Stamison¹⁸. The findings indicate that the quick rate of e-book adoption could be linked to Business research demands for quick identification and extraction of specific data. More recently, a focus group study of university lecturers by Carlock & Perry¹⁴ found that academics avoided recommending e-books because of worries over reliability and technical constraints. Wilson and Landoni¹⁹ found that e-books were mistrusted until study deadlines forced usage. In a study on the survey of e-book usage and perceptions at the University of Liverpool, it was discovered that e-books were used primarily for study and for research. Undergraduate students use e-books almost equally for study (80 %) and for research (71 %). Not surprisingly, Faculty members have somewhat different usage habits, accessing e-books less frequently for study purposes (31 %) but much more often for research (85 %). In addition, nearly 50 % of Faculty members access e-books for training purposes, primarily the preparation of course and teaching materials.

Nicholas²³, *et al.* reported in their study that 80 % of British graduate students used e-books compared to only 62 % of undergraduates. Undergraduate students have been typically driven by class assignments while graduate students concentrated on research and teaching. A study conducted by Gibbon²⁴ found that undergraduate students have the highest preference for print books (53 %); many undergraduate respondents commented on the difficulty they have learning, retaining, and concentrating while in front of a computer. Gibbon²⁴ also found out that 41 % of respondents rate the option to purchase a printed copy of an e-book as an important feature, implying that utilisation of the service should witness an upward trend. Gibson also found that Springer e-book usage is impacted by both university status and area of study

or research. Postdoctoral researchers were found to have used Springer e-books (51%); and graduate students (49 %); faculty and lectures (32 %); and undergraduate students (20 %). Springer's e-books were used by respondents in the physical science and engineering (62 %); in life and health science (39 %); social science (32 %); business and law (18 %); and arts and humanities (17 %). Ismail & Zainab¹⁶, proved that e-books, bibliographic databases and e-journals were at a very low level of usage by faculty members at the United Arab Emirates University, which might relate to the lack of awareness about the e-resources provided by the library or the ineffective channels of communication in campus.

The study on the level of satisfaction of students with e-book usage was also carried out by Walter²⁵ which one third (36 %) of the respondent were highly satisfied, over half (55 %) were less satisfied and less than 10 % were not satisfied. And a survey found that faculty members from Humanities, Economics and Social Sciences use online catalogues, full-text electronic journal databases (e-journal) and abstracting and indexing databases most frequently and they are expected to use them more extensively in the future²⁰. Helfer²⁶ carried out a study on the rate of e-resources use and the finding reveals that the use rate of e-resources was extremely low.

Hilsund²⁷ interviewed 3200 faculty members, undergraduates as well as graduate students and observed that e-books were used for research, teaching and learning. A high percentage of users, however, still indicated preference for printed books and journals. Folb²⁰, *et al.* examined e-book usage by the Health Science students and professionals and concluded that all groups of users had flexible attitudes toward print and electronic media and valued whatever sources that provides them with needed information.

In Great Britain, research has indicated slow acceptance of nearly all digital textual resources other than journals. Study revealed that the past usage of e-books is very significantly related to preference of e-book for reading as a reference book. As observed by Summerfield & Mandel²⁹ that publishing professionals preferred e-versions of reference materials, such as manuals, encyclopedias, maps and travel guides. Helfer²⁶ indicated that the slow acceptance of e-book is due to users wanting to use e-books just as a reference resource, to look for the answers they want and sent the book back. Comparing e-book use to users' ages, Anderson³⁰ surveyed 1500 US online Internet users found that those who frequent the Internet also rated e-book positively and they tended to be between the ages of 25 and 29. Bodomo³¹, *et al.* reported the minimal use of e-books in students' works that students are not familiar with copyright regulations governing digital materials, and they are uncertain of the extent they can make copies of digital resources and also, due to their lack of information skills on how to cite electronic sources used in their writings. Ismail and Zainab¹⁶ found that students who were heavy users of the internet had more positive attitudes towards e-books, but their level of usage was still low.

4. METHODOLOGY

4.1 Research Design

The research design adopted for this study is descriptive

survey. This was to find out the perception and usage pattern of e-books among the undergraduate students in five (5) selected universities in Nigeria offering BSc in library and information science or related degree. Survey design was considered appropriate for this study because it allows the collection of data using questionnaire.

4.2 Population of the Study

The targeted population for this study is the undergraduate students of library and information science from five (5) selected universities which are: University of Ilorin, Ilorin; Babcock University, Ilesha; Tai Solarin University, Ijagun; University of Ibadan, Ibadan, and Kwara State University, Malete.

4.3 Sample and Sampling Technique

The sampling technique adopted for this study is simple random sampling as every respondent in the population of the study have equal chance of being selected. Simple random sampling as the basic sampling method of survey research which aims to give each person in the sampling frame equal chance of being included in the sample. Fifty (50) LIS undergraduate students from each institution were selected as sample for the study given a total of two hundred and fifty (250) LIS undergraduate students which represent the sample for the study.

4.4 Data Collection Instruments

The instrument used for this study was a self-designed questionnaire titled Questionnaire on the 'perception and usage pattern of e-book among LIS undergraduate students'. Questionnaire have been known to be one of the most common research instruments for data collection and this is used mainly to gather useful and important data in the area of attitude and opinion of respondents. The questionnaire consists of six sections. Section 1 to gather biographical data of the respondents such as age, gender, year of study and Faculty etc. Section 2 on perception of e-book, Section 3 on the problems encountered while using e-books, Section 4 on the level of satisfaction of LIS undergraduate students with the use of e-books, Section 5 on the usage pattern of e-books, Section 6 on preferences for e-books.

4.5 Data Collection Procedure

The questionnaire on the perception and usage pattern of e-book among LIS undergraduate students in five academic institutions in Nigeria was administered to the respondents by the researcher after seeking permission from the appropriate school authority. The questionnaire was self-administered by the researcher to LIS undergraduate students in the five selected academic institutions used for the study. A total of fifty (50) questionnaires were administered in each of the five academic institutions making a total of 250 questionnaires that were administered, out of which 175 were returned completely filled and useful for data analysis thereby representing 70% return rate. The return rate of the questionnaire was affected because it was administered during examination period in all the participating schools.

4.6 Validity of Instruments

To determine the validity of the questionnaire used in this study, it was given to two experts in library and information science who reviewed the questionnaire in order to determine the appropriateness, contents coverage, adequacy and relevance to the stated objectives. The comments, suggestions and corrections by the experts were incorporated to produce a final draft of the questionnaire which was finally administered to the respondents.

4.7 Reliability of Instruments

Reliability of Instruments is the degree of consistency and accuracy with which an instrument measure what it claims to measure. This was achieved by administering the questionnaire to nineteen (19) undergraduate students of the department of Economics in University of Ilorin, Kwara State, Nigeria. Responses collected were subjected to Cronbach alpha. The overall reliability of the questionnaire returned $r = 0.71$. This was considered high enough for data collection in this study.

4.8 Methods of Data Analysis

Collected data based on the questionnaire administration was analyzed using descriptive statistics to generate mean, percentage and frequency which were used to ensure better and clear explanation of the outcome of the study.

5. DATA PRESENTATION AND ANALYSIS

The demographic information of respondents in this study revealed that respondents from University of Ilorin were 40(22.9 %); 36 (20.6 %) were from Kwara State University; 43(24.6 %), were from University of Ibadan; 37(21.1 %) were from Babcock University and 19(10.9 %) were from Tai Solarin University. This finding indicates that majority Library and Information Science students who participated in the study were from University of Ibadan.

On the year of study of the respondents, the result revealed that 25(14.3 %) were in their year 1 while 45(25.7 %) were in their year 2 and 39(22.3 %), 61(34.9 %), 5(2.9 %) were in their year 3, year 4 and year 5 respectively. This finding indicates that the respondents in their year 4 were the majority. On gender, the Table 1 shows that 79 (45.1 %) were male while 96 (54.9 %) were female. The age distribution of respondents revealed that 65(37.1 %) were between the age of 16-20 years, 88 (50.3 %) were between the age of 21-25 years, 21(12.0 %) were between the age of 26-30 years and 1 (0.6 %) were between the age of 31-35 years.

6. ANALYSIS OF RESEARCH QUESTIONS

Question 1: What is the LIS undergraduate student's perception of electronic book?

Table 2 reveals that 149(85.1 %) strongly agreed that using e-books enhances learning effectiveness and 17(9.7 %) were undecided while 9(5.1 %) strongly disagreed. Similarly, 109(62.3 %) strongly agreed that the use of e-books makes them finish their course contents/outlines 37(21.1 %) were undecided while 29(16.5 %) strongly disagreed. A total 133(76.0 %) of the respondents strongly agreed that using e-books has increased

their productivity in their course of study and 29(16.6 %) were undecided while 13(7.4 %) strongly disagreed.

Table 1. Demographic information of respondents

Institutions	Frequency (%)
University of Ilorin	40 (22.9)
Kwara State University	36 (20.6)
University of Ibadan	43 (24.6)
Babcock University	37 (21.1)
Tai Solarin University	19 (10.9)
Year of study	
Year 1	25 (14.3)
Year 2	45 (25.7)
Year 3	39 (22.3)
Year 4	61 (34.9)
Year 5	5 (2.9)
Gender	
Male	79 (45.1)
Female	96 (54.9)
Age (years)	
16-20	65 (37.1)
21-25	88 (50.3)
26-30	21 (12.0)
31-35	1 (0.6)

Also, a total of 121(69.1 %) strongly agreed that e-book usage gives them control when reading and makes their reading faster while 28 (16.0 %) were undecided and 26(14.9

%) strongly disagreed. In addition, 43(18.9 %) strongly agreed that use of e-book will be unproductive due to poor internet connection in the school while 26(14.9 %) were undecided and 116(66.3 %) strongly disagreed. Furthermore, a total of 76(43.5 %) strongly agreed and agreed that using e-books for their course is not compulsory while 28(16.0 %) were undecided and a total of 71(40.5 %) of the students strongly disagreed and disagreed. A total of 121(69.2 %) strongly agreed and agreed that e-books are easy to use while 32(18.3 %) were undecided and a total of 22(12.5 %) strongly disagreed. Also, 60(34.3 %) strongly agreed that they cannot read e-books on screen for a long time while a total of 26(14.9 %) of the students were undecided and 89(50.9 %) strongly disagreed. Also, 71(40.6 %) of the respondents strongly agreed and 71(40.6 %) strongly disagreed that they don't find it easy to maintain attention and concentration when using e-books while 33(18.9 %) were undecided. Finally, 131(74.8 %) strongly agreed that e-books have clear graphical illustrations which aid learning and 30(17.1 %) were undecided 14(8.0 %) strongly disagreed.

A benchmark of total grand mean score 3.43 was used to determine the whether the perception of e-book by LIS undergraduate students is negative or positive. This is done by comparing the mean of individual item with the grand mean. The result reveals that LIS undergraduate students have the perception that e-book enhance learning effectiveness, assist to finish course content/outline; gives control and makes reading faster; easy to use and with clear graphical illustrations. All of these are considered as positive perception of e-books by the respondents because their mean are above the grand mean.

Question 2: What is the level of LIS undergraduate students' preference for e-books?

The Table 3 provides answer to the second research question. The results on the table reveals that the entire respondents 175 (100 %) indicated they use e-books. As a

Table 2. LIS undergraduate student's perception of electronic book

Statement	SA (%)	A (%)	U (%)	D (%)	SD (%)	MEAN
Using e-books enhance learning effectiveness	59 (33.7)	90 (51.4)	17 (9.7)	7 (4.0)	2 (1.1)	4.13
Use of e-books makes me finish my course content/outline quickly.	42 (24.0)	67 (38.3)	37 (21.1)	27 (15.4)	2 (1.1)	3.69
Using e-books has increased my productivity in my course of study.	58 (33.1)	75 (42.9)	29 (16.6)	9 (5.1)	4 (2.3)	3.99
E-books usage gives me control when reading and makes my reading faster	42 (24.0)	79 (45.1)	28 (16.0)	25 (14.3)	1 (0.6)	3.78
Use of e-books will be unproductive due to poor internet connection in the school.	12 (6.9)	21 (12.0)	26 (14.9)	59 (33.7)	57 (32.6)	2.27
Using e-books for my course is not compulsory	26 (14.9)	50 (28.6)	28 (16.0)	55 (31.4)	16 (9.1)	3.09
E-books are easy to use.	43 (24.6)	78 (44.6)	32 (18.3)	16 (9.1)	6 (3.4)	3.78
I can read e-books on screen for a long time	17 (9.7)	43 (24.6)	26 (14.9)	60 (34.3)	29 (16.6)	2.77
I find it easy to maintain attention and concentration when using e-books.	19 (10.9)	52 (29.7)	33 (18.9)	50 (28.6)	21 (12.0)	2.99
E-books have clear graphical illustrations which aid my learning	45 (25.7)	86 (49.1)	30 (17.1)	7 (4.0)	7 (4.0)	3.89
Grand Mean Score						3.43

reader to get additional information, respondents were asked to indicate whether or not they prefer the e-books to print book. The results demonstrated that 164(93.7 %) of the respondents prefer using e-books compared to 1(6.3 %) who prefer using printed books. Also the finding reveals the most preferred e-book format where 19 respondents (10.9 %) indicated they prefer TEXT format; 15(8.6 %) prefer HTML format; 20(11.4 %) prefer DOCX format; while 121(69.1 %) prefer PDF format. These indicate that majority of the respondents prefer e-books to printed books and the most preferred e-book format is PDF.

Question 3: What are the usage patterns of e-books among LIS undergraduate students?

Table 3. LIS undergraduate students' preference for e-books

Do you use e-books?	Frequencies (percentage)
Yes	175 (100)
No	0
Do you prefer using e-book compared to printed book?	
Yes	84 (48.0)
No	91 (52.0)
What is your most preferred e-book format?	
TEXT	19 (10.9)
HTML	15 (8.6)
PDF	121 (69.1)
DOCX	20 (11.4)

The result in Table 4 reveals that 129 (73.7 %) used e-books for research while 46 (26.3 %) do not. A total of 92 respondents (52.6 %) used e-books for reference purpose while 82 (47.4 %) do not. In addition, 66 respondents (37.7 %) used e-books for complementing learning while 109 (62.3 %) do not. The results here imply that respondents used e-books majorly for research and as reference materials but limited number of them used e-books to complement their learning.

Table 4. Usage patterns of e-books

Usage pattern of e-book	Yes	No
Complement learning	66 (37.7)	109 (62.3)
Research	129 (73.7)	46 (26.3)
Reference	92 (52.6)	83 (47.4)

Question 4: What is the level of satisfaction of LIS undergraduate students with the use of e-books?

Table 5 reveals the level of satisfaction of LIS undergraduate students based on their use of e-books. The result shows that 154(88.0 %) of the respondents were satisfied with using e-book while 21(12.0 %) were not. The table above also reveals that 11(6.3 %) has no satisfaction using e-book, 16(9.1 %) has little satisfaction using e-book; 102(58.3 %) are satisfied to some extent while 46(26.3 %) are greatly satisfied. Due to their level of satisfaction 153(87.4 %) agrees to recommend the use of

e-book to other students. The highlight of the finding indicates that LIS undergraduate students are satisfied with using e-book but to some extent and this have great influence to their interest of recommending e-book to other students of which 153(87.4 %) of the 175 respondents agrees to recommend e-book to others.

Question 5: What are the major problems encounters by LIS undergraduate students when using e-books?

Table 5. Level of satisfaction of with the use of e-books

Are you satisfied with using e-book?	Frequency (%)
Yes	154 (88.0)
No	21 (12.0)
If yes, how satisfied are you?	
Great extent	46 (26.3)
Some extent	102 (58.3)
Little extent	16 (9.1)
No extent	11 (6.3)
Due to your level of satisfaction would recommend e-book to others?	
Yes	153 (87.4)
No	22 (12.6)

Table 6 reveals the results on the problems encountered by LIS undergraduate students with the use of e-books. The finding shows that 93(53.1 %) of the respondents strongly agreed that they encounter difficulties in accessing computers or internet to be able to read e-books, 31(17.7 %) were undecided while 51(29.2 %) strongly disagreed. A total of 92(52.6 %) of the respondents strongly agreed that the cost of affording e-book reader is high and 29(16.6 %) were undecided while 54(30.8 %) strongly disagreed. Furthermore, 49(28.0 %) of the respondents strongly agreed that e-book is hard to read and browse and 27(15.4 %) were undecided while 99(56.5 %) strongly disagreed. In addition, 46(26.3 %) of the respondents strongly agreed they don't have confidence in the relevant technology used and 45(25.7 %) were undecided and 84(48.0 %) strongly disagreed. Also, 47(26.9 %) of the respondents strongly agreed that the use of e-books requires operational skills that they don't have, 26(14.9 %) were undecided and 102(58.3%) strongly disagreed. A total of 78(44.6 %) the respondents strongly agreed that the use of e-books will not be efficient if the screen of their device is not big enough while 29(16.6 %) were undecided and 68(38.8 %) strongly disagreed. Furthermore, 63(36.0 %) of the respondents strongly agreed that use of e-books requires a lot of mental effort while 34(19.4%) were undecided and 68(44.6 %) strongly disagreed. Again, 54(30.8%) of the respondents strongly agreed that they don't find it easy searching, navigating and flipping through the pages of e-books while 25(14.3 %) were undecided and 96(54.8 %) strongly disagreed. From the finding using, the major problem encountered by the LIS undergraduate students is the difficulties in reading e-books on computers or internet, followed by the high cost e-book reader.

Table 6. Problems encounters by LIS undergraduate students when using e-book

Items	SA (%)	A (%)	U (%)	D (%)	SD (%)
Cost of affording e-book reader is high	25 (14.3)	67 (38.3)	29 (16.6)	48 (27.4)	6 (3.4)
Difficulties in accessing computers or internet to be able to read e-books	27 (4.6)	66 (37.7)	31 (17.7)	43 (24.6)	8 (4.6)
Hard to read and browse	9 (5.1)	40 (22.9)	27 (15.4)	79 (45.1)	20 (11.4)
Not confident with the relevant technology used	11 (6.3)	35 (20.0)	45 (25.7)	70 (40.0)	14 (8.0)
Use of e-books requires operational skills that I don't have	18 (10.3)	29 (16.6)	26 (14.9)	69 (39.4)	33 (18.9)
The use of e-books will not be efficient if the screen of my device is not big enough	14 (8.0)	64 (36.6)	29 (16.6)	52 (29.7)	16 (9.1)
Use of e-books requires a lot of mental effort	16 (9.1)	47 (26.9)	34 (19.4)	68 (38.9)	10 (5.7)
I don't find it easy to searching navigating and flipping through pages of e-books	16 (9.1)	38 (21.7)	25 (14.3)	71 (40.6)	25 (14.3)

7. DISCUSSION OF FINDINGS

The broad objective of the study was to examine the perception and usage pattern of e-book among LIS undergraduates' students in five different academic institutions in Nigeria. While the specific objectives of the study were to examine the perception of LIS undergraduate student's towards electronic book; to determine LIS undergraduate students' preference for e-books; to determine the usage patterns of e-books among LIS undergraduate students; to find out the level of satisfaction of LIS undergraduate students with the use of e-books and lastly to identify the major problems encounter by LIS undergraduate students when using e-books.

A benchmark which is the total grand mean (GM) score 3.43 was used to find the perception of e-book by LIS undergraduate students, comparing the grand mean score (GM) with the mean score (MS) of each questions asked to ascertain the respondents' perception. The result reveals an overwhelming majority of LIS undergraduate students' perceived e-book as a technology that enhances their learning effectiveness and easy to use. They also perceived that the clear graphical illustrations of e-book aid their learning and that the use of e-book helps them to finish their course content/outline quickly and enable them to read faster. This corroborates the assertion that once students can connect to the technology easily, they enjoy it and even read faster⁴⁸.

On the preference for e-books, the result reveals that LIS undergraduate students prefer e-books. There is no doubt that e-book technology has its own problem of use, the problems encountered when using e-book affect the level of satisfaction and preference of using e-book. Studies related to this finding indicate that the problem of difficulties with reading from screen, navigation issues, and problems related to locating materials and searching in general with e-books makes some students to prefer a paper copy that they can mark up with a pencil or marker to e-book. Contrary to^{2, 3}, undergraduate students were revealed to have the highest preference for print books as a result of the difficulties they usually encounter such as learning, retraining, and concentrating while in front of a computer. The result obtained also reveals that majority of the LIS undergraduate students' prefer to use e-books in PDF format. This is because of the fact that PDF is a file format that allow documents to be read regardless of hardware, operating systems or applications employed. PDF has also been

embraced by many publishers as their preferred format for publishing their publication, and majority of the respondents (LIS undergraduate students) uses e-book majorly for research purpose, pointing to the fact that LIS undergraduate students are always carrying out research and e-books in PDF format is their major information source. This is because scholarly and publishing professionals prefer e-books as a means of quick dissemination of current information to a large number of potential users³⁷.

The result on the level of satisfaction of LIS undergraduate students using e-book reveals that an overwhelming majority were satisfied with e-books but to some extent. Therefore, it is concluded that LIS undergraduate students in Nigeria Institutions are satisfied with the use of e-books.

The common problems encountered by LIS undergraduate students when using e-books include difficulties in accessing computers or internet, cost of affording e-books reader and the problem of accessing and using e-books on a device with small screen which usually make them to be inefficient in its use. There is no perfect technology anywhere in the world. Therefore, as far as e-book technology is concerned, there is bound to be a problem. In a similar finding by^{13,38} on factors that discourage use of e-books, it was suggested that one major factor is the cost of e-book reader. This notwithstanding, but a confirmation that there is usually problem associated with the use of e-books.

8. CONCLUSIONS

This study examined the perception and usage pattern of e-book among LIS undergraduate students. The findings have shown that LIS undergraduate students uses e-books more than printed books. The result reveals that LIS undergraduate students have positive perception of e-book as it enhance learning effectiveness, assist to finish course content/outline; makes reading faster; easy to use and with clear graphical illustrations. The usage pattern of e-book among LIS undergraduate students is majorly for research purposes and the majority is highly satisfied with reading e-books. The major problem encountered by the students with e-books is the difficulty of reading on the computers or internet followed by the cost of e-books reader. It is hereby concluded that librarians need to take into consideration, users' preferences when selecting and acquiring books, either in electronic or printed format.

10. RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made. These include the fact that courses that are capable of boosting and encouraging the usage of e-books for complementary reading should be included in the LIS curriculum. This will increase the interest of the students in using e-books to complement learning and not research alone. LIS undergraduate students should be provided with ready made access to computers and internet at anytime. This will facilitate quick access to e-books. The visibility of e-books is very important, therefore libraries are recommended to subscribe to various e-books databases so that the students can have access to them directly in the library. Also, the university authority and library of the participating institutions should make e-books readers available in large quantity. Doing so is assumed will increase the use of e-books and further arouse the interest of the students .

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