

BOOK-FORMAT PREFERENCE AND INTEREST AMONG STUDENTS WITH DISABILITIES IN NASARAWA STATE UNIVERSITY, KEFFI

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Abstract

This study focused on book-format preference among students with disabilities in Nasarawa State University, keffi. Quantitative approach to research was used, survey design employed, with 60 students purposively sampled across different programmes in the university. Three null hypotheses were formulated to guide the study. A 20 item questionnaire with reliability coefficient of 0.85 was developed, validated and used for data collection. Data were analyzed using independent t-test, the hypotheses were tested at .05 level of significance. Findings revealed a disparity in students' preferences, which may be attributed to types of disability, socio-economic factors of the students, personal characteristics, health of the eyes, and digital generation of the student among other factors.

Key Words: *e-books, printed books, devices, digital e-reader*

Introduction

Reading has been a culture in many societies and schools, as it gives the reader opportunity to interact with print, author and make meaning from the symbols for different reasons. As a skill it is learnt and taught, its value is that “we learn to read so that we can read to learn”.

A review of current literature in reading revealed that terms like e-book, e-readers, sweeps, screen touch, digital divide, print readers, e-reading and many others have become common because they enrich students' knowledge and facilities learning process. This has become imperative because a typical inclusive classroom is a heterogeneous learning environment and it should be recognized as such in provision of reading resources in different formats (UNESCO, 2016, Apsari, 2016). This is an indication of generational transition from print era to digital era however; there is no clear and

complete paradigm shift from traditional print reading to e-reading because they are those who still spent more time reading hard copy of textbooks.

Print reading is the process of making meaning from books in hard copy format, it involves having direct contact with the textbook physically and flipping or opening from page to page as the individual progresses. It is the traditional medium of reading textbook without using any device or being power by electricity. On the other hand Chan, Lyons, Kon, Stine, Melissa and Crosscey (2020), defined e-reading as accessing the digital content of books with an e-reader such as Smartphone, tablet, or computer. E-reading is facilitated by an app that helps to download, store, open and use of e-book. It means reading text in electronic form, its novelty is in the motivation it gives to students with special needs to cultivate a sustainable reading culture. Programmes such as Adobe Digital Edition, stanza, and iBooks can further make e-reading easy (Griffey, 2012, Roni, &Merga, 2017). Books in this format are sourced from different online retail shops like Amazon, websites and publishers' website. They may be uploaded in different format such as, Broadband eBook, comic Book Archive file, Complied HTML, pdf, and iBook (Rotolo, Hick, Martin, 2015). These format and others are created and managed by bodies like, International Digital Publishing Forum (IDPF), Digital Right Management (DRM), and International Electro-technical Commission (IEC) among others.

An integrated eReading support system provides physical, sensory and cognitive support to learner as they have wide range of reading opportunities and possibilities to interact digitally with text through eReader. Learners are offered the convenience of being able to read anytime, anywhere thus making assignments easier to accomplish as learning is no longer one-dimensional (Camardese, Morelli, Peled, Kirkpatrick, 2014, Yulianti & Setiawan, 2019, Rotolo, Hick, Martin, 2015).

Technology has changed every aspect of the society including the way people read, acquire, store, access books, reading interest, reading behaviours and preference of book-format. It has made it possible for children to easily integrate into online network with peers to share reading resources. More so, primary users of optical devices have changed with the advent of e-books and portable electronic devices that provide advantages previously limited to optical devices and play a major role in completion of specific visual tasks (Draffan, McNaught & James, 2014). Through technology, e-readers such as

kobo, Nook, kindle, Smartphone, tablet, computers etc are now commonly used at home, office, and school.

Technology devices and applications are increasingly playing a pivotal role in access to education, information and communication processes. This has opened opportunities and removed barriers to learning among students with special educational needs as they read academic resources in complementary format through mobile devices (Shahu & Shinko, 2017, Ramadhan, 2018). The introduction of e-reading technology has brought substantial changes in reading culture, interest, publishing industries, and choice of book format as well as awakening fear and prediction about the possible disappearance of hard copies of textbooks and printed periodicals (Ballatore, Andrea, Simone, 2015). Portability, the ease of sharing, accessibility and convenience with which e-books can be used seemingly gives it advantage over the traditional print textbooks however, digital divide among students with special needs and national development among others variables may determine which side of the divide is be preferred.

The concept of book-format preference in this study simply means the choice of either reading traditional print textbooks or reading digital books among students with special needs. Students with special needs conditions are exceptionally unique in many ways which has implications on their ability to learn how to read. They are different categories of exceptionalities which may likely be found in the university and typical Nigerian classroom. Their diversity does not fit into one-size-for all reading format. Some are constrained by the disability to prefer a particular book-format of reading, while others preference is due to personal choices. Application of technology in teaching and learning has enhanced the process of reading and learning for students with special needs as they have options to make depending on their skills, severity of special need condition, learning environment and affordability. For students with visual impairments the traditional Braille is the hard copy and digital copy called simulation is the book-format available for their use and it can be done concurrently unlike those without this disability.

This study examines peoples' habits, opinion and interest on the two sides of book-format, the e-book and traditional print copy. Pew Research Center, (2012) studied the rising of e-reading culture among Americans including those with disabilities and discovered that 21% read e-books and are prompted to read more than in the past as well as buying rather than borrowing hard copy. Also, Mangen (2013) studied reading interest and ability of 75 students on the two book- format (screen reading and print reading).

The result revealed that those who read print did better than their peers who read digital format of same book; thus, they prefer print copy to digital ones. The researcher attributed the result to difficulty marking or highlighting silent points on the screen and perhaps straining of their eyes. Supporting this result Andy (2018) survey indicates that screen and e-reader interfere with two important aspects of navigating texts which are serendipity and sense of control. The sense of control here means opportunity to make margin note and highlighting key points for the purpose of quick reference to it and committing to memory. Palani, (2012), reported that 80% of the students' population prefer to read traditional text on print to reading on screen in order to enhance comprehension. Although some research have concluded that paper text are better comprehended than screen text, others like Ikwen (2015) found that students performed equally well in multiple choice questions regardless of book format and suggested that attention should go beyond immediate comprehension to activities that deals with long-term memory. From these studies it can be concluded that the choice of book-format depends on the individual student and the purpose of reading.

Reading habit as conceived in this study is routine or pattern of behaviour students with special needs has towards reading. It is an established tendency or usual manner of individual disposition as reflected in thought, feelings, actions and attitudes to reading. Suhana and Haryudin (2017), defined reading habit as a well- planned and deliberate pattern of study which has attained a form of consistency on the part of students towards understanding academic subjects and passing examinations. It may also be defined as a behavioural pattern acquired by frequent repetition or physiologic exposure that shows itself in regularity or increased facility of performance (Palani, 2012). In a broader perspective, Olawumi and Yusuf (2016) see it as a cultivation of an attitude and possession of skills that make reading pleasurable, regular, and constant activity. This means that reading habit is developed over a period of time through repeated interaction with print or other literacy activities and materials.

Reading habit determines the success in education, modern societies. More specifically, it influences academic achievements of students those with special needs inclusive to a great extent as both variables are interrelated and dependent on each other (Bashire & Mattoo, 2012). It deals with the regularity or otherwise of interacting with books in any format. Reading habit can be positive or negative, the former is the foundation of positive reading attitude which leads to good reading culture and vice

versa. This implies that individual with positive reading habit can have good reading attitude which translate to reading culture thus, students including those with special needs with positive reading habit produce a reading, literate and developed society. These categories of students can read books in any format however, research like Setiati & Gemilang (2019), Draffan, McNaught & James (2014) indicate that those on the other side of digital divide prefer traditional print format of reading hard copy because the use of e-book requires some level of computer literacy skills and ability to afford e-readers. This is sacrosanct as most of them are from economical disadvantaged families that cannot afford devices required for e-reading. In these circumstances, they are constrained to use hard copies of reading resources. However, those who disability prevents them from using print copy are seemingly forced to acquire and develop computer literacy skills that will enable them to use e-copies (Zilbershtin-Kra, Arie, & Ahissar, 2015). This means that the preference of reading resources-format among students with special needs is determined by some other variables or factors apart from personal considerations. The preference can only be made when a student has all it takes to use both format and decide to use either of them.

According, to (Oluwasanmi 2018, Ikwen, 2015, 2019), undergraduate students with special needs' reading habit were surveyed, it was discovered that some have positive reading habit which is reflected in their frequent use of library resources, buying, downloading, subscribing for book and feel delighted sharing it with friends, colleagues and relations. On reading resources -format used mostly, the findings were divided along categories of disabilities. Those with hearing impairments read more of e-books than traditional hard copy while those with visual impairments used simulated copy of Braille, others with learning disabilities and physical impairments are fond of using e-books regularly for personal reasons. The study also indicated that frequency of using e-section of the library per day is high but subject to time and other consideration. It was further revealed that those with negative reading habit prefer pleasure of social media to reading and studying, the duration of visiting library was placed on a five point scale of always, often, rarely, sometimes and not all and their responses fall within the last two options of rarely and not at all.

Reading interest may be defined here as a strong and intrinsic sense of like or dislike for literacy activities like meaningful interaction with print, use of library, buying and using of reading material in either digital or print format. As a variable in this study, there are

three dimensions to it, interest in book-format (e-book and hard copy/ print), interest related to disciplines, and purpose. Students' interest revolves round these areas but this research's focus is between e-book and print copy of books used by students with disabilities. Sandzay (2018) found out that majority of Hong Kong students with disabilities spend more than two hours reading electronic information, books for various purposes during school day. Particularly students at lower level of education tend to use print copy of books while those at higher level read e-books to study, newspaper for daily information and fiction for entertainment or pleasure. From the this study, interest is determined by the level of education they students are which can also be inferred that the nature of task at the higher education is more complex and require digital content due to speed and convenience with which they can be accessed and used them for assignments, dissertation, examination as well other form of research. In Europe and other developed societies e-reading has become sustainable culture among students including those with disabilities as they share any valuable digital information faster and conveniently (Parmawati &Yugafiati, 2017). This is the most common format of accessing wide range of books across disciplines by just mere subscription to the publishers, database or authors by the university where they are studying. The relatively better network system in these countries enhance and encourage e-reading than in Nigeria where e-reading material or books is at the cost of students.

Statement of problem

Education is a fundamental human right of citizens inclusive of students with disabilities and globally adopted tool for self and national development. Acquiring university education is an enormous challenge in Nigeria, students with disabilities find it more challenging due to their disabilities. Technology has potentials to reduce the effect of disabilities on the learning process of the students. However, they are caught in three digital era with implications on their preferences on book-format in line of disabilities, socio-economic factors, personal characteristics among others issues. These become contributive factors to challenges imposed by disability and the university system in Nigeria.

Objectives of the study

This study is guided by three objectives as stated below which at:

- To determine the choice of book-format among students with disabilities.
- To determine the reading habit among students with disabilities.
- To determine the reading interest of students with disabilities.

Research hypotheses

The study was guided by these three null hypotheses:

1. There is no significant difference in the choice of reading format among students with special education needs who read e-text and hard text.
2. There is no significant difference in reading habits among students with special education needs on choice of e-text and hard text.
3. There is no significant difference in reading interest among students with special education needs on e-text and hard text.

Methodology

The study adopted a descriptive survey, 60 students with special educational needs from across different programmes and faculties purposively sampled as participants. A 20 item questionnaire with five points rating scale self-developed and validated with reliability coefficients ranging from 0.85 was administered and used for data collection. Data was analyzed using independent t- test. Three research hypotheses were test at .05 level of significant.

The team of researchers were introduced to the university, made their intention known and were allowed access to admission records where number of the sample was obtained. The participants were contacted through their telephones and emails. They were also briefed on the purpose of the research and later given the consent form. Research instrument in different formats was distributed based on their special needs conditions. The responses were received within two weeks, this contributed to high return rate. The results of the study was sent to the university and interested participants.

Results

Hypothesis One

There is no significant difference in mean rating of choice of books between students with special needs who read e-books and hard copy. The two categories of participants were students with special needs who read e-books and hard copy. In order to test this

hypothesis, data from the Statistical Package for Social Sciences (SPSS) were subjected to statistical analysis, using independent samples t-test. The result of the analysis was presented in Table 1.

TABLE 1

Independent samples t-test of mean rating of choice of books between students with special needs who read e-books and hard copy (60)

Variable	Categories of participants	N	Mean	SD	Sig	Df	T	Sig(2-tailed)
Book format preference	Hard copy	100	39.11	5.01	0.01	58	0.30	0.012
	E-copy	100	19.09	2.10				

$P > 0.05$ $df = 58$;

From the Table 1 above, the comparison in mean rating of students with special needs who read hard copy revealed that they have a mean of 39.11 and SD of 5.01 and the mean and SD of those that read E-copy was 19.09 and 2.10 respectively. The analysis produced a sig. of 0.01 and 2-tailed sig. of 0.012 at df of 58 indicating shows that there was a significant difference in mean rating of special needs students who read hard copy and E-copy books observing that the 2-tailed sig. of 0.012 was less than the traditional alpha value of 0.05. Therefore, the null hypothesis was rejected. This shows that students with special needs who read hard copy and E-copy show statistically different characteristics in their choice of book formats. More students with special needs students use hard copy than E-copy presumably as a result of factors such as type of disability, personal and socioeconomic factors. However, it is beyond the scope of the analysis to reveal evidence-based rationale for the observable disparity in book format preferences.

Hypothesis Two

There is no significant difference in mean rating of reading habits between students with special needs who read e-books and hard copy. The two categories of participants

compared were the reading habits of students with special needs who read e-books and hard copy. In order to test this hypothesis, data from the Statistical Package for Social Sciences (SPSS) were subjected to statistical analysis, using independent samples t-test. The result of the analysis was presented in Table 2.

TABLE 2

Independent samples t-test of reading habits between students with special needs who read e-books and hard copy (N=60)

Variable	Categories of participants	N	Mean	SD	Sig	Df	t	Sig(2-tailed)
Reading habits	Hard copy	100	45.03	6.06	0.000	58	0.11	0.001
	E-copy	100	15.00	2.01				

P>0.05 df =58

The Table 2 shows that the mean rating of the reading habits among special needs students who read hard copy is 45.03 and SD of 6.06 and those that read E-copy is 15.00 and SD of 2.0. The sig value of 0.000 produced a sig (2-tailed) 0.001 at df of 58. This analysis shows that there was a significant difference in the reading habits of special needs students who read hard copy and those that read E-copy observing that the sig (2-tailed) of 0.001 is less than 0.05 level of significance. Therefore, the null hypothesis was rejected. This shows that special needs students show statistically different reading habits in the use of hard copy and E-copy presumably due to personal and socioeconomic factors as well as the type of disability.

Hypothesis Three

There is no significant difference in mean rating of reading interest between students with special needs who use e-books and hard copy. The two categories of participants compared were the reading interest of students with special needs who use e-books and hard copy. In order to test this hypothesis, data from the Statistical Package for Social

Sciences (SPSS) were subjected to statistical analysis, using independent samples t-test. The result of the analysis was presented in Table.3.

TABLE 3

Independent samples t-test of reading interest of students with special needs who use e-books and hard copy. (N=60)

Variable	Categories of participants	N	Mean	SD	Sig	Df	T	Sig(2-tailed)
Reading interest	Hard copy	100	32.22	4.94	0.000	58	0.31	0.002
	E-copy	100	12.16	1.19				

$P > 0.05$ df =58

From the Table 3, the mean rating in reading interest of special needs students who read hard copy is 32.22 and SD of 4.94 and those who read E-copy is 12.16 and SD of 1.19 . This value is significant at 0.05 given degree of freedom of 58. This indicates that there was a significant difference in the mean rating of reading interest between special needs students who read hard copy and E-copy. Therefore, the null hypothesis was rejected. This shows that the disparity in the reading interest of special needs students who read hard copy and E-copy was significant. This disparity in reading interest could be due to variations in personal characteristics and socioeconomic status.

Discussion

The findings on book-format preference as a variable presented above, indicates that students with special educational needs in Nasssrawa state University Keffi have different book-format preference choices. Their preferences are made based three unique factors, the types of disability, socio-economic background and personal characteristics. In related study, Tosun (2014) found that 20.9% of students read e-books and 79.1% read hard copy of textbooks, additionally, it noted that most those in Faculty of Education,

Center for Computer Education and Instruction and Social Sciences tend to read more of e-books unlike woody, Danie, and Baker (210) who in their study discovered that despite access to internet services students still prefer printed vision of textbooks. In the study it was further revealed that those in aforementioned programmes reading more of e-books than in other disciplines. Priamanayagam, S.P. and Seal, P.P. (2020), report the influence of internet technology that opened new means to learning in the 21st century which mark the emergency of e-book and paradigm shift from textbooks to e-book as an alternative to printed books as a means to conveniently acquire knowledge. Those who read printed copy do so to protect the health of their eyes and want to physically hold the book when reading. On gender bases, more males read e-books than females as 96.5% of them preferred printed format to of textbooks.

On the second variable, reading habit as it relates to using e-book or hard copy of textbook, the result shows a difference among the students with special needs. Tosun (2014) study revealed that 96.5% and 3.5% of students preferred e-books and printed copy respectively if all necessary conditions are met. In Duran (2013), male students in Usak University, habit of reading e-books is higher than female students whereas, Demir (2009) study indicate higher rate in female students. Similarly, Maynard (2010) reports students within the age of 16 have the habit of reading e-book while adults preferred printed version of the same book mostly because of their easy usage and is devoid of straining the eyes

There is also a disparity among the students in their reading interest as it concern e-books and hard copy of textbooks as revealed by the findings. Tosun (2014) findings indicate that the reading interest of students with disabilities in book-format by gender is 68.2% for females and 31.8% for males while on discipline basis computer Education and Instruction Technology is 2.30%, preschool Education 17.4%, Music Education 8.2%, Turkish Language Education 10.5%, primary school Education 37.6% and social sciences Education 5.0%. This confirmed that book-format preferences among students with special needs is conditioned by many variables including types of disabilities and many other factors.

Summary

The influence of technology has affected as sphere of life including reading as many devices can now be deployed for all types leaning activities by all learners students with

disabilities inclusive. Literature in reading has identified three era or 111-generations, the digital immigrants born, the digital hybrids and digital native. Students with disabilities in Nigeria universities are faced with many challenges, mostly as they struggle to acquire university education. In a technology driven world, digital devices are supposed to be an added advantage but due disability most of them seems to be in the era of digital immigrants and digital hybrids while few are belong to digital natives. This is responsible for different preference of book-format among the population.

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