Digital resources and the reading habits of university students in Nigeria

Kolawole Francis Ogunbodede [1]* iD , Oyinkepreye Evelyn Sawyerr-George [2] iD

[1] The University Library, University of Africa, Toru-Orua, Bayelsa State, NIGERIA
[2] Bayelsa State Polytechnic, Aleibiri, Ekeremor, Bayelsa State, NIGERIA
Corresponding Author: kolawoleogunbodede@yahoo.com

ABSTRACT

The study examined digital resources (DRs) and the reading habits of university students in Nigeria. This study aims to establish the relationship between DRs and the reading habits of university students in Nigeria. The descriptive survey design was adopted for the study. The population of the study comprised all university students in Nigeria. An online questionnaire was used to collect data. The questionnaire was validated by two experts in research methodology and educational technology. 412 university students who responded to the questionnaire were used as the sample for the study. The sample size is justified by Fox et al. (2007) and Meyer (1979), who recommended 384 samples from an infinite population range. Cronbach's alpha was used to establish the reliability of the instrument, which yielded 0.76. Data were analyzed with frequency counts and simple percentages, and statistical product and service solutions version 23 was used to generate the mean and standard deviation while Pearson's product-moment correlation coefficient was used to test the hypotheses at the 0.05 level of significance. The findings established that the majority of the university students used DRs daily and the Internet resources were mostly used by the students. The students had positive perceptions of the impacts of DR usage on their reading habits. Lastly, the test of the hypothesis showed that there is a significant relationship between DRs and the reading habits of university students in Nigeria. Based on the findings, the researchers recommended that the university management should continue to provide the Internet services and computer systems so that students can continue to enjoy more access to DRs to enhance their learning.

Keywords: digital resources, reading, reading habits, university students, the Internet, Nigeria

Received: 09 Nov. 2022 ◆ Accepted: 20 Dec. 2022

INTRODUCTION

The library is a vital resource center at any university, with the primary goal of meeting users' information needs. The library plays a key role in the learning process of students and the cultivation of reading habits by offering pertinent and up-to-date resources for their study, research, and general interests as well as a welcoming environment. University libraries play a variety of important responsibilities in encouraging reading habits, such as fostering literacy, providing depth and range of resources, organizing readership campaigns, offering library orientation programs, hosting book fairs and exhibitions, and more (Alex-Nmecha & Horsfall, 2019). Reading is a crucial skill for lifetime learning. To flourish in their academic endeavors, students must cultivate a strong reading culture. Reading and academic performance are consistent with and dependent upon one another (Bashir & Mattoo, 2012). Thus, the more books students read, the more successful they will be in school. Palani (2012) stated that successful reading is necessary for academic progress and is linked to overall educational development.

Reading refers to a person's capacity to recognize letters and symbols and derive meaning from them. Reading, according to Howley (2015), is a creative activity in which the reader creates reading by engaging with the text. It is obtaining information to improve one's knowledge and quality of life. It represents a deliberate effort to understand and learn. Reading is a process that involves learning new knowledge, and it can be done silently or aloud. On the other hand, "reading culture" is the tradition of making reading a regular activity and the growth of a mind-set and skills that make reading an enjoyable, consistent, and persistent activity (Nyam, 2015). It is a long-term method of evolving a favorable reading attitude (Nkordeh et al., 2017), not merely for scholastic purposes. Developing a consistent reading habit outside of the classroom is known as developing a reading culture. A student who has a strong reading habit reads frequently. A person is said to have a reading culture if they routinely read books and other resources like periodicals that are not strictly necessary for them to grow in their field or career.

However, as a result of technological advancement and the explosive rise of digital resources (DRs), undergraduate students' reading preferences are shifting from print to digital sources (Yusof,

2021). In this context, DRs are those that can only be accessed by using the Internet-connected devices (Ambrose et al., 2021). They are also documents available in digital form. Examples include educational movies, databases, e-books, e-reports, online course materials, and websites.

Ebijuwa (2018) stated that computers and mobile devices have made DRs readily available, and they cover a wide range of topics. Ngugi and Mberia (2014) stated that people, especially young adults, are spending more time reading digital materials due to the expanding number of DRs available today. Because the Internet is easier to use, more affordable and takes less time, students are becoming more reliant on it to find reading materials (Shariza & Amelia, 2006). Students have the convenience of learning at their own pace thanks to digital tools. Students can use their preferred devices to access and read library content in various digital formats (eBooks, audiobooks, and films on demand) whenever they want and anywhere they are (Pearson, 2021).

Owing to the benefits and growing demand for DRs, most university libraries around the globe have invested a large portion of their budgets in providing the Internet services and DRs to better serve students' learning and research needs. Thus, students are required to make good use of these resources to enhance their learning abilities and overall academic performance. Despite their benefits, students, particularly those in developing countries, underutilize these vital tools (Kodua-Ntim & Fombad, 2020).

The low utilization could be attributed to students' bad reading habits, which has led to poor academic attainment. Nkordeh et al. (2017) and Olukemi (2010) opined that the rapid fall in the reading lifestyles of Nigerian students at various educational levels has had a significant impact on the value of graduates produced. Statistics on university library users show that during exam times, students who use the library rise dramatically. This demonstrates that students only read when they are studying for examinations.

However, with the exponential expansion of DRs, Nigerian students' reading habits can be transformed. Improved academic curricula flavored with DR availability can resuscitate declining reading habits (Liasu & Bakrin, 2022). According to Shariza and Amelia (2006), DRs have enhanced the reading traditions of Malaysian students who previously had poor reading practices and disliked reading. The majority of the students get the reading materials from the Internet, followed by the library.

Students' digital reading also rose dramatically as laptops, cell phones, and the Internet access became more widely available. Cull (2011) stated that younger people tend to be heavy internet and cell phone users. The availability of various DRs and digital devices has led to a rise in students' reading time (Soroya & Ameen, 2016). As more students use the Internet and wireless technology to get the information they need, reading habits are being effectively promoted.

In general, the advancement of DRs has influenced student reading preferences, causing them to become more constant and intensive. When used correctly, DRs provide students with relevant information that helps them improve their reading habits and academic success. With the widespread availability of digital technologies and resources, it is vital to study the impact of DRs on students' reading habits in Nigerian universities. The study is key because there is a lack of research on DRs and the reading habits of Nigerian university students. Therefore, this study examined DRs and the reading habits of university students in Nigeria.

Objectives of the Study

The main objective of this study is to examine DRs and the reading habits of university students in Nigeria. The specific objectives are:

1. To ascertain the level of DR usage by university students.
2. To identify the types of DRs used by university students.
3. To examine the perceptions of university students on the impacts of DR usage on their reading habits.

Research Questions

The following questions will guide the study:

1. What is the level of DR usage by university students?
2. What are the types of DRs used by university students?
3. What are the perceptions of university students about the impacts of DR usage on their reading?

Hypothesis

1. There is no significant relationship between DR usage and the reading habits of university students in Nigeria.

LITERATURE REVIEW

The rise of the new digital environment has caught the curiosity of numerous researchers. The availability of more digital information has led to an increase in the amount of time that people, especially young adults, spend reading digital content (Liu, 2005; Ramirez, 2003). As a result, studies have been undertaken to examine the influence of DRs on the reading habits of university students. A review of some of these investigations is offered in this section.

Saaid and Wahab (2014) investigated the effect of digitally based materials on undergraduates' reading habits. The findings reveal that out of 103 respondents, the majority (62.2%) of the respondents agreed that the emergence of digital materials like online newspapers, e-books, and e-magazines has changed their reading habits and increased their interest in reading. There have been similar findings in other studies. For example, Chauhan and Lal (2012) carried out a study on the impact of information technology on the reading habits of college students. The study indicated that students' reading habits changed from paper-based to the Internet-based reading. Kumara and Kumar (2018) examined the effect of ICT on students at Tumkur University's reading habits. The sample of the study was 440, and the study found that students regularly access the Internet and use DRs to help them with their academic work, and the majority of the students agreed that print books cost more than online resources.

At Universitas Kristen Indonesia's Department of English Education, Bana (2020) looked at how students saw utilizing the Internet to foster a love of reading. The findings revealed that the Internet had positively influenced students' reading habits, and they considered the Internet as their primary source of information for completing their homework. Onovughe (2012) studied the Internet use and reading habits of different university students in Ekiti State, Nigeria. The study concluded that the Internet has a great influence on the reading habits of university students. DRs have become an important source of information as a result of the increased publication of e-content on the Internet, which provided students with current and relevant information on a variety of topics.

Studies have been undertaken to highlight the important association between DRs and the reading habits of students. Using covariance-based structural equation modelling, Marliana and Nurhayati (2020) investigated the connection between students' reading habits and their use of DRs, their digital literacy, and their reading habits (CB-SEM). The results of this study, which used data from 256 students at STMIK Sumedang, revealed that there is no connection between students' use of DRs and their reading habits. In a related study, Priambodo et al. (2019) used Pearson product-moment correlation to examine students' the Internet use, reading habits, and reading aptitude. 803 students made up the study's population, and 120 students were chosen as the sample size.

With a threshold of probability significance (.388) higher than 0.05 (.388>0.05), the results showed that there is no significant correlation between the Internet use and reading habits. In contrast, Eze et al. (2022) examined the Internet usage as a correlate of reading habits in students at the College of Health Technology in Calabar, Cross River State, Nigeria. 913 students made up the study's population. A 0.05 alpha level Chi-square statistical analysis, X^2, and Pearson product-moment correlation coefficient were employed to evaluate the hypothesis. The study's findings showed that students' reading habits are greatly impacted by the Internet use. This indicates that the Internet use and reading habits are significantly correlated at the College of Health Technology in Calabar.

Several studies have also established the preferred types of DRs used by university students. For instance, Mirza et al. (2021) investigated the digital age and reading habits among undergraduate students at Mehran University of Engineering and Technology, Jamshoro, Sindh, Pakistan. The study found that the majority of the students preferred electronic books. A study by Kumara and Kumar (2021) on the effects of ICT on library patrons' reading habits in state universities in Karnataka state, India. The samples of the study comprised 2,463, and the findings indicated that access to more e-books would allow students to read more books, save time while looking for information, and have access to all knowledge at their fingertips.

Similarly, at Osun State University in Nigeria, Liasu and Bakrin (2022) conducted a study on the effect of DRs on library patrons' reading habits. From the entire user community, 388 respondents made up the sample size. The findings show that e-journals and magazines, e-books, and e-newspapers constitute the information materials sought by university students. Bala and Lal (2016) looked into how DRs were used and how it affected the university's students' reading culture. 114 students participated in the study, and the study found that the majority of the students are unaware of the Internet databases, but they use e-books, e-journals, and e-theses for their academic activities.

Yusof (2021) did a study on students' reading preferences in the digital age at Universiti Teknologi MARA Sarawak and found that the students prefer reading on websites. Okorie et al. (2018) looked into the impact of using DRs on students' academic performance at Federal Polytechnic, Nekede, and Owerri; and found that DRs were used daily for academic objectives, with e-books being the most popular academic resource among students. An experimental study conducted at the Chinese University of Hong Kong about students' usability and the usefulness of e-books demonstrated that technology has the potential to enhance teaching and learning in the university context (Lam et al., 2009).

Although more and more print resources are being replaced by digital ones, print books have continued to exist side by side (McMaken, 2019). Still, a lot of people prefer printed materials to online ones. Numerous studies have consistently shown that consumers prefer to use print resources over digital ones because they think they can focus and remember information more effectively (Greene, 2018). According to Ogunbodede et al. (2020), the primary reason why users want a print textbook is because they believe that printed materials are more accessible, less distracting, well-known, straightforward to use, and do not need the Internet access. Print is seen as familiar and simple to use by Bouck et al. (2016). For instance, the Mizrachi et al. (2018) study, which involved over 10,000 participants, examined the academic reading preferences and behavior of university students across 21 different countries. The majority of respondents (nearly 80%) thought printed course materials were preferable. Approximately 70% of Japanese respondents preferred print media to digital media, according to research by Kurata et al. (2017). Chinese undergraduate students still favor reading printed texts, according to Liu and Huang (2016). Gerhart et al. (2015) found that the majority of participants preferred printed resources to digital ones. Tuncer and Bahadir (2014) opined that reading from printed-out material is more successful than screen reading and reading from printed-out information boosts success. One of the key factors contributing to the rise in paper use in the digital age is printing for reading. This indicates that individuals still prefer reading on paper as a reading medium (particularly for in-depth reading) in the digital age and that this trend is unlikely to change (Grzeschik et al., 2011; Liu, 2005; McAllister et al., 2001; Sellen & Harper, 2002).

Although the younger generation spends a lot of time reading DRs, researchers contend that they tend to skim and explore for information online rather than reading intently (Horton et al., 1996). There is a counterargument that claims digital reading hinders people from reading deeply and critically, which reduces their capacity to comprehend and remember the information (Durant & Horava, 2015). Studies by Renner (2007) and Rowlands et al. (2007) reveal that while physical books may not become extinct, people have grown acclimated to and occasionally prefer digital materials. The use of digital texts is unavoidable in today's academic environment and has had a big impact on students' attitudes and reading habits (Pardede, 2017).

Studies have also found that using DRs might be difficult, particularly in developing nations. Gakibayo et al. (2013) conducted research at the library of the Mbarara University of Science and Technology. The study discovered that inadequate access to computers, slow the Internet connectivity, and a lack of information literacy skills all had an impact on how well people used DRs. Poor internet access, power outages, and a lack of workstations were determined to be barriers to making full use of DRs in Nigerian colleges by Liasu and Bakrin (2022). In their study, Ajayi et al. (2014) also discovered that using the library's digital services was significantly hampered by a lack of computer literacy and a poor internet connection. Ineffective information retrieval abilities, insufficient internet access, and inadequate electricity are obstacles to the effective use of DRs (Ambrose et al., 2021; Wiche & Ogunbodede, 2021). However, as described by Aiyeblehin et al. (2018), the issues of funding, erratic power supply, and inadequate ICT/library infrastructure can be said to be perennial difficulties affecting the various universities in Nigeria.

METHODOLOGY

Research Design

The data was collected using a survey method and a questionnaire tool. This strategy was chosen to give researchers the chance to gather quantitative data for analysis and come up with believable results and findings for the study. A questionnaire is a tool that consists of a collection of questions related to objectives or research questions that are asked to participants, gathers data or views, and then analyses and interprets the responses. Three research questions guided the study. The research question (RQ1) was designed to determine the level of the use of DRs by university students. This question was asked to enable the researchers to know how frequently these resources were used. Whether they were used daily, twice a week, once a week, monthly, or rarely. RQ2 was asked to help the researchers ascertain the types of DRs mostly used by the students.

The types of DRs listed in the questionnaire include the Internet resources, online educational videos on YouTube, online databases, e-books, e-journals, and e-newspapers. RQ3 was designed to enable the researchers to know if DRs have had a positive or a negative impact on the students reading habits. The responses from RQ1 and RQ3 were measured or tested using Pearson's product-moment correlation coefficient to determine if there is a significant relationship or no significant relationship between DRs and the reading habits of university students in Nigeria in this study. This will statistically reveal if DRs have positively or negatively affected students' reading habits in this study.

The research objectives are related to the research questions because the research objectives were translated into the research questions. The research objectives or questions are related to the research problem because it was from the research problem that the researchers mapped out the specific objectives, which were translated into research questions. The research problem was that students generally in Nigeria have bad reading habits, which has led to poor academic attainment (Nkordeh et al., 2017; Olukemi, 2010). So, we anticipated that using DRs might increase and promote the reading of university students, as DRs are effective tools for learning and research and allow users access to information that might otherwise be unavailable to them owing to geographical restrictions. Therefore, we measured the respondents' responses in terms of RQ1 and RQ3 to statistically show if DRs have positively or negatively affected student reading habits in this study.

Population of the Study

2.1 million students enrolled in Nigerian universities made up the study population (National University Commission, 2021). The researchers chose to look at every student in Nigerian universities to gain a comprehensive understanding of the subject at hand and to obtain the necessary sample size for their study.

Sampling and Sampling Procedures

2.1 million University students from Nigeria made up the sample population. The sample for the study consisted of 412 university students who completed the online survey and responded. Fox et al. (2007) and Meyer (1979) recommended 384 samples from a population with an unlimited population range or a population exceeding 500,000 to justify the sample size (500,000).

Data Collection Methods

An online survey was used to gather the data. The survey was developed by the researchers. A research summary, the study's topic, its aim, and a guarantee of the confidentiality of the respondent's information were all offered in the questionnaire's introduction section and two other sections. Part A elicited information on the demographic features of the respondent, while part B consisted of three items (research questions), which were specifically created to gather information on DRs and the reading habits of university students in Nigeria.

Validity and Reliability of the Instrument

Validity is the degree to which an instrument accurately measures what it is designed to measure. To determine how the items are arranged and whether they are consistent with the main goals of the study, the questionnaire underwent both face and content validity testing. The instrument was validated by two specialists in measurement and evaluation, library and information science, and libraries.

The constancy of the measure of a concept is referred to as reliability. A draft version of the questionnaire was given to 30 students at the Federal Polytechnic, Ekowe, Bayelsa State, for the pre-test for a week to assess the validity of the items measuring each variable. Cronbach' alpha was used to establish the reliability of the instrument, which yielded 0.76.

Administration of the Instrument

A Google Form online survey was used to acquire the raw data. The questionnaire was distributed to university students by the researchers via a variety of the Internet venues. Additionally, faculty members and heads of departments from different universities received the link to the survey to distribute to their students via WhatsApp, among other social media sites. A total of 412 university students replied to the questionnaire that served as the study's sample after the survey's three-month duration.

Method of Data Analysis

The study data were analyzed with frequency counts and simple percentages, and statistical product and service solutions version 23 was used to generate the mean and standard deviation while Pearson's product-moment correlation coefficient was used to test the hypothesis at 0.05 significant levels. Responses to the questionnaire were measured using a nominal scale and a 4-point Likert-type scoring scale. The options available to the respondents were strongly agree (SA)=4, agree (A)=3, disagree (D)=2, and strongly disagree (SD)=1. A criterion score of 2.5 was chosen on the scale.

Following is how the criterion score was determined: Criteria score is equal to 2.5 (4+3+2+1)/4. For RQ2, items with a mean score greater than the cut-off of 2.5 were regarded as agreeable, while those below 2.5 were considered as disagreeable. Items with a mean score greater than the criteria score of 2.5 for RQ3 were regarded as a positive impact, while those below 2.5 were considered to have a negative impact. The hypothesis was tested using Pearson's product-moment correlation coefficient, and the data were assessed using descriptive statistics including frequency counts, sample percentages, and means.

Table 1. Gender of the respondents

Gender	Frequency	Percentage (%)
Male	226	55
Female	186	45
Total	**412**	**100**

Table 2. Level of DR usage by university students in Nigeria

S/N	Level of usage	Frequency	Percentage (%)
1.	Daily	300	73
2.	Rarely	38	9
3.	Twice a week	34	8
4.	Once a week	20	5
5.	Monthly	20	5
Total		**412**	**100**

RESULTS

The outcomes in **Table 1** suggest that the majority of the study's participants were male.

Answering Research Questions

Research Qquestion 1: What is the level of digital resource usage by university students in Nigeria?

Table 2 implies that the level of DR usage by university students in Nigeria is very high, with 73% of the respondents using it daily.

Research question 2: What are the types of digital resources used by students?

Table 3 shows that all the items are the types of DRs used by students. The most notable among the types of DRs used are the Internet resources, online education videos on YouTube, online databases, and e-books.

Research question 3: What are the perceptions of university students on the impacts of digital resource usage on their reading habits in Nigeria?

Table 4 implies that all the respondents have positive perceptions of the impacts of DR usage on their reading habits.

Hypothesis: There is no significant relationship between digital resource usage and the reading habits of university students in Nigeria

A p-value of 0.000 and a positive correlation coefficient of 0.476 are displayed in **Table 5**. The p-value is lower than the alpha value of 0.05

Table 3. Types of DRs used by students

S/N	DRs	Mean	SD
1.	Internet resources	3.6	0.48
2.	Online educational videos on YouTube	3.4	0.73
3.	Online database	3.3	0.56
4.	E-books	3.2	0.67
5.	E-journals	2.8	0.70
6.	E-newspapers	2.8	0.77
Grand mean		**3.2**	**0.65**

when testing the hypothesis at 0.05. This indicates that the null hypothesis is disproven. Consequently, there is a substantial connection between DR usage and the reading habits of university students in Nigeria. The positive relationship implied that DR usage positively influences the reading habits of university students, according to the study.

DISCUSSION OF FINDINGS

Research Question One found that the majority of university students in Nigeria used DRs often, with 73% using them daily. The finding suggests that they use it daily for research writing or projects, doing assignments, and augmenting lecture notes, among other things. According to TahiraKalsoom et al. (2021), students used DRs to complete class assignments, do research, and get course-related information and study materials, among other things. As a result, it can be claimed that the respondents have a high degree of digital literacy and are comfortable with computers and the Internet. The new generation that has grown up in the information age has overcome the earlier challenges in the use of DRs stated by Ajayi et al. (2014), for example, such as inadequate knowledge on how to use e-resources. According to Bosch et al. (2011), users of e-content absorb it at a quick and relentless rate.

The findings also imply that the benefits of using DRs for academic purposes were essential in luring university students to do so. The main reasons why most students find digital materials appealing and use them frequently could include that they enable access to materials that might otherwise be denied to users owing to geographic location, economics, or other constraints (Anunobi & Okoye, 2008; Lo et al., 2017). It also offers students current and relevant information on a variety of subjects.

Table 4. Perceptions of university students on the impacts of DR usage on their reading habits in Nigeria

S/N	Impacts of e-resources on reading habits	SA	A	D	SD	Mean	SD	Remark
1.	DRs have improved my searching skills.	277	134	1		3.7	0.46	Positive
2.	DRs have increased my access to a wide variety of information sources.	263	149	-	-	3.6	0.48	Positive
3.	DRs have increased my independence and self-learning skills.	191	121	-	-	3.4	0.49	Positive
4.	DRs have improved my reading habits.	174	203	34	1	3.4	1.58	Positive
5.	I am comfortable reading e-resources.	144	258	7	3	3.3	0.54	Positive
6.	I like reading DRs.	165	231	9	7	3.3	0.61	Positive
7.	DRs make reading more enjoyable.	166	199	47	-	3.2	0.65	Positive
8.	DRs have improved my reading speed.	141	196	72	3	3.1	0.72	Positive
Grand mean						**3.4**	**0.69**	

Table 5. Relationship between DR usage and the reading habits of university students

Variable	Mean	Standard deviation	n	R	p-value	Remark
DR usage	17	19.2	412	0.476	0.000	Significant
Reading habits	19	27.2				

Note. α=0.05

These characteristics may point to the possibility of using digital technologies to improve teaching and learning (Lam et al., 2009). In comparison to manual searches, the introduction of DRs has provided students with much-needed comfort, ease, and timely information for learning, completing academic projects, and conducting research (Talent & Kundai, 2017). As a result, DRs are now important resources in every university library, demonstrating a commitment to bringing information closer to users in a more trustworthy and easy manner. The finding is consistent with the finding of Okorie et al. (2018), who also discovered that undergraduate students in Nigeria used DRs daily. This indicates that Nigerian university students today rely on using DRs to suit their diverse educational needs.

Research question two revealed that the respondents mostly used the Internet resources. The Internet resources are any of the different digital information sources that can be accessed over the Internet. The ease with which information can be found online using search engines like Google and Yahoo, or the wide selection of educational films on YouTube, may be the main factors influencing the respondents' use of online resources. Search engines like Google, which can instantly search through billions of public online pages, appear to be helpful to students when it comes to providing answers to inquiries as quickly as feasible. In comparison to databases or downloading e-books, which can take longer because many databases demand a high level of disciplinary background knowledge, searching for students on Google is much simpler. According to Omeluzor et al. (2016), students did not have a strong understanding of DRs in their field of study, making the Internet and other library websites preferable to paid databases. In addition, they complained that online materials are poorly arranged and that using a computer to search for e-books and e-journals looks time-consuming.

Research question three established that students have positive perceptions of the impacts of DR usage on their reading habits. Students believed that using DRs improved their searching skills, provided wider access to a wide variety of information sources, increased their independence and self-learning skills, and improved their reading habits. Kazu et al. (2005) posited that giving students the freedom to select and employ educational resources in accordance with their preferences and learning choices can promote effective learning. Additionally, a student's viewpoint influences every facet of learning. According to Pardede (2019), younger users who are more computer knowledgeable tend to have more positive attitudes regarding digital reading because they typically have the necessary expertise and knowledge of digital texts. Manalu (2019) established that the activity will be more conducive, and the outcomes will be better, the more positive the students' perceptions are. Sun et al. (2012) reported that students' perceptions of how helpful e-books are for facilitating their learning have a direct impact on their learning outcomes. That is to say, a student's learning outcomes will be enhanced if the student thinks that an e-book is helpful.

Additionally, Shiratuddin and Landoni (2003) observed that students are extremely satisfied when utilizing digital texts because they can use devices, the Internet resources, e-books, etc. without much effort. According to Shelburne's (2009) study, undergraduate students prefer to view digital texts favorably because there are so many resources available to them that can assist them in gathering information. In another survey, 90% of e-book users in an Indian academic setting were very satisfied or fairly satisfied with their use of e-books, and students tended to use e-books more frequently than

teachers (Anuradha & Usha, 2006). Because of the Internet's advent, the reading culture has undergone an astonishing transformation. People now read more or less exclusively on the Internet (Kolajo & Agbetuyi, 2021). This finding conforms to the findings of Bana (2020), who found that the students had a positive perception of the impact of DRs because they had helped to develop their reading habits, improve their skills of searching, and feel more comfortable with the electronic format of resources.

Lastly, the test of the hypothesis revealed that there is a significant relationship between DRs and the reading habits of university students in Nigeria. This implies that the increase in DR usage did significantly increase the reading habits of university students in Nigeria in this study. This is so because the p-value is less than the alpha value of 0.05 (**Table 5**). The results imply that students' reading habits at universities are favorably influenced by their use of DRs. As a result of this study, it is anticipated that more students would use DRs, which will lead to increased student and graduate quality as well as improved academic performance. However, this study is in line with that of Eze et al. (2022), who discovered a substantial connection between the Internet usage and a student's reading habits.

CONCLUSION AND RECOMMENDATIONS

According to the findings of the study, university students used DRs daily; the students mostly used the Internet resources; students had positive perceptions of the impacts of DR usage on their reading habits; and there was a significant relationship between DR usage and the reading habits of university students in Nigeria. Based on the findings, the researchers recommended that the university management should continue to provide the Internet services and computer systems so that students can always access a variety of DRs to enhance their reading habits.

Contributions and Implications of the Study

The positive impressions of university students regarding the effects of using DRs on their reading habits is a crucial first step in creating strategies to increase the use of DRs in Nigerian universities. Increasing student knowledge of the value of DRs is one aspect of this. The goal is to motivate more students to use DRs, which will improve their reading habits and their academic achievement. The effective use of DRs could have positive effects on students, such as reduced costs, easier access to higher education, and improved involvement. It is one potential remedy for Africa's lack of materials of good quality and underfunding of general education. This study's contribution is that students' reading habits and academic performance would be improved by using DRs effectively. To dramatically raise the caliber of graduates and the standard of higher education, universities in Nigeria continue to expand access to DRs.

Data availability: Data generated or analysed during this study are available from the authors on request.

REFERENCES

Aiyeblehin, J. A., Onyam, I. D., & Akpom, C. C. (2018). Creating maker spaces in Nigerian public libraries as a strategy for attaining national integration and development. *International Journal of Knowledge Content Development & Technology, 8*(4), 19-31.

Ajayi, S. A., Shorunke, O. A., & Aboyade, M. A. (2014). The influence of electronic resources use on students' reading culture in Nigerian universities: A case study of Adeleke University Ede, Osun State. *Library Philosophy and Practice*, 1182.

Alex-Nmecha, J. C., & Horsfall, M. N. (2019). Reading culture, benefits, and the role of libraries in the 21st century. *Library Philosophy and Practice*, 2836.

Ambrose, S. E., Ogunbodede, K. F., & Idubor, I. (2021). Undergraduate students' use of electronic resources amid the COVID-19 pandemic lockdown. *Library Philosophy and Practice*, 6434.

Bala, S., & LaI, P. (2016). Usage of electronic resources and their impact on reading culture: A case study of Punjab Agricultural University, Ludhiana. *International Journal of Digital Library Services, 6*(3), 59-66.

Bana, A. (2020). Students' perception of using the Internet to develop reading habits: A case study at the English education department of Universitas Kristen Indonesia. *Journal of English Teaching, 6*(1), 60-70. https://doi.org/10.33541/jet.v6i1.46

Bashir, I., & Mattoo, N. (2012). A study on study habits and academic performance among adolescents (14-19) years. *International Journal of Social Science Tomorrow, 1*(5), 1-5.

Cull, B. W. (2011). Reading revolutions: Online digital text and implication for reading in academic. *First Monday, 16*(6). https://doi.org/10.5210/fm.v16i6.3340

Durant, D. M., & Horava, T. (2015). The future of reading and academic libraries. *Portal: Libraries and the Academy, 15*(1), 5-27. https://doi.org/10.1353/pla.2015.0013

Ebijuwa, A. S. (2018). Gender differentiation and perceived ease of usage of electronic resources by university students in selected private universities in Nigeria. *SRELS Journal of Information Management, 55*(3), 117-127. https://doi.org/10.17821/srels/2018/v55i3/123059

Eze, E. A., Kaka O., & Okon, V. A. (2022). Students' internet usage as a correlate of reading culture in College of Health Technology, Calabar, Cross River State Nigeria. *Journal of Emerging Technologies and Innovative Research, 9*(3), 497-514.

Fox, N., Hunn, A., & Mathers, N. (2007). *Sampling and sample size calculation.* The NIHRRDS for the East Midlands/Yorkshire & the Humber.

Gakibayo, A., Ikoja-Odongo, J. R., & Okello-Obura, C. (2013). Electronic information resources utilization by students in Mbarara University library. *Library Philosophy and Practice*, 869.

Gerhart, N., Peak, D.A., & Prybutok, V. R. (2015). Searching for new answers: The application of task-technology fit to e-textbook. *Decision Sciences Journal of Innovative Education, 13*, 91-111. https://doi.org/10.1111/dsji.12056

Greene, P. (2018). *Why e-textbooks haven't taken our schools.* https://www.forbes.com/sites/petergreene/2018/08/27/why-e-textbooks-havent-taken-over-schools/

Grzeschik, K., Kruppa, Y., Marti, D., & P. Donner. (2011). Reading in 2110 reading behavior and reading devices: A case study. *Electronic Library, 29*(3), 288-302. https://doi.org/10.1108/02640471111141052

Horton, W., Taylor, L., Ignacio, A., & Hoft, N. L. (1996). *The Web page design cookbook.* John Wiley & Sons, Inc.

Kodua-Ntim, K., & Fombad, M. C. (2020). Strategies for the use of open access institutional repositories at universities in Ghana. *Library Management, 41*(6/7), 515- 530. https://doi.org/10.1108/lm-02-2020-0023

Kolajo, F. S., & Agbetuyi, P. A. (2021). Dwindling reading culture in the Internet era and the imperative for lifelong reading. *Library Philosophy and Practice*, 4739.

Kumara, B., & Kumar, B. T. S. (2021). Library users and their reading habits: Assessing the impact of ICT. *Library Philosophy and Practice*, 5670.

Kurata, K., Ishita, E., Miyata, Y., & Minami, Y. (2017). Print or digital? Reading behavior and preferences in Japan. *Journal of the Association for Information Science and Technology, 68*(4), 884-894. https://doi.org/10.1002/asi.23712

Lam, P., Lam, S. L., Lam, J., & McNaught, C. (2009) Usability and usefulness of e-books on PPCs: How students' opinions vary over time. *Australasian Journal of Educational Technology, 25*(1), 30-44. https://doi.org/10.14742/ajet.1179

Liasu, J. A., & Bakrin, S. F. (2022). The impact of electronic information resources on the reading habits of library users at Osun State University, Nigeria. *Library Philosophy and Practice*, 7055.

Liu, Z. (2005). Reading behaviour in the digital environment: Changes in reading behavior over the past ten years. *Journal of Documentation, 61*(6), 700-712. https://doi.org/10.1108/00220410510632040

Liu, Z., & Huang, X. (2016) Reading on the move: A study of reading behavior of undergraduate smartphone users in China. *Library and Information Science Research, 38*(3), 235-242. https://doi.org/10.1016/j.lisr.2016.08.007

Marliana, R. R., & Nurhayati, L. (2020). Relationship modeling between digital literacy, the use of e-resources and reading culture of students at STMIK Sumedang using PLS-SEM. In *Proceedings of the 1st International Conference on Islam, Science and Technology*. https://doi.org/10.4108/eai.11-7-2019.2298021

McAllister, D., McAllister, N., & Vivian, S. (2001). *The impact of digital books upon print publishing.* http://www.bosonbooks.com/boson/

Mcmaken, L. (2019). *E-books vs. print books: What's the difference?* https://www.investopedia.com/financial-edge/0812/e-books-vs.-printbooks.aspx

Meyer, J. T. (1979). *Fundamental research statistics for the behavioural sciences.* Holt Rinehart & Winston.

Mirza, Q., Pathan, H., Khatoon, S., & Hassan, A. (2021). Digital age and reading habits: Empirical evidence from Pakistani Engineering University. *TESOL International Journal, 16*(1), 210-231.

Mizrachi, D., Salaz, A. M., Kurbanoglu, S., & Boustany, J. (2018). Academic reading format preferences and behaviors among university students worldwide: A comparative survey analysis. *PloS ONE,* 13(5), e0197444. https://doi.org/10.1371/journal.pone.0197444

Ngugi, M. N., & Mberia, H. K. (2014). The influence of the Internet surfing on the reading culture of secondary school teachers: A case study of newspaper readership in Kigumo Sub County, Kenya. *International Journal of Academic Research in Business and Social Sciences, 4*(11), 96-110. https://doi.org/10.6007/IJARBSS/v4-i11/1275

Nkordeh, N., Oni, O., Olowononi, F., & Bob-Manuel, I. (2017). *Impact of social media on the reading culture of Nigerian youths: Is the social media platform providing an alternative source of education?* http://www.iaeng.org/publication/WCECS2017/WCECS2017_pp223-226.pdf

Nyam, S. S. (2015). The school library and promotion of reading culture. *Delta Library Journal, 9*(1&2), 4-45.

Ogunbodede, K. F., Idubor, I., & Ivwighreghweta, O. (2020). Use of electronic and print resources among lecturers in two private universities in South-South Nigeria. *Journal of Contemporary Issues in Education, 4*(1), 1-11.

Ogunbodede, K., Ambrose, S. E., & Idubor, I. (2021). Undergraduate students' use of electronic resources amid the COVD-19 pandemic lockdown. *Library Philosophy and Practice*, 6434.

Okorie, J. N. (2018). Influence of electronic information resources utilization on academic performance of HND students in Federal Polytechnic, Nekede, Owerri. *Library Philosophy and Practice*, 1950.

Olukemi, M. (2010). *Ondo first lady: Challenges youths on reading culture, daily champion.* http://allafrica.com/stories/201005110296.html

Onovughe, O. G. (2012). Internet use and reading habits of higher institution students. *Journal of Emerging Trends in Educational Research and Policy Studies, 3*(1), 11-15.

Palani, K. K. (2012). Promoting reading habits and creating literate society. *Journal of Arts, Science & Commerce, 3*(2).

Priambodo, S., Loeneto, B. A., & Diem, C. D. (2019). Internet use, reading habit and reading ability of private junior high schools. *Script Journal: Journal of Linguistic and English Teaching, 4*(2), 136-146. https://doi.org/10.24903/sj.v4i2.332

Quadri, G. O., & Abomoge, S. O. (2013). A survey of reading and internet use habits among undergraduate students in selected university libraries in Nigeria. *Information and Knowledge Management, 3*(11), 38-46.

Saaid, S. A., & Wahab, Z. A. (2014). The impact of digital-based materials on undergraduates' reading habit. *International Journal of Social Science and Humanity, 4*(3), 249-253. https://doi.org/10.7763/IJSSH.2014.V4.357

Sellen, A. J., & Harper, R. H. R. (2002). *The myth of the paperless office.* MIT Press. https://doi.org/10.7551/mitpress/4833.001.0001

Shariza, M., & Amelia, A. (2006). *Male teenagers need for extensive reading.* http://www.iium.edu.my/ilc/?download=16-e08.pdf

Soroya, S. H., & Ameen, K. (2016). Reading trends of youth in Pakistan: A pilot study. *Pakistan Journal of Information Management & Libraries, 17*, 86-96. https://doi.org/10.47657/201617896

TahiraKalsoom, Jabeen, S., & Munawar, S. (2021). An exploration of student's perceptions regarding use of e resources and its impact on their academic performance. *Indian Journal of Economics and Business, 20*(3), 1189-1203.

Tuncer, M., & Bahadir, F. (2014). Effect of screen reading and reading from printed out material on student success and permanency in introduction to computer lesson. *TOJET: The Turkish Online Journal of Educational Technology, 13*(3), 41-49.

Wiche, H. I., & Ogunbodede, K. F. (2021). Awareness and use of open educational resources by library and information science students of Ignatius Ajuru University of Education, Rivers State, Nigeria. *Library Philosophy and Practice*, 5373.

Yusof, D. A. A. (2021). Reading habits among students in the digital era: Changes of trends and behaviours. *Journal of Academic Library Management, 1*(1), 43-54. https://doi.org/10.24191/aclim.v1i1.5