

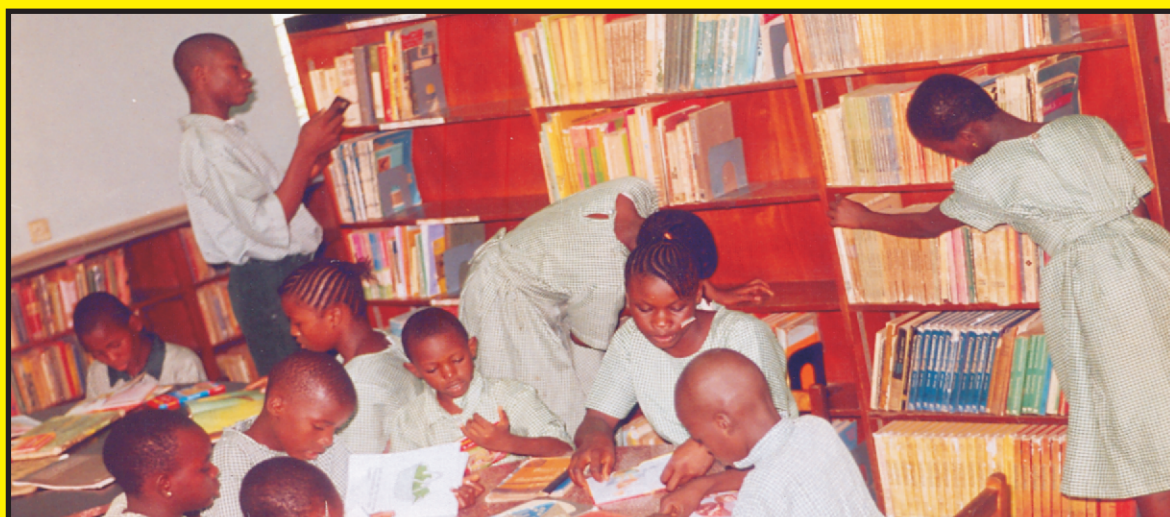
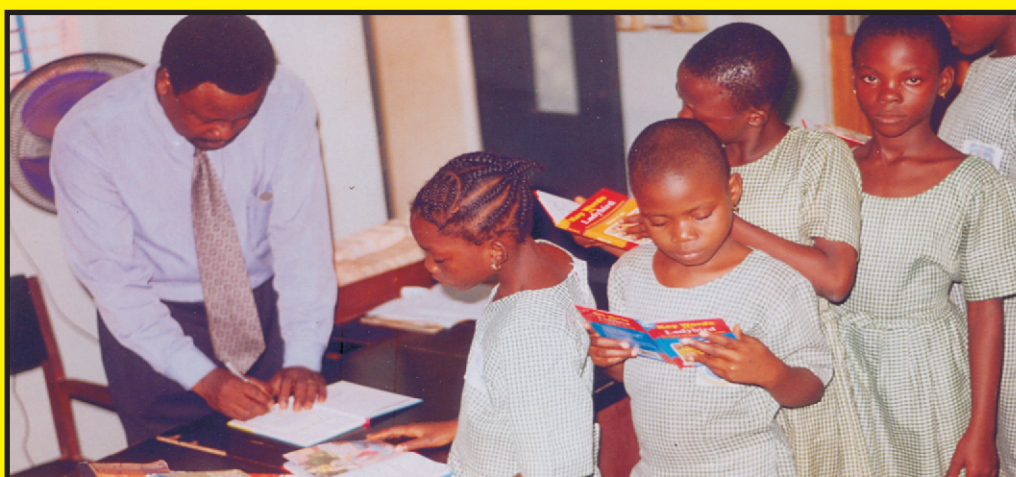
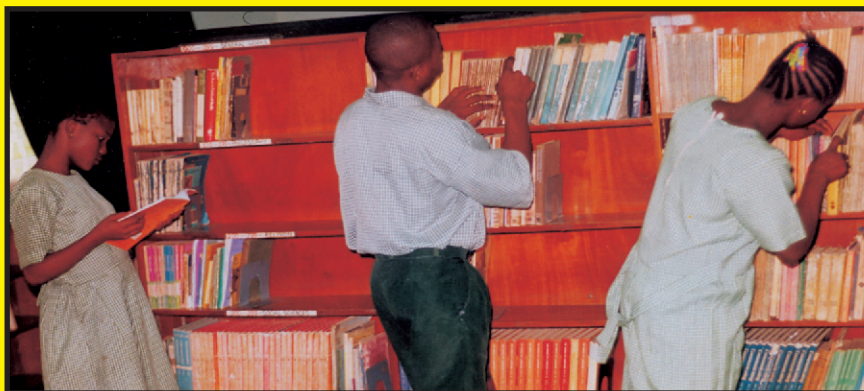


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Editorial

The volume 24, March 2025 issue of the Nigerian School Library Journal (NSLJ) is out for your consumption. I have no doubt that it will surely be a useful addition to your resource collection on school librarianship and other library and information science issues.

I, therefore, commend it for your selection as new addition to your stock.

We seek your support in submitting publishable articles on time. The Journal continues to be indexed by AJOL and it has been accorded a higher status that will reflect in its visibility.

Your sustained interest in NSLJ is highly appreciated.

Prof. David F. Elaturoti



Editor-in-Chief

**Search Engines Used by Senior High School Students to
Retrieve Information: A Case of Three Senior High Schools
in Bantama Sub- Metro, Kumasi, Ghana**

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Abstract

The aim for this paper is to identify the preferred search engines used by final year senior high school students in Bantama Sub-Metro in Kumasi Municipality in Ghana. A survey approach and questionnaire were used for the study. The sample size comprised of three hundred and sixty (360) students of three selected senior high schools in Kumasi municipality. The major findings that emerged from the study indicated that the students were used to the Internet search engines and were able to mention those they were familiar with. Students mostly used Google as compared to other search engines. Also, other internet search engines such as Info space, Alta Vista, Bing and Ask were not known to the students. With regards to the frequency students used the search engines, Google was frequently used more than Yahoo. In learning activities, students used search engines for educational needs followed by solving educational problems and to get information on entertainment. Their main challenges were difficulties in finding relevant information and lack of adequate skills in using the internet search engines. The study recommends that school librarians and heads of ICT Unit during orientation should introduce students to different search engines rather than only Google and Yahoo.

Keywords: *Search Engines, Senior High Schools, Senior High Students, Internet Use, Information Retrieval*

Introduction

The Internet is considered as one of the most important technological developments of the current situation and it is the nationwide most effective way of communication (Imoniwe, 2018 cited from Burton, 2011). Through the inception of the Internet, individuals can retrieve information in diverse ways. Furthermore, the Internet has been considered as the fountain of information in all facets of learning. With this, students at all levels of education have to benefit from it. Search engines, as information retrieval system, help an individual to obtain any information on the web

based on user's query (Sivassubramaian & Gomathi, 2019). Imoniwe (2018) cited from Ross (2012) also indicated that, search engine is a retrieval system which has been considered to help users to find available information on the Internet and is good for retrieving particular information. She further indicated that there are several search engines such as Google, Google scholar, Bing, Yahoo, Msn/Live, Blekko, Ask, Info space and Altavista on the web for information retrieval. Divya & Pillai (2015), in their study, also confirmed that search engines are many but most students are not aware and familiar with their usage. They continued that knowing different search engines is good for a student or a researcher to obtain the best results for his/her searches because each search engine is unique in terms of scope, speed and content. Onuh & Ekwueme (2020), in their study on search engines used by students in Enugu, Nigeria, established that Google is the leading and preferred search engine among different Internet search engines. They further indicated that retrieving information is a way of fishing out relevant documents to satisfy user's information needs-based on ones stated query. A lot of studies have been conducted by students and scholars on different institutions on the use of search engines. However, there is lack of studies in Ghanaian institutions. The main aim of this paper is to identify the preferred search engines often used by students to retrieve information. This study therefore sought to determine the awareness level of search engines students of senior high schools use to retrieve information on the Internet. The findings of the study can be used to identify the most popular search engines used by students in retrieving information on the web for academic purposes. This study will also be essential in the sense that, students knowing and using additional Internet search engines apart from what they already know will enhance their information retrieval skills.

Objective of the Study

The objectives of this study were as follows:

1. To identify the search engines students are using to retrieve information from the web.
2. To determine how frequently students use search engines for information retrieval.
3. To identify the factors that hinder students in using search engines to retrieve information on the web.

Review of Literature

Akpojotor (2016), in his study, indicated that awareness is by having knowledge of a situation or knowing the existence of something. Awareness in the library settings is by knowing the library holdings and how one can effectively and efficiently utilize them to satisfy the information and educational needs of the user. The web has a considerable number of search engines but only a few are being utilized by students and researchers. Search engines make online searches quite easy however, students still face challenges in searching to obtain the required information due to lack of retrieval skills (Kirana & Mallikarjun, 2016).

Nyemezu et al., (2021) conducted a study on the use of Internet search engine among students in Nigeria. The result established that Google was extremely used by the students, whilst Google scholar, Yahoo and Bing are less used. The result also reported the following: lack of search skills, slow internet connectivity and irregular power supply, as students' major challenges in using internet search engines. A study done by Sivasubramanian & Gomathi, (2019) cited Umoren, (2016), established that the main challenges affecting the use of search engines by students in Sri Ramakrishna College of Arts and Science Library was irregular power supply.

Imoniwe (2018) conducted a study on search engines by students in Delta State, Nigeria and his findings showed that students preferred Google followed by Google scholar to retrieve information. A study conducted by Kurniasih *et al* (2018) on the use of search engines by students at Universitas Padjadjaran, Indonesia confirmed that majority of the respondents (90%) often used Google, followed by Yahoo (0.6%) while Bing rated (0.4%). They also reported that students use search engines to write thesis, meet information needs, solve problems, increase knowledge and for entertainment. With regards to information retrieval technique students use keywords and Boolean logic to search information.

Ogbole (2017) cited Veronis (2014) also indicated that 97.9% of the students from Federal University of Agriculture, Ogun State and University of Ibadan, Oyo State, Nigeria used Google on daily basis, 74.7% used Yahoo two times weekly, 15.1% used Bing once in a week, 13.5% used Netscape twice a week, 11.49% used AOL monthly while 11.5% used Lycos twice in a month. The results indicated that Google was the leading search engine mostly used by students. In the same vein, Akparobore & Palmer (2015) investigated a study on awareness and use of search engines by students in Delta State, Nigeria. Their finding indicated that Google and Yahoo were the search engines mostly used by the students. They further established that most (64.1%) of the students were not familiar with other search engines and information overload was their main challenge. Divya & Pillai (2015), in their study, indicated that there are several search engines users' use for searching information. These include Google, Google scholar, Bing, Yahoo, Blekko, Ask, web crawler, MSN, Lycos and AltaVista but majority of the students use only Google to search information. Sudhier & Anitha (2015) conducted a study on the use of search engines by the users of Kerala University Library, India. Their findings established that Google was their favorite search engine followed by Yahoo. The study also confirmed that most of the students use search engines for their study and research scholars also use them for their

research work. The study further indicated that downloading of unwanted information was their major challenge.

A study done by Onwuchukwa (2013) for students offering law in Nigerian university indicated that Google, Wikipedia and Ask.com were the search engines mostly utilized by students for searching and Google was the most used search engines. Also, Ngwuchukwu (2012), in her study, indicated that students in academic institutions' awareness level of different search engines is very limited. She further indicated that most of the students do not have any idea on the concept and features of the various search engines and are not using them.

Research Methodology

The study adopted a survey research approach. A questionnaire was used as an instrument for data collection. In designing the questionnaire, the researchers took into consideration the relevant data gathered from the literature review as well as the study objectives. The main target group was form three students of three senior high schools in Bantama Sub-Metro in Ashanti Region of Ghana. These three schools were the following: Kumasi Girls Senior High School, Asanteman Senior High School and Prempeh Senior High School. The first- and second-year students were excluded from this study because only third-year students write their final examinations leading to graduation and certification. The main reason for choosing third-year students was that they were seniors who were about to write their final examination. They may be using search engines to retrieve information to supplement their lecture notes. Hence, the researchers believed that the third-year students would give better responses to the question raised by this study.

There were three thousand six hundred and two (3602) form three students in the three selected senior high schools. Nwana (1981) has proposed that a population in hundreds requires a sample size of 20%, few thousand needs 10% sample size and several thousand requires 5% or less. With reference to Nwana's (1981) proposition, 10% of the population involving all the three senior high schools selected were randomly chosen for the study. In all, 360 students constituted the sample for the study as depicted in Table 1 below:

Table 1: Selected Schools and the Number of Respondents Sampled

School	Population	Population Size
Kumasi Girls Senior High School	1306	130
Asanteman Senior High School	979	98
Prempeh Senior High School	1317	132
Total	3602	360

Source: Field Survey, 2020.

The questionnaire was grouped into three parts. It comprised of both closed and open-ended questions. Part one sought to obtain information on awareness of search engines, examples of search engines, search engines they mostly used and the methods they used to learn search engines. Part two included the rate of using the search engines, search options, information search through search engines. Part three sought information about challenges students encounter in using online search engines. Three hundred and sixty copies of the questionnaire were randomly distributed to the students by one of the researchers with the permission from the Headmaster/Headmistress from the selected schools. A period of three weeks from January 21 to 4 February 2020 was given to the respondents to return the completed questionnaire. In all, 342 copies of the questionnaire were completed by the respondents with a response rate of 95 %. The answered questionnaire was analyzed using Statistical Packages for Social Sciences (SPSS) and frequency, tables and percentage were also used during the process.

Presentation of Results

This section presents the results obtained from the results. One of the study objectives was to find out the awareness level of students on search engines. In order to get the clue on students' understanding on search engines, they were probed to state their awareness level of Internet search engines. All the students, representing 100%, responded in a positive way meaning they were fully aware of the existence of search engines. Students were also asked to state the search engines they prefer to retrieve information. The finding of the results, as displayed in Table 2 below, established that Google was the students' preferred search engines with 326 (95.3%) response rate. This was followed by Yahoo with 16 (4.7%) and none of the students from the three schools had not used Google Scholar, Alta Vista, Infospace, Bing and Ask to retrieve information.

Table 2: Preferred Search Engines

SCHOOLS	PREFERRED SEARCH ENGINES							
	Google	Yahoo	Google Scholar	Alta Vista	Info space	Bing	Ask	Total
Prempeh Senior High	124 (96.1%)	5 (3.9%)	-	-	-	-	-	129 (100)
Asanteman Senior High	87 (90.6%)	9 (9.4%)	-	-	-	-	-	96 (100)
Wesley Girls Senior High	115 (98.2%)	2 (2.0%)	-	-	-	-	-	117 (100)
Total	326 (95.3%)	16 (4.7%)	0	0	0	0	0	342 (100)

Source: Field Survey, 2020

The question on search option regarding information retrieval was asked and Figure 1 depicts the outcome of the study which indicated that 175 (51%) used simple search option, 39 (12%) stated advanced search option, 121 (35%) stated both simple and advanced options. Few students, 7 (2%) did not answer to the question. A simple clarification for this could be that these students were not more acquainted with the searches.

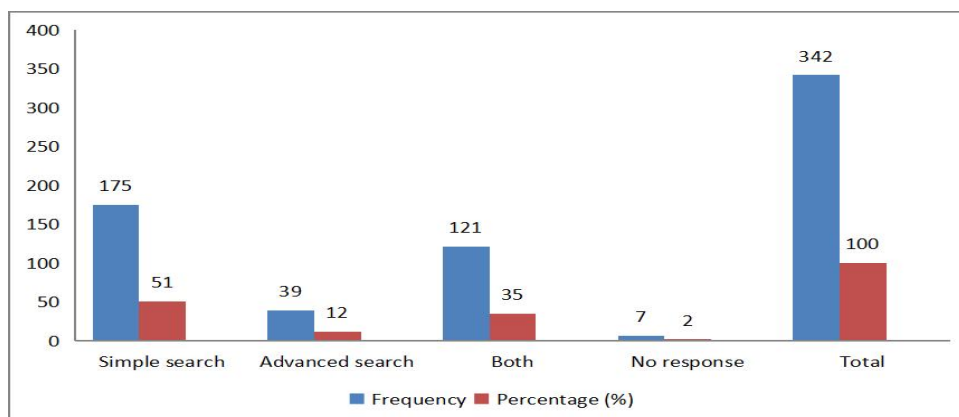


Figure 1: Respondents' Search Options

Source: Field Survey, 2020.

Methods of learning skills can either be done through formal or informal approach. Students were asked to indicate the approach they used to learn search engines. The results show that 144 (42.1%) of the students did self-tuition, 142 (41.5%) were taught by colleagues while 56 (16.3%) learned it through library orientation. The second objective of the study seeks to identify the frequency of using the preferred search engine. Students were asked to indicate the number of times they use the search engines and their responses are indicated in Table 3 which established that Google and

Yahoo are always used by the students with 335 (98.0%) and 10 (3.0%) response rates respectively. Yahoo and Google are used twice a week with 54 (15.7%) and 7 (2.0%) response rates respectively while Yahoo was rarely used with 278 (81.2%) response rate. All the students indicated that they have never heard of Google Scholar, Infospace, Alta Vista Bing and Ask.

Table 3: Frequency of Using Search Engines by Students

Search Engines	Frequency			
	Always	Twice a week	Rarely	Never heard of it
Google	335 (98.0%)	7 (2.0%)	-	-
Yahoo	10 (3.0%)	54 (15.7%)	278 (81.2%)	-
Google Scholar	-	-	-	342 (100%)
Inospace	-	-	-	3342(100%)
Alta Vista	-	-	-	342 (100%)
Bing	-	-	-	342 (100%)
Ask	-	-	-	342 (100%)

Source: Field Survey, 2020

Table 4: Information Searched through Search Engines

Information Searched	Frequency	Percentage (%)
To meet educational information needs	342	100
Increase of knowledge and solving educational problems	154	45.0
Increase knowledge	124	36.2
Information on entertainment and football	120	35.0
Tracing information about popular heroes	13	3.8

Source: Field Survey, 2020

Students access the Internet for a variety of reasons and academic information is not exempted. Students were asked to indicate information searched through search engines. Their responses are depicted on Table 4 above. It can be inferred from Table 4 that students use search engines mostly to meet their educational information needs rated 100%. This was followed by increase of knowledge and solving educational problems which had a response rate of 45% while increase of knowledge rated 36.2%. Search engines are also used to get information on entertainment and sports, especially football and to trace information about heroes rated 35%, 3.8% and 3.8% respectively.

Table 5: Challenges Encountered Using Search Engines

Challenges	Prempeh Senior High		Asanteman Senior High		Wesley Girls Senior High		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Too many information is released during browsing.	60	46.5	90	93.7	85	72.6	235	68.7
It takes too long to download pages	50	38.7	63	65.6	56	47.8	169	49.4
Poor network connectivity	26	20.1	40	41.6	39	33.3	105	30.7
Difficulties in finding relevant information	20	15.5	38	39.5	36	30.7	94	27.4
Power Outages	18	13.9	27	28.1	30	25.6	75	21.9
Some results released are irrelevant	16	12.4	25	26.0	28	23.9	69	20.1
Lack of adequate skills	10	7.7	17	17.7	20	17.0	47	13.7

Source: Field data, 2020

In any human performance, there are challenges and the students also had their share of problems. Students were asked to indicate challenges they encounter in using the internet search engines and their responses are shown in Table 5. The results indicated that 235(68.7%) of the students confirmed too many information released during browsing to be their main challenge which they encounter when using online search engines, 169 (49.4%) respondents rated too long time to download pages, 105 (30.7%) of the students indicated slow Internet connectivity, 94 (27.4%) students stated difficulties in finding relevant information, 75 (21.9%) respondents rated power outages to be one of their challenges, 69 (20.1%) respondents indicated irrelevant information whilst 47(13.7%) stated lack of skills in retrieving information.

Discussion

Search engines as information retrieval system, help an individual to obtain any information on the web based on user's query (Sivassubramaian & Gomathi, 2019). Students in the senior high schools are not exempted in using search engines to retrieve information. The objective of the study is

to identify search engines preferred by senior high school students to search information on the web. The result shows that all the students representing 100% were fully aware of the existence of search engines. This also indicates that students of 21st century are well known of technology. However, a study done by Imoniwe (2018) established that though students are aware of search engines yet only two search engines Google and Yahoo are fully utilized by the undergraduate students. The finding of the study also indicated that Google was their favorite search engine followed by Yahoo. This result agrees with Imoniwe's (2018) findings which indicated that Google was frequently used by many students. Additionally, the result on search option regarding information retrieval indicated that most of the students use simple search option which indicates that they were not more conversant with information searches. This finding is in line with Kirana & Mallikarjun's. (2016) study which indicated that though internet search engines make searches quite easier, however, students still face challenges in searching to get an appropriate information due to lack of retrieval skills. The finding of the study also established that most of the students did not learn using search engines through formal training.

This study agrees with Appiah (2017) whose findings indicated that most of the students learn how to access the Internet on their own. Also, self-tuition way of learning has its own shortcomings as the students were not trained to acquire information literacy skills to retrieve information. As suggested by Sivasubramanian & Gomathi (2019), students push to quest for information is mainly influenced by the need to get relevant information for thesis/course work. This suggestion is in line with this study finding which indicates that most of the students use search engines to meet their educational information needs and also to increase knowledge to solve educational problems.

Concerning the difficulties encountered by students in the course of using search engines to retrieve information, they indicated too many information released during browsing as their main challenge. They also indicated other challenges like too long time to download pages, slow internet connectivity, difficulties in finding relevant information and lack of retrieval skills. This finding affirms the view of Nyemezu et al., (2021) Sudhier & Anitha (2015) and Akparobore & Palmer's (2015) that lack of search skills, low internet bandwidth, irregular power supply and information overload was students' main challenges in retrieving information using internet search engines.

Conclusion

It can be inferred from the findings that; the students were conversant with the Internet search engines and were able to mention few ones they are familiar with. Students mostly use Google and Yahoo. Also, students were not familiar with other search engines such as Infospace, Alta Vista, Bing, Google scholar and Ask. Concerning the search options, majority of the students are familiar with only simple search option. With regards to learning activities, students use search engines for educational needs followed by knowledge dissemination and solving educational problems. The students indicated too many information released during browsing, too much time to download piece of paper, poor network connectivity, difficulties in finding appropriate information, power outages and lack of adequate skills to be their major challenges in using the Internet search engines.

Recommendations

The study recommends the following:

1. Librarians and Heads of ICT Unit during orientation should introduce students to different search engines.
2. Head of ICT Unit should teach students retrieving skills to enhance their searching skills.
3. Educational authorities should enhance internet connectivity.
4. There should be provision of generator in case of power outage

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Motivation of Library and Information Science Students in Sharing Online Fake News and Misinformation in Two Universities in South-West, Nigeria

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Abstract

Library and Information Science (LIS) students share online fake news and misinformation for various reasons, including belief in its accuracy, entertainment, sarcasm, or the intention to challenge misinformation. This study investigates the motivations driving LIS students to share online fake news and misinformation in two universities in South-West Nigeria. A descriptive survey design was employed, using stratified random sampling and total enumeration techniques to select 357 undergraduate students from the two universities. Data was collected via a researcher-designed questionnaire, with 357 copies distributed and 263 (73.7%) returned, fully completed and usable for analysis. The findings revealed that the primary motivations for sharing fake news and misinformation among LIS students are the desire for attention and engagement lack of media literacy skills and lack of awareness (84.0%). Despite these motivations, students exhibited a generally positive attitude towards sharing fake news. The most common types of misinformation shared were unverified information (mean = 3.30), phishing scams and false news stories. The main dissemination channels were social media platforms, peer networks and current events. To combat the spread of fake news, it is recommended that universities implement comprehensive media literacy programs within LIS curricula and across all academic disciplines.

Keywords: Motivation, Fake News, Misinformation,

Introduction

Social media has revolutionized how people share information, becoming a pervasive tool for both interpersonal and public communication worldwide, including in Nigeria. Over time, social media platforms have deeply integrated into daily life, enabling users to create and disseminate content easily and rapidly. This ease of access and speed has led many to rely heavily on social media for information. However, the widespread sharing of information also brings a significant downside to the rapid proliferation of fake news and misinformation, which has become a global issue of concern, and Nigeria is no exception. The unchecked dissemination of

inaccurate information through social media often results in severe societal consequences, such as public confusion, fear, and social unrest.

In the digital era, understanding the motivations behind sharing fake news and misinformation is critical, especially among Library and Information Science (LIS) students, who are future custodians of information. Despite their academic training in information management and critical evaluation, some LIS students engage in sharing unverified or misleading content online. This behavior raises important questions about the underlying motivations and attitudes that drive such actions, particularly in a profession rooted in principles of accuracy, objectivity, and ethical information dissemination (Wang et al., 2019).

Misinformation is defined as the spread of false information without factual basis, can disrupt social harmony and hinder government efforts, affecting all layers of society. Studies by Wang et al. (2019) and Jost et al. (2020) highlight how unverified content often spreads faster than factual information on social media, primarily due to its sensational nature and lack of scientific scrutiny. These studies emphasize the need for strategic interventions, including digital literacy programs, news verification tools, and stricter regulatory frameworks, to counter this growing issue. Despite the emphasis on critical thinking and ethical information sharing within LIS education, many students continue to share misinformation, driven by various factors such as ideological beliefs, peer influence, confirmation bias, and the allure of social media virality.

The anonymity and reach of social media platforms can embolden individuals, including students, to share unverified information, either out of ignorance or as a form of misguided activism. The absence of immediate consequences often exacerbates this behavior. Thus, understanding these motivational factors is essential to developing targeted interventions aimed at enhancing media literacy and promoting responsible information-sharing practices among LIS students.

Statement of the Problem

There is a growing concern regarding the motivations of Library and Information Science (LIS) students in two universities in South-West Nigeria who engage in sharing false and misleading content online. Despite their academic training, these students are increasingly participating in the dissemination of misinformation, which poses significant risks to public knowledge, social cohesion, and informed decision-making. Given their future roles as information custodians, this behavior is particularly concerning and demands a deeper investigation. The prevalence of fake news and misinformation in the digital landscape has serious implications

for society, including the distortion of public opinion and the erosion of trust in credible sources. The involvement of LIS students in this issue is especially perplexing, given their professional commitment to information accuracy. Understanding the motivations behind this behavior is crucial for developing effective educational strategies and interventions aimed at curbing the spread of misinformation and fostering responsible digital citizenship among future information professionals.

Objective of the Study

The primary objective of this study is to investigate:

1. identify the key motivations driving LIS students to share fake news and misinformation in two universities in south west Nigeria
2. examine the attitudes of LIS students toward the dissemination of fake news and misinformation in two universities in south west Nigeria
3. assess the extent to which LIS students engage in sharing fake news and misinformation
4. analyse the patterns and trends in the dissemination of fake news and misinformation among LIS students in two universities in south west Nigeria
5. determine the factors contributing to the spread of fake news and misinformation among LIS students in two universities in south west Nigeria

Literature Review

The scholarly community has worked to define fake news, acknowledging its multifaceted nature. Bu-Fadil, Torrent, and Grizzle (2016) offer a straightforward definition, describing fake news as “news stories that are demonstrably and purposefully misleading. Fake news is often designed to evoke strong emotional reactions, such as fear, anger, or anxiety. These emotional triggers can lead audiences to bypass critical thinking and share content impulsively. Shao et al. (2017) explored this phenomenon by examining the role of bots—automated social media accounts—in amplifying fake news during the 2016 U.S. presidential election. They found that bots significantly increased the spread of misinformation, often reaching vast audiences before fact-checking could intervene. This underscores the dual nature of fake news: while it presents itself as legitimate news ("news"), its underlying purpose is deception ("fake").

In addition to its emotional appeal, fake news serves various agendas, from political manipulation to financial gain. Sadiku et al. (2018) describe fake news as fabricated content designed to deceive, attract readers, and drive online engagement. This manipulation can result in serious consequences, including the spread of hate speech, the erosion of public trust, and the deepening of socio-political divides. Madu et al. (2019) further emphasize

that fake news often incites socio-political tensions, leading to character assassination, misinformation about public policies, and societal polarization. Social media platforms have become a primary source of news and information for many people.

However, these platforms can also facilitate the spread of fake news. Social media is broadly defined as “the relationships that exist between networks of people” (Qingya, Wei, & Yu, 2011). It represents a shift in communication, moving from one-way, traditional media to interactive, user-driven platforms. Social media platforms such as Facebook, Twitter, WhatsApp, YouTube, and LinkedIn have become essential tools for both personal and professional communication (Warner-Søderholm et al., 2018). These platforms enable users to create, share, and engage with content, fostering global connections and cross-cultural interactions. Bryer and Zavatarro (2011) emphasize that social media encourages collaboration through user-generated content, democratizing communication and making information dissemination more accessible. Sweet et al. (2020) note that social media has the potential to break down traditional communication barriers, allowing marginalized voices to participate in public discourse.

However, despite these benefits, social media also poses risks. O’Keeffe and Kathleen (2011) highlight several risks associated with excessive social media use, including exposure to inappropriate content, cyberbullying, and privacy concerns. Rithika and Sara (2013) observe that students often integrate social media into their daily routines, which can conflict with educational goals, leading to distractions and reduced academic performance. These negative effects underline the importance of promoting responsible social media use, particularly among younger users.

The motivations behind sharing fake news are complex, involving both intrinsic and extrinsic factors. Intrinsic factors refer to personal motivations, such as entertainment, self-promotion, and exploration, while extrinsic factors involve environmental influences, such as peer pressure and societal norms. Kim and Dennis (2019) identify confirmation bias, the tendency to favor information that aligns with pre-existing beliefs, as a major driver of fake news sharing. This bias often leads individuals to overlook inaccuracies, especially when the content supports their views. Islam et al. (2020) add that motivations like self-promotion and entertainment encourage users to share engaging but false content. Apuke and Omar (2021) expand on these motivations, citing altruism, information sharing, and time-passing as common reasons for sharing misinformation. For instance, individuals may share fake news believing it will benefit others, even without verifying its accuracy.

Tsang (2022) points out that a lack of critical thinking and source verification skills contributes to the spread of fake news, particularly among younger, less experienced users. Laato et al. (2020) highlight information overload as a significant factor, especially during crises like the COVID-19 pandemic. The sheer volume of information makes it challenging for users to discern credible sources, increasing the likelihood of sharing unverified content. While significant research has been conducted in Western contexts, studies in developing countries remain limited. Balakrishnan et al. (2021) call for more research on fake news governance and public opinion in Asia-Pacific regions. In Singapore, Tandoc et al. (2021) identified political bias and cognitive ability as key predictors of fake news sharing. In India, Talwar et al. (2019) found that online trust and fear of missing out (FOMO) significantly influence misinformation dissemination. With high internet penetration rates in countries like Malaysia, understanding these motivations in a regional context could provide valuable insights into global misinformation patterns (Statista Research Department, 2022).

The growing prevalence of misinformation on social media has prompted researchers to investigate how Library and Information Science (LIS) students perceive, evaluate, and share such content. Flintham et al. (2018) identified a tendency among users to make hasty, surface-level judgments about the information they encounter online. Their study revealed that one-third of respondents initially believed fake news to be true, often basing their credibility assessments on the source and perceived journalistic style rather than factual accuracy. This highlights a significant challenge in combating misinformation, as it is easily accepted at face value by unsuspecting users. Goswani (2018) explored the role of social media in spreading cyber propaganda, identifying Twitter as the most susceptible platform due to its sharing, liking, and following features. Despite expert recommendations for users to critically evaluate content, the rapid sharing of misinformation persists, fueled by ease of access and user engagement. The study suggests implementing strategies to curb the spread of fake news, which is often designed to benefit its propagators.

Leeder (2019) investigated how college students in the U.S. assess and share fake news, revealing that while many students were able to identify fake and real news stories, high-performing students demonstrated stronger critical evaluation skills and a greater use of verification strategies. However, the study also noted that students struggled to accurately assess their own evaluation skills. Interestingly, students' willingness to share news stories was found to be unrelated to their ability to judge trustworthiness or accuracy, indicating a disconnect between their confidence in information and their sharing behaviors.

Jain (2017) found that students often share information primarily for entertainment, leading to a reliance on superficial content evaluations. Chen et al. (2019) explored the impact of perceived anonymity on WeChat users, revealing that familiarity with a community and offline relationships significantly influence information-sharing behavior. This demonstrates how social relationships can extend from digital platforms into real-world interactions, reinforcing trust and engagement. Rafique (2017) reported that students frequently supply false personal information online to avoid risks like cyberstalking and identity theft. The influence of enjoyment and perceived information quality, such as relevance and reliability, on re-sharing intentions. Risk-taking behavior was also found to have a positive impact on users' willingness to share information.

Several factors contribute to the proliferation of misinformation online. One major issue is the imbalance between the demand for information and the supply of reliable sources. Ahmadi (2022) and Pan et al. (2021) noted that during the early stages of the COVID-19 pandemic, the lack of verified information created a vacuum that was quickly filled by rumors and unverified content. This situation was exacerbated by the slow pace of scientific validation, allowing misinformation to spread rapidly with little effort. Information overload, or "infodemic," has made it increasingly difficult for individuals to discern accurate information. After COVID-19 was declared a global pandemic, the sheer volume of information overwhelmed users, impairing their ability to distinguish between fact and fiction (Siebenhaar et al., 2020). This underscores the need for digital literacy programs aimed at improving users' capacity to critically evaluate online information

Social media platforms have become significant vectors for misinformation due to their decentralized and open nature. Studies have shown that a substantial portion of social media content is misleading or false (Zareie & Sakellariou, 2021). The ease with which information can be published and shared without evidence makes it difficult to control misinformation on these platforms (Walter et al., 2020). The internet's rapid advancement has transformed communication, facilitating the instantaneous spread of information across borders (Soon & Goh, 2017). However, this ease of access has also accelerated the dissemination of fake news. In Singapore, Chen et al. (2019) identified a significant rise in fake news cases, attributing this increase to the pervasive use of the internet.

The impact of misinformation is far-reaching, affecting public health, politics, climate change, and the economy. During the COVID-19 pandemic, misinformation led to psychological distress and inappropriate health behaviors (Dong et al., 2020). Politically, misinformation

exacerbates fragmentation and erodes trust in government institutions (Garrett, 2019). Climate-related misinformation has confused the public, undermining support for mitigation policies (Cook et al., 2018). Economically, misinformation can damage corporate reputations and influence consumer behavior (Berthon & Pitt, 2018). These consequences highlight the urgent need for systematic strategies to combat the spread of misinformation and foster informed public discourse.

Research Methodology

The study adopted a descriptive survey research design. The population of this study comprised of over 1,397 undergraduates of two (2) library schools in South-West Nigeria. Specifically, LIS students from Tai Solarin University of Education and Library Archival and Information Studies (LARIS) students from University of Ibadan, Nigeria. Proportional to size sampling technique was used to select 184 LIS students representing 20% of the entire population in Tai Solarin University of Education while total enumeration sampling method was used to capture the entire LARIS students in University of Ibadan due to its small population. Therefore, a total of 357 respondents was used captured for the study. Out of the 357 copies of questionnaire distributed to the respondents, 263(73.7%) copies were returned duly completed and found usable for this study.

Table 1: Demographic Information of the Respondents

Universities	Frequency	Percentage (%)
Tai Solarin University of Education, Ijagun Ogun State;	143	54.4
University of Ibadan, Oyo State	120	45.6
Level		
100	52	19.8
200	72	27.4
300	43	16.3
400	56	21.3
Gender:		
Male	106	54.4
Female	157	45.6
Age		
16-20	68	25.9
21-25	116	44.1
26 above	79	30.0

Table 1 presents the demographic data of the respondents in universities, level, gender and age range. Of the 263 participants, 143(54.4%) were from Tai Solarin University of Education, Ijagun Ogun State while 120(45.6%) were from University of Ibadan, Oyo State. The table also shows the level of the respondents, 52(19.8%) were 100 level, while the

majority of the students were in 200 level to 400 level. The table shows the gender of the respondents, 106(54.4%) were male while 157(45.6%) were female. The table also revealed that the age group of the respondents that 68(25.9%) fall within the age 16-20 years, majority of the respondent were within the age range of 21 years and above.

Research Question 1: What are the various motivations that drive LIS students to share fake news and misinformation online in the selected universities in South-West, Nigeria?

Table 2: Various motivations that drive LIS students to share fake news and misinformation online

S/N	Various motivations	Frequency	Percentages
1	Desire for Attention and Engagement	261	99.2
2	Lack of Media Literacy Skills	248	94.3
3	Lack of Awareness	221	84.0
4	Peer Influence	209	79.5
5	Attention-Seeking Behavior	203	77.2
6	Confirmation Bias	198	75.3
7	Inadvertent Sharing	193	73.4
8	Political or Social Agenda	186	70.7
9	Curiosity and Novelty	152	57.8
10	Sociopolitical Turmoil	134	51.0
11	Digital Culture and Virality	124	47.1
12	Far of missing out	114	43.3
13	Self-promotion	104	39.5
14	Mistrust in Mainstream Media	98	37.3
15	Ethical Lapses	67	25.5

Table 2 shows that the various motivations that drive LIS students to share fake news and misinformation online in the selected universities in South-West, Nigeria are desire for attention and engagement 261(99.2%), lack of media literacy skills 248(94.3%), lack of awareness 221(84.0%), peer influence 209(79.5%), attention-seeking behaviour 203(77.2%), confirmation bias 198(75.3%), inadvertent sharing 193(73.4%), political or social agenda 186(70.7%), curiosity and novelty 152(57.8%) and sociopolitical turmoil 134(51.0%). It could be inferred that the various motivations that drive LIS students to share fake news and misinformation online in the selected universities in South-West, Nigeria are desire for attention and engagement, lack of media literacy skills, lack of awareness, Peer Influence, Attention-Seeking Behavior, Confirmation Bias, Inadvertent Sharing, Political or Social Agenda, Curiosity and Novelty, Sociopolitical Turmoil, Digital Culture and Virality, Far of missing out, Self-promotion, Mistrust in Mainstream Media, Ethical Lapses

Research Question 2: What is the attitude of LIS students towards sharing online fake news and misinformation in the selected universities in South-West, Nigeria?

Table 3: Attitude of LIS students towards sharing online fake news and misinformation

S/N	Statement	SA	A	D	SD	Mean	Std . D
1	I carefully verify information before sharing it online.	152 (57.8%)	58 (22.1%)	46 (17.5%)	7 (2.7%)	3.35	0.86
2	I am concerned about the potential negative impact of sharing fake news.	146 (55.5%)	65 (24.7%)	36 (13.7%)	16 (6.1%)	3.30	0.92
3	I believe sharing fake news can harm my online reputation.	126 (47.9%)	89 (33.8%)	47 (17.9%)	1(.4%)	3.29	0.77
4	I am confident in my ability to distinguish between real news and fake news.	113 (43.0%)	112 (42.6%)	35 (13.3%)	3 (1.1%)	3.27	0.73
5	I am more likely to share content that aligns with my beliefs, even if I'm unsure about its accuracy.	122 (46.4%)	9 (35.4%)	4 (16.3%)	5 (1.9%)	3.26	0.80
6	I feel responsible for not contributing to the spread of misinformation.	115 (43.7%)	103 (39.2%)	42 (16.0%)	3 (1.1%)	3.25	0.76
7	I believe that sharing fake news is a breach of ethical behavior.	114 (43.3%)	103 (39.2%)	41 (15.6%)	5 (1.9%)	3.24	0.78
8	I am cautious about sharing information that lacks credible sources.	123 (46.8%)	84 (31.9%)	51 (19.4%)	5 (1.9%)	3.24	0.83

9	I am influenced by the likes and reactions of my peers when sharing online content.	134 (51.0%)	66 (25.1%)	50 (19.0%)	13 (4.9%)	3.22	0.92
10	I consider the potential consequences before sharing news or information.	107 (40.7%)	109 (41.4%)	40 (15.2%)	7 (2.7%)	3.20	0.79
11	I am curious to see how others react when I share controversial content.	128 (48.7%)	68 (25.9%)	54 (20.5%)	13 (4.9%)	3.18	0.93
12	I think twice before sharing information that I find sensational or shocking.	130 (49.4%)	68 (25.9%)	45 (17.1%)	20 (7.6%)	3.17	0.97
13	I am confident in my ability to differentiate between trustworthy and untrustworthy sources.	100 (38.0%)	103 (39.2%)	52 (19.8%)	8 (3.0%)	3.12	0.83
14	I feel a sense of duty to correct false information when I encounter it.	107 (40.7%)	89 (33.8%)	56 (21.3%)	11 (4.2%)	3.11	0.88
15	I am concerned about the impact of fake news on society.	115 (43.7%)	77 (29.3%)	57 (21.7%)	14 (5.3%)	3.11	0.93
16	I believe that verifying information is important before sharing it online.	104 (39.5%)	90 (34.2%)	60 (22.8%)	9 (3.4%)	3.10	0.87
17	I believe that sharing misinformation can negatively affect public	95 (36.1%)	103 (39.2%)	50 (19.0%)	15 (5.7%)	3.06	0.88

	perception.						
18	I feel that sharing fake news reflects poorly on my digital literacy skills.	89 (33.8%)	111 (42.2%)	51 (19.4%)	12 (4.6%)	3.05	0.85
19	I am aware of the risks associated with sharing unverified news.	102 (38.8%)	80 (30.4%)	70 (26.6%)	11 (4.2%)	3.04	0.91
20	I actively seek out fact-checking resources before sharing questionable information.	94 (35.7%)	83 (31.6%)	70 (26.6%)	16 (6.1%)	2.97	0.93
Average mean						3.18	0.86

Key: SA = Strongly Agree; A = Agree; D = Disagree and SD = Strongly Disagree

Criteria: $\bar{x}$ = 2.5 or >2.5 is accepted

Table 3 shows that attitude of LIS students towards sharing online fake news and misinformation in the two universities in South-West, Nigeria was positive ($\bar{x}$ = 3.18). All twenty indicators of attitude of LIS students towards sharing online fake news and misinformation showed positive mean scores. The highest being ($\bar{x}$ = 3.35) and lowest being ($\bar{x}$ = 2.97). This implies that the attitude of LIS students towards sharing online fake news and misinformation in the two universities in South-West, Nigeria was positive.

Research Question 3: What is the extent of online fake news and misinformation sharing among LIS students in the selected universities in South-West, Nigeria?

Table 4: Extent of online fake news and misinformation sharing among LIS students

S/N	Items	Very great extent	Great extent	Low extent	Very low extent	Mean	Std. D
1	Unverified Information	157 (59.7%)	42 (16.0%)	50 (19.0%)	14 (5.3%)	3.30	0.96
2	Phishing Scams	136 (51.7%)	68 (25.9%)	53 (20.2%)	6 (2.3%)	3.27	0.86
3	False News Stories	113 (43.0%)	100 (38.0%)	48 (18.3%)	2 (0.8%)	3.23	0.77
4	Conspiracy	148	41	58	16	3.22	.99

	Theories	(56.3%)	(15.6%)	(22.1%)	(6.1%)		
5	Health Misinformation	106 (40.3%)	111 (42.2%)	39 (14.8%)	7 (2.7%)	3.20	0.79
6	Misleading Headlines	108 (41.1%)	103 (39.2%)	44 (16.7%)	8 (3.0%)	3.18	0.82
7	Political Propaganda	102 (38.8%)	110 (41.8%)	44 (16.7%)	7 (2.7%)	3.17	0.80
8	False Statistics	109 (41.4%)	90 (34.2%)	48 (18.3%)	16 (6.1%)	3.11	0.91
9	Crisis Misinformation	91 (34.6%)	104 (39.5%)	54 (20.5%)	14 (5.3%)	3.03	0.88
10	Deepfakes	87 (33.1%)	99 (37.6%)	64 (24.3%)	13 (4.9%)	3.00	0.88
11	Chain Messages and Hoaxes	102 (38.8%)	74 (28.1%)	65 (24.7%)	22 (8.4%)	2.97	0.99
12	Polarizing Memes	104 (39.5%)	65 (24.7%)	64 (24.3%)	30 (11.4%)	2.92	1.05
13	Photoshopped Images	100 (38.0%)	66 (25.1%)	58 (22.1%)	39 (14.8%)	2.86	1.09
14	Satire Mistaken for Truth	69 (26.2%)	86 (32.7%)	82 (31.2%)	26 (9.9%)	2.75	0.95
15	Out-of-Context Content	48 (18.3%)	107 (40.7%)	66 (25.1%)	42 (16.0%)	2.61	0.96
16	Manipulated Videos	76 (28.9%)	50 (19.0%)	92 (35.0%)	45 (17.1%)	2.60	1.08
Average mean						3.03	0.92

Criteria: $\bar{x} = 2.5$ or > 2.5 is accepted

Table 4 shows that the extent of online fake news and misinformation sharing among LIS students in two universities in South-West, Nigeria was high ($\bar{x} = 3.03$). All the sixteen indicators of online fake news and misinformation sharing among LIS students showed high mean score $\bar{x}$. The highest being $\bar{x} = 3.30$ and lowest being ($\bar{x} = 1.08$). This implies that unverified information, phishing scams and false news stories were most online fake news and misinformation sharing among LIS students in two universities in South-West, Nigeria.

Research Question 4: What are the patterns in the dissemination of fake news and misinformation among LIS students in the selected universities in South-West, Nigeria?

Table 5: Patterns in the dissemination of fake news and misinformation among LIS students

S/N	Patterns	Frequency	Percentages
1	Social Media Platforms	262	99.6
2	Peer Networks	253	96.2
3	Current Events	243	92.4
4	Overload of Information	236	89.7
5	High Emotional Content	228	86.7
6	Lack of Fact-Checking	221	84.0
7	Memes and Visual Content	218	82.9
8	Peer Pressure	217	82.5
9	Platform Algorithms	214	81.4
10	Cultural and Political Bias	206	78.3
11	Time Sensitivity	187	71.1
12	Clickbait and Headlines	154	58.6
13	Influence of Opinion Leaders	153	58.2
14	Limited Critical Thinking	142	54.0
15	Crisis and Panic	139	52.9

Table 5 shows that the patterns in the dissemination of fake news and misinformation among LIS students in the selected universities in South-West, Nigeria are social media platforms 262(99.6%), peer networks 253(96.2%), current events 243(92.4%), overload of information 236(89.7%), high emotional content 228 (86.7%), lack of fact-checking 221(84.0%), memes and visual content 218(82.9%), peer pressure 217(82.5%), platform algorithms 214(81.4%), cultural and political bias 206(78.3%), time sensitivity 187 (71.1%), clickbait and headlines 154(58.6%), influence of opinion leaders 153(58.2%), limited critical thinking 142(54.0%) and crisis and panic 139(52.9%). It could be concluded that the patterns in the dissemination of fake news and misinformation among LIS students in the selected universities in South-West, Nigeria are social media platforms, peer networks and current events.

Research Question 5: What are the factors that contributes to the spread of online fake news and misinformation among LIS students in the selected universities in South-West, Nigeria?

Table 6: Factors contributed to the spread of online fake news and misinformation among LIS students

S/n	Factors	Frequency	Percentages
1	Lack of Media Literacy Education	263	100
2	Digital Literacy Gaps	254	96.6
3	Information Overload	254	96.6
4	Confirmation Bias	251	95.4

5	Lack of Critical Thinking	241	91.6
6	Cognitive Load	231	87.8
7	Peer Pressure	231	87.8
8	Social Media Echo Chambers	228	86.7
9	Sensationalism	227	86.3
10	Lack of Source Verification	202	76.8
11	Cultural and Political Bias	174	66.2
12	Social Validation	162	61.6
13	Time Constraints	136	51.7
14	Fear of Missing Out (FOMO)	134	51.0
15	Algorithmic Amplification	121	46.0
16	Psychological Impact	104	39.5
17	Influence of Opinion Leaders	98	37.3
18	Lack of Fact-Checking Resources	92	35.0
19	Limited Critical Evaluation Skills	72	27.4

Table 6 shows that the factors contributed to the spread of online fake news and misinformation among LIS students in the selected universities in South-West, Nigeria are lack of media literacy education 263(100%), digital literacy gaps 254(96.6%), information overload 254(96.6%), confirmation bias 251(95.4%), lack of critical thinking 241(91.6%), cognitive load 231(87.8%), peer pressure 231(87.8%), social media echo chambers 228(86.7%), sensationalism 227(86.3%), lack of source verification 202(76.8%), cultural and political bias 174(66.2%), social validation 162(61.6%), time constraints 136(51.7%) and finally, fear of missing out (FOMO) 134(51.0%). It could be concluded that the factors that contributes to the spread of online fake news and misinformation among LIS students in the selected universities in South-West, Nigeria are lack of media literacy education, digital literacy gaps, information overload, confirmation bias and lack of critical thinking

Discussion of the Findings

The finding shows that the various motivations that drive LIS students to share fake news and misinformation online in the selected universities in South-West, Nigeria are desire for attention and engagement, lack of media literacy skills and lack of awareness. The finding is in line with the finding of Pennycook and Rand (2019) who found that people tend to share false information on social media because it attracts more attention and engagement than accurate information. The desire for attention and engagement is a well-documented motivation for sharing information, including fake news, on social media platforms.

Also, the finding shows that the attitude of LIS students towards sharing online fake news and misinformation in the selected universities in South-West, Nigeria was positive. This finding is in line with the finding of Del Vicario et al. (2016) who reported that online echo chambers can reinforce

these attitudes, creating environments where misinformation is readily accepted and shared among like-minded individuals. Positive attitudes towards fake news may also be linked to confirmation bias, where individuals are more likely to believe and share information that aligns with their preexisting beliefs. A positive attitude towards sharing fake news and misinformation can have far-reaching consequences. Pennycook & Rand (2020) reported that individuals with a positive attitude toward misinformation may be more susceptible to its spread and less likely to engage in fact-checking behaviors. This is a significant concern in the digital age where the rapid dissemination of false information can lead to real-world harm, including public health crises and political instability. The positive attitude towards sharing fake news and misinformation also underscores the urgency of media literacy education, thus, Pennycook & Rand (2021) emphasized that media literacy program can be effective in reducing the impact of misinformation by teaching individuals to critically evaluate information sources and be more discerning consumers of online content.

The findings also showed that unverified information, phishing scams and false news stories were most online fake news and misinformation being shared among LIS students in the selected universities in South-West, Nigeria. The finding is in line with the finding of Reaves, Reaves and Reaves (2021) who reported that the sophistication of phishing attacks, with attackers using convincing tactics to deceive users. Addressing this issue requires heightened awareness and education about online security and recognizing phishing attempts. The sharing of phishing scams is not only harmful to individuals but also poses security risks. The prevalence of unverified information sharing is a serious concern, as it can lead to the rapid dissemination of false or misleading content.

Furthermore, findings from the study reveal that the patterns in the dissemination of fake news and misinformation among LIS students in the selected universities in South-West, Nigeria are social media platforms, peer networks and current events. This finding is in line with the finding of Vosoughi et al. (2018) who submitted that false information spreads six times faster than true information on Twitter. Social media platforms have become powerful vectors for the dissemination of fake news and misinformation. Vosoughi et al. (2018) shown that these platforms can amplify false information due to their algorithmic designs, echo chambers, and the speed at which information spreads. Del Vicario et al. (2016) examined the spreading of misinformation on Facebook and found that false claims are more likely to be propagated within close-knit social circles. Moreover, findings from the study shows that the major factors that contributed to the spread of online fake news and misinformation among

LIS students in the selected universities in SouthWest, Nigeria are lack of media literacy education, digital literacy gaps, information overload and confirmation bias. This finding is in agreement with the finding of Pennycook and Rand (2020) found that individuals who receive media literacy training are more likely to identify and avoid sharing false information. The absence of formal media literacy education can leave individuals ill-equipped to critically assess and discern reliable sources from misinformation.

Conclusion

The study explores the motivations of library and information science students in two Southwest Nigerian universities sharing fake news and misinformation online. Factors like social media pressure, confirmation bias, and attention or entertainment drive these behaviors. The findings emphasize the need to address these motivations to combat misinformation. Interventions should promote information integrity, digital citizenship, and responsible online behavior. Collaborative efforts involving educators, media organizations, and policymakers are necessary to create a more informed and discerning online communities

Recommendations

Based on the findings of this study, the following recommendation were made:

1. There is the need for the university management to implement media literacy program in Library and Information Science curricula and across all academic disciplines to teach students how to critically evaluate information sources, detect misinformation, and understand the consequences of sharing fake news.
2. There is the need for critical thinking literacy training among LIS undergraduates to enable the students to know how to interrogate and fact check online information, assess source credibility, and recognize biases.
3. There is the need for quality ethical guidelines for students and information professionals in the making on information dissemination.
4. The university management should launch awareness campaigns to educate students about fake news and misinformation, and students should be encouraged to report false information.
5. Government should promote online verification tools and fact-checking websites cheek false information and do justice on it

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Digital Transformation and User Satisfaction in School Libraries

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Abstract

This study investigated the relationship between digital transformation and user satisfaction in school libraries, specifically targeting doctoral students in Library and Information Science at Ignatius Ajuru University of Education, Port Harcourt, for the 2023/2024 academic session. A descriptive research design was employed, utilizing a 4-point Likert scale questionnaire titled Digital Transformation and User Satisfaction in School Libraries (DTUSSL). The questionnaire was administered to a total of 10 respondents, with questions asking them to rate their level of agreement on a scale from 1 (Strongly Disagree) to 4 (Strongly Agree). The study used total enumeration, and data was analyzed using descriptive statistics, calculating mean and standard deviation to assess the responses. Out of the 10 questionnaires distributed, 9 were completed and 8 were usable for analysis, yielding an 80% utilization rate. The results indicated that digital transformation significantly enhances user satisfaction by providing diverse digital resources, facilitating efficient information retrieval, and optimizing processes through automation. Moreover, it fosters an organisational culture of innovation, continuous learning, and collaboration, which ultimately leads to improved service delivery and a more user-friendly experience. Based on the findings, the study recommends that school libraries invest in advanced technology, streamline processes through automation, promote a collaborative organisational culture, and implement comprehensive staff training to develop necessary digital skills. Adopting a gradual, inclusive approach to digital transformation will reduce resistance and ensure that both users and staff are supported throughout the change process.

Keywords: *Digital transformation, user satisfaction, school libraries, automated systems, organisational culture*

Introduction

The integration of digital transformation in school libraries has become a cornerstone of modern education, which is significantly enhancing their functionality, accessibility, and relevance in the information age. According to Johnson et al. (2019), the adoption of cutting-edge

technologies such as artificial intelligence (AI) and cloud computing has revolutionised resource management, cataloging, and information retrieval processes, enabling libraries to handle vast amounts of data with precision and speed. This technological shift has streamlined operations, reducing manual tasks and freeing up librarians to focus on more strategic roles, such as user engagement and personalised support. Furthermore, Baker and Lee (2020) highlighted that digital tools have enabled libraries to extend their services beyond physical boundaries, offering seamless access to digital archives, academic journals, and databases, which are accessible to users anytime and anywhere. This transformation has not only improved operational efficiency but also created a more dynamic, inclusive, and engaging user experience, thereby fostering a culture of continuous learning and innovation within educational institutions. Consequently, digital transformation has positioned school libraries as pivotal hubs of knowledge and innovation for bridging the gap between traditional learning methods and modern technological advancements.

Efficient processes are the cornerstone of digital transformation in school libraries, driving accuracy, user satisfaction, and productivity through the adoption of advanced technological solutions. Patel and Singh (2021) emphasised that automation tools, such as self-checkout kiosks and inventory management systems, have significantly reduced administrative burdens, allowing librarians to dedicate more time to user-oriented services, such as personalised assistance and educational programming. Similarly, Wang and Liu (2022) argued that the digitisation of workflows has not only minimised errors but also enhanced the accuracy of operations, such as cataloging and resource tracking, while optimising the allocation of resources to meet user demands effectively. These advancements highlight the transformative potential of re-engineering processes through technology, thus creating a library environment that prioritises speed, reliability, and accessibility. By integrating these streamlined processes, school libraries are better positioned to offer dynamic and user-friendly services that align with the evolving needs of modern learners and educators.

The success of digital transformation in school libraries hinges significantly on cultivating a supportive organisational culture that aligns with technological advancements and evolving user needs. According to Chen and Garcia (2023), fostering an environment that embraces innovation, adaptability, and collaboration is critical for the effective implementation of new technologies, ensuring that changes are met with enthusiasm rather than resistance. This cultural shift requires strong leadership to promote a shared vision for digital initiatives and encourage proactive engagement among staff. Additionally, Roberts and Carter (2021)

highlighted the importance of professional development and training initiatives, which are essential for equipping library staff with the technical skills and confidence needed to manage digital resources and provide high-quality services. By strategically aligning technology, processes, and organisational culture, school libraries can not only meet but consistently exceed user expectations, solidifying their role as dynamic hubs of knowledge and innovation in the digital era.

Statement of the Problem

There appears to be a growing recognition of the transformative potential of digital initiatives in school libraries, yet many face significant challenges that hinder their full realisation. The lack of advanced technology seems to limit their ability to offer modern, innovative services, while inefficient processes contribute to delays, errors, and user dissatisfaction. Additionally, the absence of a supportive organisational culture, marked by resistance to change and insufficient staff training, may hinder the successful implementation of digital transformation. These barriers suggest the need for comprehensive strategies to address technological gaps, optimise processes, and foster a culture of continuous improvement, ultimately enhancing user satisfaction and ensuring that school libraries can fully embrace the benefits of the digital age.

Research Objectives

1. To evaluate the influence of digital technologies on enhancing user satisfaction in school libraries.
2. To examine the role of process optimisation in improving service delivery and user experience in school libraries.
3. To assess how organisational culture influences the adoption of digital transformation initiatives in school libraries.
4. To establish if there is a significant relationship between digital technologies and user satisfaction in school libraries.

Research Questions

1. How do digital technologies enhance user satisfaction in school libraries?
2. What role does process optimisation play in improving service delivery and user experience in school libraries?
3. In what ways does organisational culture influence the adoption of digital transformation initiatives in school libraries?

Hypothesis

- There is no significant relationship between digital technologies and user satisfaction in school libraries.

Literature Review

Emerging digital technologies have significantly transformed the way school libraries operate and serve their users, offering a more personalised and efficient experience. According to Gupta and Sharma (2018), AI-powered search engines and recommendation systems have revolutionized the user experience by tailoring resource discovery, making it easier for students and educators to find relevant materials. Similarly, Martinez and Evans (2020) reported that cloud computing has enabled real-time collaboration and resource sharing, allowing libraries to meet the increasing demand for digital accessibility and flexible learning environments. These innovations have streamlined library operations, reduced manual tasks, and significantly enhanced user satisfaction by addressing the specific needs of modern learners. Together, these technological advancements illustrate the potential for digital tools to create more dynamic, engaging, and efficient school library services.

Optimised processes are essential for ensuring efficiency and meeting user expectations in school libraries. Kim and Park (2021) found that the implementation of automated inventory management and circulation systems significantly reduced wait times and minimised errors, ultimately enhancing the overall quality of service provided to library users. This process optimisation not only streamlined operations but also contributed to a smoother and more efficient user experience. Additionally, Baker et al. (2020) argued that digitized workflows, such as online reservation and self-checkout systems, have empowered users by offering them greater control over their library interactions. By allowing users to manage their activities independently, these technologies foster a more satisfying and self-sufficient experience. These findings underscore the importance of process optimisation in delivering seamless, user-friendly services that enable school libraries to meet the evolving needs of their users while also improving operational efficiency and effectiveness.

The role of organisational culture in the success of digital transformation in school libraries cannot be overstated. Roberts and Nelson (2019) emphasised that cultivating a culture of innovation, where staff are encouraged to experiment with and embrace new technologies, leads to higher adoption rates and more positive outcomes. This environment of creativity and openness fosters a willingness to explore new digital tools and processes, ensuring that libraries stay at the forefront of technological advancements. Similarly, Chen and Wright (2022) highlighted the importance of continuous professional development programmes, which are crucial for equipping library staff with the skills and knowledge necessary to effectively navigate and manage the complexities of digital systems. These training initiatives not only enhance technical competencies

but also build confidence and adaptability in staff. A supportive organisational culture, which encourages collaboration, adaptability, and ongoing learning, is fundamental to successful digital transformation, enabling libraries to overcome challenges and fully harness the potential of new technologies.

Despite its numerous benefits, digital transformation in school libraries is not without its challenges. Jackson and Lee (2020) identify financial constraints as a significant obstacle, restricting access to advanced technologies and essential training programmes, which are crucial for successful implementation. In addition, Carter et al. (2021) asserted that resistance to change among library staff can often delay or hinder the adoption of new processes, further complicating the transition to digital systems. Overcoming these challenges requires strategic planning, including thoughtful allocation of resources and investment in both technological infrastructure and human capital. By addressing these barriers, school libraries can create a more supportive environment for digital transformation, ensuring the successful implementation of initiatives that enhance service delivery and user satisfaction.

Research Methodology

The study employed a descriptive survey design to investigate the role of digital transformation and user satisfaction in school libraries. The target population consisted of 10 doctoral students of Library and Information Science at Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt, for the 2023/2024 academic session. A 4-point Likert scale questionnaire developed by the researcher, titled Digital Transformation and User Satisfaction in School Libraries (DTUSSL), was distributed to the respondents. The questionnaire required participants to rate their level of agreement on a scale from 1 (Strongly Disagree) to 4 (Strongly Agree). The study adopted a total enumeration sampling method, and descriptive statistics were used for data analysis. Mean and standard deviation were calculated to assess the responses, providing insights into the central tendencies and variability of the data. A total of 10 copies of questionnaire were distributed, with 9 copies returned, reflecting a retrieval rate of 90%. Of the retrieved questionnaires, 8 were found useful and useable for analysis, resulting in a utilization rate of 80%.

Results and Findings

The findings revealed digital technologies, process optimisation and organisational culture influence the adoption of digital transformation initiatives in school libraries.

Table 1: Summary of Mean and Standard Deviation on how Organisational Culture Influences the Adoption of Digital Transformation Initiatives in School Libraries

S/N	Item	SA	A	D	SD	X (Mean)	± (Standard Deviation)	Decision
1	The leadership in the library fosters an environment that is open to technological innovations and digital change.	2	3	2	1	2.50	1.06	Agree
2	The organisational culture in the library supports the adoption of new digital technologies.	1	4	2	1	2.38	1.14	Agree
3	Library staff actively engage in continuous learning to adapt to digital transformation initiatives.	0	5	2	1	2.38	1.20	Agree
4	There is a strong sense of collaboration within the library that encourages the implementation of digital technologies.	1	3	3	1	2.38	1.14	Agree
5	The values and norms within the library prioritize technological advancement and its integration into library services.	1	4	2	1	2.38	1.14	Agree
Grand Mean						2.40		

Source: Researcher's field survey (2025)

Table 1 highlights how various aspects of organisational culture influence the adoption of digital transformation initiatives in school libraries. The highest mean score of 2.50 suggests that leadership's role in creating an environment open to technological innovations is seen as the most influential factor. Items 2, 3, 4, and 5, all with a mean score of 2.38, reflect the importance of staff engagement, collaboration, and the prioritization of technology, though these are viewed as slightly less critical than leadership. The standard deviations, ranging from 1.06 to 1.20, indicate some variation in responses, showing differing levels of agreement among respondents. Overall, the results emphasize the significant role of leadership in fostering digital transformation, while also recognizing the importance of a supportive organisational culture. This finding corroborates that of Schein (2018) who posited that organisational culture is a critical enabler of technological change that fosters an environment where innovation can thrive.

Table 2: Summary of Mean and Standard Deviation on the influence of digital technologies on enhancing user satisfaction in school libraries.

S/N	Item	SA	A	D	SD	X (Mean)	± (Standard Deviation)	Decision
1	The use of digital technologies in the library has enhanced the speed and accuracy of information retrieval.	2	4	2	0	2.50	1.06	Agree
2	Digital technologies integrated into the library system have improved the ease and efficiency of accessing resources.	1	3	3	1	2.38	1.14	Agree
3	Digital platforms in the library have made it easier for users to interact with library staff and access services.	0	5	2	1	2.38	1.20	Agree
4	The implementation of digital technologies has increased the availability of resources, such as e-books, journals, and online databases.	1	4	2	1	2.38	1.14	Agree
5	The automation of library processes through digital technologies has streamlined workflows, improving overall user satisfaction.	0	4	3	1	2.38	1.18	Agree
Grand Mean						2.38		

Source: Researcher's field survey (2025).

Table 2 highlights the influence of digital technologies on enhancing user satisfaction in school libraries, with the highest mean score of 2.50 for the statement, "The use of digital technologies in the library has enhanced the speed and accuracy of information retrieval," indicates strong agreement among users. The other items, all with a mean score of 2.38, reflect general agreement on the positive impact of digital technologies in areas such as resource accessibility, user-staff interactions, resource availability, and streamlined workflows. The standard deviations, ranging from 1.06 to 1.20, reveal varying levels of consistency in responses, with the lowest standard deviation showing stronger consensus for the highest-rated item. The grand mean of 2.38 underscores a positive overall impact of digital technologies on user satisfaction in school libraries. This aligns with findings by Johnson and Davies (2020), who emphasized that libraries act as vital hubs for fostering social inclusion and trust through equitable access to information.

Table 3: Summary of Mean and Standard Deviation on the Role of Process Optimisation in Improving Service Delivery and User Experience in School Libraries

S/N	Item	SA	A	D	SD	X (Mean)	± (Standard Deviation)	Decision
1	Streamlining library processes has enhanced the overall user experience by reducing wait times and increasing service availability.	1	4	2	1	2.38	1.12	Agree
2	The implementation of optimized processes in the library has led to more accurate and timely responses to user requests.	0	5	2	1	2.38	1.10	Agree
3	Process optimisation in the school library has facilitated better organization and quicker access to resources.	1	4	2	1	2.38	1.12	Agree
4	The efficiency of library services has improved due to the automation and optimisation of routine processes.	1	4	2	1	2.38	1.12	Agree
5	Process optimisation in the school library has significantly improved the efficiency of library services.	1	3	2	2	2.25	1.12	Agree
Grand Mean						2.35		

Source: Researcher's field survey (2025)

Table 3 presents the role of process optimisation in enhancing service delivery and user experience in school libraries. The results indicate a consistent agreement across all items, with mean scores ranging from 2.25 to 2.38. The highest mean score of 2.38 was recorded for four items, highlighting the significant impact of streamlined processes on reducing wait times, improving user experience, and ensuring timely and accurate responses to user requests. The lowest mean score, 2.25, reflects moderate agreement on the efficiency improvement of library services through process optimization. The Grand Mean of 2.35 demonstrates overall positive perceptions of process optimisation, supported by relatively low standard deviations, indicating consistency in the responses. These findings emphasize the importance of process optimization in enhancing library service delivery. This finding aligns with that of Smith (2022) who discovered that streamlined processes in libraries enhance resource accessibility and overall user satisfaction.

Hypothesis

Table 4: Summary of Pearson Product Moment Correlation (PPMC) on the relationship between digital technologies and user satisfaction in school libraries

Variables	N	$\bar{X}$	SD	r	p-value	Decision
Digital technologies	8	2.38	1.14	0.72	0.000	Rejected
User satisfaction		2.38	1.18			

The results of the hypothesis testing using the Pearson Product Moment Correlation (PPMC) show a statistically significant positive relationship between digital technologies and user satisfaction in school libraries. With a sample size of 8, the mean ($\bar{X}$) for both digital technologies and user satisfaction is 2.38, and their respective standard deviations (SD) are 1.14 and 1.18. The calculated correlation coefficient (r) of 0.72 indicates a strong positive relationship, suggesting that as the use of digital technologies in school libraries increases, the level of user satisfaction increases. The p-value of 0.000 is below the standard significance level (typically 0.05), leading to the rejection of the null hypothesis, which posited no significant relationship between these variables. This finding underscores the importance of integrating digital technologies into school libraries to enhance user satisfaction.

Discussion of Findings

The findings reveal that digital transformation significantly enhances user satisfaction in school libraries by providing access to diverse digital resources and enabling efficient information retrieval. Abdullahi et al. (2022) emphasized that digital technologies such as e-books, online catalogs, and virtual reference services play a critical role in meeting users' evolving information needs, fostering engagement and satisfaction. Additionally, process optimisation through automation and streamlined workflows has been identified as pivotal in improving service delivery and user experience. Johnson and Baker (2021) argued that integrating library management systems reduces operational delays and errors, and also creates a smoother and more user-friendly experience. Smith and Clarke (2020) found that a culture that embraces innovation, continuous learning, and staff collaboration significantly enhances the implementation and success of digital initiatives in school libraries. Together, these factors underscore the importance of a holistic approach to digital transformation that combines advanced technology, efficient processes, and a supportive organisational culture to maximize user satisfaction.

Conclusion

Digital transformation is revolutionising school libraries, significantly enhancing user satisfaction by providing seamless access to diverse and comprehensive information resources. The integration of digital

technologies such as e-books, online catalogs, and digital archives has expanded the scope of learning and research opportunities, catering to the evolving needs of students and educators. These advancements enable personalised learning experiences, improve information retrieval speed, and promote remote access to library resources, thereby bridging geographical and time-related barriers. Furthermore, digital tools and platforms have streamlined library operations, fostering greater efficiency and user engagement. However, achieving sustained user satisfaction necessitates ongoing investments in technology infrastructure, digital literacy training, and the development of user-centered policies. This holistic approach ensures that digital transformation in school libraries remains inclusive, effective, and aligned with the educational objectives of modern institutions.

Recommendations

1. School libraries can address the lack of advanced technology by budgeting and allocating adequate funds for the acquisition and implementation of technological equipment and infrastructure. Funds can be secured through government grants, private partnerships, or community fundraising initiatives to acquire modern digital tools and resources.
2. School libraries' management should adopt and implement automated library management systems to streamline library processes in order to minimise delays, reduce errors, and enhance user satisfaction.
3. Supportive organisational culture that would foster open communication, promote collaboration, and engage all stakeholders in the digital transformation journey should be adopted by the management of school libraries.
4. Comprehensive staff training programmes should be implemented to equip library personnel with the necessary skills and confidence to effectively utilize and manage digital technologies.
5. A gradual and inclusive approach to change that can help reduce resistance, and ensure that all library users and staff feel supported and valued during the transition to a digitally empowered environment should be encouraged.

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Awareness of E-Learning Applications for Teaching Social Studies in Colleges of Education in Kwara State

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Abstract

The study examined e-learning applications for teaching Social Studies (SOS) in colleges of education (COE) in Kwara State with a view to establish the awareness of e-learning applications for teaching Social Studies (SOS). The survey research design was adopted for the study. The instrument used for the study was a self-developed questionnaire. The sample of the study consisted of all 71 SOS lecturers, purposively selected 14 government owned and private COE in Kwara State. The findings revealed that majority of Social Studies lecturers were not aware of e-learning applications for teaching in colleges of education in the study. There was no significant difference between the male and female awareness of e-learning applications for teaching Social Studies in colleges of education. There was no significant difference among lecturers in federal, state and private colleges of education on the awareness of e-learning applications for teaching Social Studies. Based on the study, it was recommended among others that; proprietors and stakeholders in COE should endeavour to make e-learning applications aware to lecturers in order to sustain and enhance the use of e-learning applications for teaching.

Keywords: *Awareness, Colleges of Education, e-learning applications, Social Studies*

Introduction

Education provides individuals with the knowledge, attitudes and skills necessary to participate in the workforce and contribute to economic growth. Well-educated population is essential for the development of a strong and competitive economy. Education is the process of facilitating learning or the acquisition of knowledge, skills, values beliefs and habits. Education can take place in formal or informal settings and any experience that has a formative effect on the way one thinks, feels, or acts may be considered educational (Quora, 2020). However, in the 21st century, being literate has gone beyond knowing how to read or write alone but include

the acquisition of knowledge of and utilisation of technologically inclined devices (Mullen & Wedwick, 2008).

Technological devices are facilities and resources which are used in the processing and maintenance of information, and include use of all forms of computer, communication network and mobile technologies to mediate information. Communication technologies include all media employed in transmitting audio, video, data or multimedia such as cable, satellite, fibre optics, wireless (radio, infra-red, wifi) while network technologies include personal area networks (PAN), campus area network (CAN), intranets, extranets, LANs, WANs, MANs, and the internet. Computer technologies include all removable media such as optical discs, flash memories, video books, multimedia projectors, interactive mobile phones, PDAs and palmtops among others. These technologies have information as their material object (Ogechukwu & Osuagwu, 2009). ICT applied to education can be deployed in methods of e-learning, mobile learning, distance education and online learning. E-learning though, seems to be a greater umbrella over distance learning, online and mobile learning (Ogedegbe & Oyaniyi, 2010).

In this era of Information and Communication Technology (ICT), there is a need for more diversified approach to teaching and learning. The knowledge of computer application softwares such as E-mail, Powerpoint, word processing, excel, computer-aided design, database and video conferencing apps are important skills in institutional administration (Ohakwe & Okwuanaso, 2006). According to Ubulom, Enyiket and Onukwe (2011), the emergence of Information and Communication Technology has totally revolutionized the way we access, process, store, retrieve and disseminate information within organizations or across the globe. Information and Communication Technology (ICT) encompasses a combination of technologies and computer applications for collecting, storing, processing, communicating and delivering of information related to teaching and learning processes (Johnson, 2007). The application of computers to the process of teaching and learning have been diversified and they cover such areas as providing drill and practice exercises'; using computers to visualize complex objects and process as well as to facilitate communication between teachers and learners (Baba, 2007).

Accordingly, Ololube, Ubogu and Ossai (2007), ICT usage, integration and diffusion has initiated a new age in educational methodologies, thus it has radically changed traditional method of information delivery and usage patterns in the domain as well as offering contemporary learning experience for both instructors and students. Interestingly, universities all over the world are rapidly incorporating information and communication

technology (ICT) into all facets of teaching, research and management (Akpan, 2014). Computer applications, such as Microsoft office packages as well as other social media applications that boost communication and are trendy should be introduced into teaching Social Studies since they are fully in use in the school across the world and also operational in other aspects of the society. However, this seems not to be obtainable as Gbenga (2006) asserted that many institutions, in Nigeria do not have functional and reliable internet facility, which is an important requirement for supporting networking for learners and teachers as well as higher institutions.

E-learning applications have revolutionized teaching and learning by integrating technology into education, offering flexibility and enhanced accessibility. These applications enable personalized learning experiences, allowing students to learn at their own pace while accessing diverse resources. For instance, the use of platforms like Google Classroom, Zoom, and Moodle has facilitated interactive teaching, especially in the wake of the COVID-19 pandemic, which necessitated remote learning. Adebayo and Olubunmi (2021) highlighted that e-learning applications bridge the gap between traditional and digital education, fostering collaboration and communication among students and teachers. Furthermore, research by Mtebe and Raphael (2020) from Tanzania emphasizes that e-learning tools provide innovative solutions for large-scale education in resource-constrained environments, particularly in African countries where infrastructural challenges are prevalent.

In Nigeria, e-learning applications have gained momentum in tertiary institutions, where they are employed to improve educational outcomes. For example, Edmodo and Schoology have been adopted in some Nigerian universities to promote collaborative learning and efficient management of academic tasks (Oladipo et al., 2021). However, challenges such as inadequate internet access, lack of funding, and digital divide remain significant barriers. According to Adeoye et al. (2020), these challenges hinder the effective utilization of e-learning tools, particularly in rural areas. Nonetheless, the potential of e-learning applications in addressing educational inequities cannot be overstated. As Okiki and Olatunji (2021) suggest, the integration of mobile learning applications has shown promise in expanding access to education across Africa, especially for marginalized communities. Thus, e-learning applications are not only transforming education delivery but also contributing to bridging educational disparities in developing regions.

Economic Times (2022) also explained that the schools which use e-learning technologies are a step ahead of those which still have the

traditional approach towards learning. No doubt, it is equally important to take forward the concept of non-electronic teaching with the help of books and lectures, but the importance and effectiveness of technology-based learning cannot be taken lightly or ignored completely. It is believed that the human brain can easily remember and relate to what is seen and heard via moving pictures or videos. It has also been found that visuals, apart from holding the attention of the student, are also retained by the brain for longer periods. Various sectors, including agriculture, medicine, education, services, business, and government setups are adapting to the concept of e-learning which helps in the progress of a nation.

E-learning assists in the transformation of the educational process from the stage of learning by rote to one characterized by creativity, interaction and the development of skills. The student, in e-learning, is able to access educational materials at any time and from any place, thereby transforming the concepts of the educational process and learning to go beyond the limits imposed by traditional classrooms into a rich environment in which there are numerous sources of learning (ElearningNC.gov, 2022). Today, universities and knowledge leaders are able to deliver training to students in countless innovative ways.

Oladeji and Sikiru (2021) examined awareness and utilisation of e-learning technologies in teaching and learning of Business Education courses in universities in Kwara State. The findings of study revealed that lecturers and students are aware of synchronous e-learning application in teaching and learning of Business education courses and concluded that lecturers and students are aware of both synchronous and asynchronous e-learning application in teaching and learning of Business education courses but rarely utilise the synchronous e-learning technologies.

Nannim et al (2018) examined the lecturers' level of awareness of ICT facilities for teaching purposes and reported that the lecturers are partially aware of the available ICT facilities in the university. Gender and years of teaching experience were found to have no statistically significant influence on lecturers' level of awareness. However, lecturers' qualification was found to have no statistically significant influence on lecturers' level of awareness. Paul et al (2017) investigated the awareness and use of e-learning platforms in some selected senior high schools in the Accra metropolitan area of Ghana with emphasis on parameters such as perception, training, accessibility, and infrastructural availability. Questionnaire was used to collect data from a sample of 303 respondents and linear regression analysis as well as correlation was used to analysed the data. The findings revealed that participants are aware of e-learning and e-learning platforms but lacked adequate training. The findings further

reported that most of the schools lacked adequate ICT laboratories and reliable internet facility which negatively affects e-learning adoption. The study recommends among other things that the Nigerian educational institutions should train and educate teachers and students on e-learning to enhance their use of development of e-learning platforms.

Yemi et al (2020) opined that e-learning flops in Nigeria's government owned (federal and state) higher institution because successive governments failed to invest in technologies and to support infrastructure such as effective power supply and quality network connectivity. The ICT experts and higher institution teachers reported that underfunding of government-owned institutions hindered online learning in Nigeria's public (federal and state) higher institution as a veritable response to the COVID-19. The private higher institution carried on with academic activities and conducted examinations in some cases, government –owned (federal and state) higher institution crumbled under the weight of COVID-19. The private higher institution have the infrastructure for virtual (online) education while the government owned do not (Yemi et al, 2020).

Colleges of Education are tertiary institutions under Teacher Education Programme. Junaids (2012) asserted that the mandate of the teacher training programme at the National Certificate in Education (NCE) level, which is the approved minimum teaching qualification in Nigeria, is to produce quality teachers for the Basic education sub-sector. The Basic Education sub-sector encompasses five categories of education, viz; Pre-primary Education or Early childhood and care Education, Primary Education, Junior Secondary Education, Adult and non-formal Education, Special Needs Education. The philosophy of this programme is to provide academic and professional training for NCE teachers. It aims at developing student's values, interest, skill (FRN, 2012). Such noble educational programmes should be supported with a better technology. In Colleges of Education, there are various schools namely: vocational and technical, school of education, school of sciences, school of languages and school of art and social sciences. In the school of art and social sciences, there are different departments which are economics, political science, islamic and religion studies, geography and social studies.

Social Studies is the study of people in relation to each other and to their world and it is an issue-focused and inquiry-based interdisciplinary subject that draws upon history, geography, ecology, economics, law, philosophy, political science and other social science disciplines. Social Studies fosters students' understanding of and involvement in practical and ethical issues that face their communities and humankind. Social Studies is integral to

the process of enabling students to develop an understanding of who they are, what they want to become and the society in which they want to live. Social Studies provides opportunities for students to develop the attitudes, skills and knowledge that will enable them to become engaged, active, informed and responsible citizens (Alberta, 2021).

Department of Education (2019) viewed Social Studies as the interdisciplinary study of citizenship and government, Economics, Geography, history, and other disciplines in the Social Sciences and humanities in which students develop the content, concepts, skills, and dispositions necessary to be informed and engaged citizens in the contemporary world, and Federal Republic of Nigeria (FRN) (2020) stressed that the fundamental concern of Social Studies is with man and his complex relationships with the world around and beyond. It is in this context that the NCE Social Studies curriculum attempts to instill in the students; the basic knowledge, desirable values, and skills for investigating, analyzing and explaining these interrelationships.

Statement of the Problem

Electronic learning, or e-learning, is education based on modern methods of communication including the computer and its networks, various audio-visual materials, search engines, electronic libraries, and websites, whether accomplished in the classroom or at a distance. Egbita (2016) worked on student's perceived challenges on the use of online social network as a tool for facilitating e-learning in Nigerian secondary schools. The findings revealed that online social network are not fully utilised as e-learning tool. However, researchers focused on the challenges of e-learning but not focus on awareness of e-learning applications for teaching Social Studies in colleges of education in Kwara state which is the focus of the research.

It has been observed that shortage of infrastructure as well as the awareness and use of traditional methods of teaching and learning are becoming major areas of concern of researches in Nigerian higher institutions. The researchers observed that this is information age, where and when technology has become integral part of life and teaching and learning process. These e-learning technologies are relatively cheap and are increasingly being acquired by students in Nigeria (Aderinoye, Ojokheta & Olojede, 2007). However, it was discovered in Nigeria that only 29% of the e-learning technologies users used e-learning technologies for educational purposes (Pyramid Research, 2010). This shows that 71% of the e-learning technologies users used them for other purposes that are not educational. Hence, there is a need for teacher training institutions like colleges of education to prepare their students both aptitudinally and attitudinally toward the use of these e-learning technologies for learning

(Sadeeq, Akbar, & Taqi, 2015). This will assist the shift from the use of traditional method of teaching to the use of modern means of learning. Hence, the rationale behind carrying out a study on awareness of e-learning applications for teaching social studies in colleges of education in Kwara State.

Purpose of the Study

The main purpose of this study is to investigate the awareness of e-learning applications for teaching Social Studies in colleges of education in Kwara State. Specifically, the study examined:

1. the awareness of lecturers about e-learning applications for teaching Social Studies in Colleges of Education in Kwara State.
2. if there is any difference between male and female lecturers on awareness of e-learning applications for teaching Social Studies in Colleges of Education in Kwara State.
3. if there is any difference in Social Studies lecturers on the awareness of e-learning applications for teaching Social Studies in Federal, State and Private Colleges of Education in Kwara State.

Research Questions

The following research questions were answered in the study.

1. What are the lecturers awareness about e-learning applications for teaching Social Studies in colleges of education in Kwara State?
2. Is there any difference between male and female lecturers on awareness of e-learning applications for teaching Social Studies in Colleges of Education in Kwara State?
3. Is there any difference among lecturers in Federal, State and Private Colleges of Education in Kwara State on awareness of e-learning applications for teaching Social Studies?

Research Hypotheses

The following null-hypotheses were tested in the study.

- Ho₁: There is no significant difference on the awareness of e-learning applications for teaching Social Studies in Colleges of Education based on gender.
- Ho₂: There is no significant difference among lecturers in the federal, state and private Colleges of Education in the awareness of e-learning applications for teaching Social Studies in Kwara State.

Research Methodology

The study adopted a descriptive survey research design. The population of the study consisted all Social Studies lecturers in Nigeria. The sample comprised 71 Social Studies lecturers purposively selected from 14 government and private colleges of education in Kwara state. The

instrument for this study was researcher' self-designed questionnaire titled 'awareness of e-learning application for teaching Social Studies in colleges of education in Kwara state. The instrument was divided into two sections. Section A focuses on demographic information on gender and school ownership. Section B consisted of twelve items eliciting information on awareness of e-learning applications for teaching Social Studies in colleges of education with an option of aware and not aware. The instrument was validated by six experts, lecturers in Computer Science and Social Science Education Departments in University of Ilorin, Nigeria. The reliability of the instrument was done by subjecting the validated instrument to test re-test method. The validated instruments were administered within an interval of two weeks on 20 Social Studies lecturers in Oyo State. The data obtained was subjected to Cronbach Alpha Statistics. The value yielded 0.86. Frequency count and percentage was used for research question one, Mean and standard deviation was used to answer research questions two and three while chi-square was used to test hypotheses one and two.

Presentation and Interpretation of Results

Research Question 1: What is the level of awareness of lecturers about e-learning applications for teaching social studies in colleges of education in Kwara State?

Table 1: Awareness of e-learning applications for teaching Social Studies

S/N	Awareness of e-learning applications	Aware		Not Aware	
		Frequency	Perc. (%)	Frequency	Perc.(%)
1	Click meeting	32	45.1	39	54.9
2	Google Hangout	43	60.6	28	39.4
3	GoToMeeting	27	38.0	44	62.0
4	Learncube	06	8.5	65	91.5
5	Manycam	12	16.9	59	83.1
6.	Moodle	35	46.5	38	53.5
7	Skype	48	67.6	23	32.4
8	Vedamo	17	23.9	54	76.1
9	Webex	26	36.6	45	63.4
10	WisIQ	16	25.5	55	77.5
11	Whatsapp	68	95.8	03	4.2
12	Zoom	70	98.6	01	1.4

Table 1 indicates that 71 respondents participated in the study. The results revealed that majority of the respondents are aware of Zoom, WhatsApp, Skype and Google Hangout only with response rates of 98.6%, 95.8%, 67.6% and 60.6% respectively. This implies that social studies lecturers in colleges of education in Kwara State are aware of only Zoom, WhatsApp, Skype and Google Hangout e-learning application only. The lecturers are not aware of most of the e-learning applications.

Research Question 2: Is there any difference between male and female lecturers on awareness of e-learning applications for teaching Social Studies in Colleges of Education in Kwara State?

Table 2: Difference between male and female lecturers on awareness of e-learning applications

Gender	Mean	Stand Deviation
Male	17.5091	2.15056
Female	17.312	2.02382

Table 2 shows that the male Social Studies lecturers had the mean score of 17.5091 with standard deviation value of 2.15056 while the female Social Studies lecturers had the mean score of 17.312 with standard deviation value of 2.02382. This result reveals a difference in the value of mean scores. Therefore, it can be said that there is a difference between male and female Social Studies lecturers on awareness of e-learning applications in colleges of education.

Research Question 3: Is there any difference among lecturers in Federal, State and Private Colleges of Education in Kwara State on awareness of e-learning applications for teaching Social Studies?

Table 3 : Difference among Social Studies lecturers in federal, state and private colleges of education's awareness of e-learning applications

School ownership	Mean	Stand Deviation
Federal	18.08	2.39
State	19.07	3.22
Private	18.15	1.71

Table 3 shows that the federal college of education Social Studies lecturers had the mean score of 18.08 with standard deviation value of 2.39. The state college of education social studies lecturers had the mean score of 19.07 with standard deviation value of 3.22 while the private colleges of education social studies lecturers had the mean score of 18.15 with standard deviation value of 1.71. This result reveals a difference in the value of mean scores. Therefore, it can be said that there is a difference among lecturers in federal, state and private colleges of education on awareness of e-learning applications for teaching Social Studies.

Hypothesis

H₀₁: There is no significant difference on the awareness of e-learning applications for teaching Social Studies in Colleges of Education based on gender.

Table 4: Chi-square of Male and Female Social Studies Lecturers Awareness of E-learning Applications

Gender	Value	Df	Asymp. Sig. (2-sided)	Exact sig. (2-sided)	Exact sig (1-sided).
Pearson Chi-Square	.103	1	.749		
Continuity Correction	.000	1	.996		
Likelihood Ratio	.104	1	.747		
Fisher's Exact Test				1.000	.509
N of Valid Cases	71				

Table 4 shows the difference between male and female awareness of e-learning applications for teaching Social Studies in colleges of education. The table show a chi-square test for independence which indicated that there was no significant difference between the male and female awareness of e-learning applications for teaching Social Studies in colleges of education. $X^2 (1, n=71) = .000$ P. value = .996 which is greater than critical level (0.05). Based on this result, hypothesis 1 is not rejected.

H₀₂: There is no significant difference among lecturers in the federal, state and private Colleges of Education in the awareness of e-learning applications for teaching Social Studies in Kwara State.

Table 5: Chi-square of Social Studies Lecturers in the Federal, State and Private Colleges of Education in the Awareness of E-learning Applications for Teaching Social Studies.

School Ownership	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.376	2	.829
Likelihood Ratio	.353	2	.838
N of Valid Cases	71		

Table 5 shows the difference among lecturers in federal, state and private colleges of education on the awareness of e-learning applications for teaching Social Studies. The table shows a chi-square test for independence which indicated that there was no significant difference among lecturers in federal, state and private colleges of education on the awareness of e-learning applications for teaching Social Studies. $X^2 (2, n = 71) = .376$ P. value=.829 which is greater than critical level (0.05). Based on this result, hypothesis 2 is not rejected.

Discussion

The research findings of this study are discussed in relating to the objectives and research questions. The findings of this study revealed that

majority of the social studies lecturers were aware of only Zoom, Skype, WhatsApp and Google Hangouts only but unaware of most of the e-Learning applications. The finding partially contradicts the findings of Oladeji et al (2021) who opined that lecturers and students are aware of e-learning applications in teaching and learning of social studies. Also, Paul et al (2017) reported that e-learning is seen as a potent option for mass education globally. Consequently, institutions are hastily adopting it to meet the 21st century education demands, often without recourse to considering the antecedents that promotes the success or otherwise of this mode of instruction.

The findings of this study further revealed that there was no significant difference between the male and female lecturers awareness of e-learning applications for teaching social studies in colleges of education in Kwara State, Nigeria. This finding is in line with that of Moshood et al (2007) who reported that there were no significant differences in terms of gender and teaching experience regarding the use of technology and Nannim et al (2018) who discovered that the lecturers' gender have no statistically significant influence on lecturers' level of awareness. Also, the findings of this study revealed there was no significant difference among lecturers in the federal, state and private colleges of education in the awareness of e-learning applications for teaching social studies in Kwara State. The findings of this study contradicts Yemi et al (2020) which discovered that lecturers in private higher institution, compared to their federal and state owned counterparts, were more aware of e-learning applications. Also, Paul et al (2017) reported that participants are aware of e-learning and e-learning platforms but lacked adequate training.

Conclusion

Based on the findings of the study, majority of Social Studies lecturers were not aware of e-learning applications for teaching in colleges of education in the study. There was no significant difference between the male and female awareness of e-learning applications for teaching Social Studies in colleges of education. There was no significant difference among lecturers in federal, state and private colleges of education on the awareness of e-learning applications for teaching Social Studies.

Recommendations

1. Proprietors and stakeholders in colleges of education (federal and state owned) should endeavour to make e-learning applications aware and usable to lecturers in order to sustain and enhance the usability of e-learning applications for teaching;

2. Lecturers and students should be sensitized through seminars and workshops on the need to maximally utilise e-learning applications in teaching and learning in colleges of education;
3. College of education administrators should ensure to introduce courses that will make e-learning applications to be among the teaching platforms for lecturers.
4. Government and proprietors of colleges of education should provide e-learning applications such as computer, tablets e.t.c to lecturer for teaching of Social Studies .

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Future Unlocked: School libraries Role in Promoting Future-ready skills for Learners

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Abstract

In the modern world, the shift toward digital technologies, globalisation, and a knowledge-driven economy has transformed the skills required for success in the 21st Century. Educational systems globally are grappling with how best to prepare students for a future that demands not only academic knowledge but also a wide range of competencies, often referred to as "future-ready" skills. These include critical thinking, creativity, collaboration, communication, and digital literacy. As education evolves, so too must the environments that support learning. School libraries, which have long been central to academic development, are now poised to play a pivotal role in equipping students with these future-ready skills. This research seeks to explore the evolving role of school libraries in fostering future-ready skills, the challenges they face in achieving this transformation, and the strategies needed to leverage their full potential in 21st-century education.

Keywords: *school libraries, future-ready skills, creativity, 21st Century*

Introduction

In an increasingly complex and rapidly changing world, the development of future-ready skills has become essential for students to thrive in both academic and professional environments. In this global, multicultural age of the Fourth Industrial Revolution (Schwab, 2017), the shift towards disruptive technologies and artificial intelligence means that students today need ever higher levels of literacy to engage in 21st century consumption and work. There is also greater need for students to become independent learners who are able to negotiate and manage almost unlimited access to information in their everyday lives. Students need to become lifelong learners who continuously expand their reading repertoires to learn new things for living, work and participation in the larger community (Kirsch et al., 2001) with this rapidly evolving educational landscape, school libraries are transforming from traditional repositories of knowledge into vibrant,

interactive spaces that play a crucial role in developing future-ready skills among students. As the world becomes increasingly digital and information-rich, there is a growing need for students to acquire competencies that goes beyond basic literacy, encompassing digital literacy, critical thinking, creativity, and collaborative problem-solving.

The concept of future-ready skills in the context of school libraries is increasingly gaining attention as educational institutions recognize the need to adapt to the rapid changes in technology and the information landscape. School libraries are no longer just repositories of books but are evolving into dynamic learning hubs. School libraries play a pivotal role in fostering these skills by providing access to diverse resources, promoting information literacy, and creating collaborative learning environments. A study by Chin Ee Loh (2023) emphasizes the role of a design-centric approach in transforming school libraries to better meet the evolving needs of students. This involves a thorough understanding of current trends, student needs, and the successful implementation of changes at both the school and system levels. Furthermore, another case study by Loh et al. (2021) discusses how design thinking can be applied in school libraries to revitalize spaces and programs, ensuring they remain relevant in an information-saturated environment. These studies underline the critical role that school libraries play in preparing students for the future by equipping them with essential skills thereby positioning libraries as key players in educational innovation. Research highlights the importance of school libraries in developing skills by integrating technology and fostering an environment where students engage in hands-on learning experiences.

The rapid evolution of technology and the dynamic demands of the 21st-century workforce have underscored the importance of equipping students with future-ready skills. These skills, often categorized as critical thinking, problem-solving, communication, collaboration, and digital literacy, are now viewed as essential for success in a world driven by constant innovation. School libraries, traditionally seen as repositories of books and knowledge, are uniquely positioned to play a transformative role in the development of these future-ready competencies. In this context, libraries are no longer just spaces for reading but have evolved into dynamic learning environments that foster creativity, collaboration, and digital fluency. The integration of technology into education and the emergence of global knowledge economies have reshaped the learning needs of students, demanding an educational approach that goes beyond the acquisition of basic literacy skills. To meet these needs, schools must create environments that promote lifelong learning, adaptability, and the capacity to navigate complex, often digital, landscapes. This shift necessitates a reconceptualization of the role of school libraries in student learning,

turning them into hubs of innovation that actively contribute to the holistic development of future-ready skills.

Historically, education systems and corporate training programs were designed to impart specific technical skills based on static job descriptions. However, the 21st-century workplace demands more than just technical proficiency in narrowly defined roles. The Fourth Industrial Revolution, driven by disruptive technologies such as AI, blockchain, the Internet of Things (IoT), and cloud computing, is reshaping industries. This revolution is leading to job displacement in certain areas, while simultaneously creating new roles that require a fresh set of skills. The COVID-19 pandemic, which accelerated digital transformation across sectors, has further highlighted the need for adaptability, resilience, and lifelong learning.

In this context, future-ready skills are not limited to technical capabilities. They also encompass soft skills such as critical thinking, creativity, emotional intelligence, and problem-solving. These abilities help individuals navigate complexity, embrace change, and contribute to a rapidly transforming workforce. This research study aims to explore the impact of school libraries on the development of future-ready skills among students, examining how library programs and resources can be leveraged to prepare learners for the challenges of the 21st century.

Objectives of the study

This paper aims to investigate role of school libraries in promoting future-ready skills for learners. The specific objectives are to:

1. establish future-ready skills for Learners of the 21st Century
2. explore the role of school libraries in promoting the development of future-ready skills among learners
3. examine benefits of development of future-ready skills in learners
4. ascertain challenges encounter in promoting development future-ready skills for 21st Century learners.

Research Methodology

This study employs the process and the procedure involving literature search and reviews to establish the discussion on future unlocked: school libraries role in promoting future-ready skills for learners previous studies were examined to gather and gather information that are useful and useable for the purpose of this study

Literature Review

School Libraries

School libraries play a pivotal role in supporting the educational process by providing access to a variety of resources, fostering literacy, and facilitating information literacy skills. According to Kachel (2011), the primary functions of school libraries extend beyond just providing books; they serve as hubs for learning, inquiry, and discovery. School libraries contribute to enhancing students' academic achievement and are central to developing students' reading habits (Lance & Kachel, 2018). The American Library Association (ALA) emphasizes that well-resourced libraries staffed by certified librarians contribute significantly to student success. A recurring theme in literature is the correlation between the quality of school libraries and students' literacy outcomes. Numerous studies, such as Lance and Hofschire (2012), have demonstrated that students in schools with robust library programs achieve higher reading scores. Libraries not only support the development of literacy skills but also enhance students' attitudes toward reading.

Scholars like Todd and Kuhlthau (2005) underscore the role of school libraries in fostering a culture of reading, promoting both recreational and academic reading among students. School libraries are increasingly recognized for their role in teaching information literacy, which includes critical thinking, digital literacy, and research skills. As noted by Lo, Chiu, and Lee (2017), modern school libraries support inquiry-based learning approaches, enabling students to analyze and synthesize information. The American Association of School Librarians (AASL) standards encourage the integration of information literacy in school curricula, advocating for libraries as spaces that cultivate research and digital citizenship skills (AASL, 2018).

The role of school librarians has shifted towards becoming facilitators of learning and co-teachers. Several researchers, including Hay and Todd (2010), have documented how librarians collaborate with classroom teachers to design lessons, teach research strategies, and evaluate resources. Through such collaborations, librarians contribute to a broader instructional framework and enhance student learning outcomes (Montiel-Overall, 2013). School libraries are also vital in bridging the resource gap and promoting equity in education. Neuman and Celano (2012) stress that well-funded school libraries provide access to high-quality resources, technology, and support services, especially in low-income communities. However, disparities in funding and access to qualified librarians remain key challenges. According to studies by Farmer (2021), schools in marginalized communities often face a lack of sufficient resources and underfunded libraries, impacting the quality of education provided. the

digital transformation of school libraries is an evolving area of research. With the proliferation of digital resources and tools, school libraries are transitioning from traditional book repositories to digital learning centers. According to

Hughes and Brock (2020), this shift involves integrating digital databases, e-books, and interactive platforms to facilitate student engagement and personalized learning experiences. However, the effective integration of digital resources requires ongoing professional development for librarians (McDonough, 2017). In summary, the literature underscores the multifaceted roles of school libraries in enhancing student learning, promoting literacy, and supporting 21st-century skill development. While the challenges of funding, resource inequality, and digital adaptation persist, the benefits of well-resourced and professionally staffed school libraries are evident in improved academic outcomes and student engagement. Further research could focus on strategies to mitigate these challenges and explore the evolving functions of school libraries in digital and hybrid learning environments.

Future-ready skills

Future-ready skills, also known as 21st-century skills, refer to the abilities that individuals need to thrive in a rapidly changing world, characterized by complex problem-solving, critical thinking, collaboration, adaptability, and digital literacy. According to the World Economic Forum (WEF, 2020), these skills are not limited to technical expertise but encompass cognitive, social-emotional, and adaptive skills that enable individuals to navigate uncertainty and continuous learning environments. Research by Fadel, Bialik, and Trilling (2015) highlights that future-ready skills extend beyond academic knowledge, emphasizing the "four Cs": critical thinking, communication, collaboration, and creativity. These competencies are crucial for students to succeed in careers that are yet to be fully defined, given the impact of automation, artificial intelligence, and technological innovation on traditional job markets.

Researchers like Griffin, McGaw, and Care (2012) argue that traditional education systems, which often prioritize content memorization and standardized testing, are insufficient for preparing students for the future. There is a growing consensus that schools must pivot toward project-based learning, inquiry-based learning, and experiential learning to better equip students with the skills they need. The Partnership for 21st Century Skills (P21) developed a framework that integrates core academic subjects with future-ready skills such as media literacy, information literacy, and life skills like flexibility and initiative (P21, 2019). This approach advocates for embedding these skills across curricula, not just in isolated technology

or skills-based courses. The digital revolution has accelerated the need for technology-based skills.

Research by the International Society for Technology in Education (ISTE, 2021) suggests that digital literacy is not only about mastering specific technologies but also about fostering digital citizenship, data literacy, and the ethical use of information. A hybrid skillset, blending technical and soft skills, is now seen as vital for future-ready workers. Further, scholars like McKinsey (2018) underscore that automation will eliminate certain jobs while creating others, necessitating a focus on up skilling and reskilling through lifelong learning models. Education systems are increasingly responsible for fostering growth mindsets and a learning-to-learn philosophy that encourages continuous adaptation to changing technological landscapes (Dweck, 2016).

Future-ready skills are also crucial for workforce development. As industries adopt new technologies, the demand for a flexible and adaptable workforce becomes more pronounced. Employers increasingly value employees who can think critically, solve complex problems, and collaborate across diverse teams (World Economic Forum, 2020). Employers and educators alike are shifting towards a model of lifelong learning, where individuals continuously update their skills to stay relevant in the job market. The European Commission (2020) has emphasized the importance of lifelong learning initiatives that provide individuals with opportunities for upskilling throughout their careers. This perspective recognizes that education does not end with formal schooling but continues as a vital aspect of professional development. While much progress has been made in defining and promoting future-ready skills, ongoing research is necessary to understand the best strategies for teaching and assessing these skills in diverse educational contexts.

Additionally, policymakers must address the digital divide and provide equitable access to resources that foster future-ready skills. Investment in educational technology, professional development for teachers, and new assessment tools are all essential to advancing future-ready education systems, future-ready skills encompass a range of cognitive, interpersonal, and technological competencies that are essential for navigating the challenges of the 21st century. As industries evolve, there is a growing emphasis on equipping students with the skills needed for complex problem-solving, collaboration, and adaptability. However, the integration of these skills into education systems faces challenges such as inequality of access, outdated curricula, and insufficient teacher training. To address these issues, educational reforms must prioritize innovative teaching

methods, digital literacy, and lifelong learning initiatives that prepare individuals to thrive in a constantly evolving world.

Top of Form

Bottom of Form

Future-Ready Skills of Learners in the 21st Century

Digital Literacy

Digital literacy refers to the ability to effectively use digital tools, media, and platforms. School libraries teach students how to navigate online resources, critically evaluate digital content, and use technology responsibly. International Federation of Library Associations and Institutions (IFLA) outlines how libraries are key in promoting digital literacy, especially by providing access to technology and teaching digital skills. (2017). IFLA Guidelines for Information Literacy for Lifelong Learning. IFLA.

2. Critical Thinking and Problem Solving

This is an intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and evaluating information gathered from various sources. It involves asking the right questions and considering multiple viewpoints to arrive at the best conclusions. Encouraging students to use library resources for research projects fosters critical thinking as they must assess the validity and relevance of various sources. Hosting regular debate sessions or discussions on current issues helps students develop critical thinking by engaging with different perspectives and forming reasoned arguments. (Eisenberg & Berkowitz, 1988).

3. Collaboration and Communication skills:

Collaboration and communication skills are essential components of future-ready skill development in school libraries, equipping students with the ability to work effectively in teams, share ideas, and engage in meaningful dialogue. In an increasingly interconnected world, these skills foster not only academic success but also social-emotional growth and career readiness. In the context of a school library, collaboration skills enable students to engage in group research projects, share resources, and co-create knowledge through discussion and joint problem-solving.

4. Creativity and Innovation skills: are vital components of future-ready skill development in school libraries, fostering students' ability to think critically, solve problems, and generate new ideas. In a library setting, these skills are nurtured through access to diverse resources, collaborative spaces, and tools that encourage exploration and experimentation. Creativity involves thinking outside the box, challenging conventional approaches, and developing original solutions. The school library, with its wide range of books, digital media, and technology, serves as an ideal

environment for students to engage with different perspectives, inspire creative thinking, and expand their intellectual boundaries.

5. Information literacy skills

Refer to the abilities required to locate, evaluate, and effectively use information from various sources. These skills include identifying the need for information, accessing reliable resources, critically assessing the credibility and relevance of information, and applying it ethically to solve problems or make decisions. Information literacy is essential in navigating today's vast amount of data and is key to academic success, research, and lifelong learning, as it empowers individuals to become critical thinkers and informed users of information.

6. Adaptability and Flexibility skills:

These are critical components of future-ready skill development in school libraries, as they prepare students to thrive in an ever-changing world. These skills enable students to adjust to new learning environments, technologies, and challenges with ease. In the context of a school library, adaptability involves students' ability to embrace new information formats, research tools, and collaborative learning methods, while flexibility allows them to modify their approaches to problem-solving and learning as situations evolve.

7. Leadership and Initiative skills:

Are essential for future-ready skill development in school libraries, empowering students to take charge of their learning and guide others toward shared goals. Leadership in a school library setting involves students assuming roles that encourage collaboration, decision-making, and the organization of tasks, while initiative reflects the ability to act independently, solve problems proactively, and seek out opportunities for growth. By cultivating these skills, school libraries help students become confident, self-directed learners who can lead both individually and in group settings, preparing them for leadership roles in academic, professional, and personal contexts.

Ethical use of information and technology skills refers to the ability to responsibly access, utilize, and share information and digital tools in a manner that respects legal, moral, and societal standards. These skills ensure that individuals engage with information sources and technology in ways that honour intellectual property rights, maintain academic integrity, protect privacy, and promote respectful and responsible behaviour online. At its core, ethical use of information and technology means understanding the rules and responsibilities associated with using digital and print resources, such as acknowledging the creators of content, avoiding plagiarism, respecting copyright laws, and applying information in an honest and transparent manner. Additionally, it includes practicing good digital citizenship by interacting respectfully with others online,

safeguarding personal and sensitive information, and using technology for positive purposes.

Global Awareness and Cultural Competence in a school library context refer to the skills that enable students to understand, appreciate, and engage with diverse cultures, perspectives, and global issues. As one of the future-ready skill developments, these competencies are essential for preparing students to thrive in an increasingly interconnected and multicultural world. School libraries play a critical role in fostering these skills by providing access to a wide array of global literature, multimedia resources, and programming that exposes students to different cultures, worldviews, and international issues.

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11. Research and inquiry skills refer to the ability to systematically investigate questions, gather information, critically evaluate sources, and synthesize findings to draw informed conclusions. These skills are essential for academic success, problem-solving, and lifelong learning. In a school library setting, students develop research and inquiry skills through guided access to various resources, such as books, academic databases, and digital tools, along with instruction on how to approach research tasks effectively. Research Supporting Inquiry: The Center for International Scholarship in School Libraries (CISSL) at Rutgers University (2022): This source discusses the impact of empirical research from CISSL on enabling school librarians to integrate research-centered inquiry learning, helping students develop deep inquiry skills

The Role of School Libraries in Developing Future-Ready Skills

School libraries play a crucial role in fostering future-ready skills by creating environments and opportunities that equip students with the competencies needed to succeed in a rapidly changing world. Facilitating Digital Literacy and Technological Proficiency: School libraries provide access to a wide range of digital tools and resources that help students develop digital literacy—the ability to use technology responsibly, efficiently, and safely. Libraries offer training in Navigating and critically evaluating online information. Using digital tools such as databases, software applications, and emerging technologies like coding, robotics, and

virtual reality. Understanding digital citizenship, including privacy, ethics, and online safety.

Promoting Critical Thinking and Information Literacy: A core function of school libraries is to develop information literacy—the ability to locate, evaluate, and use information effectively. Through research projects and resource-based learning, libraries help students critically assess the credibility and relevance of information. Solve complex problems by analyzing, synthesizing, and applying knowledge. Cultivate independent thinking, encouraging students to question sources and data critically.

Supporting Collaboration and Teamwork School libraries serve as collaborative spaces where students work together on projects, learning to communicate and share ideas. Libraries provide environments conducive to teamwork, offering group study areas and resources for collaborative projects. Foster interpersonal skills such as leadership, communication, and conflict resolution through group activities, book clubs, and peer-led learning sessions.

In Encouraging Creativity and Innovation School libraries are increasingly incorporating makerspaces and creative zones that allow students to explore hands-on learning. These spaces support the development of Creativity and innovation by giving students access to tools like 3D printers, design software, and crafting materials. Problem-solving skills through STEAM (Science, Technology, Engineering, Arts, and Mathematics) activities that encourage students to experiment and develop novel solutions. It foster Lifelong Learning and Adaptability by providing a diverse range of resources, school libraries help students develop lifelong learning habits. Libraries Encourage self-directed learning, giving students opportunities to explore topics of interest independently. Instills adaptability by exposing students to continuous learning platforms, such as online courses and educational technology, preparing them for an evolving world where new skills are constantly required.

In Enhancing Communication Skills Libraries promote communication skills by providing various platforms for students to express their ideas. Whether through presentations, writing assignments, or digital storytelling, students learn how to convey information clearly and effectively. Libraries often Support public speaking skills by organizing debates, presentations, and storytelling events. Offer resources that improve both written and verbal communication through access to literature, writing workshops, and research assignments. Digital Citizenship foster responsible use of digital platforms and teaching online etiquette, libraries help students become informed and responsible digital citizens.

Building Research and Inquiry Skills

The inquiry-based learning approach often found in school libraries helps students develop research and inquiry skills. Students learn how to formulate questions, conduct research, and analyze information from various sources. Engage in project-based learning, which fosters a deep understanding of subjects and develops critical thinking, analysis, and reflection. Libraries ensure that all students, regardless of background, have access to the resources they need to develop future-ready skills. Bridging the digital divide by providing access to technology and internet services for students who may not have them at home. Offering diverse learning materials that reflect multiple perspectives, encouraging global awareness and empathy. School libraries teach students about the ethical use of information, which is essential in a world dominated by data and digital communication. This includes understanding copyright, plagiarism, and responsible content creation.

Libraries contribute to the development of social-emotional learning (SEL) by creating safe, inclusive spaces where students feel supported. They offer programs that focus on: Resilience and adaptability through activities that encourage personal reflection and mindfulness. Empathy and collaboration, helping students engage respectfully with diverse ideas and perspectives. By evolving into dynamic learning spaces that emphasize digital literacy, critical thinking, collaboration, creativity, and adaptability, school libraries are crucial in equipping students with future-ready skills. Their role goes beyond traditional book lending, transforming into hubs of inquiry, innovation, and lifelong learning that prepare students for success in the modern world. In summary, school libraries are essential in equipping students with the future-ready skills needed for success in the 21st century, including digital literacy, critical thinking, collaboration, creativity, and lifelong learning. By providing access to diverse resources, promoting independent and ethical learning, and fostering innovation, libraries play a vital role in preparing students for future academic, professional, and personal challenges.

Benefits of Future-Ready Skills

Enhanced Employability and Career Readiness: Future-ready skills are critical for the modern workforce, as employers increasingly seek individuals who can think critically, collaborate effectively, and adapt to new technologies. Students with these skills are more prepared to succeed in jobs that require problem-solving, digital proficiency, and continuous learning. In a global job market, skills like digital literacy and the ability to work in diverse teams make students more competitive for international opportunities.

Increased Innovation and Creativity: By fostering creativity and innovation, future-ready skills enable students to generate new ideas and solutions to problems. This enhances their ability to contribute to scientific, technological, and artistic advancements. School libraries with makerspaces or digital labs encourage students to experiment with 3D printing, coding, or multimedia projects, thereby nurturing their creativity.

Lifelong Learning and Adaptability

Future-ready skills prepare students to be lifelong learners, equipping them with the flexibility and curiosity to navigate changing career landscapes and industries. This adaptability is crucial in a world where technology and industries evolve rapidly. Students who are proficient in self-directed learning and critical thinking can easily adjust to new learning environments or career shifts.

Global Competence and Cultural Awareness

Global awareness and collaboration skills prepare students to engage with diverse cultures and perspectives, fostering empathy and understanding in a globalized world. This is essential in fields such as international business, education, and diplomacy. School libraries offering global literature and international exchange programs help students broaden their cultural competence.

Better Problem-Solving and Critical Thinking

Future-ready skills enhance students' ability to think critically and solve complex problems, making them more effective in academic and professional contexts. Students learn to assess situations, develop solutions, and make informed decisions. Encouraging students to use research databases in libraries promotes critical thinking by teaching them how to assess the credibility of sources and information.

Challenges to developing

Despite the critical role, many school libraries face challenges such as budget cuts, outdated infrastructure, and a lack of qualified staff. In some schools, libraries are underfunded or even eliminated as part of cost-saving measures, which can disproportionately affect students from disadvantaged backgrounds. To fully realize the potential of school libraries in developing future-ready skills, it is imperative that educational policymakers and institutions invest in updating library facilities, integrating digital resources, and training librarians to be leaders in educational technology. Few of the challenges are discussed below.

Inequitable Access to Resource: Not all schools have equal access to the technology and resources needed to develop future-ready skills. Students in underfunded schools or in rural areas may be disadvantaged, creating an educational divide that exacerbates existing inequalities. A school with limited access to technology or a lack of training for librarians may

struggle to offer programs that develop digital literacy, limiting opportunities for students.

Overemphasis on Technology

While digital literacy is crucial, there is a risk of overemphasizing technology at the expense of other important skills, such as interpersonal communication, ethical reasoning, or emotional intelligence. Schools that focus heavily on tech-based skills might neglect the development of social skills or the ethical use of technology, leading to imbalances in student development.

High Cost of Implementation

Implementing programs to develop future-ready skills often requires significant investment in technology, training for educators, and updated infrastructure, which may not be feasible for all institutions. Schools that lack funding might struggle to afford up-to-date digital resources, training workshops, or the hardware needed for makerspaces, limiting their ability to develop future-ready programs.

Risk of Burnout or Overload for Students

The pressure to excel in a broad range of future-ready skills, from critical thinking to technology, can overwhelm students. Balancing academic responsibilities with the expectation of developing a diverse set of competencies can lead to stress and burnout. Students may feel overwhelmed by constant exposure to new technologies and educational expectations, leading to decreased motivation and engagement.

Dependence on Rapidly Changing Technologies

As technology evolves rapidly, there is a risk that the skills students learn today may become outdated quickly. Schools and libraries may struggle to keep up with the pace of technological change, leading to gaps in student preparedness. Schools that focus heavily on teaching specific software or programming languages may find that these skills become obsolete in a few years, requiring continuous updates to curricula.

Integration into Existing Curriculum: One of the biggest challenges is incorporating future-ready skills into the traditional school curriculum without disrupting core academic content. Schools must find ways to balance standard subjects (math, science, language arts) with the development of critical thinking, collaboration, and digital literacy. School libraries can play a supportive role by integrating skill-building workshops or digital literacy programs alongside traditional learning objectives.

Inadequate Professional Development for Teachers and Librarians

Training Gaps: Educators and librarians may not receive adequate professional development on how to effectively teach and integrate future-ready skills into the curriculum. As a result, they may lack confidence in using new technologies or facilitating creative, collaborative learning.

Keeping Pace with Technology: The rapid pace of technological advancement can make it difficult for educators to stay current with the latest tools and teaching methods, leading to outdated practices that do not fully support future-ready skill development.

Evolving Technology and Educational Tools

Staying up-to-date with evolving technology presents a significant challenge for schools and libraries. The rapid pace of technological advancement can make it difficult to provide relevant and current resources for skill development. School libraries can adopt flexible learning models and continuously update digital resources and tools to ensure that students are engaging with the latest technologies and practices.

Cultural and Social Barriers

In some educational settings, cultural and social factors may limit the adoption of new learning methods or technologies. For example, some communities may prioritize traditional educational approaches over the integration of digital tools or collaborative learning. Libraries and schools can involve the broader community in discussions about the value of future-ready skills, highlighting the benefits these skills offer in local and global contexts.

Measuring the Impact of Skill Development: Assessing the development of future-ready skills can be difficult, as traditional evaluation methods (like standardized tests) may not adequately capture competencies like creativity, collaboration, or adaptability.

Limited Access to Technology and Resources

Digital Divide: Many schools, particularly those in underfunded or rural areas, face limited access to up-to-date technology, high-speed internet, and digital tools that are essential for developing digital literacy and other future-ready skills.

Resource Inequities: Disparities in funding between schools can result in uneven access to materials like computers, maker spaces, 3D printers, or robotics kits, putting some students at a disadvantage in acquiring critical skills.

Resistance to Change

Traditional Educational Models: Some schools still emphasize traditional teaching methods focused on memorization and standardized testing, which can conflict with the development of skills like critical thinking, creativity, and collaboration that require more open-ended, inquiry-based learning.

Cultural Barriers: In some educational cultures, there may be a reluctance to shift away from teacher-centered approaches to more student-centered, project-based, or technology-enhanced learning.

Curriculum Constraints and Rigid Assessment Methods

Standardized Testing Pressure: Schools often face pressure to prioritize standardized testing, which can lead to a narrow focus on rote learning

rather than fostering skills like problem-solving, creativity, and critical thinking.

Lack of Flexibility in Curriculum: Curriculums that are rigid and content-heavy leave little room for the integration of future-ready skills like digital literacy, entrepreneurship, or global awareness. Time constraints can make it challenging for teachers to incorporate project-based learning or interdisciplinary work.

Summary and Conclusion

The role of school libraries in education is evolving rapidly to meet the demands of the 21st century. No longer confined to providing access to physical books and quiet study spaces, school libraries have become dynamic environments where students can develop essential future-ready skills that are critical for succeeding in an increasingly digital, globalized, and complex world. This study has explored how school libraries serve as catalysts for developing competencies such as digital literacy, critical thinking, collaboration, communication, creativity, and adaptability. By integrating technology, fostering collaboration, and offering access to diverse resources, school libraries help prepare students for the challenges they will face in higher education and the workforce. Through the application of various learning theories, such as constructivism, social learning theory, and connectivism, school libraries support a range of learning styles and pedagogical approaches that nurture the skills needed for future success.

By engaging with digital tools, participating in collaborative projects, and accessing global resources, students are empowered to take ownership of their learning and become critical thinkers and problem-solvers. However, the study has also highlighted several challenges that must be addressed for school libraries to fulfill their potential in fostering future-ready skills. These include issues of resource inequality, the digital divide, and the need for professional development among librarians to stay abreast of the latest educational technologies and instructional methods. Additionally, ethical considerations such as equitable access, privacy, and responsible use of information are critical for ensuring that school libraries support students in an inclusive and ethically responsible manner. Overall, the findings underscore that school libraries are vital spaces for the development of future-ready skills, but maximizing their impact requires careful planning, investment, and a commitment to continuous improvement.

Recommendations

To foster learners' development through school libraries and future-ready skills, educators, policymakers, and librarians must take a strategic and integrated approach. School libraries should evolve into dynamic, multi-

functional spaces that support the development of future-ready skills. Redesigning physical spaces to encourage collaboration, creativity, and digital exploration. Libraries can incorporate flexible seating, makerspaces, and technology zones to foster problem-solving and innovation. Promoting digital literacy by providing access to the latest technology (e.g., computers, tablets, coding tools) and teaching students how to use these tools effectively for research, creation, and collaboration. Hosting workshops on digital citizenship, coding, media literacy, and emerging technologies like AI and data science to help students develop 21st-century skills. Information literacy is central to future-ready skills, as it encompasses critical thinking, research, and evaluation of sources.

To ensure students are proficient in these areas Collaborate with teachers to integrate library resources into classroom projects and assignments. This can include joint lessons on effective research techniques, navigating databases, and evaluating information credibility. Provide instruction in digital literacy, helping students discern the reliability of online information, manage digital privacy, and recognize bias or misinformation. Teach students to be self-directed learners, encouraging them to seek out information independently and critically engage with it. This promotes lifelong learning, a key future-ready skill. School libraries can be central to fostering interpersonal skills such as collaboration, communication, and teamwork, which are essential for future work environments: Create collaborative learning opportunities through group projects, book clubs, and peer-led workshops. These activities encourage communication, leadership, and teamwork. Facilitate cross-disciplinary projects, where students from different subject areas work together on problem-based or inquiry-based learning tasks, reflecting the collaborative nature of modern workplaces. Promote student engagement in decision-making within the library, such as choosing books, organising events, or co-creating resources, which can enhance leadership and communication skills.

Critical thinking and problem-solving are key components of future-ready skills. School libraries should actively support the development of these skills by: Offering inquiry-based learning experiences, where students are encouraged to ask questions, investigate topics, and solve real-world problems using library resources. Providing access to a wide range of resources, including books, databases, and digital tools, to facilitate deep learning and independent research. Encouraging interdisciplinary learning by incorporating STEM, social sciences, and the arts into library programming. This holistic approach develops the ability to think critically across various fields. To nurture creativity, innovation, and entrepreneurial thinking, school libraries should include Makerspaces equipped with tools like 3D printers, robotics kits, and craft supplies, enabling hands-on

learning and experimentation. These spaces encourage students to think creatively and develop technical skills. STEAM (Science, Technology, Engineering, Arts, and Math) programs, which blend traditional subjects with creative exploration, fostering innovation and problem-solving abilities in both technical and creative fields. Creative writing, storytelling, and multimedia projects that allow students to express ideas in various formats, from writing blogs to creating videos or podcasts, fostering both creativity and communication skills.

Libraries are uniquely positioned to instill a love of lifelong learning, which is essential for thriving in an ever-evolving job market by the ability to Promote reading for pleasure and personal development, offering a variety of genres and subjects that cater to diverse student interests. This helps develop curiosity and a habit of continuous learning. Provide access to professional development resources for older students, such as career guides, online learning platforms, and industry-specific literature, to encourage self-driven skill development. Encourage students to take ownership of their learning by offering tools and resources that empower them to pursue independent research or self-paced learning in areas of interest.

To effectively support the development of future-ready skills, librarians and educators must be equipped with the necessary knowledge and pedagogical strategies like Investing in continuous professional development for school librarians, ensuring they are well-versed in digital tools, emerging technologies, and innovative teaching methods. This training enables them to be effective guides in fostering 21st-century skills. Encourage collaboration between librarians and classroom teachers to design integrated lessons that combine subject-area content with skill-building activities, such as research projects that develop critical thinking and information literacy. Support educators in learning to use technology effectively, so they can model its use and teach students how to harness digital tools in meaningful, productive ways.

For school libraries to truly foster future-ready skills, they must ensure equitable access to resources and learning opportunities for all students, Address the digital divide by providing access to technology, including internet-enabled devices, for students who may not have these resources at home. Ensure that all students, regardless of background, can participate fully in digital learning. Offer diverse learning resources, including materials that reflect a wide range of cultures, perspectives, and learning styles. This helps to build global awareness, empathy, and cultural competency, key interpersonal skills in a globalized world. Focus on personalized learning by providing resources and support tailored to

individual student needs and interests. Libraries can offer adaptive learning technologies and individualized guidance to help students thrive at their own pace.

Partnerships with community organizations, businesses, and higher education institutions can enhance school libraries' role in fostering future-ready skills by Collaborating with local businesses and professionals to offer career talks, internships, or mentorship programs that expose students to real-world skills and workplace expectations. Engage with community resources, such as public libraries, to extend learning opportunities beyond the school setting, fostering a seamless learning environment. Partner with higher education institutions to give students access to advanced learning resources and expertise, particularly in areas like technology, digital media, and entrepreneurship.

Finally, school libraries should be dynamic, continuously assessing and adapting their programs to stay relevant in developing future-ready skills by Collecting and analyzing data on student engagement and outcomes related to library activities, adjusting programs to better serve evolving student needs. Solicit feedback from students and teachers to ensure library services and resources are aligned with educational goals and student interests. Stay informed about trends in education and technology, allowing the library to remain a cutting-edge resource for future-ready skill development. By transforming school libraries into future-ready learning environments, integrating information and digital literacy into the curriculum, fostering collaboration and critical thinking, and focusing on creativity and lifelong learning, school libraries can play a pivotal role in preparing students for success in the 21st century. Professional development, equitable access, community partnerships, and continuous program evaluation will be key to ensuring that libraries remain responsive to the changing demands of education and the workforce.

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Role of School Libraries in Promoting Literacy Development Among Primary School Students

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Abstract

This study examines the role of school libraries in promoting literacy development among primary school students, with a focus on the availability, adequacy, and accessibility of resources and the impact of library programs. Recognizing that literacy is a foundational skill essential for academic and personal success, this research explores how well-equipped and accessible school libraries contribute to improving students' reading and comprehension abilities. The study employs a quantitative research design, collecting data from students, librarians, and teachers in selected primary schools. Key variables include the type and volume of library resources, the frequency of library visits, and the influence of library programs on literacy outcomes. Findings are expected to highlight the critical role of school libraries in shaping literacy skills while identifying challenges such as inadequate funding, limited accessibility, and resource shortages. The results will provide actionable insights for educators, policymakers, and stakeholders to optimize library services for literacy enhancement.

Keywords: *School Libraries, Literacy, Development, Primary School Students*

Background to the Study

School libraries are fundamental to literacy development among primary school students, providing a supportive environment with access to diverse reading materials and learning resources. Literacy development, which is defined as the process of acquiring reading, writing, and comprehension skills, is critical for academic and lifelong success. According to Lance and Kachel (2018), school libraries with adequate resources and professional staff could contribute significantly to improved literacy outcomes among students. Recent studies emphasize the importance of school libraries in promoting equitable access to books and digital resources. Krashen (2019) argues that access to a variety of reading materials in libraries helps foster a love for reading and enhances students' language skills which is particularly vital for students from low-income backgrounds who may lack access to books at home.

Moreover, the role of libraries in supporting literacy development cannot be overstated. As Harland (2020) highlights, librarians are instrumental in creating programmes that engage students in reading and critical thinking, thereby boosting their literacy levels. However, many school libraries face challenges such as inadequate funding, outdated materials, and reading resources as well as limited access to resources, which hinder their effectiveness (IFLA, 2020). This study seeks to investigate the role of school libraries in promoting literacy development among primary school students by examining the resources available, the level of access provided, and their overall impact on students' literacy skills.

Statement of the Problem

Despite the recognized importance of school libraries in promoting literacy development, many primary schools face challenges in fully utilizing these facilities to enhance students' reading and comprehension skills. Research by (Lance & Kachel 2018) indicates that the effectiveness of school libraries often depends on the availability of adequate resources, accessibility to students, and the presence of trained library staff. However, in many schools, especially in underserved areas, libraries are underfunded, poorly equipped, and inaccessible to students during critical learning hours (IFLA, 2020). Additionally, the integration of library programmes into the school curriculum remains limited, hindering their potential to support literacy development comprehensively. This raises concerns about the ability of school libraries to address the literacy needs of students effectively. Therefore, to address the identified gap and propose, this study seeks to investigate the resources, accessibility and influence of school libraries on literacy development among Kano University of Science and Technology, Wudil Staff School pupils.

Objectives of the Study

The specific objectives of the study are to:

1. examine the availability and adequacy of resources in school libraries for promoting literacy development among primary school pupils.
2. assess the accessibility of school libraries by the primary school pupils and its influence on their literacy skills
3. determine the influence of school library programmes and activities on the literacy development of primary school pupils.

Significance of the Study

This study highlights the critical role that school libraries play in enhancing literacy development among primary school pupils. The findings of the study would benefit primary school pupils, educators, policymakers, and librarians by providing insights into resource needs, accessibility, and effective library practices. Additionally, the study aims to provide

information on strategies for improving library services, fostering a love for reading, and bridging literacy gaps, particularly in underserved communities, thereby contributing to overall academic success.

Review of Related Literature

Concept of Literacy Development in Primary Schools

Literacy development in primary schools refers to the systematic process of equipping young learners with foundational skills in reading, writing, listening, and comprehension. It is a crucial phase in children's education, as literacy skills lay the groundwork for academic success and lifelong learning. According to Vygotsky's (1978) socio-cultural theory, literacy development is deeply influenced by the social environment, emphasizing the role of teachers, parents, resources and facilities such as libraries in shaping students' literacy abilities.

Effective literacy development programs in primary schools include phonemic awareness, vocabulary acquisition, and reading comprehension strategies (Tompkins, 2020). School libraries play a pivotal role by providing access to diverse reading materials, fostering independent learning, and promoting a culture of reading. As Krashen (2019) points out, access to varied and age-appropriate books enhances children's reading fluency and comprehension, which are key components of literacy.

Moreover, literacy development extends beyond academic benefits, contributing to improved communication skills, critical thinking, and social interaction among children (Snow et al., 2020). Therefore, primary schools that integrate comprehensive literacy programmes supported by school libraries create an enabling environment for students to thrive. The availability and adequacy of resources in school libraries are fundamental to promoting literacy development among primary school students. Adequate resources, including books, digital media, and educational tools, provide students with the materials necessary to develop reading and writing skills. According to Todd and Kuhlthau (2019), a well-equipped library supports students in their literacy journey by offering diverse reading materials that cater for different reading levels and interests. The variety of materials, from fiction and nonfiction to multimedia resources, helps stimulate cognitive and linguistic growth.

Moreover, digital resources have become increasingly important in modern school libraries. Recent studies have highlighted the critical role of school libraries in promoting literacy development among primary school students. A survey conducted in Makurdi metropolis examined the availability and utilization of school library resources, revealing that well-resourced libraries significantly enhance students' reading habits and literacy skills

(Owoeye & Yara, 2011). Similarly, research indicates that school libraries serve as safe spaces that not only promote literacy but also contribute to students' overall well-being, with positive associations between library use and reading attainment (The Education Hub, 2022). These studies shows that integrating digital books, e-readers, and educational software can enhance students' literacy skills, particularly in schools where access to physical books may be limited (Smith et al., 2021). However, many schools face challenges in providing these resources due to budget constraints, especially in underserved areas (Baker & McCluskey, 2020). The adequacy of library staffing and the training of librarians are also key factors in ensuring that resources are effectively utilised to foster literacy (Lance & Kachel, 2021). The accessibility of school libraries plays a crucial role in fostering literacy skills among primary school pupils. When students have easy and consistent access to libraries, they are more likely to engage in independent reading, which is essential for developing strong literacy skills (Harris & Kinnucan-Welsch, 2021). Accessibility encompasses not only physical access to library spaces and resources but also the availability of digital platforms and library hours that accommodate students' schedules (Sullivan, 2020).

Recent studies emphasize that students who have regular access to libraries perform better in literacy-related tasks, such as reading comprehension and vocabulary acquisition (Smith et al., 2022). The presence of library programmes, such as reading clubs and literacy workshops, also increases student engagement and boosts their literacy development. However, challenges remain in ensuring equal access for all students, particularly in underfunded schools or areas with limited transportation options (Baker & McCluskey, 2020).

Furthermore, the active involvement of librarians in guiding students to appropriate resources enhances the effectiveness of library access (O'Neill, 2023). This support can help students select books that match their reading level and interests, further promoting literacy development. School library programmes and activities are instrumental in enhancing the literacy development of primary school students. These programmes often include storytelling sessions, reading challenges, book clubs, and creative writing workshops, which foster a love for reading and strengthen literacy skills (Lance & Kachel, 2021). Research indicates that students who participate in structured library programmes show significant improvements in reading comprehension, vocabulary acquisition, and writing proficiency (Sullivan & Zhang, 2021).

One of the key benefits of library programmes is their ability to engage students with diverse reading materials that cater to different interests and

reading levels. This exposure to various genres and texts supports language development and encourages lifelong learning habits (Krashen, 2020). Moreover, activities such as collaborative reading groups and interactive discussions further enhance students' critical thinking and comprehension abilities (Harland, 2022). However, the effectiveness of these programs depends on factors such as the librarian's expertise, the resources available, and the frequency of activities (Smith et al., 2022). In schools where these programs are well-supported, students tend to outperform their peers in literacy assessments (Baker & McCluskey, 2020). School libraries face several challenges that hinder their ability to effectively promote literacy among primary school students. One of the primary issues is inadequate funding, which limits the acquisition of books, digital resources, and the hiring of qualified staff (Baker & McCluskey, 2020). In many schools, particularly those in underfunded districts, libraries operate with outdated materials and lack essential technological tools that are increasingly necessary for modern literacy development (Sullivan, 2021).

Another significant challenge is the limited accessibility of school libraries. In some schools, libraries have restricted hours of operation, preventing students from utilizing resources outside of class time. Furthermore, physical space limitations and insufficient staffing can make it difficult for students to access library services effectively (Lance & Kachel, 2021). In addition, libraries in overcrowded schools often struggle to offer individualized attention to students, which is crucial for supporting literacy development (Harland, 2022).

Furthermore, there is a lack of integration between library services and the formal curriculum in some schools. When library programmes are not aligned with classroom activities, their potential to foster literacy is diminished (Smith et al., 2022). These challenges require concerted efforts from school administrators, educators, and policymakers to ensure that libraries are well-resourced, accessible, and fully integrated into the educational process.

PRIMARY SCHOOL STUDENTS

Summary of Data

1. Library Visits

- 18% visit 4 or more times per week.
- 27% visit 2–3 times.
- 40% visit once.
- 15% never visit.

The result shows that majority of the respondents, (67%) visits the library for 1-3 times per week. This implies that the primary school pupils surveyed visit the library on a regular basis.

2. Resources Accessed

- 55% access storybooks.
- 10% use reference books.
- 25% rely on digital resources.
- 10% access other materials.

This result reveals that majority of the respondents accessed only storybooks which implies that the primary school pupils surveyed accessed storybooks.

3. Participation in Programs

- 65% participate in programs.
- 35% do not.

The result shows that majority of the respondents, (65%) participate in programmes. This implies that the primary school pupils surveyed participate in programmes.

4. Literacy Improvement

- 30% reported significant improvement.
- 40% reported moderate improvement.
- 25% reported minimal improvement.
- 5% reported no improvement.

The result shows that significant improvement, (30%) and (40%) moderate improvement in literacy improvement while minimal improvement (25%) and (5%) with no improvement. **Satisfaction**

- 35% are very satisfied.
- 30% are satisfied.
- 27% are somewhat satisfied.
- 8% are not satisfied.

The result shows that (35%) are very satisfied while (8%) records not satisfied. This implies that the primary school pupils are majorly satisfied.

School Librarian's response on the availability and adequacy of resources

Insights from Data

1. Types of Resources: The librarian identified a variety of resources, including storybooks, reference books, digital resources, and magazines/newspapers.
2. Adequacy: The librarian rated the resources as inadequate, indicating a gap in meeting students' literacy needs.
3. Updating Resources: Resources are updated rarely, suggesting that the library may not keep up with new materials or technologies.
4. Challenges Faced:

- Insufficient Budget: Limited funding restricts the acquisition of new materials.
 - Limited Space: The library lacks the physical space to expand its collection.
 - Poor Maintenance: Existing resources are not well-maintained, affecting their usability.
5. Resource Usage: Students' usage of library resources is described as moderate, indicating room for improvement in engagement.

The response from the school librarian reveals that the school library offers diverse resources but faces inadequacies, infrequent updates, and maintenance issues due to budget constraints and space limitations, limiting its effectiveness in promoting literacy development.

Teacher's insights on collaboration with the library and its perceived impact on students' literacy development

1. Frequency of Collaboration: Collaboration between the teacher and librarian occurs occasionally, indicating room for increased partnership to maximize library benefits.
2. Purpose of Collaboration: Collaboration focuses on reading programs and storytelling sessions, which are directly tied to enhancing literacy.
3. Perceived Impact: The teacher perceives the library's impact on students' literacy as moderate, suggesting some effectiveness but potential for greater improvement.
4. Students' Interest: Students show moderate interest in using the library, indicating the need for strategies to boost engagement.
5. Challenges Identified:
 - Lack of Time: A packed curriculum limits opportunities to incorporate library activities into teaching.
 - Limited Resources: Insufficient resources hinder the teacher's ability to fully integrate the library into learning activities.

Response shows that, occasional teacher-librarian collaboration, focused on reading programs, shows moderate literacy impact. However, limited time, resources, and moderate student interest highlight the need for stronger engagement strategies and partnerships.

Summary

This study explored the role of school libraries in promoting literacy development among primary school students, focusing on resources, access, and impact. Data from students, a librarian, and a teacher revealed that while school libraries contribute to literacy development, several challenges limit their effectiveness. Students showed moderate library usage and interest, with 55% accessing storybooks and 65% participating in programs. However, few of the primary school pupils never visited the library, reflecting that there are no accessibility issues. The librarian highlighted inadequate resources, infrequent updates, and budget constraints, while the teacher cited limited time in the curriculum and occasional collaboration with the librarian as barriers. Despite these challenges, library programmes were perceived to moderately impact literacy skills, emphasizing their potential if properly managed.

Conclusion

School libraries are vital in enhancing students' literacy by providing resources and programs that foster reading and comprehension skills. However, challenges such as insufficient funding, inadequate resources, and limited collaboration hinder their full potential. Addressing these issues is essential to optimize the library's contribution to literacy development.

Recommendations

Increased Funding: School management should allocate more resources to update and expand library collections and improve facilities.

1. **Teacher-Librarian Collaboration:** The school management should make provision for facilities to strengthen collaboration to integrate library use into the curriculum effectively.
2. **Enhanced Accessibility:** The school management should ensure that all students can access the library through extended hours or mobile library programmes.
3. **Engaging Programmes:** The school management should develop diverse and interactive programmes to boost student participation and interest.
4. **Periodic Evaluation:** The school management should conduct regular assessments of library resources and programmes to ensure alignment with literacy goals.

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Mapping Scholarly Publications on Makerspace in School Libraries using Publish or Perish and Vosviewer Software

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Abstract

This study presents a bibliometric analysis of scholarly publications on makerspaces in school libraries, utilizing Publish or Perish (PoP) and VOSviewer software. Makerspaces have increasingly become essential in educational settings, transforming school libraries into dynamic spaces for hands-on, creative, and collaborative learning. However, a comprehensive mapping of scholarly output in this area has been lacking. This study addresses this gap by analyzing publication trends, influential authors, and collaborative networks from 2014 to 2024. Using PoP, 67 publications were initially retrieved, with 47 relevant works identified for analysis. VOSviewer was employed to visualize co-authorship networks and thematic clusters within the literature. Results indicate fluctuating research interest over the years, with a peak in 2017 and a subsequent decline, potentially influenced by shifts in educational priorities during the COVID-19 pandemic. Key themes include experiential learning, student engagement, and educational innovation, underscoring makerspaces' role in enhancing 21st-century skills. Findings provide insights into the intellectual structure of makerspace research in school libraries, informing future studies and practical applications for librarians and educators.

Keywords: Makerspaces, School libraries, Publish or Perish, VOS viewer, Bibliometric analysis, Collaborative networks

Introduction

In recent years, the concept of makerspace has emerged as a vital component of innovative educational practices, offering students the opportunity to engage in hands-on, collaborative, and creative activities that promote problem-solving and critical thinking skills. School libraries, traditionally seen as quiet spaces for reading and research, have increasingly embraced this shift by incorporating makerspace into their physical and digital environments. These spaces, equipped with tools

ranging from basic craft materials to advanced technological equipment like 3D printers and coding software, encourage students to create, invent, and learn by doing (Sharma, 2021). The integration of makerspace into school libraries is transforming these institutions into vibrant centers of learning and creativity (Moorefield-Lang, 2015). Makerspace align with constructivist and constructionist learning theories, which emphasize that learners construct knowledge through active participation and the creation of tangible objects. This educational philosophy is rooted in the works of influential scholars like Jean Piaget and Seymour Papert, who argued that hands-on, experiential learning can lead to deeper understanding (Papert, 1991).

Makerspace provide students with a platform to engage in experiential learning, where they can experiment with various materials and technologies, collaborate with peers, and apply theoretical knowledge in practical ways (Jesus & Novo, 2019). In school libraries, makerspace represent a significant departure from traditional practices. These spaces are not merely adjuncts to the library's collection but are viewed as essential components that contribute to students' overall learning and development. School librarians play a key role in managing these spaces, offering guidance and support as students navigate the various tools and resources available. The inclusion of makerspace also shifts the perception of libraries from being solely repositories of knowledge to being dynamic, participatory environments that foster creativity and innovation (Kim, Jung, & Choi, 2022).

Publish or Perish (PoP) is a software program designed to retrieve and analyze academic citations from various databases, including Google Scholar, Scopus, and Web of Science. It provides users with a wide range of metrics, such as the number of citations, h-index, g-index, and citation impact (Harzing, 2007). This tool enables researchers to identify the most cited papers and authors, offering a quantitative assessment of scholarly influence within a given field. Publish or Perish is especially useful for exploring the citation impact of specific articles related to makerspace in school libraries. VOSviewer, on the other hand, is a visualization tool that allows users to create and interpret bibliometric maps. These maps can depict co-authorship networks, co-citation networks, and keyword co-occurrences, providing a visual representation of the relationships between various elements within a body of literature (Van Eck & Waltman, 2010). VOSviewer's graphical interface makes it easy to identify clusters of research activity and areas of collaboration, helping researchers to understand the intellectual structure of a field at a glance. In the context of this study, VOSviewer will be used to map the relationships between authors, and key themes in the literature on makerspace in school libraries.

Statement of the problem

Despite the growing popularity of makerspace in school libraries, there has been limited comprehensive research into the scholarly output of this topic. Bibliometric mapping allows researchers to analyze the intellectual structure of a field by examining patterns in citations, co-authorship, and keyword occurrences (Van Eck & Waltman, 2022). This approach not only provides insight into the most influential works and researchers in a given area but also reveals emerging trends and gaps in the literature. Bibliometric analysis offers a powerful tool for filling this gap by analyzing patterns in scholarly publications, collaborations, and trends related to makerspace in school libraries. This study seeks to map the intellectual structure of scholarly publications on makerspace in school libraries using two prominent bibliometric tools Publish or Perish and VOSviewer. By using these two bibliometric tools, this study aims to offer a detailed overview of the current state of research on makerspace in school libraries.

Objective of the study

The main objective of this study is to conduct a bibliometric analysis of scholarly publications on makerspace in school libraries using Publish or Perish and VOSviewer software. Specifically, this research aims to:

1. explore the trend publications in makerspace in school library;
2. identify the most cited publications and influential authors in makerspace in school library;
3. analyze patterns of collaboration among researchers; and
4. map the occurrence of key terms and themes related to makerspace in school library.

Significance of the study

This study is significant because it fills a gap in the literature by providing a comprehensive mapping of scholarly output on makerspace in school libraries. Previous studies have largely focused on case studies or the pedagogical benefits of makerspace, but there has been little effort to systematically analyze the body of scholarly work in this area. By employing bibliometric tools, this research will offer new insights into the intellectual structure of the field, highlighting key trends and identifying areas for future research. Moreover, the findings of this study have practical implications for school librarians, educators, and policymakers. Understanding the current state of research on makerspace can inform decision-making related to the design, implementation, and management of spaces in schools. As makerspace continue to evolve, this study provides a timely and valuable contribution to the ongoing conversation about the role of school libraries in fostering creativity, collaboration, and innovation.

Literature review

Makerspace in educational settings

The concept of makerspace originated in the broader "maker movement," which emphasizes DIY (do-it-yourself) culture, innovation, and creativity through the use of both low-tech and high-tech tools. Makerspace are community-oriented spaces that provide access to tools and technologies for creating, inventing, and learning. While makerspace initially emerged in informal learning environments such as community centers and public libraries, their potential for enhancing formal education quickly became evident (Dougherty, 2012). In educational settings, makerspace have been recognized for their alignment with constructivist learning theories. The hands-on, student-centered nature of makerspace supports the principles of constructivism, where learners actively construct knowledge through direct experiences (Papert, 1991).

Furthermore, constructionist learning, a subset of constructivism, advocates for the creation of tangible objects as a means of learning. Makerspace embody this philosophy by allowing students to experiment with materials, test ideas, and develop practical solutions to problems (Kurti, Kurti, & Fleming, 2014). Educational research has shown that makerspace help cultivate critical 21st-century skills, such as creativity, collaboration, communication, problem solving, and critical thinking. In particular, makerspace support STEM (science, technology, engineering, and mathematics) education by providing opportunities for students to engage in engineering design, coding, robotics, and 3D printing (Zhan et al, 2022). As such, makerspace are increasingly being integrated into K-12 educational environments as a means of promoting active learning and student engagement (Mersand, 2019).

Makerspace in school libraries

School libraries have long served as centers for knowledge acquisition and literacy development, but the integration of makerspace marks a significant shift in their role. By offering spaces where students can design, build, and create, school libraries are evolving into "learning commons" that blend traditional literacy activities with new forms of digital and hands-on literacy ((Kim et al, 2022). In these spaces, students are not merely consumers of information but active producers of knowledge. Several studies have examined the role of school librarians in managing makerspace and facilitating learning in these environments. For example, Moorefield-Lang and Dubnjakovic (2020; Keshinro & Oyewole, 2021) argues that school librarians are uniquely positioned to support makerspace because of their expertise in curating resources and providing instruction on information literacy. Makerspace in school libraries also offer opportunities for interdisciplinary learning, where students can integrate

knowledge from various subject areas to complete projects (Moorefield-Lang, 2015). However, the implementation of makerspace in school libraries is not without challenges. School librarians often face barriers such as limited budgets, insufficient space, and a lack of professional development opportunities related to makerspace management (Loertscher, Preddy & Derry, 2013). Additionally, while makerspace are widely regarded as valuable educational tools, some educators express concerns about the equity of access to these spaces. Ensuring that all students, regardless of socioeconomic background, have the opportunity to participate in makerspace activities is a critical issue that requires further attention in both practice and research (Johnson, 2016).

Benefits and challenges of makerspace in libraries

The integration of makerspace in school libraries offers several educational benefits. First, makerspace promote experiential learning, allowing students to apply theoretical knowledge to real-world problems. Studies suggest that students who participate in makerspace activities demonstrate improved problem-solving skills, enhanced creativity, and increased engagement with STEM subjects (Sharma, 2021; Zhan et al, 2022). Moreover, makerspace foster collaboration, as students often work in groups to complete projects, share resources, and provide feedback to one another. In terms of literacy, makerspace contribute to the development of both traditional and digital literacies. As students create and share their work, they practice essential skills such as communication, critical thinking, and information literacy (Moorefield-Lang, 2015). In this way, makerspace in school libraries are seen as supporting the broader goals of education by preparing students for success in a rapidly changing, technology-driven world.

Despite these benefits, several challenges complicate the implementation of makerspace in school libraries. Many school libraries operate with limited funding, making it difficult to purchase the tools and materials needed to create a fully functional makerspace (Loertscher et al., 2013). School libraries are often small, and finding space to accommodate a makerspace can be challenging. Additionally, balancing the needs of traditional library users with those of makerspace users requires careful planning (Loertscher et al., 2013; Keshinro & Oyewole, 2021). Many school librarians lack the technical skills and knowledge needed to manage makerspace effectively. Professional development opportunities are needed to help librarians build the expertise required to facilitate makerspace activities (Moorefield-Lang, 2015).

Bibliometric studies on makerspace in libraries

Despite the growing interest in makerspace, the body of literature on their role in school libraries remains fragmented. To address this gap, bibliometric analysis provides a valuable approach for systematically mapping the scholarly output related to makerspace in school libraries. Bibliometrics, which involves the quantitative analysis of academic publications, allows researchers to explore trends in authorship, collaboration, and thematic development within a given field (Zhan et al, 2022). Several studies have used bibliometric tools such as Publish or Perish and VOSviewer to map research trends in educational technologies, but few have focused specifically on makerspace in school libraries.

Publish or Perish, developed by Harzing (2007), retrieves citation data from databases such as Google Scholar, enabling researchers to identify highly cited publications, authors, and journals. VOSviewer, a tool for visualizing bibliometric networks, provides a means of analyzing co-authorship patterns, citation networks, and keyword co-occurrences (Van Eck & Waltman, 2022). While the use of bibliometric analysis to study makerspace in school libraries is still relatively new, it holds significant potential for advancing the field. By identifying influential publications and mapping the intellectual structure of the field, bibliometric studies can help researchers and practitioners understand the current state of knowledge and identify areas for future investigation.

Jesus and Novo, (2019) explores makerspace within school libraries, emphasizing a bibliometric analysis of related scientific literature. With a total of 1,087 articles identified across English, Portuguese, and Spanish, the study highlights the increasing academic interest in this area. The document discusses the various benefits of makerspace, such as fostering community engagement, providing access to new technologies, and creating opportunities for innovative learning experiences. Additionally, it notes the positive effects of makerspace on student creativity, collaboration, and motivation, while pinpointing the USA as the leading country in literature mentions and Twitter as the primary platform for discussions on the subject.

Sharma (2021) examines makerspace research using bibliometric methodologies to identify its development, geographic dispersion, influential authors and sources. With 654 documents about makerspace from 2012 to 2020 in the Scopus database, the study uses VOSviewer to present co-citation analysis and co-word analysis to understand the conceptual framework of the makerspace knowledge base. The author reported that research on makerspace expanded rapidly after 2017, with most studies from the US and Europe. The study identified five research

clusters: "makerspace innovation and development," "makerspace child development," "makerspace learning and STEM education," "makerspace implementation in education," and "makerspace at universities." The findings provide a roadmap for further study in this area.

Zhan et al., (2022) analyzed the literature on STEM education published over the past 15 years, focusing on worldwide distribution and research trends. The study used bibliometric approach with VOSviewer and Citespace with 1,718 papers gathered from the Web of Science database and examined their distribution, geographical distribution, research themes, subject areas, learning phases, and citation burst. Result showed that STEM education is growing in diversity and gaining academic attention, with the USA at the core of international cooperation. The study identifies four thematic areas career progression, pedagogy, empirical impacts, and educational equity.

Research Methodology

The study adopts a bibliometric research design to explore various dimensions of scholarly output, such as publication trends, citation patterns, co-authorship networks, and thematic trends. This study employs a combination of citation analysis and network mapping to achieve its objectives. The citation analysis provides insight into the most influential publications, authors, and institutions, while network mapping helps visualize the relationships between different elements in the scholarly literature, such as co-authorships and keyword occurrences. The data for this study was collected on 22nd of September 2024 with the use Publish or Perish software to retrieve and analyze academic citations from Google Scholar database.

The phrase "makerspace in library" was used as "title words" search in PoP from 2014 to 2024 to capture publications related to makerspace in school libraries. Sixty-seven related publications were retrieved and after the exclusion of publications not relevant to makerspace in school library, 47 publications were useful for the analysis. After retrieving the relevant publications, the citation data, including information on the title, author(s), publication year, journal, citations, and abstracts, was exported from PoP in excel and Research Information Systems (RIS) file formats for further analysis. Citation analysis (total number of publication, citation per publication, h-Index and G-Index) were analysis using Publish or Perish while Network Analysis (Co-Authorship Networks, Citation Networks and Clustering Analysis) were done with the use of VOSviewer.

Presentation of Results and Discussion

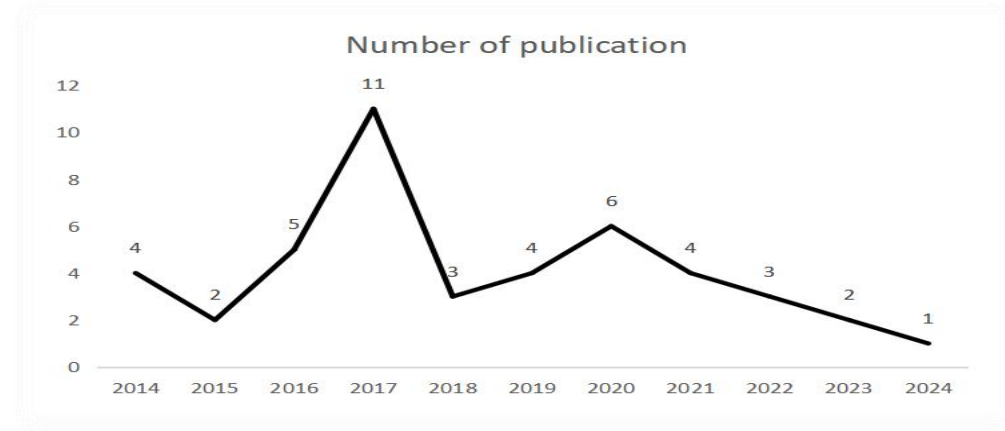


Figure 1: Trend of publications in makerspace in school library

A total number of 45 publications from 2014 to 2024 on makerspace in school libraries shows an interesting pattern of fluctuating interest over time. In the early years, particularly in 2014 and 2015, the number of publications was relatively low, with 4 and 2 publications, respectively. This suggests that during this period, the concept of integrating makerspace into school libraries was still in its infancy, and it had yet to gain significant traction in academic research. In 2016, there was a slight increase to 5 publications, followed by a substantial spike in 2017, with 11 publications. This surge marks a turning point, reflecting a growing interest in makerspace as an innovative tool in education. During this time, schools and educators were likely beginning to recognize the potential of makerspace to enhance student creativity, foster problem-solving skills, and encourage hands-on learning experiences, which contributed to the heightened research focus.

However, after reaching its peak in 2017, the number of publications began to fluctuate. In 2018, there was a sharp drop to just 3 publications, followed by moderate increases in 2019 and 2020, with 4 and 6 publications, respectively. This period of fluctuation may indicate that while the initial excitement around makerspace was high, the research focus started to narrow, perhaps becoming more specialized or focused on specific aspects of makerspace implementation in educational settings. From 2021 onwards, there is a noticeable decline in the number of publications, with 4 in 2021 and a gradual decrease to only 1 by 2024. This steady decline might be attributed to several factors, including changing educational priorities, possibly influenced by the COVID-19 pandemic, which shifted the focus toward remote learning and digital education technologies. As schools adapted to new modes of instruction, physical

makerspace may have received less attention, leading to fewer research outputs.

Table 1: Most cited publications and influential authors in makerspace in school library

S/N	Cites	Authors	Title	Year
1	127	Brady, T., Salas, C., Nuriddin, A., Rodgers, W., & Subramaniam, M.	Make Ability: Creating accessible makerspace events in a public library.	2014
2	35	Maceli, M. G.	Making the future makers: Makerspace curriculum in library and information science graduate programs and continuing education.	2019
3	15	Pijls, M., van Eijck, T., Kragten, M. & Bredeweg, B.	Activities and experiences of children and makerspace coaches during after-school and school programs in a public library makerspace.	2022
4	12	Kessner, T. M., Parekh, P., Aguliera, E. et al.,	(Design) thinking out loud: adolescents' design talk in a library makerspace tabletop game design camp.	2021
5	12	Fontichiaro, K.	Help! My principal says I need to start a makerspace in my elementary library!	2016
6	10	Lahmar, J., Taylor, M., Marsh, J., Jakobsdóttir, S., Velicu, A. et al.	Makerspaces in the early years: Current perceptions and practices of early years practitioners, library and museum educators and makerspace staff.	2017
7	8	Graves, C.,	Challenge-based	2017

		Graves, A., & Rendina, D. L.	learning in the school library makerspace.	
8	8	Li, X., & Todd, R. J.	Information practices during 3D modelling in a public library makerspace: Generating ideas, seeking help and iterative trial and error.	2016
9	7	Anderson, R. S.	School library makerspace design and implementation in a large, midwestern school district: A design case dissertation.	2017
10	6	Dugmore, P. Lindop, H. & Jacob, B.	Making the makers: An exploration of a makerspace in a city library.	2014

The table highlights the most cited publications and influential authors in makerspace research within public and school libraries. Brady et al. (2014) leads with 127 citations, focusing on accessibility in makerspaces. This work has made a significant impact by addressing the need for inclusive makerspace events in public libraries, becoming a cornerstone in the field. Maceli (2019) follows with 35 citations, examining makerspace curriculum integration in library science programs. This paper highlights the importance of formal education for future librarians in makerspace practices and has gained attention in academia for its focus on curriculum development. Pijls et al. (2022), with 15 citations, focuses on children's activities in public library makerspaces, emphasising experiential learning and mentorship. Although recent, this study is gaining recognition for its relevance to educational applications of makerspaces.

Other notable works include Kessner et al. (2021) and Fontichiaro (2016), each with 12 citations. Kessner explores design thinking among adolescents in makerspaces, while Fontichiaro provides practical advice for starting makerspaces in elementary school libraries, making it particularly useful for educators. Lahmar et al. (2017), with 10 citations, investigates early years' practitioners' perceptions of makerspaces, adding valuable insight into their implementation in early childhood education. Additionally, Graves et al. (2017) and Li & Todd (2016), each with 8

citations, explore challenge-based learning and information practices in 3D modeling, respectively. Finally, Anderson (2017), with 7 citations, offers a detailed case study on school library makerspace design, while Dugmore et al. (2014), with 6 citations, explores the role of makerspaces in city libraries.

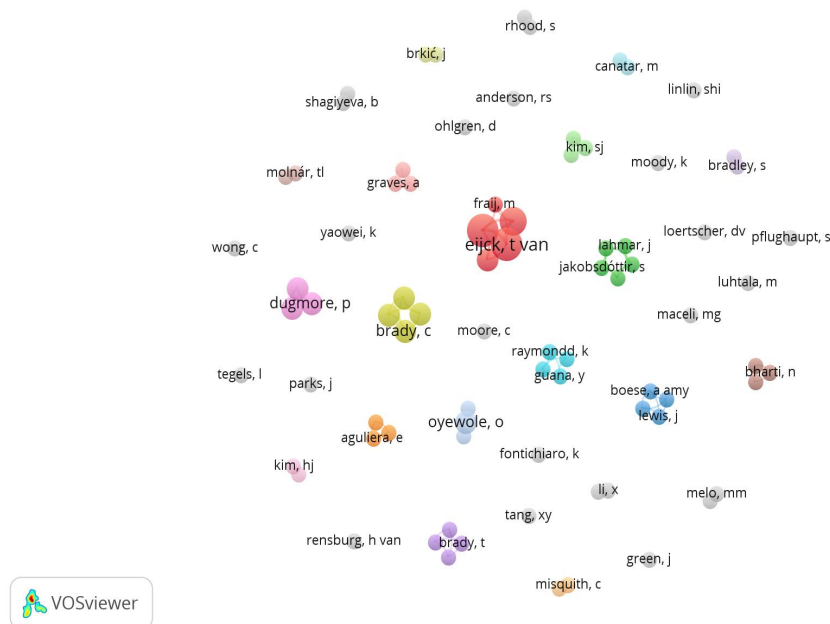


Figure 2: Patterns of collaboration among researchers of makerspace in school library

The VOSviewer network visualization highlights patterns of collaboration among researchers studying makerspaces in school libraries. Each node represents an author, and the connections between them indicate co-authorships. The size of the nodes reflects the prominence of the researchers, while different color clusters signify distinct research communities or collaboration groups. T. van Eijck stands out as the central figure in the largest collaboration cluster (red), indicating significant influence and active partnerships within this research group. This cluster likely focuses on educational practices involving makerspaces, given van Eijck's prominence in that area. C. Brady leads a distinct cluster (yellow), showing that they are a key researcher in the field with their own network of collaborators. Their work likely involves practical aspects of makerspaces, as suggested by the focus of their most-cited publication. J. Lahmar (green cluster) also forms a well-connected group, suggesting contributions to research on makerspaces, possibly within early childhood education or broader educational settings.

Dugmore (purple) and Anderson (grey) have smaller, tightly connected networks, indicating focused collaboration on specific aspects of makerspaces, such as their design and implementation in public libraries or school districts. K. Fontichiaro (light purple) appears in a more isolated cluster, suggesting involvement in specialized research, perhaps related to practical guidance on establishing makerspaces in elementary libraries. Authors like Wong, C. and Parks, J. appear more isolated, with fewer visible connections to other researchers. This suggests that these authors may be working on more niche topics or conducting independent research with limited co-authorship. There are instances of cross-cluster collaboration, such as the link between Brady and van Eijck, suggesting interdisciplinary work where different research groups collaborate on overlapping areas, likely enriching the field through diverse perspectives.

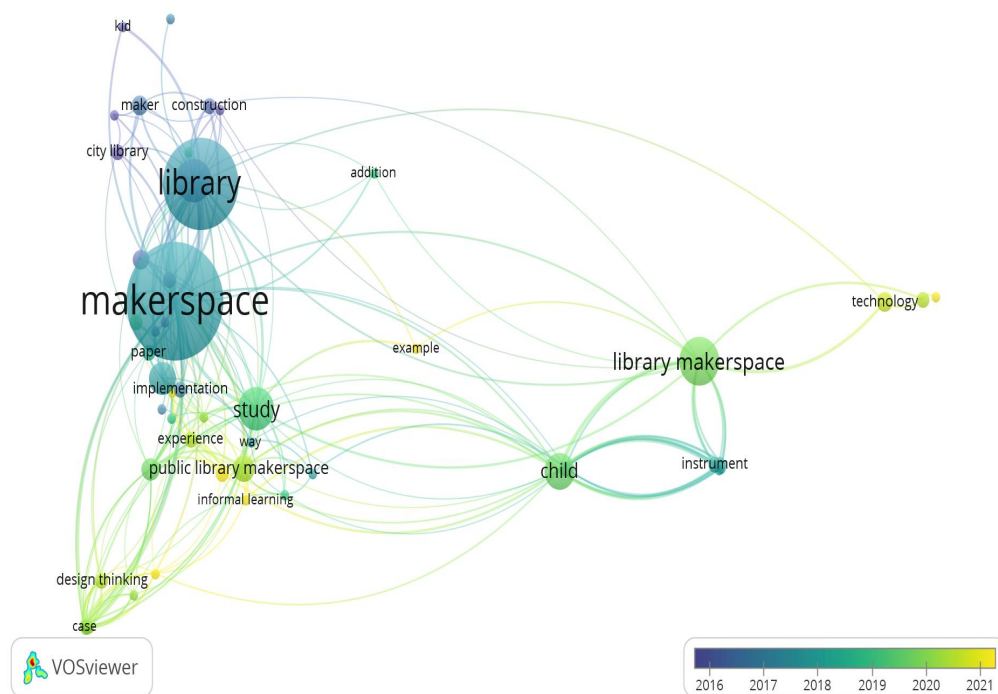


Figure 3: Themes occurrence of publications in makerspace in school library

The VOSviewer visualization provides insights into the themes and key terms occurring in publications related to makerspaces in school libraries over time. The nodes represent keywords, with the size of each node corresponding to the frequency of that term in the literature. The links between nodes reflect co-occurrences of terms, and the colors indicate the time period during which these terms were most frequently used, as shown

in the color scale (2016 to 2021). The largest nodes, makerspace and library, indicate that these are the central themes in the publications. These terms dominate discussions, highlighting the close relationship between makerspaces and libraries, especially as venues for informal and experiential learning. Other important terms include study, implementation, public library makerspace, and library makerspace, indicating that many studies focus on how makerspaces are integrated into public and school library settings. Terms such as child, informal learning, and experience suggest that makerspaces are increasingly seen as tools for child education and experiential learning, particularly in informal or non-traditional educational settings like libraries.

The appearance of terms like design thinking and instrument further supports this, indicating that makerspaces are being used to teach practical skills, creative problem-solving, and hands-on activities in educational programs. The color scale indicates how the focus of research has evolved over time. Early research (2016, represented by darker blue) appears to have focused on general themes like makerspaces, library, and city library, reflecting initial studies on introducing makerspaces into public settings. More recent research (2019-2021, represented by yellow and light green) has shifted toward specific applications such as technology, child, and library makerspace, suggesting a growing interest in the role of makerspaces in child education and the integration of new technologies. Terms like construction, city library, and maker are smaller but still significant, indicating niche areas within the broader study of makerspaces. These might represent case studies or specific types of makerspaces, such as those in urban public libraries.

Conclusion

This study provided the mapping of scholarly publications on makerspaces in school libraries using Publish or Perish and VOSviewer software. Out of the 67 publications retrieved from Google Scholar database, 45 were useful for the result of the study. The publications in school library makerspaces between 2014 and 2024 began with slow growth, followed by a peak of academic attention, and then a gradual decline as the topic matured and other educational technologies gained prominence. The declining trend in recent years suggests that the field may now be ripe for exploring new angles, such as the integration of virtual makerspace or the role of makerspace in hybrid and post-pandemic learning environments.

The citation distribution revealed that foundational and inclusive themes, like accessibility (Brady et al., 2014), have garnered the most attention in makerspace research. Recent papers focusing on specific aspects of makerspace use in education are still gaining momentum. The data also

highlights diverse research areas within the field, from curriculum development to practical implementation, and suggests ongoing interest in how makerspaces can shape educational and public library environments. This network visualization revealed patterns of both strong internal collaboration within certain clusters and weaker connections or isolated research efforts. Key researchers like van Eijck, Brady, and Lahmar are central figures driving collaboration in the study of makerspaces, especially within the context of education. While some researchers operate within tightly connected groups, others work in more specialized or independent areas, contributing unique insights to the broader field.

This visualization showed that the research on makerspaces in libraries is evolving from general explorations of the concept to more specific applications in education and child development, especially with the integration of technology. Makerspaces are increasingly seen as vital tools for informal learning and hands-on experiences, particularly for children in library settings.

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Assessment of Media and Information Literacy Promotion Practices Among School Librarians in Nigeria

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Abstract

The study explored the promotion practices of Media and Information Literacy (MIL) by school librarians in Nigeria. The purpose was to describe the current practices in the promotion of MIL and to investigate collaboration between school librarians and teachers in this area, as well as to determine the challenges that are experienced in the promotion of MIL. The study utilized a quantitative research design through a descriptive survey and sampled 40 school librarians located in the six geopolitical zones of Nigeria. Findings from the study revealed that digital literacy courses, information literacy instruction, and media literacy workshops as more established practices. While most librarians collaborated with teachers through professional development and co-planning, relatively few participated in curriculum committees or guest teaching. The study also found large gaps in training on topics of international standards were evident. The major challenges identified were: insufficient funding for MIL resources; limited access to the technology infrastructure; and lack of time to fit MIL into school schedules. Findings from the study revealed reveals this study as one of the first comprehensive assessments of MIL promotion practices among school librarians in Nigeria and provides insight into the current state of practice; collaborative relationships; and challenges in this regard. These findings will assist in policy development and resource allocation that can better support MIL education in schools for Nigeria to adequately prepare students for the demands placed on them by an increasingly digitized world. The paper also contributes to the broader field of library and information science, with considerations in terms of the changing role of school librarians in championing MIL education.

Keywords: *Media and Information Literacy, School Libraries, Digital Literacy, Library-Teacher Collaboration, Nigerian Education.*

Background of the Study

The recent wave of technological development that the world is going through, driven by the Fourth Industrial Revolution (4IR), is revolutionising every sector of human endeavours working towards making lives easier and more convenient, and at the expense of dependence on digital information and technology. As good and

transformative as these developments appear, it comes with new challenges in the way individual consume, evaluate, and interpret information. Therefore, it is more imperative than ever that individuals acquire various kinds of literacy skills, among which is media and information literacy (Sangoloya, 2017). Apart from the old-fashioned reading and writing, people currently need to be able to understand and use digital technologies, information, and technology.

Media and Information Literacy (MIL) is the merger of the two concepts of media literacy and information literacy. The United Nations Educational, Scientific and Cultural Organization MIL Curriculum and Competency Framework (2021) further merges the terminologies to mean one, which is Media and Information Literacy, acknowledging the transformative patterns of media consumption in recent years. In the past, media consumption occurred mainly through conventional modes like television, radio, and print. Today, media consumption thrives through diversified new digital pathways. This is due to the technological advancement caused by 4IR. Therefore, on one hand, media literacy seeks to impart the skill of comprehending media functions and evaluating how those functions are executed and rationally engaging with media in self-expression and democratic participation. This is in contrast to information literacy, which centred on information access and information evaluation in consideration of utilizing information ethically, (UNESCO, 2021). It is this overall UNESCO definition of MIL that informs this research.

The UNESCO emphasised that media and information literacy is vital in today's societies overwhelmed with digital products. The MIL is based on critical approaches to literacy, and therefore, it addresses the critical issues that go hand in hand with information and media literacy, including digital or technological literacy. The MIL encompasses the competencies for searching, evaluating, using, and contributing to information and media content wisely; managing rights online; combating online hate speech and cyberbullying; addressing ethical issues in information access; using media and ICTs to promote equality, free expression, tolerance, and intercultural dialogue (Arua et al., 2024). In today's 21st-century societies, all citizens need MIL competencies to prevent themselves from being misinformed or manipulated. Thus, being digitally literate means that one would safely be able to use various online platforms, safeguard personal information, and be aware of the implications of having a digital footprint; this would entail privacy and cybersecurity for an increasing number of children and youth (UNESCO, 2023). In view of this, the children and youth are more vulnerable to the risks brought about by misinformation and digital risks; hence the need to develop MIL competencies very early. With those competencies, they are better positioned to be safe in the digital space, to

critically analyze information, and become active participants in construction for a more inclusive and informed society.

Historically, libraries have always been about access to information, with librarians acting as custodians of books, documents, databases, printed or digital resources by holding the knowledge. However, the influence of time and technology have changed everything about how knowledge is accessed. While the digital age has made it easier to get knowledge, it has simultaneously made it harder to regulate knowledge (Banks, 2023), obviously due to information overload. According to the International Federation of Library Associations and Institutions/UNESCO School Library Manifesto, published in 1999 and updated in 2021, school libraries are particularly concerned with ensuring that access to resources and learning opportunities through information access and differentiated instruction takes place equitably for all learners. It more clearly defines their roles in the enhancement of literacy, information literacy, teaching, learning, and culture (IFLA, 2021).

The school library programme provides educational services and resources that enable all students and staff members to become effective users of information in every form and medium. For the information-based knowledge and tangible and intangible products to be attained, the school library and librarians are great resources. Moreover, the staff and the library are also accessible to create and use any and all materials, locally and remotely, from print to electronic and fictional to documentation. Thus, the role of school librarians in promoting multifaceted literacy, also known as multiliteracies is more important than ever. As a matter of fact, libraries are now providing more of a collaborative service because the role of being seen as only keepers of knowledge has been surpassed. According to Lamb (2015), school libraries have turned into dynamic learning and technology hubs while the school librarian's role has expanded to become educators, IT supporters, and advocates of digital literacy. Banks (2023) also notices that it no longer comes as a surprise for school librarians to assume the roles of social worker, teacher, community organizer, or even social media marketer today.

Today's school librarians are called media specialists since they are leaders in preparing today's students for the digital age, from teaching coding, design thinking, and the use of databases to how to search for information in reliable sources. Beyond the traditional role of providing access to books and other print materials, school librarians are now charged with curation and management of digital resources, such as e-books, online databases, and learning platforms. Instructional programmes are also created and delivered on a host of digital topics, like coding, video editing, and social

media. These form part of the makerspaces activities that are now opening in many school libraries where students gather to create and innovate. According to Smith (2023), many school libraries are now "equipped with robotics navigated by code, sound studios for music production, and even 3D printers to support a maker culture and innovation". It is precisely in these spaces that school librarians can make a difference by providing students with access to tools and varied resources and teaching them how to safely and effectively use those tools and resources. However, their role in promoting media and information literacy is neither defined nor very clear. This may leave students underprepared for navigating the complex information ecosystem of the contemporary world, hampering the critical ability toward assessment, interpretation, and creation of digital content. This study, therefore, investigated how school librarians in Nigeria are managing to cope with these new demands of an information explosion and also what roles are they playing in promoting Media and Information Literacy to empower these students for this new era.

The research is intended to raise consciousness that the role of the school librarian has been changing. It is about how the school librarian could contribute towards the development of Media and Information Literacy in Nigerian schools. As school librarians in Nigeria work towards instructing the students on the location, evaluation, and use of information in an ethical and responsible manner, the outcome would serve as a guideline for school librarians throughout Nigeria to work out the best literacy programs and practices that would enhance MIL. And with an enhanced practice by the school librarians, students would start having an enhanced MIL education to prepare them better for the digital demands of this age. It will help guide school management and policy framers in budgeting and resource allocation and also frame policies that specifically support and promote MIL to ensure students are well-prepared for the digital age.

This study will obviously contribute importantly to the discipline of library and information science by zeroing in on the school librarians in Nigeria, a group that has not received much focus in the national discourse; it will unravel their pivotal role in championing MIL, thereby filling this knowledge gap. This study provides an assessment of the media and information literacy promotion practices among school librarians in Nigeria. This is not only important to consider the crucial role that school librarians in Nigeria play in the promotion of media and information literacy, considering especially the technological advances in the world today.

The population of study comprised school librarians in Nigeria. Engagement for the study involved Nigerian School Library Association

(NSLA) online forum. The reason for this is that there was no known official list of school librarians in Nigeria from which samples might have been drawn. NSLA forum is an online discussion group of school librarians with participation from approximately 200 school librarians, including those from states in South-south, South-West, South-East, North-central, North-west, and North-east of Nigeria, it offers an online platform for sharing, networking, and collaborating in response to the challenging calls from colleagues, a best sample that captures the multifaceted contexts and challenges inherent within the country. The outcome of the research will, therefore, be a clear guide on challenges and opportunities for school librarians in Nigeria, giving practicable directions to school librarians in their efforts to champion MIL in the changing world.

Statement of the Problem

Media and Information Literacy (MIL) is recognised as part of core literacy in education. However, media and information literacy in Nigeria are given lip service, and it is yet to be fully developed or supported by a national standard. How school librarians in Nigeria adopt different approaches and initiate collaborative efforts with regard to availability and challenges in using resources, and use opportunities for professional development, is hardly documented. This knowledge gap affects the development and implementation of interventions aimed at enhancing media and information literacy skills within the Nigerian educational system. As declared by Adeleke (2015), the evaluation of the state of Information Literacy in any setting shows its good side as well as the aspects that require modification in the library programme. It enables the libraries and schools to understand their strengths, weaknesses, opportunities, and threats concerning MIL implementation.

It is within these gaps that this research is situated, using a nationwide school librarian survey in Nigeria as a means of comprehensively assessing the current practice of promoting media and information literacy. To carry out such an assessment, it seeks to unravel policy development, educational practices, and professional development initiatives toward establishing a more robust and effective way of media and information literacy education in Nigerian schools.

Research Questions

1. What media and information literacy promotion practices are currently implemented among by school librarians in Nigeria?
2. How do school librarians collaborate with teachers and administrators to enhance media and information literacy promotion?
3. What challenges do school librarians face in promoting media and information literacy in Nigerian schools?

Research objectives

Specific objectives are to:

1. identify the media and information literacy promotion practices currently implemented by school librarians in Nigeria?
2. examine the collaborative relationship among school librarians, teachers and administrators to enhance promotion of media and information literacy.
3. identify the problems that school librarians encounters in promoting media and information literacy in Nigerian schools.

Literature Review

The concept of literacy has experienced several changes with time, always on par with human, cultural, and technological development. Traditionally, literacy meant the ability to read and write. UNESCO's 1958 definition described it as "the ability to read and write, with understanding, a short, simple sentence about one's everyday life". By the year 1978, this definition had increased to include "the ability to use printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential" (Beecher, 2023).

In the 21st century, this definition has extended even much more to include the ability to use technology for finding and communicating information. UNESCO states that literacy is currently defined as "the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts" (Beecher, 2023). This only goes to show how the nature in which people access and share information in this present digital era has changed. The International Reading Association has pointed out that the literacies today's students use differ significantly from those of their parents or even students who attended school a decade ago. To be fully literate in today's world, part of students' acquisition of literacy must include becoming proficient in the literacies of 21st-century technologies, which represent the skills one needs to effectively use media and a variety of information sources within our digital society.

Media and Information Literacy is a generic umbrella encompassing three distinct, yet interrelated dimensions: information literacy, media literacy, and ICT/digital literacy. Due to the interrelation, relevance, and appropriateness of media literacy and information literacy in the digital age, in 2011 UNESCO brought the two literacies—media literacy and information literacy, into one framework as Media and Information Literacy (MIL) Curriculum and Competency Framework (Dadakhonov, 2024). This act is premised on the argument that these literacies have become intertwined in the modern information ecosystem. The main

purpose of MIL, as far as UNESCO is concerned, is to equip learners to participate actively in societal life and to formulate decisions based on ethical principles. In the wake of this rapidly growing media pool, finding, critically accessing, and analyzing information for all types of content assumes a high degree of importance. That means critically assessing the credibility and intentions behind the obtained information (KnowledgeHut, 2023).

The MIL competencies encompass access, evaluation, and creation (Tibaldo, 2021). Access relates to the functions of metadata; evaluation refers to the development of arguments to substantiate conclusions reached. Indexing is emphasized; creation requires using international standards and ethics applicable to the creation of new knowledge (Oltmishevich, 2024). The need for MIL becomes very relevant in a world where misinformation is rapidly spread since most young people are active online users, generally accessing digital media and places including social media, blogs, and video-sharing sites (Boulianne, 2015; Lenhart 2015). However, as studies have shown, many of them cannot make a distinction between actual and misleading information (Adjin-Tettey, 2022; Stanford History Education Group, 2016). In this respect, there is an increasing call by national and international organizations to underline the necessity for students to acquire media and information literacy skills.

School libraries are very essential to the educational ecosystem. According to the International Federation of Library Associations and Institutions, a school library is "a school's physical and digital learning space where reading, inquiry, research, thinking, imagination, and creativity are central to students' information-to-knowledge journey and to their personal, social, and cultural growth" (IFLA, 2015). School libraries offer resources and services that meet the curricular needs and promote and support teaching and learning for students, teachers, and the community they serve. The role of the school librarian has changed over the years. Traditionally, the librarians were the custodians of books and information outside the classroom. Still, this was changed with the invasion or incursion of audio-visual technology in the middle of the 20th century and consequently, entitled the "media specialist" to accommodate expanded roles covering all media used within the schools (Wright, 2022).

In 1988, just as the Information Age was getting under way, the American Association of School Librarians, together with the Association for Educational Communications and Technology, published the document 'Information Power: Guidelines for School Library Media Programs' (Hopkins & Zweizig, 2021). This document most spotlighted three major roles of a school librarian: an information specialist, teacher, and

instructional consultant. School librarians serve to instruct students about information and media literacy and, most importantly, the understanding of implicit and confirmation biases within the information presented to them (Elkins et al., 2021). Studies reflect that qualified library media specialists, adequate resources, technology integration, and collaboration with faculty can impact student achievement through an effective school library media program (McDonald, 2022). The shifting times for education bring into focus the needs for school libraries. As the information landscape changed, Consequently, this was to be reacted upon by the school library profession, which subsequently shifted to a more critical teaching role, shifting in nomenclature to "teacher-librarian" before again reverting to its historical name, the "school librarian." (Bernier, 2023). This adjustment reflects the shifts in what modern learners will need and also the increased emphasis that is being placed on digital literacy, collaboration, and technology integration in education today.

The promotion of MIL is a precondition for active participation in society, and formal and informal learning opportunities are therefore needed to reach both children and adults. The best practices in MIL promotion in the Nigerian context appear in schools and span student engagement, integration into the curriculum, teacher-librarian collaboration, and school librarian involvement. For this reason, UNESCO, the Nigerian Government, and other relevant stakeholders have been calling for citizens to be empowered with MIL skills to mitigate these factors that fuel disinformation and misinformation (UNESCO, 2023). In fact, UNESCO posits that awareness creation and media activism are some of the recommended ways through which MIL can be promoted. According to Polizzi (2019), practices such as 'Internet Matters' are a fine example of creating awareness on internet safety by making resources available to parents. Smailova et al. (2023) conducted research on the pedagogical experiment of media literacy formation in children from 7 to 10 years old, conducted in different conditions: at home, at home and school, and only at school. The findings showed that the level of media literacy development in lower school children was higher in the group where the techniques were applied both at home and school, underscoring the role of parental involvement in promoting MIL.

In northern Nigeria, Nasir & Ciroma (2023) have established that students at colleges of education lack psychomotor capability in checking fake news. They called on curriculum planners, educators, and all education stakeholders to design more practical skills, especially on how to detect fake news with traditional media and social media. This was followed by the appeal, projects, and programs such as the Reading Wikipedia in the Classroom Program for Secondary School Students in Kwara State, which

had been rolled out to enhance MIL skills among secondary school students in Nigeria (James, 2022).

This collaboration is necessary for many reasons. It is an integral and critical part of the process to advance the information literacy, reading, and reading for enjoyment levels of the students (Centerwall, 2022; Eri & Pihl, 2017). Effective collaboration makes tangible contributions toward positive student outcomes. School librarians collaborate with teachers in identifying materials that will enhance the curriculum in order to create more authentic learning experiences, thereby supporting student achievement. Successful collaboration includes strategies such as co-planning lessons, co-teaching, co-assessment, and developing shared goals for the collaboration. Curricula are enhanced by this partnership, but it also engages children in profound learning, yielding robust, original ideas (D'Orio, 2019).

Centerwall and Nolin (2019) discuss the role of the school librarian as part of the infrastructure for learning in schools. Indeed, their argument is that while there are actual classrooms, and therefore tangible and visible with priorities put upon them, a school library often acts as an invisible part of this same infrastructure in the school. Though less visible, school librarians, therefore, hold an essential behind-the-scene role by way of acquiring resources, promoting literacy, and teaching skills in research. However, studies have identified barriers to collaboration, such as teachers' negative perceptions, lack of understanding of each other's roles, workload, and time constraints (Stewart & Deans, 2021). To overcome these barriers, there is a need to involve school administration, integrate curriculum, provide common teaching spaces, and efforts to understand each other's roles must be fostered.

While a good number of studies have been conducted on aspects of the promotion of media and information literacy, practice-focused assessments, especially as involving school librarians, are limited, very few in the Nigerian context. In Nigeria, Eze and Aduba (2022) evaluated the Information Literacy (IL) instruction at library schools in Nigeria. This study utilizes both document analysis and qualitative approaches in which departmental documents and students' handbooks from 30 library schools in Nigeria were assessed and interviews were conducted with lecturers in 13 library schools with courses on IL. The study established a high rate of increase in the teaching of information literacy courses within the library school. Specifically, 13 of the 30 Nigerian universities surveyed now have "information literacy" taught as a stand-alone course in their library and information science departments. This could mean that there is an increasing emphasis on the essence of IL in the Nigerian LIS curriculum.

In contrast, the majority of the LIS departments did not have IL laboratories where students could get hands-on skills in IL, hence a yawning gap in practical training. In a similar vein, Anyaoku (2016) explored the opinions of university librarians regarding information literacy programmes. The study revealed that there was a very strong consensus of 87.3 percent that there is a need for a properly formalized and curricular approach with a focus on digital literacy, internet skills, information use competencies, and library skills training.

Ogunniyi, Efosa, and Lawal (2017) investigated the role of a school librarian in this digital age. The paper laid before ways that are already existing, challenges, and recommendations toward such in Nigeria. The conclusion reached was that school librarians' roles in the digital age, though very enormous and tasking, were quite necessary for an effective school library and information service in the 21st century. Internationally, a study by Adjin-Tettey (2022), evaluated the effectiveness of MIL in identifying fake news, disinformation, and misinformation and its sharing intention. Through an experimental design with 187 respondents who were divided between a control and an experimental group, the study found that MIL training had a positive impact on information discernment.

While some of the control group subjects managed to identify false information on their own without having received any MIL training, and several in the experimental group were unable to do so even after training, generally speaking the results showed a significant correlation. Those who had received MIL training were more likely to identify the authenticity of information and less likely to share stories that contained inaccurate information. These results clearly showed that when MIL increased, the sharing of fake news decreased, which was a clear demonstration that MIL enables information consumers to form effective judgments about information quality. These findings underline further the need to integrate MIL into mainstream educational modules and formulation of strategies targeting those with no formal education. Phillips and Lee (2019) examined the role of the school librarian in digital literacy instruction by conducting an analysis of state policies in the US. It was found that, while the school librarians strongly felt that the role of heading digital citizenship instruction belonged to them, they had indicated that this role is actually shared with the teacher.

In Indonesia, Rahyadi et al. (2022) probed information literacy skills among library users with respect to the standards set by the Association of College and Research Libraries. What came clear from this study was that although skills, in general, were rated to be good, areas like ethical and legal concerns when searching and using information needed some redress

measures. These studies all bear testimony to the rising importance of MIL promotion, changing roles for the school librarian, and further research and development, no less urgently, with specific reference to the Nigerian situation.

Research Methodology

The approach adopted in this study was a quantitative research method of a descriptive survey design. A quantitative research approach is targeted at collecting and analyzing numerical data to describe phenomena of interest. Descriptive survey design, on the other hand, allows one to collect information from a large sample so as to describe characteristics, opinions or behaviors of a population. The target population was school librarians spread over the entire Nigeria. However, it is important to note that there is no comprehensive record of the total number of school librarians in the country, and this factor presents a challenge in determining the exact population size. The study was thus limited to using a purposive sampling technique due to this. According to Etikan et al. (2016), purposive sampling involves selecting participants with the judgment of the researcher on persons who will be most representative or informative. This was chosen because there was no comprehensive sampling frame and the need to ensure the representation from the various geopolitical zones within Nigeria. This research draws its sample from 40 school librarians representing the six geopolitical zones of Nigeria. The distribution of the respondents across the zones was shown below:

Table 1: Sample size

Zone-political Zone	Frequency
South West	14
North West	5
North Central	9
North East	3
South South	5
South East	2
Total	40

Source: Fieldwork, 2024

An online questionnaire, designed by the researcher, served as the data collection tool. It had closed-ended questions structured into sections: demographic information, MIL promotion practices, collaboration with teachers and administrators, challenges, skills, and training opportunities. The sharing of the questionnaire was implemented using Google Forms since, according to Vasantha and Harinarayan (2016), a web-based survey

is the trend nowadays in conducting a survey. The link to the questionnaire was shared on the Nigerian School Librarian Association (NSLA) WhatsApp platform, together with a cover letter explaining the purpose of the study and ensuring anonymity. The survey remained open for a period of four weeks, reminding the sample to complete it from time to time. Once that target of 40 completed responses was reached, the form was closed in order to avoid over-sampling. Data analysis included descriptive statistics, supported by frequency distribution tables and charts.

Presentation of Results and Discussion of Findings

Demographic Profile

Table 2: Gender Distribution of Respondents

Gender	Frequency	Percentage
Male	18	45%
Female	22	55%
Total	40	100%

Source: Fieldwork, 2024

The gender distribution, as shown in table 2, was almost balanced, with 45% male and 55% female. This should therefore give good representation for the views of both genders.

Table 3: Years of Experience as a School Librarian

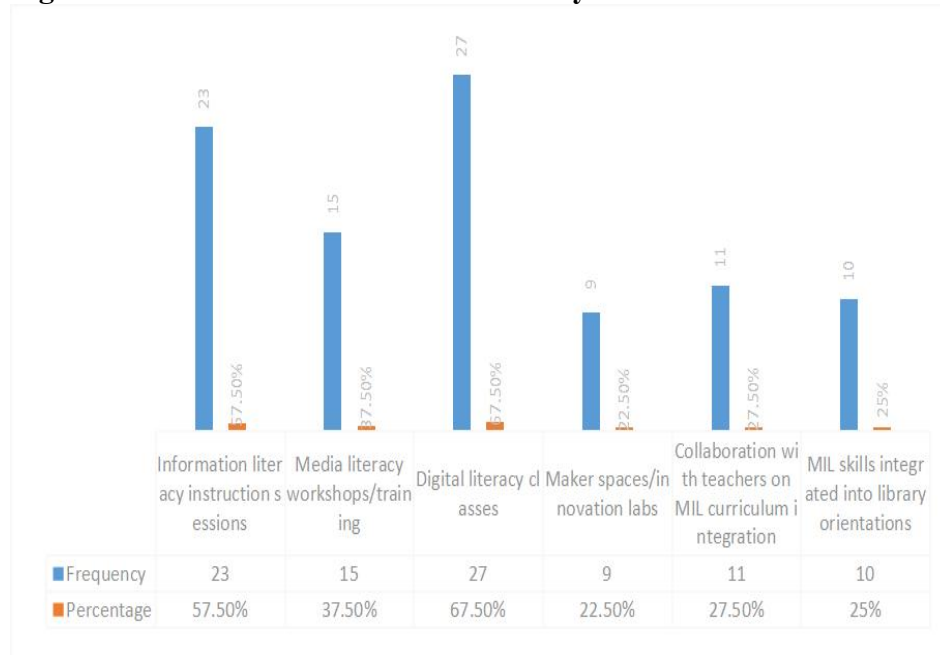
Years of Experience	Frequency	Percentage
1-5 years	22	55%
6-10 years	8	20%
11-20 years	6	15%
More than 20 years	4	10%
Total	40	100%

Source: Fieldwork, 2024

The years of experience of the school librarian respondents ranged as indicated in. Most of the librarians (55%) have 1-5 years of experience, indicating it is a relatively young workforce. Nonetheless, the sample had seasoned professionals in that 20% had 6-10 years of experience while 15% had 11-20 years and 10% had over 20 years in the field. The variation in the experience levels in this study provides information valuable to both the relatively newer and more established librarians.

MIL Promotion Practices

Figure 4: Media and Information Literacy Promotion Practices

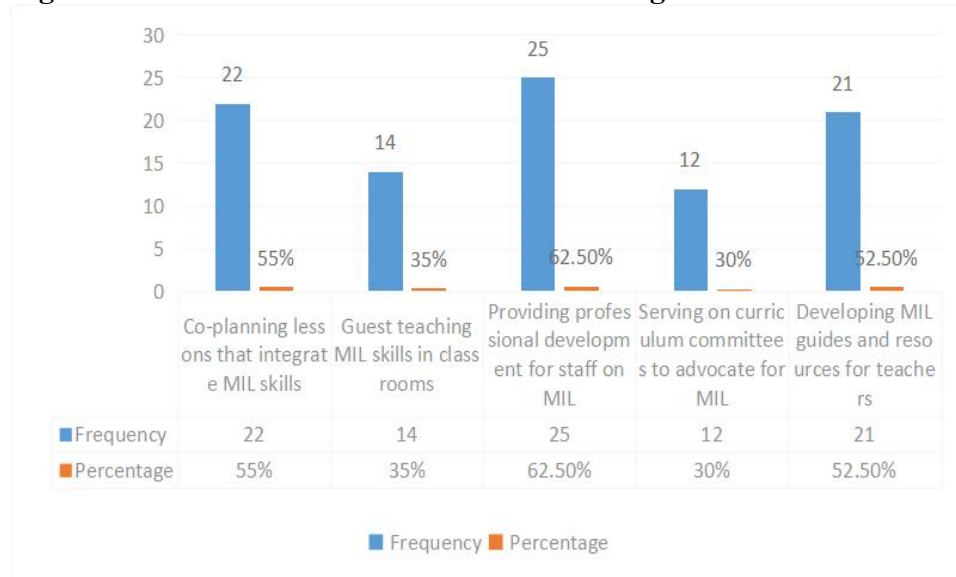


Source: Fieldwork, 2024

The most prevalent MIL promotion practices were classes on digital literacy 67.5% (27), information literacy instruction sessions 57.5% (23), and media literacy workshops 37.5% (15). This aligns well with Beecher (2023) and Fontichiaro & Johnston (2020) who called for the need to equip students with 21st century literacies that capture information, media and digital literacy skills. The least common practices were maker spaces/innovation labs (22.5%); collaboration with teachers on MIL curriculum integration, (27.5%); and integrating MIL skills into library orientations, (25%). A total of 12.5% of the respondents indicated that they implement other practices not listed, which included orientation, the presence of e-library units, and World Read Aloud Day and World Book Day programs. This underlines potential areas for improvement, as studies stress that school librarians have to cooperate with teachers in integrating MIL throughout the curriculum (Centerwall, 2022; Kammer et al., 2021; D'Orio, 2019) and in forming core library services.

Collaboration with Teachers and Administrators

Figure 5: Collaboration Methods for Enhancing MIL Skills

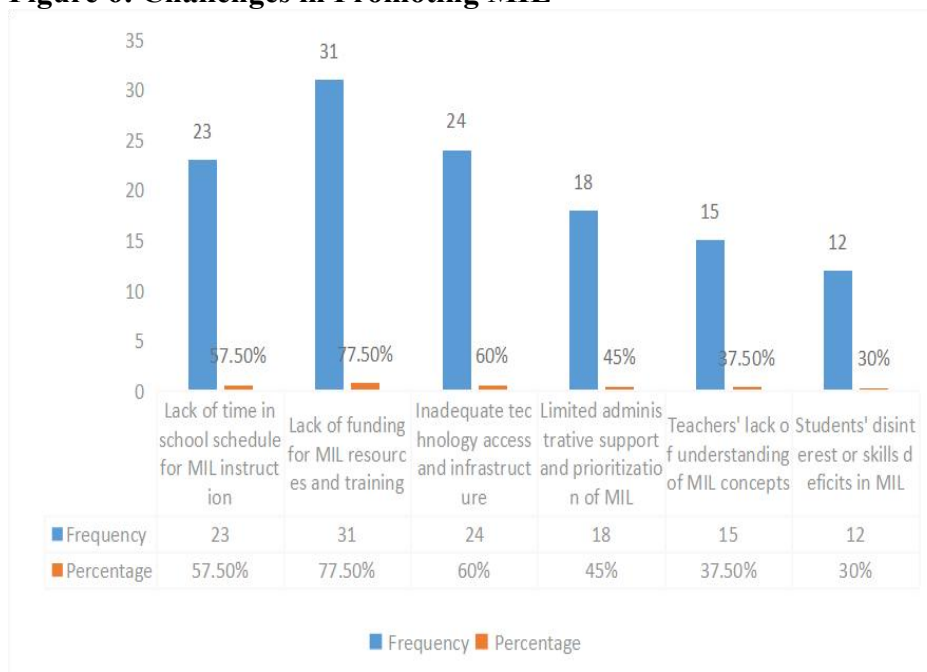


Source: Fieldwork, 2024

The most frequent collaboration methods, as shown in table 5 above, were MIL professional development provided to the staff (62.5%, 25) and co-planning of MIL integrated lessons (55%, 22). This mirrors AASL (2018) and Kammer et al. (2021)'s findings on the importance of school librarians as instructional partners. Guest teaching MIL skills in classrooms was less common, at 35% with 14 respondents, while serving on curriculum committees happened even less at 30% with 12, indicating that deeper curricular integration may face some barriers.

Challenges to Promoting MIL

Figure 6: Challenges in Promoting MIL



Source: Fieldwork, 2024

As revealed in table 4.5, the most common challenges reported were inadequate funding for MIL resources and training, with 77.5%, followed by inadequate access to technology and infrastructure, with 60% (24), and lack of time in the school schedule for MIL instruction, with 57.5% (23). These findings are consistent with barriers identified in Polizzi (2019) and Adedoyin (2022) such as scarcity of resources, underutilization of school librarians, and the fact that a school library is not compulsory in Nigeria.

Summary and Conclusion

This study assessed school librarians' practices for promoting MIL in Nigeria. The main findings are summarized as follows:

1. There is a recognition by the school librarians of the importance of MIL, with digital literacy classes, information literacy instruction sessions, and media literacy workshops as the most common promotion practices. In contrast, relatively low prevalence of practices such as maker spaces and collaboration with teachers on MIL curriculum integration set them apart.
2. As for collaboration, the school librarian has mainly been associated with providing professional development related to MIL to the teacher and administrator, co-planning MIL-integrated lessons, and

developing MIL guides and resources. While these are highly valued collaborative practices, the findings suggest there is room for increased collaboration through guest teaching in classrooms and active participation in curriculum committees to promote MIL.

3. On the question of training and skills, the responses from the librarians surveyed were equally split into two halves with one half having received some form of MIL training in the last two years, and another half not. The most common professional development opportunities reported were MIL seminars/conferences, webinars on MIL topics, and web-based self-paced online MIL training.
1. Major challenges identified by school librarians in the promotion of MIL in their institutions were: lack of funds for MIL resources and trainings, access to technology and inadequate infrastructure, and time in the school schedule for MIL instruction.

These present findings provide a clear implication for how school librarians in Nigeria are grappling with how best to advance the cause of MIL. Digital technique and information literacy instructions are somewhat routine, although more MIL involved curriculum and indeed library services are required. Collaboration with teachers is indeed on the rise but still needs strengthening, especially in relation to curriculum integration. There are professional development opportunities on the ground, although not all teachers of LIS respond to such opportunities, and there are some that remain unmet, especially international standards and guidelines. Amount of funding, the availability of infrastructure, and time allocated to school librarians also obstruct and act great challenges in pushing for effective MIL promotion by the school librarians.

Recommendations

It is based on these findings and conclusions that the following recommendations on the promotion practices of MIL are made for school librarians in Nigeria.

1. School management should make more funds and resources available for the implementation of MIL in schools, with adequate technology infrastructure and learning materials available.
2. School management should make available an explicit time slot within the school timetable for teaching and integration of MIL in all curriculum subjects.
3. School management should make provision for professional development of school librarians through training and retraining programmes.

4. School librarians, teachers, and administrators should engage in collaborative practices by using joint planning, co-teaching, and professional learning communities.
5. Increased efforts are required to sensitize school administrators about the relevance of MIL and the role of the school librarian in developing the same set of skills.

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**Assessment of Artificial Intelligence Literacy Among College of
Education Students with Hearing Impairment in Federal college of
Education (Special), Oyo, Oyo State**

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Abstract

This study examines the level of Artificial Intelligence (AI) literacy among college of education students with hearing impairments in the context of project writing at the Federal College of Education (Special), Oyo. The research highlights the potential of AI technologies in supporting students with disabilities by providing tools that facilitate project writing and learning processes. Through a descriptive survey, the study investigates students' familiarity with AI, their confidence and frequency in using AI tools, and the perceived benefits and challenges of these technologies. A stratified random sampling technique was employed and one hundred (100) students were selected for the study. Data for the study was collected using researchers developed questionnaire tagged assessing artificial intelligence literacy in project writing among students with hearing impairment (AAILPWQ). The research instrument was validated to ensure its reliability and validity. This process involved modification by experts in the fields of educational technology and special education to review the questionnaire. The data collected was analysed using descriptive statistics such as simple percentage. The researcher used frequency distribution tables to present the results. Findings indicate a general awareness of AI among students, but a significant gap exists between awareness and practical application. Challenges include limited accessibility of AI tools tailored to hearing impairments and inadequate support and training. Despite these challenges, many students recognize the role of AI in enhancing idea expression and improving project writing quality. The study emphasizes the need for targeted AI literacy training, curriculum integration, and collaboration between educators and developers to make AI tools more accessible and effective for the students with hearing-impairment. These findings underscore the importance of fostering AI literacy to enhance academic outcomes and inclusivity in education.

Keywords: Artificial Intelligence, College of Education, Literacy, Students with Hearing Impairment, Project Writing.

Introduction

The integration of Artificial Intelligence (AI) in education has transformed traditional teaching and learning methods, particularly in enhancing project writing skills among students, most especially students with hearing impairment. AI technologies, such as natural language processing (NLP) and machine learning algorithms, offer advanced tools that assist in generating, editing, and refining written content. These technologies have shown significant potential in supporting students with disabilities, including those with hearing impairments, by providing tailored feedback and facilitating more inclusive learning environments (Smith & Jones, 2022; Adeyemi, 2023).

Students with hearing impairment face unique challenges in educational settings, often requiring specialized instructional strategies and support services to achieve academic success. Traditional project writing tasks can be particularly daunting for these students due to potential difficulties in accessing verbal feedback and participating in collaborative learning activities. However, AI-driven tools can bridge these gaps by offering real-time, text-based feedback and enabling more effective self-directed learning (Miller & Clark, 2023; Okonkwo&Adeola, 2023).

Research indicates that AI literacy, defined as the ability to understand and utilize AI tools effectively, is crucial for maximizing the benefits of these technologies in educational contexts. AI literacy encompasses knowledge of AI principles, familiarity with AI applications, and the skills to critically evaluate and apply AI tools in various tasks, including project writing. Studies have shown that higher levels of AI literacy among students correlate with improved academic performance and increased confidence in using technology for academic tasks (Brown & Lee, 2023; Eze&Nwosu, 2023).

Despite the potential advantages of AI in education, there is a paucity of research focused specifically on AI literacy among students with hearing impairment in project writing contexts. Existing studies have primarily explored general educational outcomes or focused on other disabilities, leaving a gap in understanding the specific needs and experiences of students with hearing impairment. Addressing this gap is essential for developing targeted interventions and support mechanisms that can enhance the educational experiences and outcomes for this student population (Johnson & Wilson, 2022; Ugochukwu, 2022).

Statement of the Problem

The rapid advancement of Artificial Intelligence (AI) technologies has ushered in new opportunities and challenges in the educational sector,

particularly in enhancing the project writing skills of students. However, there remains a significant gap in AI literacy among college of education students, especially those with hearing impairments. These students face unique barriers in accessing traditional educational resources and feedback mechanisms, which can hinder their academic progress and project writing proficiency (Adeyemi, 2023). The lack of AI literacy exacerbates these challenges, as students with hearing impairments may not be fully equipped to utilize AI tools that could otherwise mitigate these difficulties (Okonkwo&Adeola, 2023). Understanding the current state of AI literacy among this demographic is crucial to developing effective educational strategies and support systems.-

Moreover, existing research has predominantly focused on the general application of AI in education, often overlooking the specific needs and experiences of students with hearing impairments. This oversight has led to a paucity of data and tailored interventions that address the unique challenges faced by these students in project writing contexts (Eze&Nwosu, 2023). As AI continues to evolve and become more integrated into educational practices, it is imperative to investigate how students with hearing impairment perceive and interact with these technologies. Such insights will provide a clearer understanding of the barriers to AI literacy and the potential benefits that AI tools can offer in enhancing their project writing skills (Ugochukwu, 2022).

Furthermore, without a comprehensive understanding of AI literacy levels among students with hearing impairment in colleges of education, educators and policymakers may struggle to design and implement effective curricula and support services. This gap in knowledge can result in missed opportunities to leverage AI for inclusive education, ultimately perpetuating educational inequities (Johnson & Wilson, 2022). Therefore, this study aims to fill this gap by conducting a descriptive survey of AI literacy in project writing among college of education students with hearing impairments. The findings will inform the development of targeted educational interventions and policies that promote AI literacy and support the academic success of students with hearing impairment, ensuring that they can fully benefit from the advancements in AI technology (Adeyemi, 2023).

Purpose of the Study

The primary purpose of this study was to investigate the current levels of Artificial Intelligence (AI) literacy in project writing among college of education students with hearing impairments. By conducting a descriptive survey, this research aims to uncover the extent to which these students understand, utilize, and perceive AI tools in their academic work. The

study seeks to identify the specific challenges and barriers faced by students with hearing impairment in acquiring and applying AI literacy, as well as the potential benefits that AI technologies can offer in enhancing their project writing skills. Ultimately, the findings will inform the development of targeted educational strategies and policies that promote AI literacy and support the academic success of students with hearing impairment.

Research Questions

The following research questions were generated for the study:

1. What is the current level of AI literacy among college students with hearing impairments in the context of project writing?
2. Which AI tools and technologies students with hearing impairment for project writing are utilizing, and how are they being applied?
3. How effective do students with hearing-impairment perceive AI tools to be in improving their project writing skills?
4. What challenges and barriers do students with hearing impairment face in acquiring and applying AI literacy for project writing?
5. What recommendations can be made for educators, policymakers, and technology developers to enhance AI literacy and support project writing among students with hearing impairment?

Research Methodology

This study adopted a descriptive survey research design to investigate the level of AI literacy among college of education students with hearing impairments, specifically focusing on project writing. Descriptive survey research is suitable for this study as it allows for the collection of detailed data regarding the current state of AI literacy and its impact on project writing. This design involves gathering quantitative data through structured instruments and analyzing it to describe the characteristics, attitudes, and experiences of the participants (Cohen et al., 2018). The descriptive approach will provide insights into the effectiveness of AI tools and the challenges faced by students with hearing impairments in using these tools for project writing.

Sample and Sampling Techniques

The study focused on students with hearing impairments at Federal College of Education Special, Oyo. The sample consists of a representative group of students enrolled in various programs at the college. A stratified random sampling technique was employed to ensure that different departments and levels of study are adequately represented. This technique involves dividing the population into distinct sub-groups (strata) based on characteristics such as program of study or academic level, and then randomly selecting samples from each stratum (Creswell & Creswell,

2018). This approach ensures that the sample is representative of the entire population of students with hearing impairment at the institution. Sample sizes of one hundred (100) students were selected to ensure sufficient data for analysis.

The primary research instrument for this study was structured questionnaire developed specifically for the purpose of assessing AI literacy in project writing among students with hearing impairment. The questionnaire consisted of both closed-ended and Likert-scale questions to capture quantitative data on the students' familiarity with AI tools used for project writing, the frequency and extent of their use of these tools, their perceptions of the effectiveness of these tools in supporting their project writing and the challenges they face in using AI tools.

The research instrument was validated to ensure its reliability and validity. This process involved modification by experts in the fields of educational technology and special education to review the questionnaire. The instrument was piloted with a small group of students with hearing impairments from a different institution. The reliability of the questionnaire was assessed using Cronbach's alpha to ensure internal consistency. A Cronbach's alpha coefficient of 0.70 or higher was considered acceptable (Field, 2018).

The data collected was analysed using descriptive statistics such as simple percentage. The researcher used frequency distribution tables to present the responses to closed-ended questions.

Presentation of Results

What is the current level of Artificial Intelligence literacy among college students with hearing impairment in the context of project writing?

Table 1: Artificial Intelligence literacy and Usage

	Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	Understanding of AI	60%	35%	5%	0%
2.	Familiarity with Artificial Intelligence tools for project writing	40%	50%	10%	0%
3.	Confidence in using Artificial Intelligence tools	20%	25%	35%	20%
4.	Regular use of Artificial Intelligence tools for academic work	10%	35%	50%	5%
5.	Artificial Intelligence literacy is important for academic success	40%	50%	10%	0%

From the table 2 above 60% of respondents strongly agreed and 35% of the total respondents agreed to have a strong understanding of AI, while with only 5% disagreeing, showing a good foundational knowledge of AI. 40% of the respondents strongly agreed and 50% of the respondents agreed that they are familiar with Artificial Intelligence tools for project writing on the other hand 10% disagreed with this assertion. Moreover, 20% of the respondents strongly agreed and 25% of the respondents agreed that they are confident in using Artificial Intelligence tools meanwhile 35% disagreed and 20% strongly disagreed. In addition, 10% strongly agreed and 35% of the respondents agreed on regular use of Artificial Intelligence tools for academic work while 50% disagreed and 5% strongly disagreed. Moreover, 40% strongly agreed and 50% of the respondents agreed that Artificial Intelligence literacy is important for academic success. Contrarily 10% of the respondents disagreed with this assertion.

Research Question 2: Which AI tools and technologies are being utilized by students with hearing impairment for project writing, and how are they being applied?

Table 2: Artificial Intelligence literacy and Usage

	Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
6.	Use of speech-to-text Artificial Intelligence tools	10%	50%	40%	0%
7.	Use of AI-based grammar and spell-check tools	35%	60%	5%	0%
8.	Employing AI for generating ideas and organizing	15%	25%	35%	25%
9.	AI translation tools for content production	10%	40%	45%	5%
10.	Use of Artificial Intelligence tools for gathering research materials	20%	10%	25%	45%

From the table above, the response to use of speech to text Artificial Intelligence tools shows that 10% of the respondents strongly agreed and 50% agreed while 40% disagreed. 35% strongly agreed and 60% agreed to the use of AI-based grammar and spell-check tools while only 5% of the respondents disagreed. On the response to employing AI for generating ideas and organizing, 15% of the respondents strongly agreed and 25% of the respondents agreed while 35% disagreed and 25% strongly disagreed. 10% of the respondents strongly agreed and 40% of the respondents agreed that AI translation tools for content production on the other side, 45% of the respondents disagreed and 5% of the respondents strongly disagreed. On response to the use of Artificial Intelligence tools for gathering research materials 20% of the respondents strongly agreed and 10% agreed while

25% of the respondents disagreed and 45% of the respondents strongly disagreed.

Research Question 3: How effective do students with hearing-impairment perceive AI tools to be in improving their project writing skills?

	Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
11.	AI improves quality of project writing	15%	40%	40%	5%
12.	AI speeds up project writing	30%	35%	30%	5%
13.	Reliability of Artificial Intelligence tools for writing assistance	15%	25%	35%	25%
14.	AI helps in clearer idea expression	55%	40%	5%	0%
15.	Overall satisfaction with Artificial Intelligence tools	20%	30%	45%	5%

From the table above, 15% of the respondents strongly agreed and 40% agreed with the assertion that AI improves quality of project writing while 40% disagreed and 5% of the respondents strongly disagreed with the assertion. 30% of the respondents strongly agreed and 35% agreed that AI speeds up project writing meanwhile 30% of the respondents and 5% disagreed and strongly disagreed respectively. In addition 15% of the respondents strongly agreed and 25% of the respondents agreed on the reliability of Artificial Intelligence tools for writing assistance while 35% of the respondents disagreed and 25% of the respondents strongly disagreed. 55% of the respondents strongly agreed and 40% agreed that AI helps in clearer idea expression while 5% of the respondents disagreed with this assertion. 20% of the respondents strongly agreed and 30% of the respondents agreed with overall satisfaction with Artificial Intelligence tools on the other hand, 45% of the respondents disagreed and 5% strongly disagreed with this assertion.

Table 4: Satisfaction and Challenges with Artificial Intelligence tools

Research Question 3: What challenges and barriers do students with hearing impairment face in acquiring and applying AI literacy for project writing?

	Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
16.	Difficulty accessing Artificial Intelligence tools	10%	15%	25%	50%
17.	Artificial Intelligence tools compatible with hearing impairment needs	35%	20%	45%	0%
18.	Challenges understanding	20%	20%	25%	35%

	Artificial Intelligence tools				
19	There is a lack of support and training available for using AI tools in project writing.	10%	40%	45%	5%
20	I often experience technical issues when using AI tools for my academic work.	20%	10%	25%	45%

10% of the respondents strongly agreed and 15% of the respondents agreed having difficulty accessing Artificial Intelligence tools while 25% of the respondents disagreed and 50% of the respondents strongly disagreed that they are not having difficulty accessing Artificial Intelligence tools. 35% of the respondents strongly agreed and 20% of the respondents agreed that Artificial Intelligence tools are compatible with hearing impairment needs while 45% disagreed. 20% of the respondents strongly agreed and 20% of the respondents agreed they have challenges understanding Artificial Intelligence tools while 25% of the respondents disagreed and 35% of the respondents strongly disagreed. 10% of the respondents strongly agreed and 40% of the respondents agreed that there is a lack of support and training available for using AI tools in project writing. On the other side, 45% of the respondents disagreed and 5% of the respondents strongly disagreed. On response to experiencing technical issues when using AI tools for my academic work, 20% of the respondents strongly agreed and 10% agreed while 25% of the respondents disagreed and 45% of the respondents strongly disagreed.

Table 4: Recommendations and Support for Artificial Intelligence literacy

Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
21. More training programs on Artificial Intelligence literacy	20%	55%	25%	0%
22. Integration of Artificial Intelligence tools into curriculum	10%	55%	35%	0%
23. Policymakers should ensure Artificial Intelligence tools are affordable	20%	50%	30%	0%
24. Artificial Intelligence tools should be designed for hearing impairment	10%	50%	40%	0%
25. Collaboration between educators and developers	15%	55%	25%	5%

From the table above 20% of the respondents strongly agreed and 55% of the respondents agreed that there should be more training programs on Artificial Intelligence literacy while 25% of the respondents disagreed with this recommendation. 10% of the respondents strongly agreed and 55% of

the respondents agreed that there should be integration of Artificial Intelligence tools into curriculum while 35% of the respondents disagreed. 20% of the respondents strongly agreed and 50% of the respondents agreed that policymakers should ensure Artificial Intelligence tools are affordable while 30% disagreed. 10% of the respondents strongly agreed and 50% of the respondents agreed that Artificial Intelligence tools should be designed for hearing impairment meanwhile 40% of the respondents disagreed with this recommendation. 15% of the respondents strongly agreed and 55% of the respondents agreed that there should be collaboration between educators and developers whereas 25% of the respondents disagreed and 5% of the respondents strongly disagreed with this recommendation.

Discussion of Findings

This study shows that there is general Artificial Intelligence awareness among students with hearing impairment because a significant majority of 95% agreed with the artificial Intelligence literacy and this indicate they have a good understanding of what AI is. This shows that Artificial Intelligence literacy is not a foreign concept among the students.

The high level of Artificial Intelligence literacy observed among students with hearing impairment (95% agreeing with literacy) mirrors findings in broader educational studies. According to Zhang et al. (2022), Artificial Intelligence literacy is increasingly being integrated into modern education systems, and students are becoming more aware of AI through exposure to technology in everyday life and education. In particular, accessible AI applications are gaining popularity among students with disabilities, which contributes to their familiarity with such tools .The gap between AI awareness and practical application (as evidenced by only 20% confidence in using Artificial Intelligence tools for project writing) is similarly reported by Ferguson et al. (2021), who found that while many students are familiar with AI technologies, their confidence in using them effectively for academic purposes remains low. This is particularly true among students with disabilities, where the complexity of Artificial Intelligence tools, coupled with insufficient training, limits regular usage . Another study by Gori et al. (2021) also highlighted the disparity between the familiarity and effective use of Artificial Intelligence tools, especially when it comes to more complex tasks like project writing .

The accessibility challenges faced by students with hearing impairment, where 35% strongly agree that Artificial Intelligence tools are not compatible with their needs, reflect broader concerns about inclusivity in AI development. According to Antoniou et al. (2023), accessibility remains a key barrier for students with disabilities, as many Artificial Intelligence tools do not adequately cater to diverse needs such as sensory impairments .

A recent report by the World Health Organization (2021) emphasized the importance of developing assistive AI technologies that are universally designed and accessible to all students, including those with hearing impairment . The need for more targeted training, as indicated by 55% of respondents, aligns with findings from Seale (2020), who advocates for the incorporation of specialized training programs to address the unique challenges students with disabilities face when engaging with AI technologies .

Despite the challenges, the fact that 55% of students believe Artificial Intelligence tools help them express ideas more clearly is supported by research from Shinohara & Wobbrock (2022), which found that assistive AI technologies can be empowering for students with disabilities, particularly by enhancing their communication and expression. However, the varied satisfaction levels (20% strongly satisfied, 45% disagreeing) are echoed by Bourke (2023), who points out that while Artificial Intelligence tools provide substantial benefits, their inconsistent accessibility features and lack of tailored support often leave users dissatisfied.

The demand for more AI training (55% agreement on curriculum integration) is consistent with broader calls for the integration of Artificial Intelligence literacy into education. McKnight et al. (2021) argue that AI should be incorporated into the mainstream curriculum, especially for students with disabilities, as it plays a crucial role in enhancing learning outcomes. Additionally, collaboration between educators and AI developers to improve accessibility has been highlighted by Kelly et al. (2023), who suggest that co-designing Artificial Intelligence tools with input from disabled users is vital for improving usability. The study further revealed that there is mixed confidence and usage of Artificial intelligence among students with hearing impairment while many students are familiar with Artificial Intelligence tools, the confidence in using these tools for project writing (20% strongly agree, 35% disagree) and the regular use of Artificial Intelligence tools (only 10% strongly agree) indicate a gap between awareness and practical application.

This study shows that there is Challenges with Accessibility and Support. A major challenge expressed is the lack of compatibility of Artificial Intelligence tools with their hearing impairment needs (35% strongly agree). This aligns with the finding that 50% of respondents struggle to access the Artificial Intelligence tools they need. There is also a clear demand for more training on Artificial Intelligence tools, with 55% agreeing that there should be more programs. The study also revealed that there is satisfaction with artificial intelligence tools: Despite the challenges, 55% feel that Artificial Intelligence tools help them express ideas more

clearly. However, satisfaction with Artificial Intelligence tools is varied, with 20% strongly satisfied but 45% disagreeing with overall satisfaction.

This study also revealed Support for Artificial Intelligence Literacy among students with hearing impairment. The results show a clear need for more training and integration of AI into the curriculum (55% agree on both counts). Additionally, collaboration between educators and technology developers is needed to enhance the accessibility and functionality of Artificial Intelligence tools, especially for students with hearing impairment.

Summary

The research revealed that while 95% of students demonstrated AI literacy, only 20% felt confident using AI tools for project writing, with 50% rarely utilizing them. Major challenges included the lack of compatibility between AI tools and hearing impairment needs, alongside accessibility issues. Despite these barriers, 55% of students reported that AI tools improved their ability to express ideas, underscoring the need for enhanced training and curriculum integration.

Conclusion

The findings of this study indicate that while AI literacy is prevalent among students with hearing impairments, there remains a significant gap between awareness and practical application of these tools in project writing. Students express moderate satisfaction with AI tools, particularly in their ability to facilitate idea expression. However, challenges such as limited access to AI tools that cater to hearing impairments and a lack of confidence in using AI for academic purposes persist.

Recommendations:

1. **Increase AI Literacy Training:** Educational institutions should provide more targeted training programs to improve the confidence and skills of students with hearing impairments in using AI tools for academic purposes.
2. **Curriculum Integration:** AI literacy should be integrated into the curriculum, ensuring that students with hearing impairments are equipped with the necessary skills to leverage AI technologies effectively.
3. **Collaboration for Accessibility:** Policymakers, educators, and AI developers should collaborate to ensure that AI tools are accessible and specifically designed to accommodate the needs of students with hearing impairments.
4. **Enhanced AI Tool Accessibility:** Developers should focus on creating AI tools that are compatible with hearing impairments,

making them more user-friendly and effective for students with disabilities.

5. **Affordable AI Tools:** Policymakers should work to ensure that AI tools are affordable and accessible to students, reducing financial barriers to AI technology adoption in education.

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Collaborative Partnerships With Stakeholders For School Librarians

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Abstract

Collaboration is a vital component of effective school library programs, fostering student learning, teacher effectiveness, and community engagement. This study examines the concept of collaboration in school libraries, highlighting its benefits, challenges, and standards for implementation. Effective collaboration involves shared goals, mutual respect, open communication, co-planning, co-teaching, and co-assessment. School librarians play a pivotal role in developing and sustaining collaborative partnerships with teachers, administrators, parents, and community members. The study identifies internal, external, interpersonal, organizational, and technical challenges to collaboration and proposes strategies for overcoming these obstacles. Standards for collaboration in Nigerian school libraries are outlined, emphasizing shared vision, communication, curriculum integration, professional development, assessment, community engagement, resource sharing, technology integration, inclusive partnerships, and continuous improvement. The study concludes that collaboration enhances student learning outcomes, teacher effectiveness, and community engagement, and recommends its adoption as a cornerstone of school library programs.

Keywords *Collaboration, School Libraries, Student Learning, Teacher Effectiveness, Community Engagement, Partnerships, and Standards.*

Introduction

Collaboration is the process of uniting with others to achieve a common purpose. It entails sharing resources, insight and skills to generate something innovative to solve a problem and fine-tuning decision process to arrive at a conclusion. It brings about enhanced remediation, improved innovation, better resourcefulness and decision-making, increased productivity, good communication and interaction. Collaboration in school libraries involves shared goals, mutual respect, open communication, co-planning, co-teaching, co-assessment and inspiring the learning environment (Leung et al, 2020). This synergy enables librarians to serve as tutoring partners, information specialists and learning environment administrators.

Collaborative partnerships within stakeholders in school libraries refers to a process in which teachers, parents, administrators, community members,

and educational organizations are involved in planning, creating and developing good learning experiences, opportunities, resources, environment and expertise works together with school librarians to deliver exceptional services to school library users. The purpose of the above is to enhancing student learning outcomes, integrating digital resources, and improving library services. The Stakeholders in school libraries includes teachers, parents, school administrators, local communities and government agencies that plays essential roles in encouraging inclusive and equitable education for students using the library.

Collaboration between school librarians and stakeholders are indispensable for promoting student learning, information literacy, and school-community engagement, as they foster mutual understanding, shared goals, and strategic communication; by establishing and sustaining effective partnerships, school librarians can enhance their impact on student learning and literacy development, cultivate a supportive school community and drive student success. Collaboration in school libraries is a powerful catalyst for student success, enhancing academic achievement, information literacy, and teacher effectiveness. By embracing collaborative practice, librarians and educators can create vibrant learning environments that support student success (Garrison et al, 2019)

An overview of collaboration

Collaboration is a dynamic and interactive process that enables individuals and organizations to pool their resources, expertise and knowledge to achieve shared objectives by fostering open communication, mutual respect and collective responsibilities; collaboration promotes innovation, creativity, and problem-solving Effective collaboration is underpinned by several key characteristics, including shared goals, mutual respect, open communication, active listening, shared decision-making, collective responsibility, flexibility, and adaptability (AASL, 2018). Trust, emotional intelligence, and conflict resolution skills also play critical roles in successful collaborative endeavours (Eri and Phil, 2017). Collaboration manifests in various forms, including interdisciplinary, inter-organizational, intergenerational, international, and virtual collaborations (Donahay, 2019). Each type presents unique opportunities and challenges, requiring adaptability and a willingness to navigate diverse perspectives and expertise.

Furthermore, collaboration in school libraries is an active and deliberate partnership between librarians, teachers, administrators, and stakeholders, fostering curriculum-aligned instructional programs that promote student learning, information literacy, and academic achievement (American Association of School Librarians, 2020). By integrating library resources

and services, collaboration enhances teacher effectiveness, supports diverse learning needs and cultivates 21st-century skills. Research highlights the benefits of collaboration, including enhanced student learning outcomes, improved information literacy skills, increased teacher confidence, better resource utilization, and support for diverse learning needs (Kammer et al, 2020).

Effective collaboration requires shared vision and goals, open communication, mutual respect and trust, flexibility, shared responsibility, active listening and collaborative planning (International Federation of Library Associations and Institutions, 2016). These characteristics foster a supportive environment where in developing shared vision and goals with stakeholders ensures unified purpose and direction, aligning library objectives with national educational standards (National Education Association, 2020). This collaborative approach enhances student learning outcomes. Open communication facilitates transparent partnerships, fostering mutual understanding and trust among stakeholders. Regular meetings, workshops, and joint planning ensure effective collaboration. Mutual respect and trust form the foundation of successful collaboration, promoting empathy, active listening, and conflict resolution (AASL, 2024). Furthermore, collaborative planning and decision-making which involves shared responsibility empowering stakeholders to contribute to library programs and services thereby enhancing community engagement.

Consequently, collaborative school librarians need to possess effective communication skills, strong interpersonal skills, flexibility, emotional intelligence, leadership, creativity, and technological literacy (National Education Association, 2020). These traits facilitate successful partnerships. Collaborative school libraries also require supportive administrative climates, collaborative cultures, flexible scheduling, adequate resources, technology infrastructure, and professional development opportunities (International Federation of Library Associations and Institutions, 2016). These organizational characteristics foster effective collaboration. Subsequently, collaborative school library programs involve needs assessment, collaborative planning, curriculum integration, information literacy instruction, technology integration, assessment, and continuous improvement (UNESCO, 2015).

These process characteristics ensure student-centred programs.

Stakeholders and collaborative activities in school libraries in school libraries

School libraries serve diverse stakeholders and are categorised into internal, external, educational, support, partnership and policy making stakeholders. Internal stakeholders are students, teachers and administrators; they form

the core internal stakeholder group, influencing library programs and services (International Federation of Library Associations and Institutions, 2016). Their interests and needs shape library policies. Teachers play a vital role in curriculum integration, instructional design and technology adoption, impacting library services (National Education Association, 2020). Collaborative planning with teachers enhances information literacy instruction. School administrators, including principals and assistant principals, make strategic decisions influencing library resources, budget, and personnel (UNESCO, 2015). Their support is crucial for library initiatives. While external stakeholders who are the parents, community members, educational institutions, vendors and local businesses, also contributes to library programs and services, their engagement enhances library relevance. Parents advocate for library services and provide feedback and resources and their involvement fosters community engagement.

While community should partner with public libraries, bookstores, vendors and educational resource providers expand resource sharing, promoting literacy and lifelong learning. Consequently, educational stakeholders who are curriculum specialists, instructional coaches and technology specialists support library instruction, enhancing teacher effectiveness. The support stakeholders who are the school counsellors, library aides and social workers who provides essential support, ensuring student well-being and library efficiency. The policy-making stakeholders are the school board members, district administrators and government officials who shape education policy, influencing school library funding and programs (Donahay, 2019).

School librarians play pivotal roles in supporting student learning, teaching information literacy and promoting literacy development, thereby fostering a learning environment that encourages academic achievement, critical thinking, and lifelong learning (American Association of School Librarians, 2018). The effectiveness of school librarians centres on their ability to collaborate with stakeholders, including teachers, administrators, parents, and community members, to provide relevant and effective library services aligned with the curriculum and educational goals of the school (International Federation of Library Associations and Institutions, 2015).

Collaboration is a cornerstone of effective school library programs, promoting student success, teacher effectiveness and community engagement. School librarians engage in various collaborative activities to support curriculum development, literacy, research, technology integration and community outreach such as instructional collaborations (Co-Planning and teaching) in which school librarians collaborate with teachers to co-

plan and co-teach information literacy skills, integrate technology and assess student learning outcomes (International Society for Technology in Education, 2020); this synergy enhances teacher effectiveness, student engagement, and academic achievement. Also, literacy collaborations, such as book clubs, author visits and reading challenges, foster a love of reading, improve literacy skills, and promote lifelong learning (National Education Association, 2020). These initiatives engage students, parents, and community members in the joy of reading. The research collaborations involve project-based learning, inquiry-based research, and citation support, developing critical thinking, problem-solving, and information literacy skills (Journal of School Library Research, 2019).

These partnerships enhance student research skills, academic achievement, and college readiness. Moreover, technology collaborations focus on digital citizenship education, online safety and technology integration, ensuring students navigate the digital landscape effectively (International Society for Technology in Education, 2020). These initiatives promote digital literacy, online responsibility and technology-enabled learning. Community collaborations, including family literacy nights, author talks, and volunteer opportunities, engage parents and community members in student learning is another way of collaborating in the library; these partnerships foster a sense of community, promote literacy, and support student success. Professional development collaborations provide teachers, librarians and administrators with opportunities for growth, focusing on technology integration, literacy, and research skills, these workshops enhance teacher effectiveness, librarian leadership and administrative support. Another collaborative activity in school libraries is the student-centred collaborations, such as student-led book clubs, peer-to-peer tutoring and student library advisory boards; it empower students to take ownership of their learning and foster student engagement, motivation and academic achievement. Assessment collaborations involve collaborative assessment development, shared evaluation criteria and data-driven decision making, ensuring student learning outcomes are measured effectively (Journal of School Library Research, 2019).

Interlibrary loan programs, joint programming and collaborative collection development between school and public libraries enhance resource sharing; Community outreach and engagement benefit from these partnerships. These partnerships inform instruction, improve student achievement, and promote accountability. Collaborative activities in school libraries are essential for fostering student success, teacher effectiveness, and community engagement. By engaging in these partnerships, school librarians create vibrant learning environments that support academic achievement, literacy, and lifelong learning.

Effective collaboration strategies in school libraries

Effective collaboration is a cornerstone of successful school library programs, fostering student learning, teacher effectiveness, and community engagement. School librarians play fundamental roles in developing and implementing collaborative strategies that promote academic achievement and educational excellence. Some of these strategies involves having good communication strategies for successful collaboration by having regular meetings between school librarians, teachers and administrators which facilitates shared planning, goal-setting and open communication, clear role definitions, active listening and feedback ensure seamless collaboration and effective problem-solving. Integrated lesson planning and collaborative curriculum development enable school librarians and teachers to co-teach information literacy skills, integrate technology and assess student learning outcomes; this mutual approach enhances student engagement, academic achievement and teacher effectiveness.

Also, trust building, shared values and respectful environments foster strong relationships between school librarians, teachers and administrators; while empathy, understanding and celebrating successes and challenges solidify these partnerships. Flexible library scheduling, collaborative planning time, and common planning periods facilitate co-planning, co-teaching, and assessment (School Library Journal, 2020). Virtual meetings and collaborations ensure uninterrupted communication and cooperation. Joint professional development opportunities, workshops, training sessions and conference attendance enhance school librarians' expertise and foster collaborative practice (American Library Association, 2020).

Mentorship programs and reflective practice promote continuous improvement. Digital citizenship education, information literacy instruction, online resource sharing, and virtual collaborations facilitate technology-supported instruction and collaborative learning is another strategy that can be employed with collaborative assessment development, shared evaluation criteria and regular progress monitoring to ensure data-driven decision-making and continuous improvement of school library users. Also, culturally responsive partnerships, inclusive programming, diverse resource selection, accessibility, and social-emotional learning support foster inclusive learning environments (American Association of School Librarians, 2020). Establishing clear goals, fostering open communication, defining roles, providing ongoing support and evaluating collaborative efforts ensure successful partnerships; therefore, effective collaboration strategies in school libraries enhance student learning outcomes, teacher effectiveness and community engagement. By implementing these strategies, school librarians will be able to create vibrant learning environments that support student success.

Benefits of collaboration in school libraries

Collaboration with stakeholders is a vital component of effective school library programs, fostering student learning, teacher effectiveness and community engagement. By working together, school librarians, teachers, administrators, parents and community members can create vibrant learning environments that support student success. Collaboration in school libraries enhances student learning experiences by providing access to diverse resources, promoting information literacy skills and developing critical thinking and problem-solving abilities; this prepares students for future careers and lifelong learning. Teacher-librarian collaboration improves teaching effectiveness by integrating technology, developing curriculum and supporting diverse learners; this partnership fosters professional growth, increases confidence in technology integration, and enhances teacher leadership. Furthermore, collaboration with administrators enables school librarians to develop school-wide information literacy programs, allocate resources effectively, and support strategic initiatives (Journal of School Library Research, 2019). This partnership enhances teacher effectiveness, student achievement, and community relationships. Parent-librarian collaboration increases parental involvement in children's education, promotes lifelong learning and fosters community engagement it supports school initiatives, enhances community cohesion and advances social justice.

Collaboration enhances the relevance and visibility of school librarians, providing opportunities for teaching, leadership and professional growth thereby promoting resource sharing, supports diverse learners and fosters a sense of community. Collaboration fosters improved communication, problem solving and decision making among valuesp0 enhances resource sharing, efficiency and a stronger sense of community. Moreover, collaboration enhances the academic reputation of schools, increases funding opportunities and promotes community engagement, this partnership supports strategic initiatives, advances social justice and fosters institutional identity. The society also benefits from collaboration in school libraries because it prepares future-ready citizens, promotes lifelong learning and supports economic development (American Association of School Librarians, 2020). This partnership enhances community cohesion, advances social justice, and fosters equity. Collaboration with stakeholders in school libraries is essential for enhancing student learning outcomes, teacher effectiveness, and community engagement. By working together, school librarians can create vibrant learning environments that support student success and advance social justice.

Challenges of collaborating with school libraries stakeholders

Collaboration with stakeholders is a vital component of effective school library programs, yet it poses numerous challenges identifying and addressing these challenges is crucial for fostering successful partnerships and enhancing student learning outcomes. From literature, the challenges of collaboration are classified majorly into internal, external, interpersonal, organisational and technical challenges. School librarians face internal challenges, including scheduling conflicts, communication barriers, and differing priorities (International Society for Technology in Education, 2020). Effective time management, clear communication and shared goal-setting can mitigate these obstacles. External challenges, such as administrative support, teacher workload, and community engagement, require strategic planning and partnership-building (National Education Association, 2020).

Regular communication, professional development opportunities, and community outreach initiatives can foster collaborative relationships. Interpersonal challenges, includes building trust, managing conflicts and navigating cultural diversity, demand empathetic and inclusive leadership (Journal of School Library Research, 2019). Active listening, open communication and cultural sensitivity training can promote harmonious partnerships. Organizational challenges, such as institutional policies, bureaucratic decision making and evaluation metrics, necessitate flexibility, creativity, and data-driven decision-making (School Library Journal, 2020). Collaborative planning, policy analysis and outcome based evaluation can facilitate effective partnerships. Technological challenges, including infrastructure, digital divide and cyber-security concerns, require proactive planning, digital literacy training and robust technical support (International Society for Technology in Education, 2020). Some other challenges that may be encountered includes communication breakdowns, lack of trust, different priorities, limited resources and scheduling conflicts.

However, in order to overcome these challenges, school libraries and librarians need to establish clear goals of the library, foster open communication with stakeholders, give room for shared decision making, define roles of each stakeholder, provide ongoing support for library user and constantly evaluate collaborative efforts. The place of having regular meetings with stakeholders with flexible scheduling and active listening should not be taken with levity. There is need to always celebrate success and to accept challenges in good faith while solution is unanimously proffered; proactive planning, effective communication, trust-building, flexible planning, creative resource allocation, conflict resolution, strategic partnership-building, giving regular updates and open communication channels can help in overcoming any impediment.

Standards for collaboration in Nigerian school libraries

Effective collaboration with stakeholders is crucial for Nigerian school libraries to promote student learning, teacher effectiveness, and community engagement (Nigerian Library Association, 2020). These standards provide a framework for school librarians to develop and sustain collaborative partnerships which are:

Shared Vision and goals for school library programs:- Nigerian school librarians should develop a shared vision and goals for school library programs with stakeholders, aligning library objectives with national educational standards. This collaborative approach ensures unified purpose and direction.

Communication and partnerships for success:- Establishing open communication channels and fostering partnerships with teachers, administrators, parents and community members is vital for successful collaboration. Regular meetings, workshops and joint planning facilitate effective partnerships.

Curriculum integration for information literacy:- Collaborating with teachers to integrate information literacy into the curriculum enhances student learning outcome. Curriculum-aligned library programs and services support academic achievement.

Professional development for librarians and teachers:- Providing professional development opportunities for librarians and teachers promotes technology integration, information literacy and pedagogical excellence. Collaborative training enhances teacher-librarian partnerships.

Assessment and evaluation for continuous improvement:- Collaborative assessment and evaluation ensure data-driven decision-making, informing library programs and services (Nigerian Library Association, 2020). Regular evaluation and feedback facilitate continuous improvement.

Community engagement for social responsibility:- Engaging with parents and community members through library programs fosters social responsibility, promoting literacy and lifelong learning. Partnerships with local organizations and institutions enhance community outreach.

Resource sharing for efficiency:- Collaborative resource sharing policies and practices optimize resource utilisation, supporting teaching and learning. Inter-library loan services and expertise sharing enhance resource accessibility.

Technology integration for digital literacy:- Collaborating with educators to integrate technology into library programs develops digital literacy skills among students and staff (American Association of School Librarians, 2020). Technology-enabled learning enhances academic achievement.

Inclusive and diverse partnerships:- Fostering inclusive partnerships with diverse stakeholders addresses diverse learning needs, promoting

equity and social justice. Cultural sensitivity and responsiveness ensure inclusive library programs.

Continuous improvement for excellence:- Regular evaluation and feedback facilitate continuous improvement, ensuring library programs and services meet stakeholder needs. Collaborative planning and reflection promote excellence.

Conclusion

Collaboration is essential for effective school library programs, fostering student learning, teacher effectiveness, and community engagement. School librarians play a vital role in developing and sustaining collaborative partnerships with stakeholders. By embracing collaborative practice, librarians and educators can create vibrant learning environments that support student success.

Recommendations

1. School librarians should do the followings:
2. Develop, shared vision and goals with stakeholders.
3. Establish open communication channels and foster partnerships.
4. Collaborate with teachers to integrate information literacy into the curriculum.
5. Provide professional development opportunities for librarians and teachers.
6. Engage with parents and community members through library programs.
7. Develop inclusive partnerships with diverse stakeholders.
8. School Administrators should:-
9. Provide support for collaborative library programs.
10. Allocate resources for library development.
11. Foster a culture of collaboration within the school.
12. Encourage teacher-librarian partnerships.
13. Policy Makers should:
14. Develop policies supporting collaborative library programs.
15. Allocate funding for library development.
16. Promote national educational standards for library programs.
17. Future Research
18. Investigate the impact of collaboration on student learning outcomes.
19. Explore effective strategies for building trust among stakeholders.
20. Examine the role of technology in facilitating collaboration.
21. Nigerian Context
22. Establish national standards for school library programs.
23. Provide professional development opportunities for librarians.
24. Encourage collaboration between school librarians and educators.
25. Develop inclusive partnerships with diverse stakeholders.
26. Allocate resources for library development.

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School Libraries and Future-Ready Skills Development

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Abstract

School libraries play a critical role in equipping students with future-ready skills necessary for success in an increasingly complex, digital, and globalized world. By fostering a culture of inquiry, creativity, and collaboration, school libraries provide students with the tools to develop essential 21st-century skills such as critical thinking, information literacy, digital fluency, problem-solving, and communication. Through access to diverse resources, makerspaces, technology, and collaborative learning environments, librarians can support interdisciplinary learning and prepare students for careers in rapidly evolving fields. Additionally, school libraries promote lifelong learning, adaptability, and innovation, helping students navigate an ever-changing landscape. As education shifts toward personalized learning and digital integration, school libraries serve as dynamic hubs that facilitate the development of the knowledge, skills, and mindsets students need to thrive in the future workforce.

Keywords: *Future Ready Skills, School Libraries, Development*

Introduction

As the world becomes increasingly complex and technology-driven, the role of education in preparing students for the future is more critical than ever. The rapid pace of change, including technological advancements, globalization, and evolving job markets, requires students to develop a wide array of future-ready skills. Skills that enable them to adapt, innovate, and thrive in an unpredictable and dynamic environment. School libraries, as integral components of educational institutions, are uniquely positioned to facilitate the development of these skills.

Historically, school libraries have been viewed as quiet spaces for reading and research. However, their role has evolved significantly over the past few decades. Today's school libraries are dynamic hubs of learning, collaboration, and exploration. They serve as gateways to the digital world, provide access to a vast array of information resources, and foster critical thinking and creativity. This conference paper explores the key role school libraries play in the development of future-ready skills, the challenges they face, and strategies to maximise their potential in preparing students for the 21st century.

Therefore, the specific objectives of this paper are to:

1. identify the types of future-ready skills promoted within school library settings.
2. highlight the challenges faced by school libraries in integrating future-ready skills.
3. propose best practices for maximising the potential of school libraries in fostering such skills.

Future-ready skills, often referred to as 21st-century skills, encompass a broad set of competencies that are essential for success in modern society and the future workforce. These skills can be grouped into several key areas:

Critical Thinking and Problem-Solving: The ability to analyse complex situations, think critically, and devise solutions to real-world challenges.

Creativity and Innovation: The capacity to think creatively, generate new ideas, and innovate in a variety of contexts.

Information Literacy and Digital Fluency: The skill of effectively locating, evaluating, and using information, coupled with proficiency in digital tools and platforms.

Collaboration and Communication: The ability to work effectively in teams, communicate ideas clearly, and build productive relationships.

Adaptability and Flexibility: The capacity to adapt to new situations, learn continuously, and manage change in a rapidly evolving world.

Leadership and Responsibility: The skill of leading others, taking responsibility for actions, and contributing positively to communities and organizations.

School libraries play a critical role in developing these future-ready skills by providing access to resources, fostering collaborative learning, and encouraging a culture of inquiry and exploration.

Literature review

The transformation of school libraries from quiet, resource-based spaces to dynamic, innovative hubs of learning has been widely documented in recent years. This shift reflects the growing need to prepare students with future-ready skills, a broad set of competencies essential for success in the 21st century, including critical thinking, digital literacy, creativity, collaboration, and adaptability. The role of school libraries in cultivating these skills has become a subject of increasing scholarly interest. This literature review synthesizes key studies and research on the contribution of school libraries to future-ready skills development, examining the roles they play, challenges they face, and the strategies that have been proposed to maximize their impact.

The Evolving Role of School Libraries

Traditionally, school libraries were places for passive learning, where students accessed physical books and resources for research or recreational reading. However, as technology and educational practices have evolved, so too has the function of the library. According to Kuhlthau, Maniotes, and Caspari (2015), libraries are no longer simply places for book borrowing, but instead, are becoming centres of inquiry and innovation where students engage in active learning and knowledge creation. This change has been accelerated by the integration of digital tools and resources, which have expanded the capabilities of school libraries to support diverse modes of learning. School libraries now serve as spaces where students can develop future-ready skills, particularly in areas such as critical thinking, problem-solving, and collaboration (Farmer, 2017). As libraries adopt makerspaces, digital learning environments, and collaborative study areas, they foster an atmosphere conducive to the hands-on, experiential learning that is essential for building these skills.

Critical Thinking and Information Literacy

One of the key contributions of school libraries to future-ready skills development is the promotion of critical thinking and information literacy. As early as 1990, Eisenberg and Berkowitz introduced the Big6 Model, which emphasizes the process of research and information problem-solving as essential competencies for students in the information age. This model underscores the library's role in teaching students how to locate, evaluate, and ethically use information.

More recently, studies have demonstrated the growing importance of information literacy in the digital era, where students are confronted with a flood of information and misinformation online. According to Herring (2011), school libraries are instrumental in teaching students how to discern credible sources, evaluate evidence, and critically analyse the information they encounter, whether through academic research or personal digital experiences. Information literacy has been identified as one of the most essential future-ready skills, empowering students to navigate the complexities of the digital world (American Association of School Librarians [AASL], 2018).

Digital Literacy and Technological Fluency

As the digital landscape continues to expand, school libraries are playing a critical role in fostering digital literacy and technological fluency. Stripling (2014) notes that libraries are central to integrating technology into education, providing students with access to digital tools, platforms, and resources that enable them to engage in creative problem-solving and exploration. Technologies such as coding platforms, 3D printing, and

virtual reality are becoming increasingly common in school libraries, offering students the opportunity to develop technical skills alongside traditional research abilities.

According to Loertscher, Koechlin, and Zwaan (2011), the presence of technology in school libraries also supports the development of digital fluency, (DF). DF is the ability to use digital tools confidently and effectively for a wide range of tasks, from simple research to complex project-based learning. Digital fluency goes beyond technical know-how; it encompasses the ability to critically assess digital information, collaborate in online environments, and use technology as a tool for innovation (Walsh, 2017). School librarians play an essential role in guiding students through these new digital environments, teaching them to use tools like online databases, digital collaboration platforms, and content creation software.

Creativity and Innovation: Makerspaces and Innovation Hubs

A significant body of research has explored the role of makerspaces and innovation hubs in fostering creativity and innovation within school libraries. Makerspaces, defined as collaborative environments where students can engage in hands-on experimentation with tools like robotics kits, 3D printers, and crafting supplies, are rapidly gaining popularity in schools around the world. Martinez and Stager (2013) argue that these spaces promote creative problem-solving and help students develop an entrepreneurial mindset by allowing them to experiment, take risks, and learn from failure.

Makerspaces also encourage interdisciplinary learning, as students are often required to integrate knowledge from multiple subjects to complete projects. According to Oliver (2016), this experiential approach to learning is crucial for developing future-ready skills such as adaptability, critical thinking, and innovation. By providing students with opportunities to engage in design thinking and real-world problem-solving, makerspaces help bridge the gap between theory and practice, preparing students for the demands of the future workforce.

Collaboration and Communication

The ability to collaborate effectively and communicate ideas clearly is recognized as a key 21st-century competency. School libraries, with their flexible spaces and focus on student-centered learning, are well-suited to foster these skills. Elkins (2018) highlights the library's role as a space for collaborative learning, where students can work together on projects, share resources, and exchange ideas. Group study areas, project-based learning activities, and digital collaboration tools provided by school libraries allow students to practice working in teams, developing communication and

leadership skills that are essential for success in both academic and professional environments. Research by Trilling and Fadel (2009) suggests that these collaborative experiences also build interpersonal and cross-cultural skills, enabling students to work effectively in diverse groups and communicate across cultural boundaries; an increasingly important competency in today's globalised world.

Challenges Facing School Libraries in Future-Ready Skills Development

Despite their critical role, school libraries face several challenges in contributing to future-ready skills development. Funding constraints are one of the most significant barriers, limiting the ability of libraries to invest in new technologies, makerspaces, or professional development for librarians. Research by Todd (2015) points out that many school libraries lack the resources necessary to fully implement programs that support future-ready skills, particularly in underserved or underfunded schools. Additionally, staffing issues pose challenges for some school libraries. Without full-time, trained librarians, it becomes difficult to deliver the kind of consistent, high-quality instruction and support that is needed to develop future-ready skills. Farmer (2017) emphasizes the need for ongoing professional development for school librarians to ensure they are equipped with the latest instructional strategies and technological tools.

Strategies for Maximising Impact

The literature also offers several strategies for maximizing the impact of school libraries in developing future-ready skills. First, advocacy is crucial. Research by Lance and Kachel (2018) suggests that school librarians must advocate for their role in future-ready skills development by engaging with administrators, teachers, and policymakers to secure the funding and support necessary for library programs. Partnerships with community organizations, public libraries, and local businesses can also provide valuable resources and support for school libraries. Professional development for librarians is another critical factor. According to McCracken (2020), ongoing training in digital tools, makerspace management, and instructional strategies is essential for ensuring that librarians can effectively support students in developing future-ready skills. Collaboration with teachers to integrate library programs into the curriculum can also strengthen the library's role in supporting interdisciplinary learning and skill development.

The literature on school libraries and future-ready skills development demonstrates that libraries are playing an increasingly important role in preparing students for the demands of the 21st century. Through the promotion of information literacy, digital fluency, creativity, collaboration,

and critical thinking, school libraries are helping students build the competencies they need to succeed in a rapidly changing world. However, challenges such as funding constraints and staffing issues persist, necessitating continued advocacy and support for school libraries. By addressing these challenges and leveraging the potential of school libraries as hubs of innovation and learning, educators can ensure that students are well-equipped with the future-ready skills needed to thrive in the digital age.

According to the literatures reviewed, the role of school libraries in developing future-ready skills are as follows: fostering critical thinking and information literacy, supporting digital fluency and technological proficiency, encouraging creativity and innovation through makerspaces, promoting collaboration and communication, developing adaptability and lifelong learning and leadership and responsibility. These roles of school libraries would have been perfectly achieved, if not because of the few challenges facing the school libraries in future-ready skills development. The challenges include: limited funding and resources, lack of staff and expertise, resistance to change and inequitable access to technology.

Strategies for Maximizing the Role of School Libraries in Future-Ready Skills Development

To overcome these challenges and maximize their impact, school libraries can adopt several strategies:

Advocacy and Collaboration: Librarians must advocate for the importance of future-ready skills and the role of the library in developing them. By collaborating with teachers, administrators, and community stakeholders, librarians can align library programs with school-wide goals and gain support for initiatives that foster critical thinking, creativity, and digital literacy.

Professional Development for Librarians: Ongoing professional development is essential for librarians to stay informed about new technologies, instructional strategies, and trends in education. This training allows librarians to effectively integrate future-ready skills into library programming and provide students with relevant, up-to-date learning experiences.

Partnerships and External Funding: Libraries can seek out partnerships with local businesses, community organizations, and technology providers to enhance their offerings. External funding, through grants or donations, can help libraries acquire the tools and resources needed to support future-ready skills development.

Incorporating Future-Ready Skills into Curriculum: Libraries should collaborate with teachers to integrate future-ready skills into the curriculum across all subject areas. This might involve co-teaching lessons, designing

research projects, or creating interdisciplinary activities that engage students in critical thinking, problem-solving, and collaboration.

Fostering an Inclusive Environment: School libraries must ensure that all students have access to the tools, resources, and learning opportunities necessary to develop future-ready skills. This includes providing support for students with disabilities, offering programs that engage underrepresented groups in STEM, and addressing the digital divide by offering access to technology and training for all students.

Therefore, school libraries are fundamental in shaping the educational experiences that prepare students for the future. By nurturing the development of critical thinking, creativity, collaboration, and digital literacy, school libraries are equipping students with the future-ready skills they need to succeed in a rapidly changing world. While challenges such as funding limitations, staff shortages, and inequitable access to technology persist, school libraries can overcome these obstacles through advocacy, collaboration, and innovative strategies. As education continues to evolve, the role of the school library will remain vital in creating a culture of learning, exploration, and innovation that empowers students to thrive in the 21st century. These future-ready skills not only enhance student learning but also prepare them for the challenges of a digital, interconnected world.

Examples of Future-ready Skills

Future-ready skills are those that prepare individuals to adapt and thrive in a rapidly changing world, especially in an increasingly digital and interconnected environment. Some key examples are:

Digital Literacy - The ability to use digital tools, software, and platforms effectively, including familiarity with emerging technologies like AI, cloud computing, and blockchain.

Data Analysis and Interpretation - Skills in analysing, interpreting, and drawing insights from large sets of data are crucial across many industries.

Emotional Intelligence (EQ) - The ability to understand, manage, and navigate relationships, both personal and professional, is increasingly important in leadership roles and teamwork.

Complex Problem-Solving - The capacity to tackle complicated, novel problems that require creative and analytical thinking.

Adaptability and Agility - Being flexible and quick to learn new skills as industries and technologies evolve.

Critical Thinking - The ability to objectively analyse information to make informed decisions, anticipate challenges, and solve issues effectively.

Cultural Competency - Understanding and navigating diverse environments and perspectives in a globalized world.

Coding and Programming - Knowledge of programming languages like Python, JavaScript, or SQL helps build and interact with software and technology.

Leadership and Teamwork - The ability to lead, manage projects, and work collaboratively in teams is critical, especially in agile, project-based settings.

Innovation and Creativity -Thinking outside the box and coming up with new ideas, products, or processes to drive progress. These skills will help professionals stay competitive and adaptable as industries evolve in the future.

Research Methodology

The methodology of this paper followed a literature review approach to explore the role of school libraries in fostering future-ready skills development. This qualitative research design systematically collects, analyse, and synthesise existing literature on the subject, providing an in-depth understanding of how school libraries contribute to equipping students with the skills required to thrive in a rapidly evolving world. The literature review was used to gather data from diverse academic and professional sources. The process includes: Searching academic databases, such as Google Scholar, to find relevant peer-reviewed articles, books, and reports on school libraries and future-ready skills. Specific search terms were employed, such as "school libraries," "future-ready skills," and "school library programs. Studies and articles published within the last 10 years (2013–2024) were considered for this conference paper. Studies outside the scope of school libraries, such as those focused exclusively on public or university libraries.

The data analysis will be conducted using a thematic synthesis approach, which involves identifying and coding themes across the reviewed literature. The following steps will be taken:

Data Extraction: Key information will be extracted from each source, including the study's purpose, methodology, key findings, and implications for school libraries and future-ready skills development.

Thematic Analysis: The extracted data were grouped into themes related to: The specific skills fostered by school libraries (e.g., digital literacy, information literacy, critical thinking). The role of library programs and activities in skill development (e.g., makerspaces, digital literacy workshops, collaboration projects). Challenges faced by school libraries (e.g., funding, access to technology, staff training). The integration of technology and resources to support skill development. The findings from different studies were synthesized to provide a comprehensive overview of the role school libraries played in fostering future-ready skills.

Ethical Considerations

Since this study involves secondary research based on published literature, no direct interaction with human participants is required, and there are no ethical risks related to participant confidentiality or consent. However, proper citations and adherence to intellectual property rights will be maintained throughout the research to ensure the ethical use of sources.

Interpretation and Presentation of Results

All literature reviewed were relevant to the subject matter. These articles were accepted papers from peer-reviewed and journal articles published in reputable journals and their methodologies were academically renowned. According to the literature reviewed, it was revealed that school library has evolved from just a commonplace where books are borrowed in the past to a more magnificent hub where diverse activities (inquiry and Innovations) are taken place. (Farmer, 2017 and Kuhlthau et. al., 2015) identified school libraries as spaces where future-ready skills were developed. The literature reviewed revealed that the importance of school libraries cannot be over-emphasised in preparing students for future-ready skills through their roles as professionals. The table below highlights the school librarians' roles in fostering future-ready skills.

Table 1: - Future-ready skills fostered by school libraries

S/NO	FUTURE-READY SKILLS FORSTERED BY SCHOOL LIBRARIES	SOURCES
1 2 3 4 5 6	Critical thinking and information literacy Information literacy and digital fluency Creativity and innovation Adaptability and flexibility Collaboration and communication Leadership and responsibility	(Trilling and Fadel, 2009; Oliver, 2016; Martinez and Stager, 2013)

The literature reviewed also revealed that future-ready skills not only enhance students' academic performance, but also enable students to thrive in the 21st century technology savvy and prepare them for the challenges of a digital interconnected world. This study also revealed different types of future-ready skills that are necessary educational advancement. This is evident in table 2 below.

Table 2: Types of future-ready skills

S/NO.	FUTURE-READY SKILLS PROMOTED WITHIN SCHOOL LIBRARY SETTINGS
1	Digital Literacy
2	Data Analysis and interpretation
3	Emotional Intelligence (EQ)
4	Complex Problem-solving
5	Adaptability and agility
6	Critical Thinking
7	Cultural competency
8	Coding and programming (Python, Java script, SQL)
9	Leadership and Teamwork
10	Innovation and creativity

Despite the fact the school libraries are willing to promote future-ready skills among students and pupils, there were limitations militating against their efforts. Integrating future-ready skills in school libraries presents several challenges, especially as the role of libraries evolves to support a digitally driven, information-rich society. These future-ready skills, such as critical thinking, digital literacy, problem-solving, and collaboration, are essential for preparing students for the demands of the 21st century. However, school libraries often face a range of barriers that hinder their ability to fully integrate and support the development of these skills (AASL, 2018). Here are some of the key challenges:

Limited Funding and Resources –

Budget Constraints: Many school libraries operate with limited financial resources, which restricts their ability to invest in new technologies, digital tools, and training programs necessary to promote future-ready skills.

Inadequate Infrastructure: A lack of modern infrastructure, such as up-to-date computers, tablets, reliable internet access, and digital resources, limits students' ability to practice and develop digital literacy and information skills.

Outdated Technology

Obsolete Equipment: Many school libraries rely on outdated technology that cannot support the interactive, multimedia, and digital tools required to teach future-ready skills.

Digital Divide: In some regions, students may not have access to personal devices or high-speed internet at home, creating disparities in their ability to use library resources effectively for learning and skill development.

Staffing and Professional Development

Lack of Specialized Staff: School libraries may not have enough qualified librarians or media specialists trained in the latest digital tools, instructional strategies, and information literacy frameworks.

Need for Ongoing Training: Librarians need continuous professional development to keep pace with emerging technologies and instructional

methodologies. However, training opportunities are often limited by budget or administrative support.

Curriculum Alignment

Integration Challenges: Integrating future-ready skills into the school curriculum can be difficult if there is no clear alignment between the library's resources and the school's broader educational goals.

Lack of Collaboration: Collaboration between librarians and classroom teachers is essential to ensure that students are learning the necessary digital and research skills across disciplines. However, in many schools, this collaboration is either minimal or absent.

Inadequate Support from Administration

Administrative Prioritization: In some schools, library programs are not seen as a priority by school administrators, leading to underfunding and a lack of institutional support for initiatives aimed at building future-ready skills.

Policy and Advocacy: There may be a lack of policy framework or advocacy at the school or district level to prioritize the integration of information literacy and future-ready skills within the library's mission.

Changing Role of Libraries

Traditional Perceptions: Libraries are often still seen as places solely for physical books and quiet study, rather than dynamic centres for learning, collaboration, and digital exploration. This traditional perception can limit the integration of forward-thinking, tech-driven learning experiences.

Role Ambiguity: As libraries evolve into hubs of digital learning and media production, there can be confusion or resistance about their changing role, both among staff and within the larger school community.

Balancing Print and Digital Resources

Resource Allocation: While digital tools and resources are critical for teaching future-ready skills, libraries must still balance their print and digital collections. Striking the right balance between traditional and modern resources can be challenging, especially with limited budgets.

Digital Overload: As schools increasingly move toward digital content, there is a risk of overwhelming students with too much technology, making it difficult for them to focus on building critical thinking and information literacy skills.

Addressing Diverse Student Needs

Equity in Access: School libraries must cater to students with varying levels of digital proficiency and access to technology at home. Bridging the digital divide and ensuring all students have equal opportunities to develop future-ready skills can be difficult in resource-strapped schools.

Special Education and Diverse Learning Styles: Integrating future-ready skills for students with special needs or those who require alternative learning approaches can require specialized tools and strategies that some school libraries are not equipped to provide.

Rapid Technological Changes

Keeping Up with Trends: The fast pace of technological advancement means that school libraries are constantly trying to keep up with new tools, platforms, and instructional practices. Adapting to these changes while maintaining quality services is a continuous challenge.

Future-Proofing Resources: Investing in technologies that will remain relevant in the long term is difficult, given the rapid obsolescence of many digital tools and platforms.

Assessment and Evaluation of Future-Ready Skills

Measuring Impact: There is often a lack of clear, standardized methods for assessing how well students are developing future-ready skills within the library setting. Without proper metrics, it can be difficult to demonstrate the value of library programs in fostering these skills.

Student Engagement: Ensuring that students are actively engaged and motivated to participate in future-ready skill development can be a challenge, particularly if they view the library as a secondary or optional resource in their education.

While school libraries play a crucial role in fostering future-ready skills such as digital literacy, critical thinking, and collaboration, they face significant challenges in fully integrating these competencies into their programs. Addressing issues such as funding constraints, outdated technology, insufficient staffing, and the need for curriculum alignment will be essential in empowering school libraries to become central to 21st-century learning. Investing in these areas will ensure that school libraries can meet the evolving needs of students and prepare them for success in a digitally-driven world.

Additionally, for school libraries to maximise its potential in fostering future-ready skills requires a multi-faceted approach that addresses both infrastructure and instructional strategies. The literature reviewed revealed some best practices such as:

Enhance Technological Infrastructure through update of digital tools and resources. School libraries should ensure that the libraries have up-to-date computers, tablets, e-readers, and reliable internet access to facilitate digital literacy and access to educational resources. Libraries can be centres for learning how to use coding platforms, digital content creation tools, and interactive learning apps. They must Incorporating technologies like 3D printers, virtual reality (VR), and robotics kits allows students to engage

with hands-on learning experiences that develop critical thinking, creativity, and problem-solving skills .

Develop a collaborative teaching approach by integrating future-ready skills in to curriculum. Librarians should collaborate with teachers to embed digital literacy, critical thinking, and research skills into subject areas such as science, social studies, and language arts. Collaborative lesson planning between librarians and teachers is essential for meaningful integration of these skills . School librarians can act as instructional coaches, helping teachers integrate technology into their teaching practices. Librarians can offer workshops or one-on-one coaching to develop teachers' confidence in using digital tools, ensuring they effectively teach future-ready skills

Promote student engagement and digital literacy by creating digital citizenship programs. where students would be taught about safe, ethical, and effective use of technology, including how to navigate the internet responsibly, evaluate online sources, and protect their privacy. These skills are foundational for becoming informed and responsible digital citizens . Inquiry-Based learning should be offered to encourage students to engage in self-directed learning projects that promote critical thinking, creativity, and problem-solving. This can involve using both physical and digital resources to conduct research, synthesize information, and create presentations

Expand access to diverse learning resources such as access to e-books, audiobooks, databases, and multimedia resources. This allows students with different learning styles and preferences to engage with content in ways that suit them best. Libraries can also offer digital storytelling and multimedia production tools . School libraries should provide equitable access to technology for all students, including those who may not have internet or digital devices at home. Extending library hours or offering take-home devices can bridge the digital divide and ensure all students can develop future-ready skills

Continuous professional development for librarians. Librarians should engage in regular professional development to stay up to date with emerging technologies, instructional strategies, and digital tools. Joining professional organizations and attending conferences or webinars can help librarians acquire new skills and strategies for supporting students in a rapidly changing educational landscape

Foster a library culture of innovation and exploration with the use of Makerspaces. Libraries should develop makerspaces where students can

experiment with coding, robotics, engineering, and other STEM activities. These spaces encourage creativity and collaboration, which are key future-ready skills. Libraries could be environments where students feel encouraged to explore, take risks, and learn from failures. A growth mindset culture helps foster resilience, problem-solving, and a passion for learning, all of which are vital future-ready skills

Assessment and evaluation are key to measuring skill development. Hence, implement systems for evaluating students' progress in future-ready skills. This can involve formative assessments, digital portfolios, or peer feedback mechanisms that provide students with opportunities to reflect on their learning and growth . By addressing these key areas, school libraries can play a transformative role in equipping students with the future-ready skills necessary to thrive in an increasingly digital and interconnected world.

Limitations of the Study

The research is limited to available literature sources.

The exclusion of non-English studies restricted the inclusion of international perspectives.

As a literature review, this research will not provide new empirical data but rather rely on the synthesis of existing knowledge.

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Factors Affecting the Reading Habits of Minors in Nigeria: A Literature Review

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Abstract

Reading has been identified as a spring through which knowledge is acquired. However, it has been observed that there is lack of enthusiasm among minors in Nigeria. This has largely contributed to the poor performance in their general examination such as WAEC and NECO. The objectives of this study were to identify the factors affecting minors and also highlight the challenges militating against the reading habits of minors. Minors in this study include children and teenagers. The study showed that availability of reading materials, access to a wide range of reading materials, parental involvement, availability of reading materials, peer influence, the increasing use of technology, the curriculum in schools among others. The challenges faced on reading habits include the family background of students, lack of reading materials; lack of functional libraries in most of the schools surveyed and a similar lack of trained librarians or teacher librarians among others. Recommendations made included

Keywords: *Reading campaigns , Parents, pupils, Primary schools*

Introduction

Reading and academic achievements are interrelated and dependent on each other. Students often come from different environments and localities with different levels of academic achievement. Therefore, they differ in the pattern of reading habits before entering into a formal school setting; each student has acquired a unique array of background knowledge and learning experiences through the social interactions he/she has experienced in multiple environments. Much of student knowledge and experiences are gained through interactions beginning at home. Parents hold great responsibilities in raising their child and in becoming their child's first teacher. As the child's first teacher and role model, parents face the important task of having conversations, providing certain experiences and creating a literacy rich environment within the home that fosters and aids in a child's language acquisition and social and emotional development. A child does not become literate on his own. The child should receive help from parents and teachers. For this reason, the first teacher the child has is the parents and his first school is the home. The parents must bestow love

for learning in the child and guide him to persevere on his own. To want to learn is more important than to teach.

Reading is a complex process that involves cognitive, physical, intellectual, cultural, and linguistic processes. Research shows that learners who read extensively tend to accomplish a high level of academic achievement (Hassan, LatiffAzim, Muhammad & Abdullah, 2021). Reading is an attempt to comprehend the writer's message for personal growth and success in the relevant fields. Thus, psychologists consider it a multifaceted cognitive process of constructing meanings from texts, (Abid, Aslam, Alghamid & Kumar, 2023). It requires integrating information within and across text units ranging from the individual word to phrases and sentences, to paragraphs and chapters, to complete articles and books. The cognitive components of reading comprehension have been rigorously tested (Elleman & Oslund, 2019). Reading is a spring in which knowledge is acquired. A complex process involving the whole individual in active coordination to secure meaning for printed text, graphics, or symbols. It is also a specialized skill that involves several skills.

Habit is a fundamental part of living (Ibrahim, 2014). It is that activity which is done effortlessly. Habits are routine and repetitive behavior. They are not instinctive like hunger or thirst. Therefore, good habits towards a task may lead students in the right direction, as the saying goes "habits die hard". Therefore, to develop good reading habits, students need to be exposed to reading strategies. The activity of reading is regarded as a habit when it is repeatedly carried out. Reading habits are measured in terms of amount of materials read, frequency of reading as well as average time spent on reading (Abeyrathna, Phas & Zainab, 2004). Reading habits is a well-planned and deliberate pattern of study which has attained a form of consistency on the part of students toward understanding of subjects. It could be nurtured at an early age (Babalola, 2020). Reading is an essential tool for knowledge transfer and the habits of reading is an activity that increases skills in reading strategies.

The habit of reading is a pattern in which an individual organizes his reading. To know about the world and its environment, a child helps himself through reading books, newspapers, and other magazines. Once the child has been taught to read and has developed a love for books, he can explore for himself the wealth of human experiences and knowledge through reading. Children, who miss the opportunity of getting in touch with books in their early stages of life, find it hard to acquire good reading habits in their later years. Reading habits is a behavior that expresses the liking for reading of individual types and tastes for reading (Ramatu et al., 2015). Having reading habit in students is very necessary, because one of

the most important factors of education is the ability to read, understand and critically apprehend the text. However for student to be able to inculcate reading habits he/she must develop the habits of reading on daily basis. In addition, reading and reading habits is understood to be almost the same, but nevertheless, it is important to introduce children to reading very early in life even before the child steps into school. This way the children can perceive reading as a means of enjoyment, self – development, and learning. This is because it is widely believed that enterprise of developing reading habits has to start at the early part of a child's life and that there should be a conducive reading environment to stimulate lifelong reading.

Parenting is the single largest variable implicated in childhood learning process, reading, literacy development, numeracy, punctuality, school interest, academic achievement and mental stability. It plays a potential role in overcoming learning problems in children and the adolescent population. Therefore, increasing precise knowledge of the parenting concept is a great necessity. The contemporary concept of the role and contribution of parents in a way rejects the so called single direction of influence of the parents on their children's development, replacing it with an intense interaction of three factors such as; the child, the parent and the wider social environment (Ceka & Murati, 2016).

This interaction is constantly being seen as a mutual influence and process moving from the parent to the child and the other way round, which as such triggers a variety of factors which in one way or another may impact the children's development and education, in both, positive as well as negative sense. It is an undeniable fact that parents are the ones who brought the children to life; they are the ones who reproduce the human kind in a given society, as in this way they contribute to the development of human history. Parents or family as a whole, are one of the direct holders of educational work.

Parental engagement and motivation consists of partnerships between families, schools and communities, raising parental awareness of the benefits of engaging in their children's education, and providing them with the skills to do so Emerson et.al (2012). Parental engagement and motivation can be conceptualized as behaviors and statements reflecting involvement in and approval or encouragement of students reading activities, emitted with or without the intention of promoting those students reading motivation and activity. Parental engagement and motivation for reading includes factors such as the availability of reading materials in the home, parental reading behavior, and the frequency of reading to the child. Reading enrichment activity at home has a significant positive influence on students' reading achievement.

Greater parents' engagement can be associated with stronger pre-literacy skills and literacy experiences during the preschool years were associated with subsequent reading achievement. Parent's reading attitudes and behaviors can also be related to children's reading achievement. Parental beliefs about reading are not only an important key to understanding the variety of activities in which parents engage with their young children but also in relation to preschool children's language and reading competencies. Parents have the more major role to play in cultivating the young ones into reading habits which help them to mature and to be responsible citizens. This difficult responsibility not only give rise to providing the children under their care with the right quotient and mix of relevant skills, character and civic exposure in order to be able to take over the responsibilities that time has destined for them, but also, and even more critical – is the task of teaching the child to conduct relevant investigations and research in all fields to solve social, political and technological problems. To achieve this, a child must be well equipped with good reading habits.

According to Tella and Akande (2007) ability to read is at the heart of self-education and lifelong learning and that it is an art capable of transforming life and society. The importance of reading cannot be overemphasized because no learning activity or situation can occur without reading. However, one of the greatest problems in education is that reading has become a real tool for acquiring knowledge in all areas of human life. Therefore, knowledge acquisition is based on the ability to read and interpret materials correctly. This does not deny that knowledge can be acquired without reading it. Although people read for many reasons, studies have shown that sometimes, especially in developing countries, students' reading habits are low because reading is not considered a leisure activity as it is not part of children's social interactions (Babalola, 2020).

Ezeala (2020) submitted that students have low interest towards reading and the majority of these students do not know how to read well, and thus, they are faced with reading challenges amid examination periods. Students still struggle with reading skill acquisition even after secondary school education. This has led to their total dependence on teachers note for their success even at higher degree levels. Failure to succeed in these exams has left many in bad health conditions which can lead to death, mental and permanent disability. Beyond educational achievement, parental engagement and motivation is associated with various indicators of student's development. These include: more regular school attendance, better social skills, improved behavior, better adaptation to school, increased social capital, a greater sense of personal competence and efficacy for learning. It is on this note that this study is designed to

investigate parental engagement and motivation as determinant to reading habits of secondary school students.

Reading is an essential tool for learning exchange and the habit of reading is an academic activity that builds abilities in reading methodologies. In recent times, lack of cultivating the habits of reading has been the concern of all the stakeholders in education sectors. The lack of enthusiasm of secondary school students for reading has contributed to many failures such as poor writing and a limited understanding of what they are taught in class. Research has shown that students who read extensively are likely to achieve good academic performance (Mwangi & Bwire, 2020; Petrus & Shah, 2020). Other studies have seemed to discover and elucidate the various ways in which secondary school students in Nigeria could develop the habits of reading amidst divergent distractions around them especially in the 21st century society as well as the roles of stakeholders towards enhancing the reading habits of secondary school.

Statement of the Problem

There are so many benefits attached to reading among children reading, however, many students are always reluctant to engage in reading activities during their early adolescence (Traux, 2010). This has resulted into poor performance in general examination such as West African Examination Council (WAEC), National Examination Council (NECO), NABTEB and JAMB over the years. Research findings such as Ajayi, (2012); Alawiye, Owolabi, and Olagesin, (2012); and Bamidele, (2017) have shown that there is poor reading culture among school children in Nigeria. Samuel (2019) traced the increase in failure till 2019 and discovered that about 80% of students usually fail WAEC examination every year. The poor performance of the students may be due to students' attitude towards their reading and reading habits. Hence, this study.

Objectives

The objectives of this study are to:

1. identify the factors affecting the reading habits of minors in Nigeria
2. highlight the challenges militating against reading habits of minors in Nigeria

Literature Review

Narrative paradigm theory was propounded by Walter Fisher in 1984 and was adjusted in 1987. It stresses the effectiveness of influence through narration, that is, persuasion through storytelling. Using a more subjective theoretical orientation, Fisher argues that human beings are fundamentally storytelling creatures; therefore, the most persuasive or influential message is not that of rational fact, but instead a narrative that convinces us of

“good reasons” for engaging in a particular action or belief (Hinampas, 2021). The concept gives the relative definition of humans as the beings whose storytelling competencies are top notch. A human can adequately bypass a message more diligently and effectively using communications theories. The narrative paradigm theory explains that the storytelling capabilities of human beings are, greater important when giving clarifications more than when supplying convincing ideas about a certain situation matter which has crucially been incorporated in human inventive and communication lifestyles (Mark 2021).

Definitions of parenting are not explicit in the domains of instruments used to measure it. Most studies have explained parenting in relation to the phenomenon of concern by using various terms and conceptual bases that represent the meaning and attributes of the parenting concept, such as parenthood, child-rearing, childcare, parental role and function, parent-child relationships, family process, and socialization (Virasiri, Yunibhand & Chaiyawat, 2011). These varied terms can be confusing for people because of the real meaning and construct of these concepts and as a result, gaps in research in the area of parenting might occur.

Berg-Nielsen and Holsen (2013) opined that parenting is not the same as parenthood, which means to be a father or a mother who gives birth. It is a more comprehensive term than child rearing, and it is limited to the relationships between parents and children, whereas grandparents or relatives, as well as teachers, can take part only in child rearing practices. Certainly, parenthood means being a parent. However, parenting is more than that. Parenting is the function, role, and responsibility of the parent in the family unit that can imply the commitment of an individual or individuals to provide for the physical and psychosocial needs of a child. In particular, parenting means the role performed by a person that possesses parental status in order to suitably and positively enhances development in every aspect of their child’s life. It is the primary method used by parents for socializing children. Virasiri, Yunibhand and Chaiyawat (2011) posited that parenting is the most important factor in the learning and educational development of every society and the world.

Ilori and Abdulahi (2016) highlighted various roles of libraries in promoting reading habit as following: creating an enabling environment, provision of reading materials, library orientation programmes and motivation of students to be avid readers through literary competition and giving of prizes and other incentives. Ailakhu and Unegbu (2017) asserted that school librarians should continue and improve their reading promotional strategies the more, so that the impact will be overwhelmingly felt by all and sundry. Government has a significant role to play in

developing the reading habits of students in the nation. There is urgent need to re-design the school curriculum to emphasize the acquisition of reading skills, train and re-train teachers and adequately fund the school system for the sustainability of educational standards in Nigeria.

Akande and Oyedepo (2019) concluded in their study, that the reading habits of secondary students should be given rapt attention because of the imminent danger of losing reading habits in the era of information and communication technologies, where the use of social media sites is the order of the day. Their study also recommended that there must be a fixed time for reading a variety of reading materials that will appeal to students and that adopting different methods to arouse the interest of students could enhance their reading habits.

Bamidele and Ilshan (2019) stated in their research that in order to improve students' academic achievement in Nigeria, the government and some Non-Governmental Organizations (NGOs) organized workshops, seminars and quiz competitions to promote of reading habits/culture in Nigeria. In addition, the Nigerian Library Association (NLA), Ogun State Chapter, held a daylong interactive session with selected secondary schools. Among the activities of the day, were quiz competition and a lecture on career talk that aimed, among other goals, to arouse the reading habits of young ones (Nigerian Library Association, Ogun State Chapter, 2014). As well, in 2014 a keynote address at the opening ceremony of the National Conference/Annual General Meeting of Nigerian Library Association was titled "Restoring reading culture and use of library among young Nigerian adults: Implications for empowering citizens and Nigerian society".

Iloeje (2014) opined that every child must be encouraged to read and assist in becoming fully competent in reading so that they can succeed in school, succeed in life and become a responsible adult citizen. He further advised the students on their part to strive harder to ensure better performance. It is important to note that from the foregoing discussion, Non-Governmental Organizations (NGOs) have made many efforts to inculcate and sustain the reading habits among secondary school students. Reading is often simply referred to as communication between the mind and printed materials, which involves getting the meaning, message and thought. It enriches readers' imaginations and intellectual growth faster (Ibrahim, 2014). In other words, Reading can be explained as a practice of seeking knowledge, information or entertainment through written words. Knowledge and information can be acquired by reading books, journals, magazines and electronic resources. It helps reap one of the greatest virtues—the ability to understand and not condemn (Chettri & Rout, 2013). To fulfill numerous

types of knowledge processes, it is crucial to start reading at an early age to seek knowledge more effectually.

Kaur and Jawald (2018) conducted a research on a comparative study of Urban and Rural Reading Habits: problems of the rural reader. This study revealed that fewer quality academic reading materials, outdated collections, unwelcoming behavior of staff, less community involvement, poor library access, lack of photocopy printing services, less customers focus, lack of ICT services, flexibility in operating hours, requirements of staff training and internet access were the main problems affecting their reading habits. The ability to read is an art of self-education and lifelong learning which is capable of transforming life and society. Habits are an act done by people regularly as their daily activity even they don't know it is their habits because they do it regularly either consciously or unconsciously.

The Longman Dictionary of Applied Linguistics and Language Teaching (2010: 258) defines habit as a pattern of behavior that is regular and which has become almost automatic as a result of repetition. Reading habits can be identified as one of the factors that can serve as a mediators of students' achievement in education and life-long endeavour. It can be said to be a generic habits and can be successfully and sufficiently extended and nurtured both through family and educational institutions. It reflects the personal choice of material to be read as well as the time and place to read it. Interest in reading provides motivation for more reading. It suggests the sociological aspect of the reading process, the group of readers and patterns and types of behavior. Developing reading culture involves motivating students. It is very important to recognize that, parents, teachers, and librarians have vital roles to play among secondary school students to enable them to embark on voracious reading and developing good reading culture.

Dollah and Khan (2017) specified that reading habits play important role in enhancing students' academic performance in schools. In order to achieve successful academic performance among students, parents must give more attention to monitor their children's education progress at home. Parents provide a multidimensional role and are considered to be their child's first teachers and socializing agents (Weigel, Martin, & Bennett, 2006). They are caregivers that provide a nurturing environment where a child can feel safe, while providing the essential needs that motivate active reading within the child. Parents are the first educators the children come in contact with. They are the first teachers and role models for their children, and therefore have a strong influence on their learning. Impacting knowledge to the children through reading at the early stage adds a lot of meaning to

their lives (Whalley, 2017). There is a correlation and causal relationship between parental involvement and student motivation to read. In the correlation, motivation works more than any other relationship and this motivation come through the proactive reading involvement of parents with their child (Zaheer, Muhammed, Tariq & Chaudary, 2021). Reading makes them eager to explore things written in books as they grow older, thereby cultivating reading culture and learning about things, places, events and experience (Deal & Peterson, 2016). Therefore, parental involvement is vital in supporting a child's literacy development.

Eke (2017) argues that several researchers have affirmed that relationship between children's reading and their interactions with their parents have long been recognized as a significant factor in early childhood reading development. Nwokaogu (2016) affirmed that nature bestowed indispensable role in parents to support their children's early development of sustainable reading habits. Indian Department of School Education and Literacy (2021) opined that reading is the foundation of learning, which motivates children to read books independently, develops creativity, critical thinking, vocabulary and the ability to express both verbally and in writing. It helps children to relate to their surroundings and real life situation. Thus, there is a need for parents to be involved in programmes in which students read for pleasure and develop their skills through a process that is enjoyable and sustainable and which remains with them for life.

Anunobi (2022) solicited for parents' supports in the development of reading culture by challenging parents to join hands with the National Library of Nigeria to ensure that every Nigerian child reads a book, a sentence in (their) mother tongues or English language. She further stressed that the making of a great village, city or town starts small. Parents should not allow the candle of the library's light to extinguish. Pope and Galle (2016) also emphasized that parents must prioritize their involvement in reading campaigns in order to enhance delivering effective programmes that improve literacy attainment, attitudes and behaviours meant to develop, encourage and stimulate the reading culture of children.

Ogunrombi & Gboyega (1995) highlighted inhibiting factors: the family background of students where few homes are conducive to reading owing to noise and lack of reading materials; the lack of functional libraries in most of the schools surveyed and a similar lack of trained librarians or teacher librarians; the failure to provide library periods in schools; language teachers and shortage of equipment and resources for teaching reading skills; and a heavy reliance on school texts. Taking cognizance of all the aforementioned inhibiting factors, all educational stakeholders should be involved in developing and sustaining the reading habits of

secondary There are several factors that adolescent are faced which serve as a barrier towards cultivating good reading habits and thereby achieving greater academic achievement.

According to the research carried out by Ameyaw and Anto (2018) out of 104 respondents,(58.65%) expressed that the main factors that hinder their study is a lack of conducive home environment, followed by (16.35%) who revealed that inadequate novels/fiction in the school library while (13.46%) indicated a lack of reading materials at home. Alawiye, Owolabi, and Olagesin, (2012) revealed that among the factors indicated as a hindrance to the students' reading habits, lack of comprehension and television, social network and radio programs were rated higher by the students. In 2014, Ibrahim also reported that the Nigerian children and youths, and unfortunately the adults all over the world are today glued more to television than books. The films, T/V, video games, Facebook, and twitter, among others have completely taken the place of the book. A report by National Endowment for the Arts (2007) in United States revealed that mass media largely influences the reading habits of students nowadays and the environment is polluted by the constant bombardment of media contents which are not directed to encourage young people towards cultivating good and effective reading habits.

Bamidele (2017) examined the reading habits of senior secondary school students in Ogun State, Nigeria. The study aimed to determine the frequency and types of reading materials that students engaged with, as well as the factors that influenced their reading habits. The sample consisted of 968 students from three public senior secondary schools in Ogun State. She reported in her research that out of 968 respondents, 585(60.4%) of the respondents agreed that addition to social media mostly affect their reading, (%), Lack of reading materials in the schools and at home 566 (58.5%). Followed by television and radio programme 574 (59.3%), growing distractions of internet 567(58.6%). Also, 544(56.2%) indicated that the total absence of trained profession librarians/teachers to deliver lecture on reading, lack of seminar and workshop on reading skills 539(55.7%) while 423 (43.7%) of the respondents agreed that school library is not conducive for reading. Majority of the respondents confirmed that the above factors affecting reading habits.

In the research of Kowale (2015), he examined on the relationship of secondary school student students' background factors (family type, parents' income level, educational level, occupation and occupational designation) and their reading habits. He discovered the negative relationship between family type and reading habits, which implies that reading habits of students increases with irregularity of family and vice

versa. The implication of this is that students from irregular family such as polygamous and single parents' family are more favorably disposed to reading than those from regular monogamous family. A negative relationship was established between parents' educational level and reading habits, this implies that students' from lowly educated parents' are more favourably disposed to reading than those from highly educated parents and vice versa. This may be due to the fact that highly educated parents that are engaged in formal and cooperate businesses do not have time to monitor the reading habits of their children reading habits.

Also, negative relationship between parents' occupational designation and reading habits implies that students from highly designated parents are found not to exhibit favorable reading habits unlike their counterparts from lowly designated parental background. On the other hand, the positive relationship between family income and reading habits implies that the reading habits students' increase with increased family income. In other words, students from higher family income background are more favorably disposed to reading than those from low family income backgrounds. This may be due to the fact that students from high-family-income backgrounds have access to more books and other information materials.

According to Olasehinde et al. (2015), many schools (public and private) have not complied with library provisions in the National Policy on Education (NPE). Ilori and Abdulahi (2016) highlighted various roles of libraries in promoting reading habit as following: creating an enabling environment, provision of reading materials, library orientation programmes and motivation of students to be avid readers through literary competition and giving of prizes and other incentives. Ailakhu and Unegbu (2017) asserted that school librarians should continue and improve their reading promotional strategies the more, so that the impact will be overwhelmingly felt by all and sundry. Government has a significant role to play in developing the reading habits of students in the nation. There is urgent need to re-design the school curriculum at secondary school level to emphasize the acquisition of reading skills, train and re-train teachers and adequately fund the school system for the sustainability of educational standards in Nigeria. Reading should be given a place in the secondary school curriculum apart from language classes such as English, Yoruba and French classes.

In an interview conducted, Haliru et al. (2015), found that teachers are eager to have reading in the school curriculum. Therefore, government should integrate reading into the school curriculum in order to facilitate the turning of Nigeria into a reading society, where students at all levels

would be passionate about. Simth (2017) highlights some factors influencing reading habits: Availability of reading materials: The availability of reading materials is an important factor that affects the reading habits of students. Research has shown that students who have access to a wide range of reading materials, such as books, magazines, and newspapers, are more likely to develop a reading habit. Parental involvement: Parents play a crucial role in developing the reading habits of their children. Research has shown that children whose parents are actively involved in their reading habits are more likely to develop a reading habit.

Peer influence is another factor that affects the reading habits of secondary school students. Students who have peers who enjoy reading are more likely to develop a reading habit themselves. The increasing use of technology, such as smartphones and social media, has been identified as a factor that negatively affects the reading habits of students. Many students spend a significant amount of time on their devices, which leaves them with little time to read. The curriculum in schools also plays a role in the reading habits of students. If the curriculum does not place enough emphasis on reading, students may not develop a reading habit. School guidance counsellors also have roles to play in developing the reading habits of students; through counselling and sharing success stories of people who attained great heights through good reading habits while they were young such as Ben Carson. Portraits or pictures of people who have excelled due to their good reading habits should be placed at strategic places to motivate students.

Students should not be left out in the effort towards developing reading habits. All efforts should be harnessed in order to remove distractions that are capable of subjugating their reading time to watching television, using social media sites such as: Facebook, 2go, WhatsApp, and twitter among others. Students should be engaged in intensive and extensive reading that would illuminate their minds, sharpen their intellect and guarantee their educational success and all round development.

Conclusion

This study has shown that parents have crucial roles to play in children's reading culture because they aid the pupils' psychological and physiological responses to tasks assigned to them. This study has identified factors affecting reading habits as: availability of reading materials, access to a wide range of reading materials, parental involvement, availability of reading materials, peer influence, the increasing use of technology and the curriculum in schools among others. The challenges faced on reading habits include the family background of

students, lack of reading materials; lack of functional libraries in most of the schools surveyed and a similar lack of trained librarians or teacher librarians; the failure to provide library periods in schools; language teachers and shortage of equipment and resources for teaching reading skills; and a heavy reliance on school texts.

Recommendations

1. Parents should be encouraged to read with their children, sit with them while they read, and create time to read with them.
2. Parents should motivate their children to read by buying them new books, granting their wishes when they read books, and rewarding them for reading.
3. Educators and parents should work together to address negative attitudes towards reading among secondary school students, such as only reading when exams are around the corner or reading only to please parents.
4. Schools should provide reading resources such as libraries and encourage students to visit frequently. This will provide students with access to a variety of reading materials and promote good reading habits.
5. Government re-design the school curriculum to emphasize the acquisition of reading skills, train and re-train teachers and adequately fund the school system for the sustainability of educational standards in Nigeria.

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Rethinking Information Literacy in the Digital Age: Exploring the Evolving Concept of Information Literacy and Its Implications for Polytechnic Education in Nigeria

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Abstract

Information literacy (IL) has evolved from a traditional skillset for locating and evaluating resources into a multifaceted competence essential for thriving in the digital age. In polytechnic education, particularly within Nigeria, the changing landscape of information technologies and learning modalities necessitates a comprehensive reassessment of how IL is conceptualised, taught, and applied. This paper presents a narrative review and conceptual exploration of the evolution of IL in the digital age, examining both global trends and the unique challenges and opportunities present in Nigerian polytechnic education. The review synthesizes key literature, identifies conceptual gaps, discusses emerging ethical and pedagogical issues, and proposes a framework for rethinking IL policy and practice in polytechnic settings. Recommendations are presented for curriculum reform, faculty development, institutional support, and national policy initiatives aimed at fostering digitally literate, critically informed polytechnic graduates.

Keywords: *Information Literacy, Digital Age, Polytechnic Education, Nigeria, Curriculum Reform, Digital Competence*

Introduction

The 21st-century information landscape is characterized by a rapid proliferation of digital content, technological innovation, and evolving modes of knowledge production and dissemination. As individuals increasingly rely on digital platforms for learning, communication, and decision-making, the ability to critically locate, evaluate, and apply information has become a core competency for academic success and societal engagement. Information literacy (IL), traditionally associated with library instruction and academic research, has expanded to encompass a broader range of digital, ethical, and critical thinking skills (Head, 2021; Lloyd & Hicks, 2020).

For polytechnic institutions in Nigeria, tasked with producing technically skilled, industry-ready graduates, the implications of IL in the digital age are profound. Despite its significance, IL remains inconsistently defined, taught, and assessed within Nigerian polytechnics. This conceptual and

narrative review addresses this gap by exploring the evolving dimensions of IL globally and locally, and by proposing strategic directions for its integration into Nigeria's polytechnic education. The advent of the digital age has revolutionised the way we interact with information, necessitating a reevaluation of the concept of information literacy. Traditionally, information literacy referred to the ability to locate, evaluate, and utilize information effectively (American Library Association, 1989). The Presidential Committee on Information Literacy in their final report submitted that the concept of information literacy has evolved over the years, and it is now recognised as a critical component of lifelong learning. Information literacy is the ability to locate, evaluate, and use information effectively. It involves critical thinking, problem-solving, and communication skills, as well as the ability to access and evaluate information from a variety of sources. However, the proliferation of digital technologies has expanded the scope of information literacy, demanding a more nuanced understanding of this concept (American Library Association, 1989).

The digital age has ushered in a new paradigm in the generation, dissemination, and consumption of information. As digital technologies continue to transform how knowledge is accessed and utilized, the concept of information literacy (IL) has evolved beyond its traditional boundaries. Information literacy, once primarily associated with the ability to locate and evaluate printed sources, now encompasses a broader set of competencies that include digital, media, data, and algorithmic literacies (Lloyd & Hicks, 2020). These skills are vital for participation in a knowledge-driven society and are essential for lifelong learning, effective citizenship, and meaningful employment. Despite the growing emphasis on digital competencies globally, many polytechnic institutions in Nigeria still struggle with outdated curricula, limited access to digital resources, and insufficient training for both students and staff in modern IL skills (Okiki & Asiru, 2021). This paper aims to explore how information literacy is evolving in the digital age and examine its implications for polytechnic education in Nigeria.

Statement of the Problem

Nigerian polytechnics, despite their critical role in technical education, face challenges in equipping students with 21st-century information competencies. The existing information literacy programs often do not reflect the multifaceted nature of digital information environments. Many students remain ill-equipped to critically analyze digital content, distinguish credible sources, and ethically use information. Moreover, the pedagogical strategies used to teach IL are often outdated, lacking integration with current technologies and digital tools (Nwagwu, 2020).

This research addresses the need to rethink and revamp IL education in Nigerian polytechnics to align with global standards and respond to digital realities.

Objectives of the Study

This study aims to:

1. explore the evolving concept of information literacy in the context of the digital age.
2. examine the relevance and current status of IL in polytechnic education in Nigeria.
3. identify global best practices and theoretical models applicable to IL education.
4. propose a conceptual framework for integrating IL into polytechnic education in Nigeria.
5. offer practical recommendations for policy, pedagogy, and institutional support.

Literature Review and Theoretical Underpinning

Information literacy has expanded significantly from its initial focus on library and research skills. According to the Association of College and Research Libraries (ACRL, 2016), IL now involves the ability to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information." In the digital age, this also means navigating digital databases, understanding algorithms, interpreting data visualizations, and creating digital content. Globally, scholars such as Secker and Coonan (2019) have emphasized the role of IL in fostering critical thinking, academic integrity, and digital participation. In Africa, Olorunfemi and Amusa (2020) argue that IL is key to overcoming digital divides and enhancing educational outcomes. The UNESCO (2021) framework on Media and Information Literacy (MIL) further underscores the integration of IL with media literacy to foster informed, ethical, and responsible digital citizenship.

Globally, IL has been redefined to address new technological realities. The Association of College and Research Libraries (ACRL, 2016) reconceptualized IL as a "framework for lifelong learning," emphasizing knowledge creation, ethical reasoning, and understanding the socio-political contexts of information. UNESCO's Media and Information Literacy (MIL) framework integrates IL with media and digital competencies to promote democratic participation, intercultural dialogue, and digital citizenship (UNESCO, 2021). In Europe and North America, IL is embedded into national curricula. Scandinavian countries integrate IL from primary through tertiary education, often supported by national digital literacy policies (Koltay, 2020). The United States' Project

Information Literacy (Head, 2021) reveals that students, though digitally immersed, struggle with evaluating source credibility and navigating algorithmic bias.

In Nigeria, IL research has predominantly focused on university contexts, with limited attention to polytechnics. Studies by Ezeani and Igwesi (2020), Aina (2021), and Afolabi (2024) emphasize the absence of structured IL instruction, inadequate access to digital tools, and a lack of trained personnel. Library orientation programs remain the main vehicle for IL delivery, which is insufficient for equipping students with advanced digital and critical thinking skills. Moreover, infrastructural deficiencies, ranging from poor internet connectivity to outdated library resources, pose significant barriers (Odede & Enakerakpor, 2022).

Ethical concerns have gained prominence with the rise of AI and data-driven platforms. Students increasingly interact with systems that track behavior, personalize content, or harvest personal data, often without adequate understanding or consent (Wargo & Anderson, 2024). The use of generative AI (e.g., ChatGPT) challenges traditional definitions of plagiarism and authorship, necessitating revised policies and instructional strategies. Pedagogically, IL in the digital age requires a shift from transmission-based teaching to inquiry-based learning. As Lloyd and Hicks (2020) argue, IL must be understood as a socially situated practice that evolves through context-specific interactions with information.

The literature reveals several challenges confronting IL implementation in Nigerian polytechnics. These include poor ICT infrastructure, lack of policy direction, insufficient training for librarians and educators, and limited awareness among students (Ugwulebo & Okoro, 2022). Adebayo and Adewale (2021) note that many institutions lack structured IL programs, and where such programs exist, they are poorly funded and rarely updated.

Theoretical Framework: Socio-Cultural Theory and Connectivism

This study is grounded in Vygotsky's socio-cultural theory and Siemens' theory of connectivism. Vygotsky emphasizes the role of social context and cultural tools in learning, which aligns with how IL is acquired through interaction with digital tools and communities. Connectivism, on the other hand, argues that knowledge is distributed across networks and that learning involves navigating and making connections within these networks (Siemens, 2005). These theories highlight the importance of context, collaboration, and digital networks in understanding and teaching IL in polytechnics.

The Evolving Concept of Information Literacy

Information literacy has evolved significantly since its inception in the 1970s. The traditional concept of information literacy focused on the ability to locate, evaluate, and utilize information effectively (American Library Association, 1989). In the digital age, information literacy encompasses a range of skills. However, the proliferation of digital technologies has expanded the scope of information literacy to include:

1. Proficiency in using digital tools, platforms, and technologies to access, manage, and communicate information. Hague & Logan (2009) in a study of digital literacy among students in higher education revealed that many students lack basic digital literacy skills. The study found that students are often unable to evaluate digital information critically, and they rely heavily on search engines such as Google for information. Therefore, there is a need for universities to prioritize the development of digital literacy skills among their students.
2. Media literacy: The capacity to critically evaluate and create content across various media formats. Katz (2010) submitted that Media literacy is a critical component of information literacy in the digital age. It involves the ability to critically evaluate and create content across various media formats. Media literacy skills are essential for individuals to navigate the complex digital media landscape effectively.
3. Information management: The ability to organize, store, and retrieve information effectively in a digital environment. Rowlands et al. (2017) state that the Google generation is characterized by its reliance on search engines for information. However, this reliance on search engines can lead to a lack of critical evaluation of digital information. Therefore, there is a need for educators to prioritize the development of critical evaluation skills among students.
4. Collaboration and participation: The ability to engage in online communities, collaborates with others, and contributes to knowledge creation. According to Weller (2011), the digital, networked environment provides many opportunities for collaboration and participation. Social media, in particular, has made it easy for people to connect with others who share similar interests, and to participate in online communities. This has significant implications for academics, who can use these tools to connect with others in their field, share their research and collaborate on projects. For instance, the use of wikis, blogs and microblogging can facilitate collaborative research and allow for a more open, transparent approach to scholarship. Weller (2011) argues further that digital technologies have enabled new forms of collaboration and participation, which can enhance academic practice and research. He highlights the potential of social media, wikis, blogs and microblogging to facilitate collaborative research, share knowledge and promote open scholarship.

5. Critical thinking: The ability to evaluate information critically, recognizing bias, misinformation and disinformation. Critical thinking is a crucial concept under evolving information literacy, as it enables individuals to effectively evaluate, analyse and synthesize information in a rapidly changing digital landscape. It is the systematic evaluation and analysis of information and ideas to form a judgement or decision. It involves objectively considering multiple perspectives, questioning assumptions and evaluating evidence to arrive at a well-supported conclusion. Critical thinking is essential in information literacy because it enables individuals to evaluate information credibility; analyse information complexity; synthesize information and make informed decisions (International Society for Technology in Education, 2017).

Challenges and Opportunities in Nigerian Polytechnics

Nigerian polytechnics face unique challenges in promoting information literacy. The challenges are multifarious but essential ones include the followings:

1. Limited infrastructure: Inadequate digital infrastructure, including internet connectivity and computer facilities (Adeyinka & Abidoye, 2016).
2. Lack of trained personnel: Insufficient training and development opportunities for librarians and faculty members. Igwe (2017) asserted that Librarians play a critical role in promoting information literacy in Nigerian polytechnics. They can provide training and support to students and staff on how to access and evaluate digital information effectively. Therefore, librarians should be prioritized in Nigerian polytechnics, and they should be provided with the necessary resources and support to perform their roles effectively.
3. Limited access to digital resources: Restricted access to digital resources, including e-books, journals, and databases. Okiy (2018) opined that access to digital resources is a major challenge for Nigerian polytechnics. Many polytechnics lack subscription to digital databases and online journals, and students and staff rely heavily on free online resources. Therefore, there is a need for Nigerian polytechnics to prioritize access to digital resources. Despite these challenges, there are opportunities for Nigerian polytechnics to promote information literacy, including:

1. Collaboration with international partners: Partnering with international organizations and institutions to access digital resources and expertise (Aina, 2017). Aina (2017) further states that international collaboration and partnership are essential for Nigerian polytechnics to access digital resources and expertise. Partnerships with international organizations and institutions can provide access to digital libraries, online courses, and other digital resources that can enhance teaching and learning. Therefore, Nigerian polytechnics should prioritize international collaboration and partnership.

2. Development of digital literacy programmes: Creating programs to enhance students' digital literacy skills, including online safety, digital citizenship, and media literacy. Adomi (2016) viewed that digital literacy skills are essential for Nigerian polytechnic students to succeed in the digital age. These skills include the ability to use digital tools, access and evaluate digital information, and communicate effectively in digital environments. Therefore, polytechnics should prioritize the development of digital literacy skills among their students.
3. Integration of information literacy into the curriculum: Embedding information literacy into various disciplines to promote critical thinking, creativity, and lifelong learning. Oyediran (2018) reasoned that integrating information literacy into the curriculum of Nigerian polytechnics is essential for promoting information literacy among students. Information literacy skills should be incorporated into various courses and programs to ensure that students develop these skills throughout their academic career.
4. Curriculum reform: Integrating information literacy into the curriculum to promote critical thinking, creativity, and lifelong learning. National Board for Technical Education (2018) hinted that the curriculum for National Diploma in Library and Information Science has been revised to include digital literacy skills. The revised curriculum emphasizes the importance of digital literacy skills for library and information science professionals in the digital age.
5. Digital infrastructure development: Investing in digital infrastructure, including internet connectivity and computer facilities. "The state of digital infrastructure in Nigerian polytechnics is a major concern. Many polytechnics lack basic digital infrastructure such as computers, internet connectivity, and digital libraries. This hinders the ability of students and staff to access and utilize digital information effectively. Therefore, there is a need for urgent investment in digital infrastructure in Nigerian polytechnics. (Adeyinka & Abidoye, 2016).
6. Faculty development: Providing training and development opportunities for librarians and faculty members to enhance their understanding of information literacy (Igwe, 2017).
7. Collaboration and partnership: Fostering collaboration with international partners and local industries to access digital resources and expertise (Aina, 2017).

Implications for Polytechnic Education in Nigeria

The revised concept of information literacy has significant implications for polytechnic education in Nigeria. The implications involve the under listed:

1. Curriculum reform: Integrating information literacy into the curriculum to promote critical thinking, creativity, and lifelong learning.
2. Digital infrastructure development: Investing in digital infrastructure, including internet connectivity and computer facilities.

3. Faculty development: Providing training and development opportunities for librarians and faculty members to enhance their understanding of information literacy.
4. Collaboration and partnership: Fostering collaboration with international partners and local industries to access digital resources and expertise.

Research Methodology

A narrative review approach was used to collect, analyse, and synthesize relevant literature published from 2019 to 2024. Databases such as Scopus, Google Scholar, AJOL, and JSTOR were searched using keywords including “information literacy,” “digital age,” “polytechnic education,” “Nigeria,” and “digital competencies.” The inclusion criteria focused on peer-reviewed articles, conference papers, and reports that address IL in the context of higher education, especially in Africa. A total of 47 publications were selected for in-depth review based on relevance, credibility, and recency.

Presentation and Interpretation of Results

Conceptual Shifts in Information Literacy

The reviewed literature indicates a clear shift from IL as a discrete skill to a multifaceted competency, which includes:

Digital Literacy: Mastery of online tools and platforms.

Media Literacy: Ability to critique media messages and understand framing.

Algorithmic Literacy: Understanding how search engines and platforms filter content.

Data Literacy: Interpreting data visualizations and using datasets ethically.

Current Practices in Nigerian Polytechnics

Empirical studies show limited implementation of IL beyond library induction sessions. Ezeani and Igwesi (2020) report that only 20% of surveyed Nigerian polytechnics offer IL workshops beyond first year. Afolabi (2024) notes that most students rely on unfiltered Google searches and lack familiarity with academic databases. Faculty often assume students possess digital competence, leading to gaps in instruction.

Barriers to IL Integration

Key barriers identified include:

Curricular Limitations: IL is rarely embedded in course objectives or assessments.

Infrastructural Gaps: Limited access to high-speed internet, digital libraries, and up-to-date software.

Faculty Constraints: Lack of training in IL pedagogy and digital tools.

Policy Vacuum: No national IL standards or monitoring mechanisms.

Opportunities and Innovations

Despite challenges, opportunities exist for transformative change:

Curriculum Reform: Embedding IL into general studies and discipline-specific courses.

Capacity Building: Professional development for faculty in digital pedagogy and IL frameworks.

Open Educational Resources (OERs): Leveraging free digital tools to teach IL.

Collaborative Learning Models: Encouraging student-led workshops and peer mentoring.

The findings confirm that while global definitions and practices around IL have evolved, Nigerian polytechnics have not fully adapted. The narrow conceptualization of IL remains a barrier. Most institutions treat IL as a one-time library orientation rather than a sustained and integrated component of academic programs. Furthermore, the lack of digital infrastructure, ranging from internet connectivity to e-resources, limits meaningful engagement with IL (Olorunfemi & Amusa, 2020). The application of socio-cultural theory suggests that IL cannot be separated from the digital and social context of learners. Similarly, connectivism reinforces the need to prepare students for a networked society where learning occurs through digital platforms and collaborative tools. These perspectives stress the need to embed IL into curricula, pedagogy, and institutional strategies. Despite the growing emphasis on digital competencies globally, many polytechnic institutions in Nigeria still struggle with outdated curricula, limited access to digital resources, and insufficient training for both students and staff in modern IL skills (Okiki & Asiru, 2021). This paper aims to explore how information literacy is evolving in the digital age and examine its implications for polytechnic education in Nigeria.

Summary

This narrative review reveals that information literacy has become an essential, dynamic, and context-sensitive competency in the digital age. Globally, IL is expanding to include digital, media, and algorithmic literacies. In Nigeria, however, polytechnic institutions lag behind in IL integration due to structural, pedagogical, and policy challenges. Yet, innovative practices and global frameworks provide pathways for reform.

Conclusion

Rethinking information literacy in Nigeria's polytechnic education is not only timely but essential. As the digital environment grows more complex, equipping students with critical information skills must become a core institutional priority. The reconceptualization of IL as a lifelong, socially

situated, and digitally embedded competency has significant implications for pedagogy, curriculum, and policy.

Recommendations

1. Develop a National IL Policy: The Ministry of Education and NBTE should formulate IL standards aligned with international frameworks.
2. Curriculum Integration: IL should be embedded across all polytechnic programs and disciplines.
3. Faculty Training: Regular workshops on IL and digital pedagogy for academic staff.
4. Infrastructure Investment: Improve internet access, digital library systems, and ICT facilities.
5. Student Engagement: Promote IL through peer learning, project-based assessment, and digital storytelling.
6. Monitoring and Evaluation: Establish IL assessment metrics and quality assurance mechanisms.

Recommendations

Based on the revelation from the literature, the following suggestions can be considered to improve the situation in rethinking information literacy in the digital age in the polytechnic sector in the Nigerian education system.

1. Conduct a needs assessment: Assess the information literacy needs of students, faculty members, and librarians.
2. Develop a digital literacy programme: Create a program to enhance students' digital literacy skills, including online safety, digital citizenship, and media literacy.
3. Integrate information literacy into the curriculum: Embed information literacy into various disciplines to promote critical thinking, creativity, and lifelong learning.
4. Establish partnerships and collaborations: Foster partnerships with international organizations, local industries, and other institutions to access digital resources and expertise.
5. Policy Development: Government and polytechnic authorities should develop national IL policies that reflect current digital realities.
6. Curriculum Integration: IL should be integrated into all academic programs as a core competency.
7. Capacity Building: Regular training should be provided for librarians and educators on evolving IL concepts.
8. Infrastructure Improvement: Investment in digital tools, high-speed internet, and e-resources should be prioritized.
9. Collaborative Teaching: Adopt interdisciplinary approaches that involve librarians, ICT staff, and academic faculty.
10. Monitoring and Evaluation: Establish systems to regularly assess the effectiveness of IL initiatives.

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Open Access and Library Use: A Comparative Studies of Two Libraries

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Abstract

This study examines the impact of Open Access (OA) on library use through a comparative analysis of libraries in Nigeria and Canada. With the global shift towards OA, libraries have transformed into digital hubs, yet disparities in infrastructure, policies, and socio-economic factors affect their utilization. While Canadian libraries leverage advanced digital platforms and national OA policies, Nigerian libraries struggle with funding constraints, poor internet access, and low digital literacy. Findings reveal that OA has increased digital resource engagement in both countries, though challenges such as information overload and uneven access persist. The study highlights the importance of digital literacy programmes, robust infrastructure, and strategic policies to maximise the benefits of OA in diverse contexts. Recommendations include targeted investments in digital repositories, enhanced institutional support, and collaborative policies to foster equitable knowledge access.

Keywords: *Open Access, Library Use, Digital Libraries, Nigeria, Canada, Information Access, Digital Literacy, Institutional Repositories.*

Introduction

The emergence of open access has revolutionised scholarly publishing and provided greater access to scholarly resources for researchers and students. Also, in the digital age, the revolution in scholarly communication is marked by the dramatic rise of open access (OA) resources, which have transformed the ways in which students seek and engage with academic information. The global shift toward OA publishing has redefined the role of libraries as gateways to knowledge, yet disparities in infrastructure, policy frameworks, and socio-economic realities create stark contrasts in how libraries leverage OA resources across regions. Consequently, digital libraries have become indispensable hubs for knowledge dissemination, offering unfettered access to journals, e-books, and databases that were once locked behind expensive paywalls. Open access has also impacted libraries, particularly their collections and services in diverse positive ways, though not much research has been conducted to explore the impact of open access on library use.

The term digital library is vast as it covers many and different applications and has been used interchangeably for systems and concepts such as digitised collections, e-journals platforms, network databases, library websites, among others. Digital libraries can be described as organisations that provide the resources to select, structure, offer intellectual access, interpret, distribute, preserve, and ensure the persistence of collections of digital works over time, so that they are readily and economically available for use by a defined community or set of communities. They are also referred to as platforms that connect users to Web-based resources rather than hold the resources themselves. The definition of Paepcke et al. (1996) which states that digital libraries provide a single point of access to a wide range of autonomously distributed sources corroborates these descriptions, and when describing the polymorphous nature of digital libraries, one feature is stable, provision of information through networked systems.

According to Greenstein (2000), digital libraries are known less for the extent and nature of their collections, than for the networked information space they define through various online services. They make possible connections to a wide range of open access resources, such as scholarly journals and other knowledge advancement and information sources, eliminating barriers and restrictions associated with having access to information. Since some decades and till now, developments in technologies have been bringing revolutionary changes in social communication patterns and information behaviour. The digital revolution has not only changed the scholarly communication patterns but also resulted in a vast amount of scholarly literature such as books, theses, journals, reports, research articles, and working papers, among others (Van Trier, 2009; Alam, 2014; Kaba & Said, 2015). This vast amount of information, which is now available on the internet in digital form, has increased the issues of access and preservation, and Open Access has appeared as a prerequisite for libraries to survive and thrive in this critical condition.

Open Access refers to the free and unrestricted access to scholarly literature, research outputs and data, and also refers to digital contents that are available free of charge to use without any barriers or payment requirements, allowing its users to read, download, copy, print, search, distribute, or link to the full text of works, permitting the use for any legitimate purpose, as long as access to the material is possible through the internet (Krishnamurthy, 2008). Originally associated only with scholarly journals that are published free online, the concept has been extended to other types of content such as eBooks and media. Its emergence and growth stand as one of the most significant changes to the world of scholarly communication since the migration to digital publishing began.

Open access emerged as a transformative response to the commodification of academic knowledge, advocating for unrestricted access to research outputs. Libraries, traditionally custodians of information, now face dual imperatives: advocating for OA to counter paywall barriers and adapting services to meet user needs in a digital-first era. In Nigeria, libraries confront infrastructural deficits, with only 22% of universities having functional institutional repositories (Nwagwu, 2020). Despite growing OA advocacy led by organisations like the Nigerian Library Association, challenges such as unreliable internet access and low researcher engagement persist (Asamoah-Hassan, 2021). Conversely, Canadian libraries benefit from national strategies like the Tri-Agency Open Access Policy (2021) and investments in platforms such as Érudit, enabling seamless OA integration (Johnson, 2021). However, critiques highlight uneven adoption across provinces and lingering commercial publisher dominance (Ducas & Michaud-Ostryk, 2021).

Theoretical frameworks such as Hess and Ostrom's "knowledge commons" (2019) underscore the ethical imperative for equitable access, yet structural inequities rooted in colonial legacies and global knowledge hierarchies complicate OA's implementation in Africa (Adusei et al., 2023). Functioning within the copyright law, OA permits authors to either transfer rights to publishers who tolerate free access to their work, or retain the right to post their papers on institutional servers which are often hosted and operated by the libraries. Principally envisaged for scholarly journal articles, OA is also providing access to increasing and available number of theses, and scholarly monographs. Unlike articles that are licensed in most conventional databases, academic libraries have been creating their own local digital copies and with some also building or in joint ownership of institutional repositories for their resources. Working in synergy to build repositories of OA literature in their institutions, academic libraries all around the world have been ensuring sustained open access to scholarly publications into the distant future by an extensive audience.

In case of academic libraries where the main mandate is to support teaching, learning, research and training, open access has been a great booster to scholarly creations, productions, publications, distribution and usage, thereby giving opportunity to researchers to access these contents from anywhere even without having to step into the library premises any longer. However, the impact of OA on library use has been a topic of debate, with some public insinuations suggesting that OA might have a negative impact on library usage for accessing information resources in the coming years. Thus libraries have been positioned as both agents and casualties of these dynamics, arguing that comparative analysis can reveal

actionable pathways to bridge gaps in OA utilization, fostering South-North dialogue on inclusive knowledge ecosystems.

This comparative study examines the intersection of OA initiatives and library practices in Nigeria and Canada, which are two nations at divergent ends of the digital and economic spectrum. While Canada, with its robust technological infrastructure and policy-driven OA frameworks, exemplifies advanced integration of OA into library systems, Nigeria grapples with systemic challenges such as erratic funding, limited digital literacy, and institutional hesitancy (Olaajo & Adeyeye, 2022). This research therefore is aimed to explore the existing research on the impact of open access on library use in Nigeria and Canada.

Statement of the Problem

The global momentum toward open access (OA) publishing has positioned libraries as pivotal actors in democratising knowledge. However, the implementation and impact of OA initiatives remain unevenly distributed, particularly between high-income nations like Canada and lower-middle-income countries like Nigeria. Despite OA's potential to bridge information gaps, libraries in Nigeria face systemic barriers, including unreliable internet infrastructure, underfunded institutional repositories (Nwagwu, 2020), and limited policy frameworks to incentivise OA adoption (Olaajo & Adeyeye, 2022). In contrast, Canadian libraries operate within well-resourced ecosystems supported by national OA mandates, such as the Tri-Agency Open Access Policy (2021), and advanced digital platforms (Johnson, 2021). Yet, even in Canada, challenges persist, including disparities in provincial implementation and persistent reliance on costly commercial publishing models (Ducas & Michaud-Oysttryk, 2021).

This dichotomy raises critical questions about how socio-economic, infrastructural, and policy disparities shape the efficacy of OA in fostering equitable library services. For instance, while Canadian libraries leverage OA to enhance global scholarly communication, Nigerian libraries struggle to overcome basic access barriers, perpetuating a cycle of knowledge marginalisation (Asamoah-Hassan, 2021). Furthermore, the dominance of Northern-centric OA platforms risks reinforcing colonial knowledge hierarchies, sidelining African scholarship (Adusei et al., 2023). Existing studies often examine OA in isolation within national contexts, neglecting comparative analyses that could reveal systemic inequities and inform context-specific solutions.

This study addresses this gap by interrogating how divergent economic, technological, and policy landscapes in Nigeria and Canada influence

libraries' capacities to harness OA for public good. By juxtaposing these nations, it challenges universalist assumptions about OA's accessibility, asking the questions of how do structural inequalities mediate the role of libraries in advancing open access, and what lessons can cross-national comparisons offer for fostering inclusive knowledge ecosystems?

Research questions

The following research question were answered to investigate the impact of open access on library use

1. How has open access through digital libraries affected library use among students in both Nigeria and Canada?
2. How has library users' information seeking behaviour changed due to the availability of open access resources?
3. How can libraries maintain their relevance and better support their users through open access resources and services?

Literature Review

Open Access and Visibility of Research Outputs

Open access (OA) refers to the unrestricted online availability of scholarly research, allowing anyone to read, download, and disseminate findings without financial or legal barriers. This model contrasts with traditional subscription-based journals, where access is limited to subscribers or institutions. The visibility and impact of research outputs are significantly influenced by their accessibility, making open access a pivotal factor in the dissemination of knowledge. One of the primary arguments for open access is the potential increase in visibility and subsequent citation rates of research articles. Open access publications are accessible without cost to readers, which would be expected to lead to more frequent citations. While some studies have found that articles published in open access journals do not receive more citations on average than those in subscription journals, other studies have found that they do. Notably, evidence suggests that author-self-archived ("green") open access articles are cited more frequently than non-open access articles, indicating a citation advantage associated with open accessibility.

A 2022 large-scale randomized analysis examined the Open Access Citation Advantage (OACA) by comparing citation impacts of publications in fully OA journals to those in subscription-based journals (Asamoah-Hassan, 2021). The study found no significant citation advantage for articles in fully OA journals and, in some cases, observed a disadvantage. Conversely, OA articles in hybrid journals, which offer both OA and subscription content demonstrated a citation advantage, suggesting that increased accessibility in this context enhances visibility and impact. The digital age has introduced platforms that further amplify the reach of open

access research. Social media platforms and repositories like Social Science Research Network (SSRN) enable broader dissemination of scholarly work, reaching audiences beyond traditional academic circles (Ducas & Michaud-Oystrik, 2021).

Furthermore, open access facilitates the integration of scholarly work into widely used platforms like Wikipedia, thereby reaching a broader audience. Research (Nwagwu, 2020) indicates that open access journals are 47% more likely to be referenced on Wikipedia compared to paywalled journals, significantly amplifying the diffusion of scientific knowledge to the public. Despite the evident benefits, the open access model faces challenges. The financial burden of article processing charges (APCs) often shifts from readers to authors or their institutions, potentially disadvantaging researchers from underfunded regions or disciplines. Additionally, the proliferation of predatory journals exploiting the OA model raises concerns about the quality and integrity of published research. Furthermore, while open access increases visibility, it does not inherently guarantee increased citations or impact, as factors such as journal reputation, article quality, and dissemination efforts also play crucial roles (Olajo & Adeyeye, 2022). Open access significantly enhances the visibility of research outputs, facilitating broader dissemination and potential real-world impact. However, the correlation between open access and increased citations is complex and varies across disciplines and publication models. As the academic community and publishers navigate the evolving landscape of scholarly communication, it is imperative to address the challenges associated with open access to ensure equitable and sustainable access to knowledge.

Highlighting the benefits of open access in terms of increasing the visibility and impact of research, several recent studies have reported that open access have greatly increased research impact by making academic literature more visible and accessible to a wider audience. According to Adusei, (2023), a very helpful webliography from the Open Citation Project pulls together the many studies showing that open access increases research impact (Open Citation Project, 2009). According to the report, putting material on the free web allows an author's maximum visibility, and in order to maximise discovery, academic libraries have adopted including free web-based search engines such as Google Scholar that crawl open access journals and repositories on their websites, web lists and OPACs (Mullen and Hartman, 2006; Hartman and Mullen, 2008).

A study carried out at the Centre for Publishing at University College London also showed that search engines increase online journal usage even more than open access, and in the case of Nucleic Acids Research, the

introduction of an open access publishing option resulted in an additional upturn in journal use (Mayor, 2006). This analysis helps to establish that open access has helped to increase the citation rate and measure of impact of journal articles, thereby creating more visibility for authors of the accessed articles. Also, this confirms there are more preferences for online access to the resources than accessing them through the library itself.

Moreover, within the context of OA and visibility of output research, literature in support of open access publishing, funding, and promotion by libraries, and encouragement to use in academic research are robust across methodologies and disciplines, and a range of methods and metrics have been used in studies to affirm the existence of an open access citation advantage. It was estimated according to Lasko et al (2011) that the number of open access journals increased by 500% and the number of articles by 900% during the decade 2000-2009. This expanded access has come with challenges as well as rewards. Several literatures have established that the availability of open access resources have grown at an unprecedented rate since the signing of the Budapest Open Access Initiative in 2002, and since then, government agencies, university libraries, public libraries, and other stakeholders have introduced new and robust initiatives to make open access content more available and accessible. As a result of these new initiatives, libraries across the world have worked together to secure open access rights for several academic titles in the Knowledge Unlatched pilot project (Montgomery 2014).

Griffiths and Brophy (2005), Asher, Duke, and Wilson (2012), Rempel, Buck, and Deitering (2013) reported in their different studies that, as excellent resources become more easily searched and increasingly freely available outside of library databases and integrated library systems, the role of the library in the discovery process have also changed with an emphasis on disintermediation, allowing the user to access resources directly without the library's intervention. This confirms that libraries are in several cases not approached any longer by students and researchers alike as a result of their access to needed resources abundantly available over the internet.

Open Access convenience and availability has also revolutionised the dissemination of scholarly work by removing financial and legal barriers, making research outputs freely available to the global community (Johnson, 2021). This paradigm shift enhances the availability of knowledge, ensuring that anyone, regardless of institutional affiliation or economic standing, can access scholarly materials. However, this increased availability introduces considerations regarding the convenience of accessing and publishing research. The primary advantage of OA is its

ability to democratise access to information. Studies (Adegbite and Oludayo (2022) and Ajisebutu, Adetayo and Otuya (2024) have shown that OA publications achieve higher download rates and reach a more geographically diverse audience compared to subscription-based counterparts. For instance, research indicates that OA books are downloaded in 61% more countries than non-OA books, with significant usage in low and middle-income nations. This widespread availability fosters global collaboration, accelerates scientific discovery, and promotes educational equity.

While OA enhances availability, the convenience of accessing and publishing OA content varies. Authors often face Article Processing Charges (APCs) when publishing in OA journals, which can be a financial burden, especially for researchers from underfunded institutions or developing countries (Okafor, 2021). This pay-to-publish model may inadvertently create disparities, limiting who can contribute to the open scholarly discourse. Moreover, the proliferation of OA models, such as transformative agreements and hybrid journals, adds complexity to the publishing landscape. Transformative agreements, which shift subscription costs to cover OA publishing, aim to make the transition to OA seamless but often lack transparency and may not reduce overall expenses (Jones & Lee, 2021). This complexity can make it challenging for researchers to navigate their publishing options effectively.

The tension between availability and convenience in OA necessitates a balanced approach. While the goal is to make research universally accessible, it is crucial to address the financial and logistical challenges that accompany OA publishing. Therefore, institutions and policymakers should work towards funding models that alleviate the cost burden on individual researchers, ensuring that the path to OA is both accessible and convenient for all scholars. Open Access significantly enhances the availability of research outputs, democratising knowledge on a global scale. However, to fully realise the potential of OA, the academic community must address the convenience factors associated with publishing and accessing OA content.

There is a widespread belief that the rise of open access will have a negative impact on interlibrary loan (ILL) services, and this has been supported by studies in Japan and Belgium, which found a decrease in the number of ILL requests attributed in part to open access (Koyama et al., 2011; Corthouts et al., 2011). However, Schöpfel (2014) has argued that there is little empirical evidence to support this claim of a causal relationship. Additionally, McGrath (2014) has pointed out that there will

still be many situations where ILL is necessary despite any potential negative impact of open access.

Yang et al. (2019) conducted a study to evaluate the level of awareness and utilisation of the free document delivery and interlibrary loan service offered by the Texas A&M University (TAMU) Libraries among its students, faculty, and staff. The study revealed a continual decrease in new user registrations since 2010. Previous surveys conducted in 2003 and 2011 had shown high satisfaction among registered users, and their feedback was used to make improvements to the service. However, the study did not address why a significant portion of the campus community did not use the free service. It is uncertain whether they are aware of the service's benefits or if they are content with the access to information resources available to them through other online sources such as ResearchGate.

Open Access (OA) has transformed the landscape of scholarly communication by making research outputs freely accessible to the public. This shift has significant implications for traditional library services, particularly Interlibrary Loan (ILL) operations. While OA enhances the availability of scholarly materials, its impact on ILL services is multifaceted, influencing both the demand for and the efficiency of these services. The intuitive assumption might be that the proliferation of OA resources would lead to a decline in ILL requests, as users can directly access needed materials without library mediation. However, empirical studies present a more nuanced picture. Research (Smith and Roberts, 2020) indicates that despite the growing availability of OA materials, ILL request rates have not uniformly decreased. This persistence in demand can be attributed to several factors including, user awareness and search proficiency, comprehensiveness of OA coverage, enhancing ILL efficiency through OA, expedited fulfillment, and cost reduction. While OA has expanded access, not all scholarly works are available through OA channels. Consequently, ILL remains essential for sourcing materials that are not openly accessible.

Open Access has not rendered interlibrary loan services obsolete but has reshaped their function within the academic ecosystem. While OA provides alternative avenues for accessing scholarly materials, ILL continues to play a crucial role in obtaining resources beyond the scope of OA. By embracing OA, libraries can enhance the efficiency and cost-effectiveness of ILL services, provided they address the challenges of discovery and user education. The symbiotic relationship between OA and ILL underscores the evolving nature of library services in the digital age. It has been identified that one of the key reasons why library users submit

ILL requests for open access materials is difficulty with discovery. Despite the abundance of resources for locating open access materials, users generally prefer easy access to them.

According to Connaway et al. (2011), this is so important to users that they are willing to sacrifice content for convenience. Moreover, a report published in 2010 on the results of 12 user behaviour studies found that search engines such as Google are increasingly crucial for information discovery (Connaway and Dickey, 2010). In fact, when asked where they begin their information search, 84% of "information consumers" indicated starting in a search engine, while not a single person identified to begin on a library website, as reported by DeRosa et al. (2010) and Baich (2015). Kroll and Forsman (2010) also note that researchers consider Google and Google Scholar to be extremely effective in finding relevant publications or research. Consequently, users are unlikely to contact libraries for resources or the information they need due to convenience and the perception that they have already found what they are looking for.

Open Access use in Nigeria

Muthuvennila and Thanuskodi (2018) stated that in the past, access to scholarly literature was mainly through print publications like academic journals and research collections, but currently, OA has made it possible for users to access scholarly literature freely without payment. Iyoro (2004) argues that accessibility is a crucial factor in the use of information, and Ugah (2008) contends that people are more likely to use information resources when they have access to them. However, Iwighreweta and Onoriode (2012) found low usage of OA journals by LIS students at the University of Ibadan, Nigeria, while Arosanyin and Ajibili (2014) discovered that undergraduate students used OA resources to supplement their library's inadequate information materials but were hindered by a lack of internet searching skills and services.

In contrast, Ani (2010) found that students in surveyed universities in Nigeria mostly used various internet resources rather than the university online database for learning, while Muthuvennila and Thanuskodi (2018) and Ukwoma and Onyebinama (2020) reported that their respondents used open access resources (OARs) on a daily basis and were satisfied with their level of access without having to visit the library, as did Veena (2016), who reported that 47.36 percent of respondents used OARs and 64.47 percent were satisfied with these resources, indicating that respondents had no need to contact or visit the library.

Open Access use in Canada

According to the U.S. Bureau of Labour Statistics, (2023) the cost of textbooks in the United States has risen by 7.2% over what it was in February 2020, which is a bit higher than the rate of inflation, while in Canada, textbooks are often more expensive due to a tariff imposed on imported books (Justice Laws Website, 2023). As a result, students are forced to consider open access resources through various platforms especially those provided by the libraries. However, it was established that there is huge open access resources available for students and Canadians. Generally, the reviewed trends of research about open access publishing, accessibility, citations and other trends associated with open access and open access resources in Canada explored revealed that little or no research has been conducted to explore what impact its availability and access have caused on how students and academic researchers use the library in Canada either for personal or academic purposes.

Research Methodology

The methodology adopted for this paper is qualitative in nature and it involves analysis of documents and contents. Content of journals and books were analysed with a view to review and draw inferences relating to the themes set out for investigation by the study. Themes that were considered include open access usage, digital libraries, users' information seeking behaviour, libraries' relevance. A multi-stage procedure was adopted in filtering and selecting relevant articles that fell into the category of documents that addressed the themes which the paper focused on. At the first stage, the author decided on the use of ResearchGate database and Google Scholar web search engine, that are prominent platforms for archiving and searching for scholarly articles in all fields. Forty-Nine (49) articles were retrieved from the two platforms on the themes. The first level of search was done with a view to have high recall rate of documents on the areas of the study. At the second stage, articles that specifically focused on open access usage, digital libraries, users' information seeking behaviour, libraries' relevance were selected for the study. High level of precision in documents selection was ensured to capture only articles that specifically focused on the basic themes which the study intends to investigate at the second stage. A total of 18 publications (including journal articles and books) were selected at this stage and were analysed in this study. These specific articles and books formed the key sources of information for this study. Following the completion of the investigation, a procedure known as thematic data analysis was performed on the many problems that were discovered to categorise them into themes. The articles were selected after screening along the lines of the themes investigated in the study.

Presentation of Results and Discussion

Research Question One: How has open access through digital libraries affected library use among students in both Nigeria and Canada?

Findings on the research question one shows that Nigerian students increasingly rely on OA journals and e-books to support their assignments and research projects and that Canadian students have shifted from physical library visits to online engagement, with digital platforms, including OARs becoming the primary mode of accessing scholarly resource. Thus, it can be deduced from the study that students in both Nigeria and Canada rely much on OARs available through digital libraries for academic, research and other engagements than resources on paywalls and the physical libraries. These findings were corroborated by In Nigeria, where traditional library resources have historically been constrained by limited funding and restricted access to international journals, the advent of open access digital libraries has been nothing short of transformative. Researchers such as Folorunso and Ohwofasa (2021) report that Nigerian students increasingly rely on OA journals and e-books to support their assignments and research projects just as Jones and Lee (2021) found that the use of OA resources has led to more collaborative learning experiences, as students share and discuss digital articles and research papers on online forums and social media platforms.

With open access, the University of Ibadan and other leading institutions have witnessed a significant uptick in digital resource usage, as students now have direct access to scholarly materials that were previously out of reach. However, the transition has not been without its challenges as revealed in the study of Ajisebutu et al. (2024), which noted that while OA resources are many, issues such as intermittent power supply, slow internet connectivity, and insufficient digital literacy impede effective utilisation. Many students, particularly those from under-resourced regions, face difficulties filtering through the overwhelming volume of available content. This often results in information overload, where the sheer abundance of OA material makes it challenging to discern high-quality sources from less reliable ones. Ukwoma and Onyebinama (2021) further underscore that while digital libraries have the potential to democratise access to information, the benefits are unevenly distributed students in urban centers with robust IT infrastructure tend to leverage these resources more effectively than those in rural areas.

In Canada, tertiary institutions have largely embraced open access with significant infrastructural and institutional support, resulting in a smooth transition to digital libraries. Studies conducted at universities such as the University of Toronto illustrate that Canadian students have shifted from physical library visits to online engagement, with digital platforms

becoming the primary mode of accessing scholarly resources (Smith & Roberts, 2020; Jones and Lee 2021)). This has fostered an environment where OA resources are seamlessly integrated into academic routines, leading to improved research efficiency and academic performance. Moreover, empirical research indicates that Canadian students not only consume digital content but also actively engage with it. The ease of access has allowed for timely updates in rapidly changing fields, thereby promoting a culture of continuous learning. However, this digital shift has also led to a decline in traditional library usage. While fewer students physically visit libraries, there is a marked increase in online interactions and resource sharing, which is a trade-off that reflects broader changes in academic behavior in the digital era.

The empirical evidence from Nigeria and Canada reveals a complex picture of how open access affects library use among tertiary students. In both contexts, the key benefit of OA is the democratisation of knowledge, which enables students to enjoy immediate access to a vast array of scholarly materials without the financial and logistical constraints of subscription-based services. Yet, the contexts in which these benefits are realised differ substantially. In Nigeria, infrastructural challenges and varied levels of digital literacy serve as significant barriers. Although OA resources have the potential to level the academic playing field, inconsistent power supply, inadequate internet connectivity, and uneven digital training often mean that only a segment of the student population would be able to reap the benefits in Nigeria.

In contrast, Canadian institutions, supported by robust digital infrastructure and comprehensive institutional policies, have largely overcome these obstacles. As a result, Canadian students are more likely to engage deeply with digital libraries, harnessing the full potential of open access to drive their academic pursuits. Both settings, however, share common challenges related to information overload. The vast amount of available OA content can overwhelm users, regardless of their context. This underscores the importance of digital literacy programmes that equip students with the skills to critically evaluate and efficiently navigate digital resources. Adegbite and Oludayo (2022) emphasise that enhancing digital literacy is crucial for ensuring that open access becomes a tool for empowerment rather than a source of confusion.

Research Question Two: How has library users' information seeking behaviour changed due to the availability of open access resources?

The study revealed that the availability of open access resources has led to increase in frequency of visits to the library by Nigerian students in the process of seeking for information while in Canada, a steady decline in

physical library visits was established among the students. The variations in the findings were traced to issues relating to the quality of infrastructural facilities such as internet facilities. While, it was established that the quality of internet in Canada was very stable, the same cannot be said of Nigeria due to fluctuations in internet facilities provision. Folorunso and Ohwofasa (2021) found that the availability of OA electronic journals in Nigerian universities led to a measurable increase in the frequency with which undergraduate students engaged with library resources since the students reported that the ease of access to scholarly articles not only supported their assignment and research but also encouraged a more independent and inquiry-driven approach to learning. However, Ajisebutu et al. (2024) observed that while digital libraries in Nigerian universities offer a wealth of open access content, infrastructural issues such as intermittent power supply and slow internet speeds significantly hamper consistent usage. Moreover, the overwhelming volume of available content has, in some cases, led to difficulties in information filtering. Many students express frustration with the sheer abundance of material, which can result in cognitive overload and impede effective decision-making during research.

In contrast to the challenges faced in Nigeria, Canadian institutions benefit from relatively robust digital infrastructure, high-speed internet, and well-funded library systems. Empirical studies in Canada (Johnson and Tremblay 2021 and Bouchard, 2023) indicate that the integration of OA resources into academic libraries has contributed to a steady decline in physical library visits, while significantly boosting the use of online databases and electronic journals. For instance, research conducted at several Canadian universities suggests that students now prefer digital platforms for accessing up-to-date research materials, citing convenience, immediacy, and the ability to search vast collections as key advantages. Also, the widespread adoption of OA resources has facilitated interdisciplinary research and collaborative learning. Digital libraries serve not only as repositories but also as interactive platforms where students engage in discussion, share insights, and co-create knowledge. This evolution in library use reflects broader trends in digital literacy and information management, where the ability to navigate online environments is as critical as traditional reading skills.

When comparing the experiences of students in Nigeria and Canada, several common themes emerge despite distinct infrastructural and cultural contexts. In both countries, open access has substantially lowered the barriers to scholarly resources because students appreciate the immediate availability of a vast array of academic materials, which supports timely research and learning. This increase in access has shifted information

seeking from physical visits to digital searches, transforming the role of libraries from passive storage spaces to active digital hubs. The abundance of available content, while generally positive, can also create a paradox where students experience cognitive overload. This is particularly evident in Nigeria, where the rapid proliferation of OA materials sometimes overwhelms users, leading to difficulties in filtering and effectively utilising information. Libraries must thus develop user-friendly interfaces and sophisticated search algorithms to help students navigate the digital landscape. The effectiveness of open access resources is heavily contingent on institutional support and robust digital infrastructure. Canadian universities tend to invest more in IT infrastructure and provide continuous professional development, which facilitates smoother transitions to digital platforms. In Nigeria, however, infrastructural challenges such as unstable power supply and limited high-speed internet access continue to impede full utilisation of OA resources.

Research Question Three: How have libraries maintain their relevance and better support their users through open access resources and services? Open access has transformed the landscape of scholarly communication by breaking down paywalls and providing free, immediate access to research outputs. As digital libraries increasingly incorporate OA resources from scholarly journals to e-books and multimedia collections users now enjoy unprecedented access to knowledge. In Nigeria, studies have shown that the availability of OA resources has increased the frequency of digital library usage among students, with many undergraduates reporting a shift from physical library visits to online resource engagement (Folorunso & Ohwofasa, 2021). This paradigm shift is not confined to Nigeria alone; institutions in Canada have also witnessed a significant transition, with digital platforms becoming the primary source of academic content due to their convenience, immediacy, and expansive reach (Smith & Roberts, 2020).

However, the impact of OA extends beyond merely providing access. Open access also serves as a catalyst for collaborative learning and research innovation. Digital libraries are increasingly designed not only as repositories but as dynamic, interactive spaces where users can engage in virtual reference services, participate in online forums, and collaborate on research projects. In Canada, digital libraries now facilitate interdisciplinary research by allowing students to access diverse databases and connect with peers and experts across geographic boundaries (Jones & Lee, 2021). In Nigeria, the integration of open access resources into academic libraries has opened new avenues for research and learning. Okafor (2021) reported that Nigerian students had higher engagement with digital resources once OA content became widely available. Their research

noted that open access not only improved the ease of obtaining scholarly articles but also promoted a more inquiry-driven approach to learning, as students could quickly verify information and access a broader range of perspectives.

In the light of the foregoing, the relevance of libraries in Nigeria and Canada is through the process of reinventing themselves by transitioning from traditional repositories of physical books to dynamic, digitally enabled service centers. Robust digital infrastructure is the backbone of effective OA resource utilisation, thus investments in high-speed internet, modern computing facilities, and reliable digital repositories are crucial for the libraries to remain relevant. Empirical evidence from Nigerian in the study of Ibrahim and Mohammed (2021) indicates that institutions with state-of-the-art IT resources experience higher levels of digital engagement among students, thus without reliable infrastructure, even the best-curated OA content may remain underutilised.

Conclusion

Open access through digital libraries has fundamentally reshaped how students engage with academic resources, offering unprecedented access to scholarly content and driving transformative changes in information seeking behaviour. In Canada, robust digital infrastructure and comprehensive institutional support have led to high levels of digital engagement, while in Nigeria, open access has begun to democratise knowledge despite significant infrastructural and digital literacy challenges. This suggests that though open access can be a powerful tool for enhancing academic research and learning, its benefits depend on the effective integration of digital literacy training, infrastructure investments, and user-centered digital services. Also, libraries in Nigeria and Canada must have shifted focus to the process of adapting to the curating of quality content, investing in digital platforms, and developing hybrid models that balance online and physical services so as to remain relevant in the digital age. The study has critically and creatively explored how open access through digital libraries has reshaped information seeking behaviour among students in Nigeria and Canada. It has provided empirical evidence, compared divergent contexts, and discussed implications for policy and practice. Future research should continue to explore these dynamics to ensure that the benefits of open access are harnessed equitably, empowering all students to thrive in the digital age.

Recommendations

Based on the comparative findings from the study, the following recommendations are proposed:

1. For policymakers and academic leaders of libraries in Nigeria and Canada, there is need to invest highly in bridging the digital divide, investing in digital literacy, and developing policies that ensure equitable access to high-quality academic resources.
2. Libraries in both Nigeria and Canada should make provision for platforms that will facilitate ease and convenience access to the open education resources as well as adequate visibility of these resources that are relevant to students needs.
3. The libraries should ensure that the students in both Nigeria and Canada can explore the open education resources within the holdings of the libraries real time, online and anywhere they are located
4. Through the implementation of these recommendations, libraries in Nigeria and Canada can enhance the relevance of their libraries and better support their users in a rapidly evolving digital landscape. While the experiences in Nigeria and Canada differ due to infrastructural and cultural contexts, both regions stand to benefit from strategic investments in technology, digital literacy, and user-centered services. These efforts will not only democratise access to knowledge but also empower students to thrive academically and contribute to a more informed, equitable society.

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Career Choice of Librarianship among Secondary School Students in Uyo Metropolis, Nigeria: Motivational Factors

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Abstract

This study explores the motivational factors influencing secondary school students' career choice of librarianship in Uyo Metropolis. Grounded in Donald Super's Career Development Theory, which emphasizes the exploratory stage of adolescence, this research examines how perceptions of professional prestige, financial benefits and career opportunities shape students' vocational decisions regarding the career choice of librarianship. The research was guided by three objectives, corresponding research questions, and null hypotheses. A researcher-developed questionnaire titled "Motivational Factors and Career Choice of Librarianship" (MFCCCLQ), was administered to a sample of 150 students from three secondary schools. Data analysis, using descriptive statistics (for research questions) and simple linear regression (for hypotheses testing), revealed that while students generally hold negative or neutral views regarding the professional prestige and career opportunities of librarianship, financial benefits emerge as a significant influencing factor. Specifically, the regression analysis showed that financial benefits explain 3% of the variance in career choice ($p < 0.05$), whereas professional prestige and career opportunities did not significantly influence students' decisions ($p > 0.05$). Recommendations aimed at improving the image of librarianship were made, including enhancing salary structures, broadening public awareness of diverse career pathways within the field, and actively promoting the profession's potential for personal and professional growth.

Keywords: *Career Choice, Librarianship, Senior Secondary Students, Professional Prestige, Career Opportunities, Financial Benefits, Motivational Factors.*

Introduction

Human beings are inherently, and by design, a product of choice. A choice involves selecting or differentiating between two or more options, and in the context of a career, it means choosing one occupation over another. Making a career choice is a significant and often complex decision that

requires thorough research and careful consideration. This process involves selecting one occupation over another, with career choice necessitating the evaluation of multiple options to find the best fit for an individual's personal needs, interests, and capabilities. It extends beyond simply aligning a person with a job; it is a holistic decision-making process where individuals evaluate their skills, identify what brings them fulfillment, explore different career paths, and reflect on how their choices may shape their sense of identity. A career is a profession chosen for its potential to provide financial stability, job satisfaction, and personal growth, serving as a continuous journey that demands education, skills, experience, and exposure, while offering not only employment but also the opportunity to achieve personal goals, build professional networks, and contribute to society.

According to Ezeani (2013), a career is defined as the sequence of occupations and positions held throughout a person's life. It is a major aspect of life, engaging individuals in various capacities, including as a worker, family member, community member, and participant in leisure activities. Popoola (2004, as cited in Igere, 2017) describes a career as a vocation or profession that involves extensive education and training, pursued over an extended period. Given the diversity of abilities, experiences, and interests, there is no single career path that suits everyone. Therefore, individuals are expected to select careers that align with their unique traits, abilities, interests, and circumstances.

Career selection is a significant decision that affects individuals throughout their lives, as it reflects their values and aspirations for their professional journey. As people grow and progress through their working lives, they go through different stages that improve their ability to reflect on their career choices (Patel et al., 2024). Making right career choices can lead to success, satisfaction, and happiness, while poor career decisions or frequent career changes can negatively impact mental well-being (Alkhelil, 2016). Patel et al., also observed that previous career choices and the fear of pursuing the wrong career can result in depression, anxiety, burnout, and a diminished quality of life. This, in turn, can negatively impact both productivity and job satisfaction. To avert this, career guidance and counselling are essential.

The primary aim of career guidance is to foster the holistic development of young people, aiding their transition into the workforce and equipping them to make informed decisions as they pursue continuous growth throughout their lives. Through this process, young individuals can fully realize their skills and abilities, as well as gain self-awareness regarding their interests, strengths, and areas for improvement. They become better equipped to analyze their social and professional environments, identify

potential challenges and opportunities, make personal, educational, and career choices, and adjust as needed (Ortega et al., 2014). In contemporary society, a plethora of career options is accessible to individuals, particularly the youth, as they navigate their professional aspirations. Among the most notable fields are Medicine, Engineering, Pharmacy, Nursing, Accounting, Law, Banking, Mass Communication, Education, and Library and Information Science.

Many young people are drawn to more popular career fields, while librarianship continues to struggle for widespread acceptance. A key reason for the hesitation in pursuing librarianship as a career stem from a lack of understanding about the role of a librarian and limited awareness of the profession itself. For thousands of years, libraries have empowered people by providing resources, services, and training to help expand their knowledge and foster lifelong learning. Librarians, however, are the backbone of library operations, ensuring that resources are organized, accessible, and effectively utilized. They play a vital role in connecting people to information, guiding research, and fostering a learning environment (ALA, 2016). A librarian is responsible for overseeing the management of a library and its resources, which includes selecting, organizing, and maintaining materials, as well as providing various services tailored to meet the needs of diverse user groups.

Thiruppathi (2024) asserted that in the digital age, librarians have evolved from traditional gatekeepers of physical collections to multifaceted professionals who serve as information curators, technology experts, and educators, emphasizing digital access and actively promoting information literacy among users. Like other professions, librarianship requires formal training, during which individuals learn the foundational principles and tenets of the field. A librarian, often referred to as an information professional, typically holds at least a degree in Library and Information Science from a recognized tertiary institution.

While much has been written in the literature on librarianship as a career choice in Nigeria, there is a notable lack of research focusing on secondary school students, as most studies concentrate on undergraduates and library schools. This research aims to shed light on how individual factors such as professional prestige, financial benefits, and career advancement influence secondary school students' choices regarding librarianship as a career path.

Theoretical framework

Donald Super's Development Theory was first published in an article titled "A Theory of Vocational Development" in 1953. Super's career development theory combines stage development and social role theory,

suggesting that individuals progress through five stages: growth, exploration, establishment, maintenance, and disengagement. These stages are not rigid, and individuals may cycle back through certain stages at different points in life. The exploration stage, typically occurring during adolescence, focuses on investigating careers and developing vocational self-concept. In the growth stage, children and adolescents learn about occupations, which shapes their vocational identity and self-concept.

During the exploratory stage, individuals gain work-related experiences and refine their self-concept by matching their interests and abilities to specific careers. The establishment stage focuses on career stability and advancement, while the maintenance stage involves preserving one's career status, with some individuals making changes to their roles or jobs. Finally, the disengagement stage represents retirement and the process of leaving the workforce. Throughout these stages, individuals develop a stable sense of self-concept and career maturity, influenced by biological, social, and societal factors (Woerner, 2023; Kosine & Lewis, 2008). Super's career development theory relates to professional prestige, financial benefits, and career opportunities because career choices are influenced by both internal (self-concept, interests, values) and external (social status, economic conditions, job availability, career growth potential, future security) factors. This study focuses on secondary school students who are usually in their adolescent age, that is, the exploration stage where they are developing self-concept and career maturity. These students at this stage begin assessing careers based on how they align with their personal identity and social expectations. In this case, if librarianship is seen as low-prestige, students who value social recognition may avoid it.

Conversely, if librarianship is perceived to be associated with knowledge, research, and intellectualism, students with a strong academic self-concept may be drawn to it. In relation to career opportunities, if librarianship is understood to offer diverse career paths (e.g., digital librarianship, academic librarianship, Law librarianship, Medical Librarianship, etc.) students may find it attractive, but if they see limited career progression in librarianship, they may prefer careers with more upward mobility and long-term growth opportunities.

Additionally, super's development career theory acknowledges that students may shift career choices if better opportunities arise in other fields, hence the need to engage in career counselling in librarianship. Particularly for students from low-income backgrounds who prioritise financial security, if librarianship is seen as low-paying, students may be discouraged from pursuing it. Conversely, if financial benefits are adequate and stable, students may consider it a viable option. The theory therefore

helps to explain why students may or may not choose librarianship based on: self-perception and professional identity (prestige; job security and career growth (opportunities); and economic motivations and salary expectations (financial benefits).

Statement of the Problem

Librarianship has undergone substantial transformations with the advancement of information and communication technology (ICT). Despite these changes, the profession continues to struggle with a lack of appeal among young adults and teenagers, most of whom are still in secondary schools or just concluded secondary education. The motivational factors for pursuing librarianship appear minimal, and the rewards associated with the career are often perceived negatively. Many young people view librarianship as a profession lacking in glamour, respect, prestige, and financial benefits compared to other fields. There also seems to be a general lack of understanding and appreciation of librarians and their roles. The prevalent stereotype of librarianship as a job with limited opportunities, focused solely on tasks like arranging, stamping, and shelving books, has further tarnished the profession's image. This perspective has negatively impacted the profession, as it deters younger individuals from embracing the field unless no other alternatives are available. This study seeks to investigate three motivational factors that influence secondary school students' choice of librarianship and how they impact their career choices.

Objectives of the Study

The main purpose of this study is to assess the influence of motivational factors on career choice of librarianship among secondary school students in Uyo Metropolis. The specific objectives of the study are to:

1. examine how professional prestige impacts secondary school students' career choice of librarianship
2. determine the effect of financial benefits on secondary school students' decision to pursue librarianship.
3. ascertain the influence of career opportunities on secondary school students' preference for librarianship.

Research Questions

The study addresses the following research questions:

1. What is the impact of professional prestige on secondary school students' career choice of librarianship?
2. How do financial benefits affect secondary school students' decision to choose librarianship as a career?
3. What role do career opportunities play in secondary school students' career choice of librarianship?

Research Hypotheses

The following hypotheses were formulated to guide the study and are tested at a 0.05 level of significance:

H₀₁: Professional prestige do not significantly influence secondary school students' career choice of librarianship

H₀₂: Financial benefits do not significantly influence secondary school students' career choice of librarianship

H₀₃: Career opportunities do not significantly influence secondary school students' career choice of librarianship.

Literature Review

Adolescents are influenced in their career choices by multiple sources of support and guidance. At approximately 14 to 15 years of age, they are often required to make significant decisions about their future, a process that can provoke feelings of indecision and insecurity. This uncertainty is frequently associated with decision-making difficulties and a tendency toward procrastination or avoidance of the process (Marcionetti & Zammitti, 2023). Several factors contribute to career choice, with the home environment playing a crucial role in shaping a child's personality and values. A notable influence on career decisions is also the lack of awareness regarding available professions (Jones & Larke, 2005, as cited in Kazi & Akhlaq, 2017). According to Malgwi, Howe, and Bornaby (2005, as cited in Umar, 2014), in addition to financial incentives, factors such as career advancement opportunities, prestige, social status, job security, higher earning potential, and a diverse range of career options significantly affect career decisions. This study focuses on the motivational factors of professional prestige, financial benefits, and career opportunities as it affects librarianship as a career choice.

Professional prestige refers to the value or respect a community assigns to a particular profession. Individuals working in high-prestige fields often enjoy elevated social standing within the community. This prestige can also influence self-perception and how others view them, with certain professions often being associated with positive personal traits. Although prestige may not drive every career decision, it can be a factor in narrowing down options if considered important (indeed.com, 2023).

Professional prestige denotes the status, respect, and honor attributed to a specific profession, encapsulating its societal reputation, recognition, and esteem, and is frequently correlated with the level of expertise, specialized knowledge, and significant contributions made by professionals within their respective fields. Prestige can greatly influence career satisfaction and personal identity. For example, careers in medicine, law, or academia are typically viewed as prestigious due to the extensive education and

expertise they require, leading to a strong sense of accomplishment and pride among those in these fields. Conversely, professions perceived as having lower prestige may lead individuals to feel undervalued or less fulfilled, making professional prestige a critical factor in both career choice and overall job satisfaction.

Oyebanji and Aliyu (2020) reinforce this viewpoint, highlighting prestige as one of the most influential factors in career choice. Aguolu and Aguolu (2002, as cited in Obot et al., 2018) argued that the level of respect and recognition a profession accorded a profession by society is largely determined by the public's understanding and acceptance of its significance within that community. Obot et al., (2018) further explained that the implication is that the status of the library profession is shaped by society's perception of librarians' roles and social responsibilities. Despite society's failure to fully recognize these duties, librarians are frequently expected to engage in community activities, such as organizing exhibitions, presenting book reviews, and educating community organizations on library usage.

Furthermore, as professionals, librarians are anticipated to draw upon their extensive knowledge to cultivate cultural appreciation among library patrons. Obot et al., citing Aguolu and Aguolu (2002) as well as Ugah and Ntui (2005), contend that, in comparison to more established professions such as law and medicine, there remains a prevalent consensus among scholars in library and information science that librarians and information scientists continue to struggle with issues of professional recognition and respect. It is worth noting, however, that the profession has experienced significant evolution over the years.

Although librarianship may not always be viewed with the same level of prestige as careers in fields such as medicine or law, it embodies a distinct and significant form of professional esteem. The evolving role of librarians is increasingly significant in the context of both physical and digital resource management, digital literacy promotion, and broader societal contributions. By adapting to technological advances and changing societal needs, librarians are recognized not just as custodians of books but as essential players in fostering informed communities. This transformation enhances the professional prestige of the profession.

Earning potential, also known as financial benefits, is another key factor to consider when evaluating career options. It plays a crucial role in determining whether a profession will be both financially sustainable and personally rewarding in the long term. Researching potential salaries and the factors that influence them can provide valuable insight when making informed career decision. Several common variables affecting

compensation include: expected number of work hours per week; geographic location of the job; and specific responsibilities of the position. Once these factors are understood, it is important to assess them in relation to the potential earning capacity and determine whether the salary aligns with expectations. This evaluation is subjective, as it depends on individual priorities. For instance, some may find it acceptable to work over 60 hours per week for financial gain, while others may prioritize a lower workload with reduced pay due to personal commitments, such as maintaining work-life balance. Ultimately, the decision is shaped by values and personal circumstances (indeed.com, 2023).

Obot et al., citing Katz in Sinclair et al. (2005), demonstrated the influential role of financial incentives in the process of job choice. Sinclair et al. (2005, as cited in Obot et al., 2018) further explained that money possesses the capacity to attract, retain, and motivate individuals toward career choices and enhanced performance. For example, if a librarian or information professional receives a job offer with identical characteristics to the current position but offers a higher salary, acceptance of the new offer is likely based on the financial advantage. In line with this, Akintoye (2000, as cited in Obot et al., 2018), argued that money is the most significant factor influencing career choice, as it symbolizes intangible goals such as security, power, prestige and a sense of accomplishment and success. Salaries for librarians vary based on several factors, including the type of library (e.g., public, school, academic), the population of the community served, the region of the country, and years of experience. Generally, salaries tend to be higher in academic libraries compared to public libraries and in large metropolitan areas compared to rural ones (ALA, 2008a). Obot et. al (2018, citing Etim, 2010) averred that fringe benefits associated with academic library work can significantly influence the decision to pursue librarianship as a career.

According to Oyebanji and Aliyu (2020), the opportunity for career advancement through training significantly influences career choice. Indeed.com (2023) affirmed that the availability of opportunities for professional development is a critical factor when selecting a career. While the meaning of professional advancement may vary across different fields, many individuals seek careers that offer the potential for promotion or progression. For instance, certain professions, such as medicine or law, provide well-defined pathways for advancement. Conversely, careers lacking opportunities for skill development or advancement within an organization may be less appealing, depending on individual values and goals.

Focusing on the field of library and information science, Khajuria and Kumari (2023) observed that libraries were once known for their dusty shelves, quiet reading spaces, and printed materials. However, they highlighted that libraries have since transformed into dynamic centers of learning, catering to the diverse and evolving needs of their patrons and offering exciting career opportunities for library professionals. In the digital age, Khajuria and Kumari noted, librarians must now blend their traditional knowledge with expertise in digital technology, data management, and information management. They emphasized that one of the most significant changes in the field of library and information science is the evolving role of librarians, who have become skilled in digital navigation, proficient in curating digital resources, and adept at managing digital repositories. This suggests that librarians who are committed to continuous learning, unlearning, and relearning are likely to encounter limitless career opportunities. Such professionals exhibit significant potential for growth, advancement, and specialization within the field of librarianship.

The areas of specialization are diverse, allowing both current and aspiring librarians to pursue career paths that align with their personal interests and professional goals, thereby enhancing the appeal of librarianship as a career choice. Supporting this, ALA (2008b) observed that many specialties exist within librarianship, each with its own dedicated organization. In Nigeria, the Nigerian Library Association (NLA) is organized into various sections, such as the Information Technology Section, Cataloguing and Classification Section, Public Library Section, Medical Library Section, Academic and Research Libraries Section, National Association of Library and Information Science Educators Section, and so on.

Professionals can belong to more than one section based on their interest. This structure allows professionals to group into specific areas of expertise, fostering connections with like-minded peers and leveraging collective expertise for mutual growth. Furthermore, this underscores the notion that individuals can achieve their desired professional heights through their willingness to embrace new innovations in the field, effectively placing the responsibility for career outcomes and the enhancement of career prospects in the hands of the individual. With the vast range of career opportunities in librarianship, the advancement of information and communication technology (ICT) has further expanded possibilities, especially for those who are flexible and eager to adopt emerging technologies.

Research Methodology

The instrument used for data collection in this study was a researcher-developed questionnaire titled “Motivational Factors and Career Choice of Librarianship” (MFCCCLQ). The study population consisted of 416 students from Senior Secondary School 1 to Senior Secondary School 3 (SSS1 - SSS3) from three schools in Uyo Metropolis: Monef High School, Jevi Science Academy, and Efficient Secondary Commercial School. These students were chosen because they are at a stage where they can make significant career decisions. A sample size of 150 students was selected using simple random sampling, and the questionnaire was distributed accordingly. All the distributed instruments were completed and returned, resulting in a 100% response rate. The data obtained from the returned questionnaires were analyzed using descriptive statistics, specifically mean and standard deviation, to interpret the research findings while regression was used to test the hypotheses at a 0.05 level of significance.

Interpretation and Presentation of Results

Research Question 1: What is the influence of professional prestige on students’ career choice of librarianship?

Table 1: Mean and Standard Deviation of professional prestige and students’ career choice of librarianship

S/N	Professional prestige	SA	A	D	SD	Mean	S.D.
1	I admire what librarians do as a profession	7	32	18	93	1.69	0.963
2	Librarianship is a profession that requires the use of modern technology	6	59	22	63	2.05	0.988
3	Librarianship is not a respectable profession	51	62	13	24	2.07	1.034
4	Librarianship is an attractive potential career choice	50	29	26	45	2.56	1.234
5	Librarianship is highly rated in the society, among my family and peers	14	54	54	28	2.36	0.892
	Grand Mean					2.15	1.022

Table 1 shows the extent to which professional prestige affects students’ career choice of librarianship. From the scores obtained, the result reveals that the statement ‘Librarianship is an attractive potential career choice’ has the highest mean = 2.56, suggesting that suggests that some students see librarianship as a career option. This is followed by ‘Librarianship is highly rated in the society, among my family and peers’ with mean = 2.36 standard deviation of 0.892; and the least in the rank is ‘I admire what librarians do as a profession’ with mean=1.69, standard deviation of 0.963. The grand mean which is 2.15 reflects a generally negative perception of

librarianship as a profession. Being below the acceptable mean of 2.50 indicates that professional prestige influences students' career choice of librarianship to a low extent. It further suggests a generally negative or neutral perception of librarianship among students. Low admiration and perceived prestige could affect students' career choices. However, some respondents see career potential, suggesting that better promotion and awareness of the profession might improve perceptions. This highlights a need for interventions to improve the image and societal perception of the field.

Research Question 2: In what way does Financial Benefits influence students' career choice of librarianship?

Table 2: Mean and Standard Deviation of Financial Benefits and students' career choice of librarianship

S/N	Financial Benefits	SA	A	D	SD	Mean	S.D.
6	Librarians have a good earning power	20	26	50	54	2.12	1.086
7	The salary paid to librarians is not attractive	36	59	28	27	2.15	1.134
8	I can live well financially if I choose librarianship as a career	9	31	79	31	2.27	1.014
9	Librarians are not financially secure compared to other professions	21	58	44	27	2.27	1.157
10	The librarianship profession has no serious monetary benefits	23	65	52	10	2.05	1.025
	Grand Mean					2.17	1.083

Table 2 reveals the extent to which financial benefits influence students' choice of librarianship as a career. Analysis of the responses reveals that all the items scored below the acceptable mean of 2.50. The statements "I can live well financially if I choose librarianship as a career" and "Librarians are not financially secure compared to other professions" has the highest mean score at 2.27. Conversely the statement "The librarianship profession has no serious monetary benefits" has the lowest mean score at 2.05. The grand mean for this table is 2.17, which is below the neutral point of 2.5, thus indicating that financial benefit influences students' career choice of librarianship to a low extent. The overall perception is that librarianship does not offer strong financial rewards, which could negatively impact students' willingness to pursue it. While some respondents recognize financial stability is possible, the general sentiment leans toward uncertainty and concern about salary competitiveness. Addressing this perception through better salary structures, incentives, and awareness of

career advancement opportunities could improve students' views on librarianship as a career.

Research Question 3: What is the influence of career opportunities on students' choice of librarianship as a career?

Table 3: Mean and Standard Deviation on the Influence of Career Opportunities on Librarianship

S/N	Career Opportunities	SA	A	D	SD	Mean	S.D.
1.	Librarians only work in the library and handle books	40	35	23	52	2.39	1.186
2.	Librarians do not work in media houses (radio, television stations)	45	44	34	27	2.29	1.078
3.	Librarians can work as information specialists	62	8	30	50	2.19	0.965
4.	Librarians can work with international bodies	46	17	42	45	2.23	1.006
5.	Librarians can work in publishing houses	51	21	41	37	2.37	1.007
	Grand Mean					2.29	1.048

Table 3 shows how career opportunities influence students' choice of librarianship as a career. The results indicate that the respondents have a limited view of the career prospects of librarianship. Three items have a mean score below 2.5, indicating disagreement, while two items have a mean score above 2.5, indicating agreement. The highest mean score is 2.72 for item 12, which states that librarians do not work in media houses. This suggests that the respondents are not aware of the diverse roles that librarians can play in different sectors. The lowest mean score is 2.38 for item 11, which states that librarians only work in the library and handle books. This implies that the respondents have a stereotypical image of librarianship as a boring and monotonous job. The grand mean for this table is 2.51, which is close to the neutral point of 2.5. This indicates that the respondents have an average level of agreement on the career opportunities of librarianship. The overall perception of career opportunities in librarianship is weak, with students largely unaware of non-traditional roles. Librarianship is still primarily viewed as a book-centered profession, limiting students' interest in the field. Increasing awareness of alternative career paths (media, information science, publishing, international organizations, etc.) could improve students' perceptions and career choices in librarianship.

Testing of Hypotheses

Null Hypothesis 1: Professional prestige does not significantly influence a student's career choice of librarianship.

Table 4: Test of Significance of Simple Regression Analysis on the Influence of Professional Prestige on students' career choice of Librarianship.

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	.101	1	.101	.364	.547 ^b
Residual	41.274	148	.279		
Total	41.375	149			

a. Dependent Variable: Librarianship as a career

b. Predictors: (Constant), Professional Prestige

Professional prestige does not significantly affect student's choice of librarianship as a career. The independent variable is professional prestige while the dependent variable is student's choice of librarianship as a career. To test this hypothesis, simple linear regression was used and the result as presented in Table 1 showed that $R=.050$ which implies that there is a weak influence of professional prestige on choice of librarianship as a career.

More so, the $\text{Adj } R^2 = -.004$ which implies that the variation in the student's choice of librarianship as a career could be explained using -0.4% contribution of professional prestige which is zero or almost negligible contribution. Also, a look at the Analysis of Variance (ANOVA) as presented in table 2 shows that ($F=0.364$) ($p=.547$). Since $p (.547)$ is greater than $p (.05)$, the results imply that professional prestige does not significantly influence students' choice of librarianship as a career. Hence, the null hypothesis is accepted or not rejected.

Null Hypothesis 2: Financial benefits do not significantly influence student's career choice of librarianship.

Table 5: Test of Significance of Simple Regression Analysis on the Influence of Financial Benefits on students' career choice of Librarianship.

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	1.518	1	1.518	5.637	.019 ^b
Residual	39.857	148	.269		
Total	41.375	149			

a. Dependent Variable: Librarianship as a career

b. Predictors: (Constant), Financial Benefits

Financial benefits do not significantly affect student's choice of librarianship as a career. The independent variable is financial benefits while the dependent variable is student's choice of librarianship as a career.

To test this hypothesis, simple linear regression was used and the result as presented in Table 3 showed that $R=.192$ which implies that there is a positive influence of financial benefits on choice of librarianship as a career.

More so, the $\text{Adj } R^2 = 0.03$ which implies that the variation in the student's choice of librarianship as a career could be explained using 3.0% contribution of financial benefits. Also, a look at the Analysis of Variance (ANOVA) as presented in table 4 shows that ($F=5.637$) ($p=.019$). Since $p (.019)$ is less than $p (.05)$, this implies that financial benefits do significantly influence student's career choice of librarianship. Hence, the null hypothesis is rejected, and the alternate hypothesis is upheld.

Table 6: Test of Significance of Simple Regression Analysis on the Influence of Career Opportunities on students' career choice of Librarianship.

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	.010	1	.010	.035	.852 ^b
Residual	41.365	148	.279		
Total	41.375	149			

a. Dependent Variable: Librarianship as a career

b. Predictors: (Constant), Career Opportunities

The independent variable is career opportunities while the dependent variable is student's choice of librarianship as a career. To test this hypothesis, simple linear regression was used and the result as presented in Table 5 showed that $R=.015$ which implies that there is a weak influence of career opportunities on career choice of librarianship.

More so, the $\text{Adj } R^2 = -.007$ which implies that the variation in the student's choice of librarianship as a career could be explained using -0.7% contribution of career opportunities which is zero or almost negligible contribution. Also, a look at the Analysis of Variance (ANOVA) as presented in table 6 shows that ($F=0.035$) ($p=.852$). Since $p (.852)$ is greater than $p (.05)$, the results indicate that career opportunities do not significantly influence students' career choice of librarianship. Hence, the null hypothesis is accepted or not rejected.

Discussion

The results showed that professional prestige does not significantly influence students' decisions to pursue librarianship as a career. This suggests that regardless of whether the profession is seen as prestigious, students may still not consider it a desirable path. Even if the field is perceived as lacking societal status, students might still choose it or prefer other careers they believe will bring greater recognition. This finding contrasts with the study by Abraham et al. (2021), which found that, although a minor factor, professional prestige did motivate some students

at Mahatma Gandhi University in Kottayam to choose librarianship. Thus, while professional prestige may hold some relevance, it appears to be neither a sufficient nor necessary factor in attracting students to the field.

The result revealed a significant influence of financial benefits on students' decisions to pursue librarianship as a career. This implies that for many students, potential salary and benefits are key considerations when choosing a career, making expected financial rewards in librarianship an important factor. The expected financial rewards associated with librarianship thus play a crucial role in students' career choice. This finding contrasts with a previous study by Obot et al. (2018), which identified only a low positive correlation between remuneration and librarianship as a career choice. However, it aligns with the study by Abraham et al. (2021), which found that, although a minor factor, a satisfactory salary did motivate some students at Mahatma Gandhi University in Kottayam to choose librarianship.

The results indicated that career opportunities do not significantly influence students' decision to pursue librarianship. This suggests that, even when aware of the diverse career options available in the field and the profession's evolving nature, students may still not view librarianship as a dynamic and rewarding career choice. This finding contradicts Kanyika (2022), who found that job opportunities were the primary influencing factor for many respondents. According to Kanyika, most individuals were motivated to enroll in a LIS programme because of the available job prospects after graduation. The author attributed this interest to the shortage of librarians, particularly in developing countries, which has led to numerous vacancies in the field.

Conclusion

The decision to pursue a career in librarianship is often shaped by several factors, including students perceived professional prestige of the profession, the anticipated financial rewards, and their awareness of the diverse career opportunities within the field. Student's decision to pursue librarianship is shaped by their perception of the profession, the financial benefits they expect to gain, and their understanding of the various career paths available within the field. Promoting a modern, multifaceted image of librarianship and highlighting its potential for personal and professional growth could attract more students to this important and evolving profession.

Recommendations

Based on the objectives of this study, the following recommendations are made;

1. There is a need to boost the people's perception of Librarianship: The fact that the students consider librarianship only if other options fail shows that people do not think highly of being a librarian. To change this narrative, librarians must spread the word about how important and interesting the profession is. Also, regularly featuring prominent and successful librarians, and how they help with learning, research, and sharing knowledge could make being a librarian more appealing.
2. There is a need to push for improved pay packages and incentives for librarians. Money plays a key role in the choice of career, hence the need to vie for better pay for the librarianship professionals. The regulatory body (Librarians Registration Council of Nigeria), and the association's body (Nigerian Library Association) should jointly push for better pay, good benefits, and chances for professional growth for librarians working across all three tiers of government as well as in private organisations. Furthermore, these professional bodies could put in place strategies to place younger and more intelligent potential librarians on scholarship as a means of encouraging them in their choice of librarianship.
3. Sensitization and opening up on more career paths: Knowledge of career options available in the profession would enable potential librarians take advantage of the lots of chances to grow in the field. In collaboration with career counselors, and also during programmes like career day in schools, experienced librarians can expose new ones to opportunities, and the different types of librarian jobs to make sure that students are ready for a successful librarian career.

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Polytechnic Library as Strategic Collaborators for the Next-Generation Initiatives

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Abstract

This study explores the role of polytechnic libraries as strategic collaborators in next-generation research initiatives. Using a mixed-methods approach, this research investigates the current state of polytechnic libraries in supporting research initiatives and identifies areas for improvement. The findings suggest that polytechnic libraries can play a critical role in supporting research initiatives by providing access to relevant information resources, offering research support services, and collaborating with researchers. Recommendations made include: Polytechnic libraries should develop more effective research support services including training programmes for researchers and library staff; the polytechnic library should collaborate more closely with researchers to support research initiatives; and they should provide access to relevant information resources including online databases and e-journals for users' consultation.

Keywords: *Library, Next Generation Initiatives, Strategic Collaborators*

Background to the study

Polytechnic libraries are academic libraries that serve polytechnic institutions, which offer higher education programmes in various fields such as technology, engineering and applied sciences. The primary role of polytechnic libraries is to support the teaching learning and research activities of the institution by providing access to relevant information resources, facilities and services. They are equally established to provide high-quality information services in support of teaching and research for academic staff members and students. With the increasing emphasis on research and innovation, polytechnic libraries are expected to play a more active and crucial role in supporting research initiatives in their institutions. They provide various resources and services to support researchers in the area of access to databases and e-journals. Polytechnic libraries subscribe to various databases and e-journals that provide access to relevant research articles, conference papers and other scholarly materials.

Not only that, polytechnic libraries serve as research assistance. The librarians provide research assistance to students and faculty, helping them to locate relevant information resources; develop research strategies and evaluate sources. The information literacy role played by polytechnic libraries also suffices. Polytechnic libraries offer information literacy instruction to students, teaching them how to effectively locate, evaluate and use information resources. Another unique function of polytechnic libraries is research data management. Some polytechnic libraries provide support for research data management, helping researchers to organize, store, and share their research data.

Strategically speaking, polytechnic libraries can serve as collaborators for research initiatives in a number of ways including: partnership with faculty; collaboration with research centres; support for research grants and dissemination of research output. Librarians can partner with faculty members to develop research projects, provide research assistance and support the integration of information literacy into the curriculum. In the same vein, polytechnic libraries can collaborate with research centres and institutes within the institution to provide research support, develop research databases and promote research output.

In furtherance of their strategic collaboration for research initiatives, polytechnic libraries through the librarians can assist researchers in identifying potential funding sources, developing grant proposals and managing research grants. Finally, polytechnic libraries can support the dissemination of research output by providing platforms for publishing research papers, creating research repositories and promoting open access publishing. Despite the potential for polytechnic libraries to serve as strategic collaborators for research initiatives, there could be several challenges that may require attention. This is however not in the immediate focus of this paper.

Literature Review

Previous studies have highlighted the importance of libraries in supporting research initiatives. For example, a study by Luu (2010) found that libraries can play a critical role in supporting research by providing access to relevant information resources and offering research support services. Polytechnic libraries play active roles in facilitating the research process for its users. They achieve this role by providing rich collections which gives access to a wide range of information resources including books, journals, databases and digital collections. Libraries also assist through database subscriptions. Libraries subscribe to various databases such as JSTOR, ScienceDirect and ProQuest to provide access to relevant research articles, conference papers and other scholarly materials. Libraries also

provide access to electronic journals and books which can be accessed remotely or on-campus. They equally offer interlibrary loan services which allow users to borrow materials from other libraries to satisfy users' needs. Another study by Needle (2015) emphasized the importance of libraries in collaborating with researchers to support research initiatives. Libraries essentially engage in information resource provision by creating access to relevant literature such as found in journals, books and databases facilitating literature reviews and informing research design. The library often subscribes to specialized databases and tools such as citation management software that support research workflows. Librarians offer expert guidance on research design, methodology and information seeking, helping researchers to refine their research questions and approaches. Additionally, libraries provide instruction on information literacy, teaching researchers how to effectively locate, evaluate and use information resources. They may offer support for research data management including data storage, sharing and preservation.

Kesselman and Watstein (2017) discussed the role of libraries in supporting research initiatives in the digital age. They opined that libraries provide access to digital versions of books and journals; offer subscriptions to databases and datasets relevant to various research fields; establish institutional repositories to store and provide access to research outputs. They further submit that libraries offer support for digital scholarship, including data analysis, visualization and digital pedagogy. They often provide guidance on research data management including data storage, sharing and preservation as well as teach researchers how to effectively use digital tools and resources.

While examining the role of libraries in supporting interdisciplinary research initiatives, Saunders and Owen (2018) state that libraries provide access to databases that cover multiple subjects and disciplines; offer subscriptions to journals and publications that focus on interdisciplinary research and establish digital collections and repositories that store and provide access to interdisciplinary research outputs. Commenting further, the authors were of the views that libraries offer research consultations that cater to the needs of interdisciplinary research such as mixed-methods research; offer data management and analysis services that cater to the needs of interdisciplinary researchers. In a related submission, they added that libraries provide access to research platforms that support interdisciplinary research such as collaborative workspaces and data sharing platforms; offer access to software and tools that support interdisciplinary research such as data analysis and visualization tools and provide access to high-performance computing resources that support interdisciplinary research.

In their own case, Chow and Goh (2019) discussed the importance of libraries in supporting innovation and entrepreneurship initiatives. They concluded that libraries are useful in providing physical and virtual spaces; resources and tools; provide programme opportunities and services; engage in partnerships and collaborations; offer training on digital literacy including coding, data analysis and digital marketing. Provision of training and resources on entrepreneurship skills such as business planning, pitching and fundraising is in the purview of the library. They also provide innovation and design thinking offering training and resources on innovation and design thinking methodologies. Umar (2019) highlighted challenges faced by the federal polytechnic libraries in North Eastern States of Nigeria. The identified problems are inadequate funding, lack of trained personnel, poor infrastructure, limited access to digital resources, power supply and internet connectivity issues, lack of research culture, inadequate library automation and security issues.

Statement of the problem

Polytechnic libraries are facing challenges in supporting research initiatives due to limited resources and infrastructure. There is a lack of collaboration between polytechnic libraries and researchers, resulting in inadequate support for research initiatives. Polytechnic libraries are not fully utilizing their potential as strategic collaborators in research initiatives, leading to missed opportunities for innovation and growth.

Objectives of the study

The research objectives for the study are to:

1. Investigate the current state of polytechnic libraries in supporting research initiatives;
2. Identify the challenges faced by polytechnic libraries in supporting research initiatives;
3. Examine the role of polytechnic libraries as strategic collaborators in research initiatives; and
4. Develop a framework for polytechnic libraries to support research initiatives effectively.

Research Methodology

This study used a mixed-methods approach, combining both quantitative and qualitative data collection and analysis methods. The study population consisted of polytechnic librarians and researchers in Nigeria. Data were collected using a questionnaire and interview schedule. A survey was conducted to collect data on the current state of polytechnic libraries in supporting research initiatives. Interviews were conducted with librarians and researchers to gather more in-depth information on the challenges and limitations faced by polytechnic libraries in supporting research initiatives.

Data Analysis, Interpretation and Discussion of Findings

The findings of this study suggest that polytechnic libraries can play a critical role in supporting research initiatives by providing access to relevant information resources, offering research support services, and collaborating with researchers. The study also identified areas for improvement, including the need for polytechnic libraries to develop more effective research support services and to collaborate more closely with researchers. More specifically, the Table 1 to 3 present the data obtained for this study and the interpretation showing the responses of the respondents as captured in frequency of occurrence and percentages. The fourth table presents the consensus of opinions of the respondents who were polytechnic librarians on what a standard framework of libraries to support research initiatives should look like.

Table 1: Current State of Polytechnic Libraries Support for Research Initiatives

S/N	Names of Polytechnics	Well Supported	Fairly Supported	Poorly Supported	Not Supported
1	Adeseun Ogundoyin Polytechnic, Eruwa	-	Yes	Yes	-
2	Federal Polytechnic, Ayede	-	-	-	-
3	Oyo State College of Agriculture & Technology, Igboora	-	Yes	-	-
4	The Ibadan Polytechnic, Ibadan	-	Yes	-	-
5	The Oke-Ogun Polytechnic, Saki	-	Yes	-	-

Table 1 presents the results of the current state of polytechnic libraries support for research initiatives. None of the five polytechnics sampled has supported research initiatives well enough. Only 80% respondents fairly supported research initiatives of their users. A polytechnic librarian claimed that he cannot say he has supported research initiatives of his users excellently but he made bold to state that no user encounters the library without being satisfied. In fact, he claimed to have also supported his users in other countless ways but he was only being modest to say he has provided needed services satisfactorily when it comes to supporting researchers. One respondent, representing 20% also claimed to have poorly supported research initiatives of its users. This finding is contrary to

Needle (2015) opinion that the importance of libraries can be seen in collaborating with researchers to support research initiatives.

Table 2: Challenges Faced by Polytechnic Libraries in Supporting Research Initiatives

S/N	Challenges faced by Polytechnic Libraries	Yes	%	No	%
1	Funding related problems	05	100	-	-
2	Digital transformation issues	03	60	02	40
3	Information overload	01	20	04	80
4	Limited resources	03	60	02	40
5	Changing user needs	02	40	03	60
6	Scholarly communication	03	60	02	40
7	Inadequate staffing	04	80	01	20

Table 2 presents the various challenges polytechnics are grappling with at the time of research. A perfect percentage (100%) of the polytechnics under study has funding problems. Inadequate staffing has affected four representing 80% respondents. In fact a library has only two staff members which is not a good occurrence in a government owned polytechnic library. Only one (20%) library claimed to have experienced information overload as a challenge. This implies that other eighty percent cannot be said to possess sufficient information needed by their users. This uphold Umar (2019) that highlighted challenges faced by federal polytechnic libraries in North Eastern states of Nigeria to include the ones here-in identified as shown in the Table 2.

Table 3: Role of Polytechnic Libraries as Strategic Collaborators in Research Initiatives

S/N	Roles of Polytechnic Libraries in Research Initiatives	Yes	%	No	%
1	Literature search	05	100	-	-
2	Database access	02	40	03	60
3	Developing research methodologies	-	-	05	100
4	Information literacy training	03	60	02	40
5	Providing support on digital scholarship	01	20	04	80
6	Facilitating collaboration between researchers	02	40	03	60
7	Building partnerships with industry partners	-	-	05	100
8	Collaborating with research institutions onshore and offshore	02	40	03	60
9	Providing training and development opportunities for staff	02	40	03	60
10	Offering training and support for researchers	03	60	02	40
11	Providing access to digital infrastructure	02	40	03	60
12	Creating dedicated research spaces	04	80	01	20
13	Promoting research initiatives and achievements	02	40	03	60
14	Advocating for the role of libraries in supporting research	03	60	02	40

Table 3 indicates that five (100%) libraries under the study engaged in literature search and offered the service to their reading populace. Also, none of the libraries build partnerships with industry partners. A total of four (80%) libraries have created dedicated research spaces for their clienteles. Only one, 20% libraries do provide support on digital scholarship. While three libraries representing 60% of the participants engage in information literacy training, only two (40%) each offer database access; facilitating collaboration between researchers; collaborating with research institutions locally and internationally; providing training and development opportunities for staff; providing access to digital infrastructure and promoting research initiatives and achievements. These findings support Saunders and Owen (2018) submission on roles of libraries as collaborators in research. It also supported Luu (2010) who found that libraries can play a critical role in supporting research by providing access to relevant information resources and offering research support services. The finding uphold Chow and Goh (2019) views on importance of libraries.

Table 4: Framework for Polytechnic Libraries to Support Research Initiatives

S/N	ITEMS OF THE FRAMEWORK	KEY INDICATORS / ATTRIBUTES		
1	RESEARCH SUPPORT INFRASTRUCTURE	Dedicated research space	Research technology and equipment	High-speed internet and networking
2	RESEARCH RESOURCES AND COLLECTIONS	Curated research collections	Open access resources	Specialized databases and datasets
3	RESEARCH SUPPORT SERVICES	Research consultations	Literature review and search support	Data management and analysis
4	COLLABORATION AND PARTNERSHIPS	Research partnerships	Interdisciplinary collaboration	Community engagement
5	TRAINING AND EDUCATION	Research skills training	Digital scholarship training	Information literacy instruction
6	ASSESSMENT AND EVALUATION	Research output metrics	User feedback and surveys	Continuous improvement

Source: Interview sessions with the Polytechnic Librarians

Table 4 shows the areas well detailed as what should constitute the framework that could guide the polytechnic libraries that may want to support research initiatives of their patrons most efficiently and effectively too. Six main areas have been suggested with three highlighted indices for

measuring the presence of the six in these libraries. The very first column states that there is need for research support infrastructure measurable with dedicated research space, presence of research technology and equipment and availability of high-speed internet and networking. In the same vein, the table recommends the inclusion of assessment and evaluation as a major construct needed in the framework if any polytechnic library will support the research initiatives of its clients. The three indicators to determine this are: research output metrics, user feedback and surveys as well as continuous improvement.

Conclusion

This study highlights the importance of polytechnic libraries as strategic collaborators in next-generation research initiatives. The findings of this study suggest that polytechnic libraries can play a critical role in supporting research initiatives by providing access to relevant information resources, offering research support services, and collaborating with researchers. The study's recommendations include the need for polytechnic libraries to develop more effective research support services and to collaborate more closely with researchers.

Recommendations

The following recommendations were suggested based on the research findings:

- 1 Develop more effective research support services: Polytechnic libraries should develop more effective research support services, including training programmes for researchers and library staff.
- 2 Collaborate more closely with researchers: Polytechnic libraries should collaborate more closely with researchers to support research initiatives.
- 3 Provide access to relevant information resources: Polytechnic libraries should provide access to relevant information resources, including online databases and e-journals.

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**Perception of Quality of Internet as a Source of Acquiring Information
by Registered Library Users in University of Calabar Library**

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Abstract

This study investigated the perception of the quality of internet sources of information by registered library users in the University of Calabar library. Descriptive survey design was adopted for the study. Two objectives were formulated to guide the study while two research questions were answered. The population consisted of 320 registered library users. A validated researcher's made instrument (questionnaire) with a reliability index of 0.88 achieved through a pilot test using members of the population that did not form part of the main study was used for data collection. 186 respondents were randomly selected as the sample. The research data was analyzed with frequency tabulation and percentages to answer research questions. The findings of the study indicated that 161(86.6%) of the respondents utilize the internet regularly, 20(10.8%) do not utilize the internet regularly while 5(2.7%) never utilized the internet at all. The findings also indicated that out of 186 respondents that responded on the perception of quality of internet sources of information, 112 (60.2%) agreed on that the quality of internet sources of information is very high while 74(39.8%) disagreed. Similarly, 53(28.5%) agreed that the quality of internet provided does not influence their use of the library while 133(71.5%) disagreed. 138 respondents agreed that the quality of OPAC provided is dissatisfactory while 48(25.8%) of the respondents disagreed. It was recommended that registered library users should be made familiar with the use of internet sources and operation of the OPAC by making it compulsory for all student to learn how to use the internet tool during their first year of study in order to be conversant with internet and OPAC sources of information for their academic and research purposes.

Keywords: *Perception, Quality, Internet, Sources of Information, Registered Library Users.*

Introduction

The use of Internet has grown tremendously over the years and has emerged as the foremost source of disseminating information quickly to a large audience and a medium for collaborative interaction between individuals and computers. The internet is a basic component of Information and Communication Technology (ICT) that has provided a wider access to information to support teaching and learning in tertiary

institutions including universities in Nigeria. The internet is the world's largest and most widely used network. It is a network of millions of computers that are globally connected in a way that allows other computers to access information on them. The internet appearance in tertiary education was used as tools for researchers to communicate and share project work. Internet service is an integral product of Information and Communication Technology (ICT). Through the internet, you can navigate through the Web. Internet servers are supported with formatted documents on the web. The Web consists of a framework for accessing documents that are located in collection of interconnected documents and other resources residing on computers and the internet where library catalogues can be accessed online. Internet access in libraries is the common practice in modern librarianship. This is because more libraries and information repositories are becoming available on the internet. The beauty of the internet lies in its offering a rapid growing collection of information in basically all fields of knowledge; it is a tool that facilitates and supports educational and academic activities in the universities.

Today, the education environment is still one of the largest contributors to the internet as it has facilitated the teaching and learning processes. The internet has simplified the process of teaching and learning. Students are among the ardent users of information from the Internet. Students use the Internet for social, entertainment, and educational purposes. Internet usage has the potential to improve the quality of education. The use of internet plays a major role in helping students in accessing large number of materials from different parts of the world when maximised efficiently (Onuoha, 2013).

With its advent, students can work together without physical interaction between each other and achieve the same objective with that of traditional way of studying in higher institution. Students communicate and exchange ideas effectively since teaching, learning and research is now made easy with the aid of Internet connectivity. Also, effective use of the internet leads to day-to-day update of the happenings in our society and this affects the academic performance of students in various fields. This has helped to increase the information quotient of students during studying, learning and research. The internet contains wide range of information resources across all academic disciplines.

The Nigerian government has done its best in advancing to the current innovations. For instance, through the National Universities Commission (NUC) and the Federal Ministry of Education (FME) has done a lot in terms of subsidizing subscriptions to internet databases connectivity to universities, organized series of workshops and seminars periodically for

capacity building on internet connectivity in universities since 2002 to support the implementation and development of virtual libraries and University of Calabar is one of the beneficiaries of the project, representing South-South university libraries but the projects were stalled by inadequate funds (National Universities Commission, 2010). While universities in developed countries provide free or inexpensive internet access to students, the situation is different in developing countries, particularly in Nigeria where students' access to the internet connectivity is characterised with low patronage of internet services, lack of interest in utilizing internet services, low bandwidth and constant epileptic power supply amongst others and the University of Calabar library is not an exception.

Libraries today are undergoing series of transformations in their quest to meeting the demand of information users and their information seeking behaviours. The tremendous growth of information search by students in the past two decades has prompted libraries to provide internet services to their users on a constant basis.

Literature Review

Research carried out by Gakibayo, Ikoja-Odongo and Okello-Obura (2013), investigated electronic information resources utilisation by students in Mbarara University library. The findings on internet utilisation skills of respondents reported high usage of internet resources 160 (60%). Some of the reasons attributed to this high usage of the internet are the freely available access, the ease of use and the currency of resources. Also, in disagreement with the study, it has been widely reported in Godfrey and Eze (2014) that a number of factors are affecting the use of internet in developing countries especially in Nigeria. This issue was investigated in the survey. The findings of the survey revealed that slow response rate (42.7%) was relatively the major factor that impede the use of internet facilities/resources in the polytechnic café. Slow response rate was attributed to low bandwidth of internet connectivity at the polytechnic café which cannot meet the demands of its teeming internet users. Other factors were lack of work station, inadequate seats in polytechnic café and lack of skills by respondents using the internet.

Odu, Uchendu and Inyokwe (2012) findings reveal that the use of internet by academic staff at the University of Calabar is high representing (66.7%) of the respondents. This growth in internet usage can be attributed to the more attractive and time-saving approach to information search and retrieval offered by the internet. The study concluded that academic staff in the University of Calabar perceive the internet as a basic research infrastructure based on its potentials such as speed and global accessibility in information search and retrieval.

Jagboro (2003) conducted a study on the usage of the internet at Obafemi Awolowo University Ile-Ife, Nigeria. The analysis showed that 22.06 percent of the respondents accessed the internet on a daily basis, 38.24 percent weekly, 11.76 percent monthly, 11.76 percent quarterly and 16.17 percent annually. In addition, 25.00 percent spent an average time of half an hour, 39.71% spent 1 hour (i.e. approximately between 5-7 hours per week), 19.12% spent 2 hours, 7.35% spent 3 hours and 2.9% spent 4 hours, while 5.88% spent more than 4 hours. A further examination of the results showed that there is a convergence of weekly users who spent only one hour on the internet.

Emeka and Nyeche (2016) conducted a study on impact of internet usage on the academic performance of undergraduate students: A case study of the University of Abuja, Nigeria. The study showed that out of 200 questionnaires answered and returned, 44(22%) respondents were 100 level students, 45(23%) were 200 level students, 40(20%) were 300 level students, 36(18%) were 400 level students and 35(17%) were 500 level students. Also, on frequency of Internet Use, results gotten from the research shows that 111(55%) of respondents use the internet every day, 31(15%) use internet once a week, 9(5%) use the internet once in two weeks, 26(13%) use the internet once in a month, 20(10%) use the internet occasionally while 3(2%) do not use the internet. The findings show that majority of students use the internet every day.

In another study based on review of literature by Kumar and Kaur (2006), revealed that students are the most frequent users of the internet. They used the internet mainly for educational purposes rather than entertainment. Olusola and Reuben (2010), study on perception of the internet as an enabler of scholarship among postgraduate students of the University of Ibadan, Oyo State, Nigeria, revealed that vast majority of respondents indicated that they have adequate knowledge of the Internet. Chi-square analysis shows students' perception of the effect of the Internet on learning, teaching, and research. The result shows that the use of Internet and other information technology facilities help students in their academic performance, as adjudged by the calculated chi-square value of 7.25, which is significant at the 5 percent level. The results also show that there are not enough Internet facilities, very slow Internet connections, and few computers with Internet connections at the University of Ibadan for students. Another observation of the researcher is that some students cannot access information through the Internet without help from their colleagues.

The study of Bolu-Steve, Oyeyemi and Amali (2015) examined the influence of internet usage on academic performance of undergraduate students of the University of Ilorin, Nigeria and found that internet usage

among undergraduate students of University of Ilorin had negatively; it distracts students' attentions and prevents them from attending lectures regularly. It was also found that students have not been able to use internet to develop their academic activities.

Objectives of the Study

The purpose of the study was to explore the perception of quality of internet sources of information by registered library users in the University of Calabar Library. The specific objectives are:

1. To determine the influence of perception of frequency of utilization of internet sources of information on registered library users;
2. To ascertain the influence of perception of quality of internet sources of information on registered library users.

Research Questions

The following research question were answered in the study:

1. How do perception of frequency of utilization of internet sources of information influence registered library users?
2. To what extent does perception of quality of internet sources of information influence registered library users?

Research Methodology

The study was conducted in the University of Calabar Library Nigeria. Descriptive survey design was adopted for the study. The population of the study consisted of 320 registered library users in the surveyed university. A sample of 186 registered library users was selected through random sampling technique from each of the five library subdivisions in the university of Calabar library. The main instrument for data collection for this study was a questionnaire with a reliability index of 0.88 achieved through a pilot test using members of the population that did not form part of the main study. The researcher progressively and personally distributed the copies of the questionnaire to the registered library users and 186 copies of the questionnaire were duly completed and retrieved for data analysis representing 99% response rate. The research data was analyzed using frequency tabulation and percentages.

Results and Findings

The distribution of respondents by their subdivisions in the University of Calabar Library is presented in Table 1.

Table 1: Distribution of Respondents by subdivisions

<i>Subdivisions of the University of Calabar Library</i>	<i>Frequency</i>	<i>Percentage</i>
Humanity Library	51	27.4
Social Science Library	62	33.3
Law Reference Library	34	18.3
Medical Library	18	9.7
Science & Technology Library	21	11.3
Total	186	100

As shown in Table 1 above, there were a total of 186 respondents used. Out of this number, majority of the responses came from social science library with 62 (33.3%), followed by humanity library with 51 (27.4%). 34 (18.3) were for law reference library and 21(11.3) for science and technology library while the least response came from medical library with 18 (9.7%).

The data on the number of users' response on the perception of frequency of utilisation of internet sources of information is presented as follows:

Table 2: Users' responses on the perception of frequency of utilization of internet sources of information

<i>Frequency of use</i>	<i>No of respondents</i>	<i>Percentage of respondents (%)</i>
Regularly	161	86.6
Not regularly	20	10.8
Never	5	2.7
Total	186	100

As shown in table 2 above, the findings of the study showed that the frequency of utilization of internet sources of information is high, as majority 161(86.6%) of the respondents utilize the internet regularly. The finding agrees with that of with the study by Gakibayo, Ikoja-Odongo and Okello-Obura (2013), whose investigated electronic information resources utilisation by students in Mbarara University library. The findings on internet utilisation skills of respondents reported high usage of internet resources. Some of the reasons attributed to this high usage of the internet are the freely available access, the ease of use and the currency of resources. The findings of this study are in contrast with the findings of

Godfrey and Eze (2014) that revealed slow response rate (42.7%) recorded in the use of internet facilities/resources in selected university librarians in Edo State, Nigeria. The slow response rate was attributed to low bandwidth of internet connectivity at the polytechnic café which cannot meet the demands of its teeming internet users. Other factors were lack of work station, inadequate seats in the polytechnic café and lack of skills by respondents using the internet.

The data on users' response on the perception of quality of internet sources of information by registered library users is presented as follows:

Table 3: Users' responses on the perception of quality of internet sources of information

Quality of Sources of Information	Agreed	Disagreed	Total	
			No. of Respondents	
Quality of internet sources of information is very high in my library	112 (60.2)	74 (39.8)	186 (100.0)	
Quality of internet provided does not influence my use of the library	53 (28.5)	133 (71.5)		186 (100.0)
Quality of Online Public Access Catalogue is dissatisfactory	138 (74.2)	48 (25.8)		186 (100.0)

The result of the study presented in Table 3 revealed users' responses on the perception of quality of internet sources of information as very high. From the results, 112 (60.2%) agreed that quality of the internet sources of information is very high. Meanwhile 74 (39.8%) disagreed. This result revealed that the quality of sources of information, as agreed by the majority 112 (60.2%), in the university of Calabar library was rated very high. The result is in disagreement with the study conducted by Anyira (2011) on internet services in Nigerian private Universities: a case study. It was reported that (42%) of the respondents said that the internet was not accessible to them and the non-access to internet was as a result of slow internet connections attributed to small bandwidth and the internet is overloaded. On the influence of internet provided, 53 (28.5%) agreed that the quality of internet provided does not influence their utilization of the library. On the other hand, 133 (71.5%) disagreed. This result reveals that the quality of internet as a source of information provided largely influence more of the registered library users' utilization of the library. This implies that if there is better quality of internet as a source of information, it will attract more users and there more likely that the library would be utilised.

The study is in consonance with that of Ani and Maina's (2015) empirical study on a survey of internet use by teaching staff at the federal polytechnic, Nasarawa, Nigeria. In view of the importance of the polytechnic café in providing internet access to the teaching staff in the polytechnic, it was pertinent to investigate the extent in which internet facilities/resources in the polytechnic café are being used by the respondents. The findings of the study revealed that vast majority of respondents (97.9%) were using the internet facilities/resources at the poly café. It is therefore obvious from the findings of the survey that respondents are integral parts of the emerging global information revolution. This is further confirmed by the high frequency (62.5%) of daily use of internet facilities/resources in the polytechnic café by respondents. The findings of the study disagree with the findings of Bolu-Steve, Oyeyemi and Amali (2015) revealed an extremely low level of utilization of internet sources by undergraduate students in university of Ilorin, Nigeria. The findings of this study revealed that internet usage among undergraduate students of University of Ilorin had negatively influenced their studies; it distracts students' attentions and prevents them from attending lectures regularly. It was also found that students have not been able to use internet to develop their academic activities.

Conclusion

While the internet is recognized as a valuable tool for information acquisition at the University of Calabar Library, its quality and accessibility are perceived as suboptimal due to technical and infrastructural limitations. The internet is a critical resource for registered library users at the University of Calabar Library, its current quality and accessibility fall short of user expectations. Addressing the identified challenges through infrastructural upgrades, user education, and improved technical support can significantly enhance the perception of internet quality. By doing so, the library can better fulfil its role as a hub for information acquisition and academic excellence.

Recommendations

Based on the findings of the study, the following recommendations were made.

1. Increasing the number of computers and providing regular user training to enhance the quality of internet services.
2. Improve Internet Infrastructures by upgrading Internet Bandwidth. Investing in higher bandwidth to address slow internet speeds, which is a major complaint among users.
3. Upgrade Internet Bandwidth by way of investing in higher bandwidth to address slow internet speeds, which is a major complaint among users.

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**School Libraries and Information the Literacy Development of First
Year Undergraduates of Nigerian Universities: A Case Study of
Federal University Oye-Ekiti**

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Abstract

This study examines the role of school libraries in information literacy development and their impact on the reading habits, research skills, and digital literacy of first-year undergraduates. This study adopted a descriptive survey research design, and it is targeted at the entire first year undergraduate students across the fourteen (14) faculties in Federal University Oye-Ekiti (FUOYE). The findings revealed that while most (92%) students had access to school libraries, usage patterns varied, with many relying on libraries for quiet study assignment and research, rather than digital resources or librarian's support. Despite this, majority (77.2%) of the respondents' express confidence in their reading and research skills at the university. Some gaps remain in digital literacy and preparedness for higher education. Key challenges include limited book collections, inadequate digital resources, and insufficient librarian engagement. The study underscores the need for improved library infrastructures, expanded digital literacy programs, and adequate librarian's support to ensure equitable access to literacy development opportunities. The findings have important implications for educational policy, school curriculum enhancement, and higher education readiness, emphasizing the need for strategic investment in school libraries to bridge literacy gaps and support students' academic career.

Keywords: *School libraries, literacy development, digital literacy, First Year Undergraduate, Federal University Oye-Ekiti*

Introduction

Information literacy (IL) is a fundamental skill that influences academic success and lifelong learning. In today's rapidly and fast paced world, IL development is no longer limited to the ability to read and write but it encompasses a broader set of skills (such as reading comprehension, vocabulary development, and critical thinking) essentials for success. IL development is more important as it plays a pivotal role in shaping a child's school readiness and set the stage for lifelong learning (Voyager Sopris Learning & Hasbrouck, 2023). As recommended by Mckeever,

Bates and Reilly (2017), students should develop IL skills in schools to be responsible users of information as the future skilled workforce, for lifelong learning and digital citizenship. Therefore, for the first-year undergraduates, strong literacy skills developed during their school years play a crucial role in navigating university education, engaging with complex texts, conducting research, and effectively communicating ideas.

School library plays a fundamental role in shaping students' literacy skills, by providing access to diverse reading materials, research resources, and digital tools that support academic growth. School libraries serve as vital learning spaces where students cultivate reading habits, information literacy, and critical thinking skills, all of which are essential for higher education. They provide access to diverse resources and foster an environment that encourages independent learning and analytical thinking (Sethy, 2018). However, the extent to which school libraries contribute to the literacy development of first year undergraduates varies based on factors such as accessibility to resources, librarian's support, and exposure to digital literacy tools. While some students enter university well-prepared due to a strong library culture in their schools, others may face challenges due to inadequate library facilities, limited reading opportunities in their early education, or lack of skills required to adequately utilise library (Olajide, 2023).

This study examines the impact of school libraries on the literacy development of first year FUOYE undergraduates, exploring their influence on reading habits, research skills, and academic preparedness. Understanding this relationship can help educators, policymakers, and librarians improve literacy support systems and ensure that student's transit smoothly into university-level learning/stage.

Literature Review

The literature review explores existing studies on the role of school libraries in literacy development; school libraries and reading habits of first year undergraduates; the impact of librarians on literacy development; digital literacy and the transition to higher education; and challenges in school library access and its impact on undergraduate literacy. School libraries play a crucial role in fostering literacy skills that are essential for academic success. According to Souza (2015), access to well-stocked libraries significantly contributes to students' reading development, particularly among those from disadvantaged backgrounds. For example, study by Lance and Kachel (2018) further affirms that students who have access to well-equipped school libraries tend to perform better academically due to improved reading habits and critical thinking skills.

These literacy foundations are essential, as students' transit to higher education, where advanced reading and research skills are required. More importantly, reading habits developed during secondary school years influence how students engage with academic texts at the university level. For example, Scoulas and De Groote (2022) found that students with strong reading habits cultivated through library exposure tend to demonstrate higher comprehension and analytical skills in their undergraduate studies. Similarly, Mubofu and Mambo (2021) emphasize that a reading culture supported by school libraries encourages students to become lifelong learners, which is crucial for success in higher education.

However, disparities in school library resources can result in varying levels of preparedness among first year undergraduates. It should be noted that librarians play a significant role in guiding students, promoting information literacy, research skills and impacting academic achievement. For example, De Jesus, et al (2024) argue that school librarians support students in developing information literacy, helping them navigate academic sources effectively. Mullins and Noyd-Byrness (2024) further states that well-trained librarians enhance students' ability to critically evaluate information, a skill that is essential for first year undergraduates as they engage with scholarly literature. Without such support, students may struggle with research assignments and independent learning in their first year of university. Research reveals that librarians are uniquely qualified to deliver information literacy instruction and effectively improve students' critical evaluation skills.

In the digital age, literacy development is not limited to traditional reading skills but also includes the ability to access and evaluate online information. In this information age, information literacy is essential for remaining active in lifelong learning (Ikonne, Ibikunle & Babalola, 2023). Agina-Obu and Okwu (2023) asserts that school libraries that integrate digital resources help students develop essential digital literacy skills, preparing them for university-level research. Kuhlthau et al (2015) highlight that students who are trained in digital literacy through their school libraries tend to adapt more easily to academic databases and online research platforms in higher education. First year undergraduates without this foundation may face challenges in managing digital academic resources.

Despite their importance, many school libraries face challenges such as inadequate funding, limited book collections, lack of trained librarians, restricted library hours, and lack of computers and internet connectivity (Ireru & Ocholla, 2025; Shonhe, 2019). These issues can negatively impact students' literacy development, particularly among those who come from under-resourced schools. Aderibigbe and Fisher (2016) emphasize that

disparities in school library resources contribute to literacy gaps, affecting students' ability to succeed in university-level reading and research tasks. Addressing these challenges is crucial to ensuring that all students enter higher education with strong literacy skills.

In conclusion, the literature suggests that school libraries play a crucial role in shaping the literacy development of first year undergraduates, impacting their reading habits, research skills, and digital literacy. However, disparities in school library resources and support can lead to differences in students' preparedness for higher education. Strengthening school library programs, investing in digital literacy initiatives, and ensuring the presence of trained librarians who can help bridge these gaps and support students in their transition to university learning.

Statement of the Problem

Literacy is a critical skill that influences academic success and lifelong learning. For first year undergraduates, the transition from secondary school to university requires strong reading comprehension, research abilities, and digital literacy. School libraries play a fundamental role in fostering these skills by providing access to books, academic resources, and technology. However, the extent to which school libraries effectively contribute to literacy development varies, based on factors such as resource availability, librarian's support, and digital access. Many first-year undergraduates enter university with differing levels of literacy preparedness, often influenced by the quality of library services in their previous schools. Some students benefit from well-equipped libraries that enhance independent reading and research, while others, particularly those from under-resourced schools, struggle with academic reading and information retrieval. This gap in literacy preparedness can affect students' ability to comprehend complex texts, conduct research, and engage critically with academic materials at the university level. Furthermore, with the increasing integration of digital resources in higher education, students without prior exposure to digital literacy tools in their school libraries may find it challenging to navigate online databases and scholarly materials. The lack of proper school library services and programs could, therefore, contribute to academic struggles among first year undergraduates.

This study seeks to examine the role of school libraries in the literacy development of first year undergraduates of Federal University Oye-Ekiti (FUOYE), exploring how access to library resources, librarian's support, and digital literacy training impact students' preparedness for university education. Identifying the challenges and opportunities in school library services can help policymakers, educators, and librarians to develop

strategies that could enhance literacy support for students before they transit to the university.

Objectives of the Study

The specific objectives of the study are :

1. To examine the accessibility and usage of school libraries by first year undergraduates.
2. To analyze the impact of school libraries on students' reading habits and literacy development.
3. To evaluate the role of school librarians in supporting students' literacy and research skills.
4. To assess the influence of school libraries on students' preparedness for university-level reading and research.
5. To identify challenges faced by students in utilizing school libraries and suggest possible improvements.

Research Questions

To achieve the objectives of this study, the following research questions guided the study:

1. How frequently did first year undergraduates use their school libraries, and what were the main purposes of their usage?
2. What types of reading materials and literacy programs were available in school libraries, and how did they influence students' reading habits?
3. To what extent did school librarians contribute to students' literacy and research development?
4. How well did school libraries prepare first year undergraduates for university-level reading and academic research?
5. What challenges did students face in utilizing school libraries, and what improvements can be made to enhance their effectiveness?

Research Methodology

This study adopted a descriptive survey research design and it is targeted at the entire first year undergraduate students across the fourteen (14) faculties in Federal University Oye-Ekiti (FUOYE). This design is suitable as it allows for the collection of quantitative data from students regarding their experiences with school libraries and their impact on literacy skills. The target population for this study comprises first year undergraduate (100 level) students in various faculties at the university. The focus on first-year students is based on the fact that their experiences with school libraries are recent and that their transition to university literacy demands can be effectively assessed. A stratified random sampling technique was used to ensure representation across different faculties at the university. A structured questionnaire was used to collect data from respondents. The

questionnaire consisted of closed-ended and open-ended questions covering the following sections:

Demographic Information (age, gender, faculty, school library access)

Library Usage and Reading Habits (frequency of library use, types of reading materials, participation in literacy programs)

Impact on Literacy Development (role of the library in reading habits, librarian's support, digital literacy exposure)

Preparedness for University Literacy Demands (confidence in reading, research skills, and adaptation to academic requirements)

Challenges and Suggestions for Improvement

The questionnaire (developed with Google Forms) was administered online (via WhatsApp and Telegram) to ensure wide participation among the respondents in various faculties. The questionnaire distribution was conducted by sending the link (<https://forms.gle/rhFirtuvNhTb3Uuu5>) to WhatsApp and Telegram group accounts of the first-year undergraduate students across various faculties in the universities. Respondents were given clear instructions on how to complete the questionnaire, and participation was voluntary and anonymous to encourage honest responses. A total of 2246 respondents filled the questionnaire. The data obtained through the research instrument were exported into Excel spreadsheet, and charts, figure and tables were generated. Thus, the analysed data (the findings) were presented in the form of charts, tables and figures, and were expressed as frequency counts and percentages. Responses to open-ended questions was thematically analyzed to identify patterns and insights related to school library challenges and suggested improvements.

Data Analysis and Presentation of Findings

Demographic information of the respondents

Table 1: Demographic Information of the Respondents

Demographic variables	Frequency	Percentage (%)
Age:		
18-20 years	1229	54.7
Below 18 years	627	27.9
21-23 years	326	14.5
24 years and above	64	2.9
Total	2,246	100
Gender:		
Male	1205	53.7
Female	1041	46.3
Total	2,246	100

College/Faculty:		
Sciences	613	27.3
Education	461	20.5
Social Sciences	443	19.7
Engineering	316	14.1
Agriculture	119	5.3
Arts/Humanities	152	6.7
Basic and Management Sciences	33	1.5
Environmental design and management	31	1.4
Information and computing Engineering	29	1.3
Management Sciences	27	4.8
Law	22	1
Medicine	0	0
Mass Communication & Media Studies	0	0
Pharmacy	0	0
Total	2,246	100

Table 1 shows the demographic variables of the respondents. Age distribution of the respondents reveals that the vast majority of the (1229, 27.9%) are between 18 and 20 years. This is followed by below 18 years 627(27.9%), 21-23 years 326(14.5%). The least are 24 years and above 64(2.9%). This indicates that most of the respondents gained admission into universities at young age. Gender distribution of the respondents indicates that more male students (1205, 53.7%) responded to the study. Distribution based on the College/faculty of the respondents reveals that 613(27.3%) of the respondents are from the Faculty of Sciences. This is followed by the Faculty of Education 461(20.5%), Faculty of Social Sciences 443(19.7%), and Faculty of Engineering 316(14.1%). However, no responses were got from the College of Medicine, Faculty of Mass Communication & Media Studies, and faculty of Pharmacy. This indicates that students from the faculties of Sciences, Education, and Social Sciences are more responsive to social survey than students in other faculties.

Research Question 1: Did your secondary school have a library?

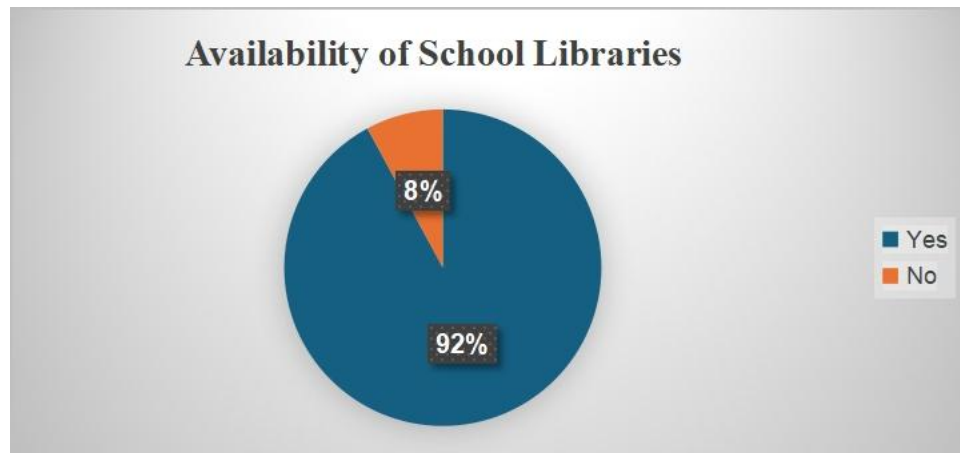


Figure 1: Availability of School Libraries

The responses of the students on availability of school libraries in their schools are revealed in Figure 1. More than 90% of the respondents responded in the affirmative. This implies that most of the schools had school libraries.

Research Question 2: How frequently did you use your school library?

Table 2: Frequency of Accessing School Libraries

Frequency	Frequency	Percentage (%)
A few times a week	931	41.5
Rarely	519	23.1
Once a week	378	16.8
Daily	284	12.6
Never	134	6
Total	2,246	100

The frequency of using school libraries by students is revealed in Table 2. Nine hundred and thirty-one (41.5%) of the responded affirmed that they use the libraries a few times a week. This is followed by those who claimed that they used the libraries rarely 519(23.1%), and once a week 378(16.8%). Only 134(6%) claimed that they never used the school libraries.

Research Question 3: What were your main reasons for using the school library

Table 3: Reasons for using the school library

Reasons	Yes		No	
	Freq.	Percentage (%)	Freq.	Percentage (%)
Studying in a quiet space	2137	95.1	109	4.9
Research for assignments	1822	81.1	424	18.9
Borrowing books for reading	714	31.8	1532	68.2
Using digital resources/computers	305	13.6	1941	86.4
Librarian's support for reading and research	292	13	1954	87

Table 3 reveals the reasons students used the school libraries. The reasons, according to the respondents, are studying in a quiet space 2137(95.1%), and research for assignments 1822(81.1%). However, the reasons never included using digital resources/computers 305(13.6%) and librarians' support for reading and research 292(13%).

Research Question 4: What types of reading materials did you primarily access in your school library?

Table 4: Types of Reading Materials Accessed in School Library

Types of Reading Materials	Yes		No	
	Freq.	Percentage (%)	Freq.	Percentage (%)
Textbooks and reference books	1921	85.5	325	14.5
Fiction books (novels, short stories)	1408	62.7	838	37.3
Non-fiction books (history, biographies, science, etc.)	572	25.5	1674	74.5
Digital materials (e-books, online articles)	231	10.3	2015	89.7

The reading materials the students accessed in the school libraries are indicated in Table 4. These include textbooks and reference books 1921(85.5%) and fiction books (novels, short stories) 1408(62.7%). However, the students' use of non-fiction books (history, biographies, science, etc.) 572(25.5%) and digital materials (e-books, online articles) 231(10.3%) is low.

Research Question 5: Did your school library encourage reading habits through activities like reading clubs or book discussions?

Table 5: Encouragement of reading habits through activities like reading clubs or book discussions

Encouragement	Yes		No	
	Freq.	Percentage (%)	Freq.	Percentage (%)
My school library encouraged reading habits and I actively participated	1217	54.2	1129	45.8
My school library encouraged reading habits but I did not participate	532	23.7	1714	76.3
My school library did not organize programmes on reading habits	57	2.5	2189	97.5

Responses to the question regarding the encouragement of reading habits through activities like reading clubs or book discussions are revealed in Table 5. The respondents affirmed that their school library encouraged reading habits and I actively participated 1217(54.2%). Five hundred and thirty-two (23.7%) claimed that their school library encouraged reading habits but I did not participate in it. Also, 57(2.5%) of the respondents claimed that their school library did not organize programmes on reading habits. This implies that the school libraries encouraged reading habits.

Research Question 6: Did your school library help improve your reading and literacy skills?

Table 6: Assistance from Library in Improving Reading and Literacy Skills

Assistance from School Librarians	Frequency	Percentage (%)
Yes, significantly	1733	77.2
Somewhat	277	12.3
I did not use the library	127	5.7
No noticeable impact	109	4.8
Total	2,246	100

Table 6 shows the responses of the students regarding whether or not their school libraries help improve the reading and literacy skills of the students. One thousand seven hundred and thirty-three (77.2%) responded yes, significantly. This is followed by somewhat 277(12.3%). The least claimed no noticeable impact 1109(4.8%).

Research Question 7: How did the secondary school library influence your reading habits?

Table 7: Influence of School Library on Reading Habits

Influence	Yes		No	
	Freq.	Percentage (%)	Freq.	Percentage (%)
Helped improve comprehension and critical thinking	1956	87.1	290	12.9
Encouraged me to read more frequently	1549	69	697	31
It had little to no impact on my reading habits	142	6.3	2104	93.7
I was not interested in using the library	97	4.4	2149	95.6

Influence of school library on reading habits of the students are revealed in Table 7. the respondents claimed that school libraries helped improve comprehension and critical thinking 1956(87.1%) and encouraged students to read more frequently 1549(69%). Only 142(6.3%) posited that school libraries had little to no impact on my reading habits, while 97(4.4%) affirmed that they were not interested in using school libraries.

Research Question 8: Did your school librarian actively assist in your literacy development (e.g., book recommendations, research guidance)

Table 8: Assistance from School Librarians

Assistance from School Librarian	Frequency	Percentage (%)
Yes, always	1071	47.7
Sometimes	695	30.9
Rarely	251	11.2
No librarian was available	229	10.2
Total		100

Table 8 shows responses regarding whether school librarians actively assist literacy development (e.g., book recommendations, research guidance) among the students. The responses are yes, always 1071(47.7%), sometimes 695(30.9%), rarely 251(11.2%), and no librarian was available 229(10.2%). This implies that the students did not get enough assistance on literacy development.

Research Question 9: Did your school library offer digital literacy programmes (e.g., training on using online databases, research tools)

Table 9: Offering of Digital Literacy Programmes by School Library

Offering of Digital Literacy Programmes	Yes		No	
	Freq.	Percentage (%)	Freq.	Percentage (%)
My school library offered digital literacy programmes and I found them helpful	1943	86.5	303	13.5
My school library did not offer digital literacy programmes	938	41.8	1308	58.2
My school library offered digital literacy programmes but I did not participate	249	11.1	1997	88.9

Table 9 shows responses on offering of digital literacy programmes (e.g., training on using online databases, research tools) by school libraries. The respondents claimed that their library offered digital literacy programmes and I found them helpful 1943(86.5%). However, only 938(41.8%) claimed that their school libraries did not offer digital literacy programmes, and 249(11.1%) claimed that their school libraries offered digital literacy programmes but I did not participate.

Research Question 10: How confident are you in your reading and comprehension skills at university

Table 10: Confidence in Reading and Comprehension Skills at University

Confidence	Frequency	Percentage (%)
Very confident	1338	59.6
Somewhat confident	797	35.5
Not confident	111	4.9
Total	2,246	100

The confidence level of the students on reading and comprehension skills at university are revealed in Table 10. The students claimed that they are very confident 1338(59.6%). Only 797(35.5%) claimed that they are somewhat confident, while 111(4.9%) claimed that they are not confident. This means that the students are very confident about reading and comprehension skills at university.

Research Question 11: How confident are you in conducting academic research and using university library resources?

Table 11: Confidence in Conducting Research and Using University Library Resources

Confidence	Frequency	Percentage (%)
Very confident	1193	53.1
Somewhat confident	867	38.6
Not confident	186	8.3
Total	2,246	100

As revealed in Table 11, responses to the question regarding the confidence of the students about conducting academic research and using university library resources reveal that 1193(53.1%) of the students are very confident. Eight hundred and sixty-seven (38.6%) claimed that they are somewhat confident, while 186(8.3%) claimed that they are not confident. This implies that the students are very confident.

Research Question 12: Did your school library make adequate preparation for potential undergraduates' reading and research?

Table 12: Preparation for Potential Undergraduates' Reading and Research

Preparation	Frequency	Percentage (%)
Yes, it fully prepared me	1316	58.6
Somewhat, but I still struggle	659	29.3
No, I feel unprepared	271	12.1
Total	2,246	100

Table 12 shows the responses of the students about adequacy of preparation of the school libraries for university-level reading and research. The students claimed that the school libraries fully prepared them 1316(58.6%). However, 659(29.3%) claimed that the school libraries somewhat prepared them but they still struggle. Also, 271(12.1%) affirmed that they feel unprepared. This implies that the school libraries fully prepared the students for university-level reading and research

Research Question 13: What challenges did you face when using your school library?

Table 13: Challenges Faced when using School Library

Challenges	Yes		No	
	Freq.	Percentage (%)	Freq.	Percentage (%)
Limited book collection	2114	94.1	132	5.9
Lack of digital resources	1966	87.5	280	12.5
Limited library hours	1323	58.9	923	41.1
Lack of librarian's support	1249	55.6	997	44.4

The challenges the students encountered while using school libraries are revealed in Table 13. These include limited book selection 2114(94.1%), lack of digital resources 1966(87.5%), limited library hours 1323(58.9%), and Lack of support from librarians 1249(55.6%).

Discussion of the Findings

The literature review and findings highlight the crucial role school libraries play in shaping students' literacy skills, particularly as they transit to the university. Souza (2015) and Lance and Kachel (2018) strongly emphasize the direct positive impact of well-equipped school libraries on students' reading habits and academic performance. This is corroborated by the findings of the study, where more than 90% of respondents confirmed the presence of school libraries in their schools, and 77.2% affirmed that these libraries significantly improved their literacy skills. However, while the majority of students reported using their libraries at least a few times a week (41.5%), a notable portion (23.1%) rarely visited, and 6% never did. This suggests that while libraries are available, factors such as accessibility, lack of engagement programs, or limited resources may affect usage rates. The low percentage (13.6%) of students using digital resources further supports the notion that school libraries may not be fully integrating modern literacy tools.

The research aligns with Scoulas and De Groote (2022) and Mubofu and Mambo (2021), who argue that early exposure to reading fosters comprehension and analytical skills in university students. The findings indicate that 54.2% of students actively participated in library reading programs, while 23.7% acknowledged their presence but did not engage. This suggests that while school libraries promote a reading culture, participation remains an area for improvement. In terms of reading material preferences, students primarily accessed textbooks (85.5%) and fiction (62.7%), but non-fiction books (25.5%) and digital materials (10.3%) were underutilized. This could indicate either a lack of diverse materials in these

categories or a preference for traditional reading formats. Since reading non-fiction and digital sources is crucial for university research, school libraries should expand their offerings and encourage students to explore these resources.

De Jesus et al. (2024) and Mullins & Noyd-Byrness (2024) highlight the importance of librarians in fostering information literacy. However, the findings of this study suggest that librarian engagement in literacy development is inconsistent. While 47.7% of students reported that librarians actively assisted them, 30.9% said it happened only sometimes, and 21.4% (including those who reported no librarians) rarely or never received help. This lack of consistent librarian's support could explain why some students struggle with research skills in university. Since school librarians play a vital role in helping students critically evaluate information, training and employing more qualified librarians could enhance literacy development. The findings support Agina-Obu & Okwu (2023) and Kuhlthau et al. (2015), who argue that digital literacy is increasingly essential. Although 86.5% of students who attended digital literacy programs found them helpful, 41.8% reported that their libraries did not offer such programs. Given the growing reliance on online research in higher education, this gap needs urgent attention.

Furthermore, while students reported high confidence in reading comprehension (59.6%) and research skills (53.1%), a significant portion (35.5% and 38.6%, respectively) were only somewhat confident. This suggests that while many students feel prepared, others still struggle, possibly due to inadequate digital literacy training at the secondary level. The study confirms the concerns raised by Shonhe (2019) and Aderibigbe and Fisher (2016) regarding disparities in school library resources. The primary challenges reported include limited book collection (94.1%), lack of digital resources (87.5%), restricted library hours (58.9%), and insufficient librarian's support (55.6%). These issues directly impact students' literacy development and preparedness for university-level research.

In conclusion, the study reinforces the argument that school libraries significantly influence first-year undergraduates' literacy skills, reading habits, and research abilities. However, gaps in digital literacy, librarian's support, and resource availability indicate that improvements are needed. By addressing these challenges, schools can better prepare students for the demands of higher education, ensuring their transition smoothly into university-level academic work.

Conclusion

The study confirms that school libraries play a vital role in shaping students' literacy skills, reading habits, and preparedness for higher education. The literature review establishes that well-equipped libraries with strong librarian's support contribute significantly to students' academic success. The findings reveal that while most students had access to school libraries and acknowledged their role in literacy development, several gaps remain, particularly in digital literacy, librarian engagement, and access to diverse reading materials.

Challenges such as limited book selections, inadequate digital resources, and insufficient librarian's support hinder the full potential of school libraries in fostering strong literacy skills. Although many students reported confidence in their reading and research abilities at university, a notable percentage still struggled, indicating disparities in preparedness. Addressing these issues is crucial to ensuring that all students transition smoothly into higher education with the necessary literacy skills. Since reading habits and research skills developed in school libraries significantly impact university performance, secondary education curricula should integrate structured library use and literacy programs. Schools should introduce mandatory information literacy and digital literacy training to equip students with the necessary skills for university-level academic work.

Recommendations

Based on the findings of the study, the following recommendations are herewith proposed to enhance the functioning of school libraries and improve literacy development among students:

1. **Enhance Library Infrastructure and Accessibility:** Upgrade school libraries with modern facilities, comfortable seating, and extended opening hours; Ensure libraries are well-maintained, with a quiet and conducive reading environment.
2. **Improve Digital Resources and Technology Integration:** Provide high-speed internet access and equip libraries with computers, tablets, and e-books; Introduce digital literacy programs to teach students how to navigate online research platforms and academic databases.
3. **Expand Book Collections and Diversify Reading Materials:** Regularly update book collections with relevant and diverse materials, including non-fiction and digital resources; Provide multilingual resources to cater to diverse student backgrounds.
4. **Strengthen Librarian's support and Training:** Recruit and train qualified librarians who can guide students in research, critical thinking, and information literacy; Encourage librarians to actively

engage with students through book recommendations and research support.

5. Promote Reading Culture and Student Engagement: Organize book clubs, reading challenges, and author visits to encourage student participation; Implement mentorship programs where students help each other improve their reading and research skills.
6. Increase Awareness of Library Services and Literacy Programs: Educate students on how to effectively utilize library resources for academic success; Encourage more students to participate in literacy programs and digital literacy training sessions.
7. Address Library Resource Disparities: Ensure equitable distribution of library resources across schools to reduce literacy gaps among students from different backgrounds; Collaborate with government agencies, NGOs, and private organizations to secure funding for library development.

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