INFORMATION TECHNOLOGY AND USERS PATRONAGE OF POLYTECHNIC LIBRARIES IN SOUTH SOUTH NIGERIA

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ABSTRACT

This study examined the influence of information technology on users' patronage of polytechnic libraries in south south Nigeria. Three objectives, three research questions and three hypotheses were formulated to guide the study. The survey research design was used to conduct the study and the population of the study comprised 7,325 registered library users who are HND students in polytechnics in south south Nigeria. Accidental sampling technique was used to sample the sample size of 382 HND students from the study area. The instrument for data collection was the researcher made questionnaire titled "Information Technology on Users' Patronage Questionnaire" (ITUPQ) and it was administered to the respondents with the aid of research assistants. The instrument was collected as respondents completed the exercise. 382 copies of the questionnaire were given out while 376 copies were duly filled and returned for the analysis. Data obtained was analyzed using mean and standard deviation to answer the research questions while t-test was used to analyze the hypothesis. The study revealed that, the variables examined significant influence on users' patronage of polytechnic libraries in south south Nigeria. The study therefore concluded that there is significant influence of information technology on users' patronage of polytechnic libraries in south south Nigeria. The following recommendations were made among others; Internet services should be increased in polytechnic libraries to improve users' patronage and multimedia technology should be made available to enhance users' patronage in polytechnic libraries.

KEYWORDS; Internet, Multimedia Resources, Databases, Information Technology, Library Patronage, ICT

INTRODUCTION

As the world progresses technologically, user needs continue to change in line with the technological changes especially as used in libraries to serve the users who are also changing significantly. These changes have added to the physical structures of libraries and its resources thereby requiring that libraries adopt new patterns of service provision that establishes library values at a place of relevance in this 21st century. The development of Electronic Information Services (EIS) is part of the information revolution that marks changes in libraries in the 21st century. The birth of the 21st century library has witnessed library users accessing and using Electronic Information

Services (EIS) to their advantage. Available library electronic resources are therefore accessed and utilized through the application of computer and technology (Tam, 2017).

The main functions of any library are to collect, organize, preserve and disseminate information to its user and the polytechnic library is not an exception. From time to time, several techniques and technologies have emerged for handling the information more speedily and effectively in the polytechnic library. Polytechnic libraries are academic libraries that serve the information needs of the members of the polytechnics such as academic staff, non-teaching staff and the students to satisfy their advanced technical education. Technical education is the instruction in a skill or procedure, usually of a mechanical type and at a level between that of the professional scientist or engineer and that of a skilled craftsperson (Ofori-Bruku, 2015). These libraries assist the mother institutions in the discharge of their functions by acquiring relevant resources that are necessary for sustaining the technical education functions of the institution (National Board for Technical Education, 1985).

Ideally, the use of technologies of modern computer-based information systems according to Khalid (2017), is a major force that has transformed the traditional library methods used in library practices. According to the author, it is expected that all technologies used in processing, storing and communicating data and information in libraries should be managed as an integrated system and be used as service delivery tools in libraries. Notably, today's libraries are service providing institutions because Information Technology (IT) has provided a means of reversing the traditional paradigm, not only by providing accesses to information, but also by disseminating information and fostering interaction (Bloom & Hough, 2018). Library services ranges from membership registration, acquisition, cataloguing, resource sharing, circulation, Inter Library Loan, reference services, current awareness service, selective dissemination of information, and document delivery can be offered through the Internet. Internet is an abbreviation for International Network (Uloaku, 2017). It is not a single network but a collection of computers worldwide through a system of connection that use the standard Internet Protocol Suite (TCP/IP) to serve billions of users worldwide (Hamidu & Hauwa, 2015). The application of Internet in library services according to Islam and Umme (2015) increases efficiency and effectiveness and also ensures the delivery of timely, accurate, precise and relevant library resources to the users. Afolabi and Abidoye (2013) asserted that the Internet has integrated nearly all aspects of the library practices. As observed by Afolabi and Abidoye, internet plays an important role in library resources accessibility and utilization by the students. The internet is changing the ways the libraries organize, manage and disseminate information resources. Hamidu and Hauwa (2015) noted that the advanced use of Internet tools in the library resources enable libraries to reach both local and distance users much more easily and effectively.

Internet is a network of millions of computers linked together with telecommunication equipment for the purpose of sharing data, resources and information. Agbaje (as cited in Uloaku, 2017) sees Internet as a veritable tool for global online services. It is a mechanism for information dissemination and a medium for collaborative. That the Internet as a component of information and communication technologies provides a golden opportunity for the provision of value-added services by libraries. It is suffice to state that the Internet is changing the traditional library

functions and has become a vital component in the overall services and operations of library and information centers (Hamidu & Hauwa, 2015). Internet has become a basic ingredient of information accessibility and dissemination. It tools such as email and web provides tremendous opportunities for library and information professionals to deliver the accessible information to their users (Egberongbe, 2017).

Multimedia is formed by the combination to two terms (Multi and Media) (Nwangwu & Obi, 2014). Multimedia resources are a combination of text, data, images, photographs, animation, audio and video in dissemination of information. A multimedia technology processes, stores and delivers all types of multimedia resources in binary code the same way as a computer does, which is a major different from the traditional analogue library system (Uloaku, 2017). The main advantage of multimedia technology is the flexibility in combining, transmitting, manipulating and customizing the elements of the multimedia resources according to the needs of the user which are converted from different formats into a single platform (Anyim, 2017). Multimedia application may require the use of speech, music and sound effects which are called audio or the sound element. It also requires the video system which is the more important part of the multimedia which provides a powerful impact in a multimedia program. In multimedia applications, the digital video is gaining popularity. Full-motion video, such as the images portrayed in a television, can add even more to a multimedia application (Billings, 2015). Databases in the electronic library are complimented by the multimedia technology.

Databases are the collection of information that is organized so that it can be easily accessed, managed and updated (Jone, 2018). Data is organized into rows, columns and tables, and it is indexed to make it easier to find relevant information. Database resources have a significant impact on users' patronage of the library (Xie, *et al,* 2018). Library database makes use of database management systems offered by different vendors like Oracle, Informix, Microsoft Soft Structured Query Language (SQL) and Micro Soft Access. However, the cloud database and the secure cloud access database system directly perform SQL queries through encrypted data and increases acceptance and vendor service issues. Moreover, databases are made up of cataloguing module used for the creation, storage, retrieval and management of bibliographic records and/or indexes (Olajide & Adio, 2017). According to Miao, *et al,* (2019), database allows libraries to track relationships and various contact details to extend the integrated library system to meet the new requirements of libraries through complementing software.

Information technologies in recent decades have had great impact on the libraries. Many technologies have been integrated into library operations as acquisition, cataloguing, circulation, interlibrary loan, and reference services. Library activities are no longer confined within their physical territories, rather, they are electronically networked and rely heavily on computer and technologies for providing library and information services (Donghua, 2018). Information can be stored in various electronic forms and transmitted at high speed over electronic networks to wherever there are required by using computer facilities. Technologies having become an integral part of libraries and information centres help in meeting the information requirements of the users in a timely manner. The library and technologies is increasingly turning to a versatile unified system that provides access to enormous variety of materials in different formats (Jone, 2018).

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STATEMENT OF THE PROBLEM

In the past two decades, library services were executed traditionally. The traditional methods of library services were always burdensome, slow and time consuming. These processes made information accessibility and utilization difficult and ineffective. Sometimes, the end users seem not to be satisfied with the library services and find it difficult to patronize the library. Nowadays, the use of technologies of modern computer-based information systems is a major force that has transformed the traditional library system to technology-based system where library services can be offered and accessed through the development of computers and their peripherals and this enhance effective users' patronage.

Technology is expected to drastically bring new innovation to enhancing library services and the libraries are challenged to embrace new technology to cope with the measure of current library services. It is based on this observation and knowledge of the information technology into libraries mostly polytechnic libraries that this study is conducted to determine the influence of information technology on users' patronage of polytechnic libraries in South South Nigeria.

PURPOSE OF THE STUDY

The main purpose of this study was to determine the influence of information technology on users' patronage of polytechnic libraries in south south Nigeria. The specific purposes were to:

- Find out the influence of Internet on users' patronage of polytechnic libraries in south south Nigeria.

- Examine the influence of multimedia technology on users' patronage of polytechnic libraries in south south Nigeria.

- Identify the influence of database on users' patronage of polytechnic libraries in south south Nigeria.

RESEARCH QUESTIONS

The following research questions were raised to guide the research:

1. What is the influence of Internet on users' patronage of polytechnic libraries in south south Nigeria?

2. What is the influence of multimedia technology on users' patronage of polytechnic libraries in south south Nigeria?

3. What is the influence of database on users' patronage of polytechnic   libraries in south south Nigeria?

RESEARCH HYPOTHESES

The following research hypotheses are formulated to guide the study:
- There is no significant influence of Internet on users' patronage of polytechnic libraries in south south Nigeria.

- There is no significant influence of multimedia technology on users' patronage of polytechnic libraries in south south Nigeria.
- There is no significant influence of database on users' patronage of polytechnic libraries in south south Nigeria.

SIGNIFICANCE OF THE STUDY

The findings of this study would be beneficial to the following group of persons: librarians, library patrons, library management and the researchers. It would reveal to the librarians the information technology tools meant to enhance users' patronage of polytechnic libraries. It would draw the attention of library patrons to the appropriate information technology tools they can use to satisfy their information needs in the polytechnic libraries. It would be an eye opener to library management in the aspect of application of information technology tools to facilitate users' patronage of polytechnic libraries.   This study would add to the existing body of knowledge in the field of library and information science and would be useful to researchers who may want to conduct further research on information technology and users' patronage of polytechnic libraries.

LITERATURE REVIEW
CONCEPT OF INFORMATION TECHNOLOGY

Information technology is the modern new science to collect, store, process and transmit information to the users. It is the computer capability to store, process information and communication technology, which is capable of transmitting information to distance (Godwin, 2021). Information technology according to Hamidu and Hauwa (2015) is the application of tools and method by means of which information is transferred, recorded, edited, stored, manipulated and disseminated. The information technology has resulted from a convergence of computing technology and communication technology. However, Okiki and Akiru (2017) noted that information technology is the system and device used for receiving, information in all its form and their application to all aspects of our lives, including the office, the factors and the home. Several educational fields provide better service to their users significantly through information technology.

The application of Information and Communication Technologies according to Jone (2018) has greatly change the dimension of educational practices in the 21st century which processes or transmit information to enhance the effectiveness of users and organizations utilization of needed information. Information technology facilitates the operation of resources collection, transportation, retrieving, storage, access, presentation and transformation of information in all its forms to ease utilization. Information technology tools are aimed for the creation of computer-based systems of information by using computer system in any organization (Islam & Umme, 2015). Information technology includes any computer application and required packages of hardware, Computer Aided Manufacturing, Computer Aided Design, Electronic Data Interchange and Enterprise Resource planning that positively affects the utilisation of electronic information (Khalid, 2017).

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USERS' PATRONAGE

Library users' patronage enables the library management to determine what users want, which helps libraries design, refine and monitor their equipment, services and identify service problems. Library users depend on the library for provision of electronic information resources for learning, recreation, development, and teaching and for research purposes (Odunola, 2018). The rate at which the electronic library is patronized by her community target, can be said to determine the relevance of the library to its users. This is because users of libraries patronize the library based on quality, access and availability of it resources (Tella & Odunola, 2021). The library owes it a duty to develop and provide current and relevant library resources if its users will continue to patronize the library. Electronic libraries should provide slides, pictures, objects, sound and multimedia for two ways communication. That is, a message that can be easily obtained by users and follow as directed or also send feedback to the library (Prakash, 2017).

There is a measure of difference in library users' patronage of the electronic libraries owing to some demographic factors. These factors among others are Internet, multimedia technology, database and library learning software and they may serve as determinants of the access and use of electronic information resources in the library (Achebe, 2018). User's patronage eases and enhances library services accountability and provides the measure of assessing the library staff and resources (Udofot, 2021). According to Usoro (2020), the use of information resource of any format in the library depends on the patronage by the users and the perception of the user towards the usefulness of such resource determines if the resource is to be used or not. However, the manner to which information is sought vary by age, occupation, level of education, intelligence, discipline and purpose and this can also influence users' patronage.

INTERNET AND USERS' PATRONAGE

Prior to the advent of internet services in Nigeria, Echezona, *et al*, (2015) asserted that library holdings were predominantly in print, but, with the internet, materials in electronic formats are now included in library collections, the collection scope has changed from local contents to global networks. The use of the internet and World Wide Web has attracted the interest of scholars because of its advantage and convenience over traditional services in libraries, most library users have readily started using the internet to find their information (Oso & Adesua, 2017). The internet according to Hamidu and Hauwa (2015) has changed the landscape of information as it supports multi-user environment, make room for multiple users and allows users to access and manipulate information at ease thereby making the library disseminate information without necessarily stocking printed materials on the shelves.

The internet has changed the landscape of information as it supports multi-user environment and allows users to patronise, access and manipulate information without convection thereby making the library disseminate information without necessarily stocking printed materials on the shelves (Uloaku, 2017). Internet availability has paved the way for some associated services in respect of serials such as browsing, e-mail, online system and information management. The use of the Internet in libraries and information centres has enabled users to have access to a wide range of learning resources available on the net especially the World Wide Web (www) and the electronic mail (University of Cape Coast, 2020). In recent years, Internet and e-resources has

emerged as a powerful educational information tool that has been spread technological literacy and given people all over the world fast access to vast resources (Islam, *et al*, 2015). According to Okon, et al (2023c), internet facilities open the library to life as all users would want to connect to it and have access to their required and needed information hence improving patronage of the library.

Internet has helped for easy accessibility and dissemination of information. With the use of the Internet services like discussion groups and e-mail, it is possible to post message which include request for information, seeking book titles or reference materials, asking for names and addresses of people who have expert knowledge in particular areas and has greatly enhanced the practice of librarianship. This implies that the internet has helped library staff to effectively deliver library services to her users (Oso & Adesua, 2017). Internet is applied to the services of libraries to ensure that information is delivered timely, accurately and precisely (Olajide & Adio, 2017). The advanced use of Internet tools enables libraries to reach both local and distance users much more easily and effectively. In view of this, Uloaku (2017) opined that Internet is applied mostly in acquisition, classification and cataloguing, reference, document delivery, current awareness service, selective dissemination of information and interlibrary loan to enhance service delivery and at the same time save time.

MULTIMEDIA TECHNOLOGY AND USERS' PATRONAGE

Multimedia technologies evolved to become the most highly employed technology used across the globe for effective library services dissemination due to its rich combination of text, graphics, audio, video and animation in the transmission of information or knowledge (Nwangwu & Obi, 2014). A UNESCO prime goal in education which is to make quality education more accessible for all is being attained with the use of multimedia technologies in the library. In view of the above, Patel (2013) opined those priorities of national policies should be on improving library services through technological innovations in accessibility and utilisation of library resources. One of the ways in which such goals would be attained is by adopting multimedia technologies in library services. This will facilitate advancement and improvement in library services. According to Nwangwu and Obi (2014) information technologies like multimedia technologies enhance the quality of library services and sharing of knowledge and information. Okon, et al (2023b) also noted that multimedia resources are linked to other devices and media like the social media and can help facilitate retrieval and dissemination of information resources and when used in libraries can aid patronage.

Anyim (2017) confirms that multimedia technologies contribute to effective library services through expanding access, promoting efficiency, improving the quality of learning, enhancing the quality of learning and improving the management systems. Multimedia technologies do not only provide opportunities to work with distance library users and achieve a closer collaboration among users and libraries. It also paves the way for new pedagogical approach where students should be able to communicate, create presentations in power points, and interact with colleagues and staff (Nwangwu & Obi, 2014). Since emergence of multimedia technologies in the library, there are significant changes in the way library services is being dissemination. Multimedia technology has broken a new ground to mitigate the lapses that have been inherent in traditional library services and provides library users with variety of accessing and utilising options (Bent & Brink, 2013).

Multimedia has the potential and would prove to be one of the powerful tools that could assist library staff to enhancing their professional capacity and also enable the users achieve their information goals. Multimedia technology tools are designed and developed for the purpose of making information delivery effective. According to Nwangwu and Obi (2014), multimedia technologies aid conveying information easily to library users and facilitate clear understanding of concepts as well as capturing library users' interest and attention. The dynamic nature of the library users in the 21st century precipitated the need for the librarians to remain flexible and adaptable to change in the way in which library services is delivered. Bent and Brink (2013) asserted that multimedia technology adds new dimension to library services because concepts could easily be presented and comprehended when the words are accompanied with images and animations and library users have more retentive memory when a variety of senses are engaged in utilisation. Once these resources are made available and accessible it will drive patronage on its own and the libraries will be very active and efficient to patrons. (Okon and Okwu, 2016)

DATABASE AND USERS PATRONAGE

Electronic library databases enhance easy accessibility of information resources in the library. Today, library information sources are more likely to be accessed and used in soft copy than that of the hard copy. In view of this, Ogumodede and Emeahara (2017) opined that library users tend to use information sources that require least effort to access and manipulate through any computerised devices and at their comfort zones. Library users consider database resources more reliable than the content of the open web thereby promoting patronage (Li, *et al* 2017). According to Miao, *et al,* (2019) the explosion of database-related information make search for information more effective and successful. In this connection, Song (2017) posited that databases of scientific publications, especially in the world-famous journals published in the English language surpass the other languages. For this purpose, Mamafha, et al (2014) suggested that the database experts should remember that end-user satisfaction while developing a database to improve user search. As noted by Okon, et al (2023) Database greatly influences students' patronage of libraries because when the student utilizes the databases and get effective results they would always come back to utilize more of the resources. Jone (2018) found that the published literature of journals in the Web provides assistance in resources integration. In this way, the use of data technology and external data sources such as the resource description framework helps answer complex research queries. Therefore, Li, *et al,* (2017) suggested that every library must be prepared to transform the traditional information service system by applying big data to support multi-faceted users in the era of information explosion. The processes of using big data in the library are group into four parts; accuracy, data reduction and compression, data confidentiality and security and big data processing system and technology.

In exploring the evolving stage of databases in electronic libraries, Xie, *et al* (2018) opined that one of the challenging tasks in the information technology application in the library is to ensure the integrity of databases. The application allows libraries to track relationships and various contact details to extend the integrated library system to meet all the new requirements for flexibility, accessibility and utilisation by the users. Many authors including Miao, *et al,* (2019) asserted that despite the above developments, until the fall of 1998, there was no adequate access to all

electronic databases. In existing digital repositories, electronic databases and multi-search engines have become a reliable source of information for the library users. Li, *et al,* (2017) explained that the explosion of database-related information make search for information more effective and therefore users prefer online information resources more.

RESEARCH METHODOLOGY

The study adopted a descriptive survey design. The area of this study is Polytechnic libraries in south south Nigeria to include Auchi Poly Edo state, federal poly of oil and gas Bonny, rivers state, federal poly Oko, Delta State, federal poly Ukana, Akwa Ibom State, Bayelsa state Polytechnic, Akwa ibom state Polytechnic, Delta state Polytechnic and federal Poly Ugep, Cross river state. The population of this study was 7,325 HND students who are registered library users in 2022/2023 academic session (Library registration unit for each of the polytechnics, 2023). Accidental sampling technique was used to sample of 382 HND students from the study area, this sample was gotten using the Krejcie and Morgan sample size determination table. The instrument that was used for data collection was a researcher developed questionnaire titled "Information Technology on Users' Patronage Questionnaire" (ITUPQ). The researchers administered copies of the questionnaire to the respondents in each of the selected polytechnic libraries with the help of research assistants, at the end 376 copies were filled and returned. The data obtained through the questionnaire was analysed using mean and standard deviation to answer research questions and dependent t-test was used to test the hypotheses at .05 level of significance.

RESULTS

Answering to Research Questions
Research Question One
What is the influence of Internet on users' patronage of polytechnic libraries in south south Nigeria?

Table 1: Mean and Standard Deviation of the Influence of Internet and Users' Patronage (n=376)

S/N	Internet and Users' Patronage	Mean	S D	Remarks
1.	My library has Internet services	13.46	4.20	Agreed
2.	I visit my library often to use the Internet services	13.50	3.68	Agreed
3.	My library has steady power supply to enhance Internet services	13.48	4.11	Agreed
4.	Internet services help me to do my work faster and easier	13.46	3.59	Agreed
5.	Internet services enhances users' patronage in my library	13.49	3.62	Agreed
		37.39	19.20	Agreed

Table 1 gives the summary of the item analysis of the influence of Internet on users' patronage of polytechnic libraries in south south Nigeria. The result shows that all the items have positive mean responses indicating that respondents agreed to all the items. The total Mean score was 37.39 with standard deviation of 19.20 which indicated

that Internet has positive influence on users' patronage of polytechnic libraries in south south Nigeria.

Research Question Two

What is the influence of multimedia technology on users' patronage of polytechnic libraries in south south Nigeria?

Table 2: Mean and Standard Deviation of the Influence of Multimedia Technology and Users' Patronage (n=376)

S/N	Multimedia Technology and Users' Patronage	Mean	SD	Remarks
1.	My library has the following multimedia technology tools like; text	13.53	3.75	Agreed
2	Audio	8.41	1.12	Disagreed
3	Pictures	13.14	3.62	Agreed
4	Videos	6.71	1.22	Disagreed
5.	I will be encouraged to do my learning and research as a result of multimedia technology tools in my library	13.48	3.84	Agreed
3.	My library does not possess functional multimedia technology tools	13.51	4.04	Agreed
4.	Polytechnic libraries should carry out periodic surveys in order to ensure functional multimedia technology tools are available users patronage	13.49	3.82	Agreed
5.	Multimedia technology can enhance patronage of polytechnic library	13.52	3.86	Agreed
		37.53	19.31	Agreed

Table 2 presents the summary of the item analysis of the influence of multimedia technology on users' patronage of polytechnic libraries in south south Nigeria. The result shows that most of the items have positive mean responses indicating that respondents agreed to most of the items. Except for the availability of the multimedia tools which is not very present in some of the polytechnic libraries. The total Mean score was 37.53 with standard deviation of 19.31 which indicated that multimedia technology has positive influence on users' patronage of polytechnic libraries in south south Nigeria.

Research Question Three

What is the influence of database on users' patronage of polytechnic   libraries in south south Nigeria?

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Table 3: Mean and Standard Deviation of the Influence of Database and Users' Patronage (n=376)

S/N	Database and Users' Patronage	Mean	S D	Remarks
1.	My library provide access to database resources	13.42	3.68	Agreed
2.	You know how to access databases in your library	13.48	3.64	Agreed
3.	Database resources are more reliable than the content of the open web	13.53	4.12	Agreed
4.	Database enhances users' patronage in my library	13.43	3.76	Agreed
5.	My library subscribes to databases regularly	13.46	3.59	Agreed
		37.32	19.74	Agreed

Table 3 shows the summary of the item analysis of the influence of database on users' patronage of polytechnic libraries in south south Nigeria. The result shows that all the items have positive mean responses indicating that respondents agreed to all the items. The total Mean score was 37.32 with standard deviation of 19.74 which indicated that database has positive effect on users' patronage of polytechnic libraries in south south Nigeria.

TESTING OF HYPOTHESES
Hypothesis One
There is no significant influence of Internet on users' patronage of polytechnic libraries in south south Nigeria

Table 4 Dependent t-test Analysis of Internet and Users' Patronage

Variables	$\bar{X}$	SD	P	t- critical	Decision
Internet	37.4	19.2	19.13*	3.18	*Significant
Users' Patronage	39.58	21.23			

*significant @ .05 alpha level 375 degree of freedom

Table 4.4 showed that the P-value of 19.13 is greater than the critical t-value of 3.18. Since the P value is greater than the t-critical, the null hypothesis is rejected, thus there is a significant influence of Internet on users patronage of polytechnic libraries in south south Nigeria.

Hypothesis 2: There is no significant influence of multimedia technology on users' patronage of polytechnic libraries in south south Nigeria.

Table 5: t-test Analysis of Multimedia Technology and Users' Patronage

Variables	$\bar{X}$	SD	p	t- critical	Decision
Multi Tech.	37.32	19.31	15.17	3.18	*Significant
Users' Patronage	39.58	21.23			

*significant @ .05 alpha level at 375 degree of freedom

Table 5 shows that the P-value of 15.17 is greater than the critical t-value of 3.18. Since the P-value is greater than the t-critical, the null hypothesis is rejected, consequently, there is significant influence of multimedia technology on users' patronage of polytechnic libraries in south south Nigeria.

Hypothesis 3: There is no significant influence of database on users' patronage of polytechnic libraries in south south Nigeria.

Table 6: t-test Analysis of Database and Users' Patronage

Variables	$\bar{X}$	SD	t- cal.	t- critical	Decision
Database	37.32	19.74	14.01*	3.18	*Significant
Users' Patronage	39.58	21.23			

*significant @ .05 alpha level at 375degree of freedom

Table 7 shows that the P-value of 4.00 is greater than the critical t-value of 3.18. Since the P-value is greater than the t-critical, the null hypothesis is rejected, thus, there is significant influence of database on users' patronage of polytechnic libraries in south south Nigeria.

DISCUSSION OF THE FINDINGS
- ### Internet and Users' Patronage

The results of data analysis on Internet influence of users' patronage of polytechnic libraries in south south Nigeria showed a positive mean response and the hypothesis of the no significant influence was rejected, indicating that there is significant influence of Internet on users' patronage of polytechnic libraries in south south Nigeria. The result is in agreement with the opinion of Oso and Adesua (2017) who stated that the use of the internet and World Wide Web has attracted the interest of scholars because of its advantage and convenience over traditional services in libraries, most library users have readily started using the internet to find their information. Hamidu and Hauwa (2015) in their research, observed that internet has changed the landscape of information as it supports multi-user environment, make room for multiple users and allows users to access and manipulate information at ease

thereby making the library disseminate information without necessarily stocking printed materials on the shelves. It is also in agreement with the research of University of Cape Coast (2020) who explained that the use of the Internet in libraries and information centres has enabled users to have access to a wide range of learning resources available on the net especially the World Wide Web (www) and the electronic mail.

- ### Multimedia Technology and Users' Patronage

The results of data analysis on Multimedia technology influence of users' patronage of polytechnic libraries in south south Nigeria showed a positive mean response and the hypothesis of the no significant influence was rejected, indicating that there is significant influence of multimedia technology on users' patronage of polytechnic libraries in south south Nigeria. The significance of the result is in agreement with the opinion of Nwangwu and Obi (2014), who emphasized that Multimedia technologies evolved to become the most highly employed technology used across the globe for effective library services dissemination due to its rich combination of text, graphics, audio, video and animation in the transmission of information or knowledge. Anyim (2017) in his research, confirmed that multimedia technologies contribute to effective library services through expanding access, promoting efficiency, improving the quality of learning, enhancing the quality of learning and improving the management systems. It is also in line with the work of Bent and Brink (2013), who explained that since emergence of multimedia technologies in the library, there are significant changes in the way library services is being dissemination. That multimedia technology has broken a new ground to mitigate the lapses that have been inherent in traditional library services and provides library users with variety of accessing and utilising options.

- ### Database and Users' Patronage
The results of data analysis on database influence of users' patronage of polytechnic libraries in south south Nigeria showed a positive mean response and the hypothesis of the no significant influence was rejected, indicating that there is significant influence of database on users' patronage of polytechnic libraries in south south Nigeria. The result is in agreement with the opinion of Ogumodede and Emeahara (2017), who stated that electronic library databases enhance easy accessibility of information resources in the library. That today, library information sources are more likely to be accessed and used in soft copy than that of the hard copy. Li, *et al* (2017) also explained that library users consider database resources more reliable than the content of the open web thereby promoting patronage. This finding is in line with what was reported by Miao, *et al* (2019), who opined that, the explosion of database-related information make search for information more effective and successful.

CONCLUSION

This research was looking at information technology tools and how they influence library patronage by polytechnic students in south south Nigeria. Considering the results and finding, the research therefore concludes that there is a significant influence of information technology on users' patronage of polytechnic libraries in south south Nigeria. Hence, polytechnic libraries should ensure that they update their ICT tools especially Internet facilities, multimedia resources and databases as it would

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greatly increase and encourage student patronage of their libraries and thereby give the users the required satisfaction with the library services.

RECOMMENDATIONS

The following recommendations were made based on the findings of the study:

- Internet services should be increased in polytechnic libraries in south south Nigeria to improve users' patronage.

- Multimedia technology should be made available to enhance users' patronage in polytechnic libraries in south south Nigeria.

- Database should be updated in polytechnic libraries in south south Nigeria to encourage users' patronage

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