

**THE USE OF MOBILE INTERNET DEVICES AS FACTOR AFFECTING THE
UNDER-UTILIZATION OF LIBRARY SERVICES BY UNDERGRADUATE
STUDENTS IN THE UNIVERSITY OF BENIN**

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FACULTY OF EDUCATION
UNIVERSITY OF BENIN
BENIN CITY**

MAY, 2024.

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**A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF
EDUCATIONAL MANAGEMENT, FACULTY OF EDUCATION,
UNIVERSITY OF BENIN, BENIN CITY IN PARTIAL FULFILMENT
OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR DEGREE
IN LIBRARY & INFORMATION SCIENCE. (BLIS)**

MAY, 2024.

CERTIFICATION

We, the undersigned, certify that this study was carried out by Dennis Ose ODION with Matriculation Number EDU1904075 in the Department of Educational Management, Faculty of Education, and University of Benin, Benin City. It is adequate in scope and quality for the partial fulfillment of the requirements of the award of bachelor degree in

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Date

DEDICATION

This research work is dedicated to my parents for their love, care and support.

ACKNOWLEDGEMENTS

The researcher wishes to express his gratitude to God Almighty for His infinite mercies, tender love, and kindness showered on him before, now and always.

He wishes to express his profound gratitude to Mrs. U.B Oviri my project supervisor, for her direction and tireless efforts to correct the work throughout the study's various stages, as well as for her encouraging words and useful suggestions that helped the job get finished.

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TABLE OF CONTENT

Title Page	-	-	-	-	-	-	-	-	-	ii
Certification	-	-	-	-	-	-	-	-	-	iii
Dedication	-	-	-	-	-	-	-	-	-	iv
Acknowledgments	-	-	-	-	-	-	-	-	-	v
Abstract	-	-	-	-	-	-	-	-	-	xi

CHAPTER ONE: INTRODUCTION

Background to the Study	-	-	-	-	-	-	-	-	-	1
Statement of the Problem				-	-	-	-	-	-	4
Purpose of the Study	-	-	-	-	-	-	-	-	-	5
Research Questions						-	-	-	-	6
Significance of the Study	-	-	-	-	-	-	-	-	-	6
Scope of the Study			-	-	-	-	-	-	-	7
Definition of Terms-	-	-	-	-	-	-	-	-	-	7

CHAPTER TWO: REVIEW OF RELATED LITERATURE

Conceptual Framework	-	-	-	-	-	-	-	-	-	9
Review of Empirical Studies				-	-	-	-	-	-	10
Types of Mobile Internet Devices used by Undergraduate Students	-	-								13
Under-utilization of Library services by Undergraduate Students	-	-								15

Types of Library Services Available to Undergraduate Students	-	-	19
Effects of the Use of Mobile Internet Devices on Under-utilization of Library Services	-	-	21
Preference between use of Mobile Internet Services and Utilization of Library Services	-	-	23
Empirical Studies	-	-	26
Summary of Reviewed Literature	-	-	32

CHAPTER THREE: METHODOLOGY

Research Design	-	-	34
Population of the Study	-	-	34
Sample and Sampling Procedure	-	-	34
Research Instrument	-	-	35
Validity of Research Instrument	-	-	35
Reliability of the Instrument	-	-	35
Method of Data Collection	-	-	36
Method of Data Analysis	-	-	36

CHAPTER FOUR: PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

Questionnaire respond rate	-	-	37
Discussion of Findings	-	-	48

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION

Summary	-	-	-	-	-	-	-	-	-	50
Conclusion	-	-	-	-	-	-	-	-	-	52
Recommendations	-	-	-	-	-	-	-	-	-	52
Limitations of the Study	-	-	-	-	-	-	-	-	-	53
Suggestions for Further Study	-	-	-	-	-	-	-	-	-	53
REFERENCES	-	-	-	-	-	-	-	-	-	55
APPENDIX	-	-	-	-	-	-	-	-	-	57

LIST OF TABLES

Table 1.1: Questionnaire respond rate	-	-	-	-	-	-	-	-	-	37
Table 1.2: Gender of respondents	-	-	-	-	-	-	-	-	-	38
Table 1.3: Level of respondents	-	-	-	-	-	-	-	-	-	38
Table 2.1: The under-utilization library services by undergraduate students-										39
Table 2.2: The different types of mobile internet devices used by undergraduate students in the University of Benin	-	-	-	-	-	-	-	-	-	41
Table 2.3: The level of Under-utilization of library services by undergraduate Students	-	-	-	-	-	-	-	-	-	42
Table 2.4: The different types of library services available to the undergraduate Students	-	-	-	-	-	-	-	-	-	43
Table 2.5: Show the effect of the use of mobile internet devices on the Under-utilization of library services	-	-	-	-	-	-	-	-	-	45
Table 2.6: Show students' preference between the uses of mobile internet devices on the under-utilization of library services	-	-	-	-	-	-	-	-	-	47

ABSTRACT

This study was conducted to investigate the use of mobile Internet devices as a factor affecting the under-utilization of library services by undergraduate students in the University of Benin. Six purposes and research questions were raised to guide the study. The survey research design was employed in the study. The population of the study consists of all the entire library and information science students of the Faculty of Education in The University of Benin, Ugbowo, Benin city, Edo state. The sample size comprises of 100 students of the library and information science department in the University of Benin. Simple random sampling technique was used. The instrument for data collection was the questionnaire developed by the researcher, and validated by the researcher's supervisor. The study was able to determine the different types of mobile Internet devices used by undergraduate students, the level at which they use these devices (very often). It was also able to discover that the level of under- utilization of library services is very high as students prefer the use of mobile Internet devices to the utilization of library services. The university library should discover and develop on platforms that can be used to provide library services to undergraduate students via mobile Internet devices so that the students preference of mobile Internet devices will be to the library's advantage and not otherwise. Mobile applications can be invented for the benefit of the university user community especially undergraduate students in the University of Benin.

Undergraduate students should be ensured to be given adequate library user orientation as part of their 100 level orientation program so that they understand completely the value of library services utilization. Lecturers should devise means to enforce on their students compulsory and frequent library visits for academic work. This will prompt the never-library users to visit the library and most of them will get to enjoy utilizing the library services, this will in turn reduce mobile Internet device use.

The university library should improve on the provision of library services to meet the information needs of its users.

CHAPTER ONE

INTRODUCTION

Background to the Study

A library, simply defined, is a carefully organized collection of information (print and non-print) systematically selected, acquired, organized, and made available to users by professionals (librarians). Libraries can be physical (library buildings) or non-tangible (virtual libraries). Various types of libraries include Academic, Public, School, Private, Special, and National libraries. In Nigeria, libraries play a crucial role in solving educational problems (Oluwatoyin, 2021). University libraries, being repositories of essential knowledge, are vital for national development (Ashaver & Bem-Bura, 2022), contributing significantly to academic progress and research in the academic field through well-defined and organized library services.

Library services encompass functions provided by a library to its users/patrons. The primary purpose of a university library is to support teaching, learning, and research (Oyewusi & Oyeboade, 2020). These services are foundational to the mission and vision statements of the library. University libraries support teaching, learning, and research activities within their institutions (Ashaver & Bem-Bura, 2022), providing information resources and user-oriented services to undergraduate students upon their arrival in the library or through online access.

The internet, a vast system of connected computers worldwide, facilitates information sharing and communication. It provides a wide array of resources, including websites, emails, multimedia content, and collaborative platforms. Internet access is crucial for students globally, allowing them to retrieve information irrespective of their location (Aderonke, 2021). Internet devices, such as smartphones and tablets, have become essential tools for accessing information and educational resources (Wikipedia, 2024).

Mobile Internet devices, which connect wirelessly to the internet, have seen widespread adoption globally, impacting various areas (Odede, 2022). This adoption has transformed the information landscape for undergraduate students, who increasingly use these devices for private and convenient access to information (Smith & Caruso, 2021). Despite this trend, traditional library services remain relevant, offering well-defined information resources and assistance (Quadri, Adetimirin, & Idowu, 2023).

University undergraduates seek information to fulfill social and psychological needs, supporting their academic journey (Quadri et al., 2023). Factors such as personal preferences, service quality, information literacy, and awareness influence the utilization of library services (Oluwatoyin, 2021). The underutilization of library services can be attributed to the frequent use of mobile Internet devices for information searches, as students may find it more convenient (Ugah, 2020). Despite this, the library remains a

vital intellectual establishment that should not be overlooked (Awoleye, Siyanbola, & Oladipo, 2022).

Recent studies reveal that undergraduates, although embracing the Internet, do not fully utilize traditional library services (Jones & Madden, 2023). The University of Benin, for example, observes low visitation to academic libraries, even when faculty or departmental libraries are available (Abubakar, 2022). While mobile Internet devices offer quick and reliable information, libraries provide essential resources for research and learning (Kumar & Kaur, 2023).

Encouraging the use of both mobile Internet devices and library resources is crucial for promoting research and providing a comprehensive knowledge base. Libraries need to understand students' preferences and integrate services to align with the evolving information landscape. Addressing factors contributing to under-utilization requires effective solutions and actions for delivering library services (Mwatela, 2022).

University libraries are facing underutilization of their services, and addressing this issue requires considering the factors contributing to it. This consideration can lead to actions and the development of effective solutions for delivering library services.

Statement of the Problem

Over the years, university libraries in Edo State have struggled with issues related to library usage. Despite various studies conducted to enhance library services and cater to students' needs, a good number of undergraduate students continue to underutilize the improved services. Notably, there is a significant portion of students who have never set foot in the library since their admission to the university. Others seldom visit the library for research or information gathering, with some utilizing library facilities solely for personal book reading.

Even among final-year students engaged in project work, majority successfully complete their projects without ever making use of library services. This could be as a result of the use of mobile Internet devices in meeting their information needs.

Previous investigations show that undergraduate students prefer time saving Internet access to information. They also prefer sitting in the comfort of their hostels to gain access to information on the Internet rather than using library resources. Students need information on a daily basis, they carry out research, do assignments and other academic activities but under-utilize the library. This study is set to find out how the use of mobile Internet devices acts as factor affecting the under-utilization of library services.

Purpose of the Study

The main objective of the study is to investigate the use of mobile Internet devices as a factor affecting the under-utilization of library services by undergraduate students in Edo State.

Specifically, the study intends to:

1. Find out the level of use of mobile Internet devices by undergraduate students.
2. Identify the different types of mobile Internet devices used by undergraduate students in Edo State.
3. Find out the level of the under-utilization of library services by undergraduate students.
4. Identify the different types of library services available to the undergraduate students.
5. Find out the effect of the use of mobile Internet devices on the under-utilization of library service.
6. Find out the students' preference between the use of mobile Internet devices and the utilization of library services.

Research Questions

The research was guided by the following research questions:

1. What is the level of use of mobile Internet devices by undergraduate students?
2. What are the different types of mobile Internet devices used by undergraduate students in Edo State?
3. What is the level of the under-utilization of library services by undergraduate students?
4. What are the different types of library services available to the undergraduate students?
5. What is the effect of the use of mobile Internet devices on the under-utilization of library service?
6. What is the students' preference between the use of mobile Internet devices and the utilization of library services?

Significance of the Study

This study will help provide an insight to the extent of undergraduate students' reliance on mobile Internet devices compared to their utilization of library services.

It will also identify the reason as to why students prefer to use internet devices as against making use of the library.

The library can leverage this data to enhance its services, either by implementing strategies to attract students to physical library spaces or by delivering services through online platforms.

This study also contributes to the improvement of service quality for undergraduate students. Identifying and addressing the effects of mobile Internet device usage on library services will empower the library to deliver high-quality services that cater to students' information needs. Additionally, the findings of this study will add valuable insights to existing literature, serving as a resource for further research in the field and providing researchers with a foundation for exploring related topics.

Scope of the Study

The scope of the study examines the impact of mobile Internet devices on the underutilization of library services among undergraduate students in the University of Benin. The study is delimited to the undergraduate students of the University of Benin.

Definition of Terms

Internet: A global computer network providing a variety of information and communication facilities, consisting of interconnected networks using standardized communication protocols.

Library Services: These include from circulation services, reference services, online information services, inter library loans, and information literacy skills training.

Mobile Internet Devices: These are movable Internet devices such as: smartphones, laptops, modems, iPads, etc. that can allow access to the internet

Undergraduate Students: Students from 100 level to final level in training in a university in order to acquire a first degree, who form the major bulk of library users.

Under-Utilization: The poor and low use of library services.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter presents a comprehensive review of related literature on the use of mobile Internet devices as factor affecting the under-utilization of library services by undergraduate students in the University of Benin. It is reviewed under the following sub-headings:

Conceptual Framework

- Use of mobile Internet devices by undergraduate students
- Under-utilization of library services by undergraduate students
- Types of library services available to undergraduate students
- Effects of the use of mobile Internet devices on under-utilization of library services
- Preference between use of mobile Internet devices and utilization of library services

Review of Empirical Studies

Summary of literature review

Use of mobile Internet devices by undergraduate students

The significance of the Internet for undergraduate students has become indisputable. According to Awoleye's Study (2008), a substantial 92% of undergraduate students actively embrace and consistently utilize the Internet. This widespread adoption prompts a consideration of the role of mobile Internet devices in this context.

Mobile Internet refers to wireless access to digital content on the Internet through portable devices. These devices, characterized by their mobility and ability to offer Internet services through a handheld interface, are instrumental in catering to the needs of students. Importantly, they are not confined to fixed locations, allowing users to access Internet services from any location.

The study conducted by Mohammed et al, (2014) emphasizes that the use of mobile Internet devices provides a valuable opportunity for students to access a vast amount of information and Internet services in a relatively short time. They assert that students, in their constant pursuit of information, find mobile Internet to be a significant advantage due to its quick, easy, and portable nature. Basically, students not only seek information but also prioritize the efficiency and convenience offered by mobile Internet devices in accessing this information.

Several studies have revealed that students make use of mobile Internet devices more than any other related technology. For example, Aderonke in his 2021 study, highlighted the distribution of the source of Internet access amongst undergraduate students of Bowen University, and his findings revealed that 44.6% use mobile phones, 33.9% use laptops and 8.1% access the Internet at home. This explains that a higher percentage of the students use mobile Internet devices to access the Internet. In a survey of places of Internet use conducted by Safdar et al., (2022), it was revealed that more students use Internet services at home or in the University premises, it thus showed 58% at home, 29% at the college, 17% at bukas or net cafes' and 8% at any other place. Similarly, in a study by Ugwulebo and Okoro (2016), it was revealed that 54% of the student population used Internet at home with their personal devices. This indicates that students do more of sitting at the comfort of their homes to access Internet services using their mobile Internet devices rather than going to the university environment or the library.

A survey conducted by EDUCASE showed that 85% of students from developing countries owned at least laptops, music/video devices, game devices, wireless hubs, PDAs (Personal Digital Assistants), and smart phones indicating an increase in mobile penetration (Smith & Caruso, 2010). Mohammed, Aswathi and Yahya (2014) supported this view in a study of mobile Internet use revealing that a large majority (81.2%) of students use mobile Internet. As revealed, more students are now accessing the Internet through their mobile Internet devices.

The frequency of mobile Internet device usage varies among undergraduate students. Usage patterns range from daily to once or twice a week, with some students using it very rarely or as needed. A study on undergraduate students' mobile Internet usage revealed that 25.6% use it daily, 25.6% use it as needed, 20.1% use it very rarely, 14.6% use it once a week, and 14% use it twice a week (Mohammed, Aswhathi, and Yahya, 2014). Aderonke (2013) disclosed that students predominantly use these devices for Internet access, with over 70% using them daily, some on a monthly basis, and very few on a bi-monthly basis. This suggests a widespread and regular utilization of mobile Internet among students.

Mobile Internet devices are used by undergraduate students both positively and negatively. Ogunbeni, Adekanye, Bamibose and Sulaiman (2016) identified the major negative use and influence of the Internet on undergraduate students as plagiarism. The study discovered a good number of students are guilty of copying and pasting. Furthermore, the results were that students want to copy from files or documents from Internet sites and paste into their assignments using their mobile devices. Despite the negative use of mobile Internet devices, majority of students still use it for academic purposes. Aderonke in her study of Internet access and use among undergraduate students of Bowen University revealed that 58% of students use Internet devices for several academic purposes. In a study of the impact of Internet usage on students, Ugwulebo and Okoro (2016), found out that majority of students use mobile Internet devices to obtain course related information followed by 22% who used it for online communication. In

this case, more students use mobile Internet for course related information and online communication.

Types of Mobile Internet Devices used by Undergraduate Students

There are various types of mobile Internet devices that undergraduate students use to access the Internet. Mobile broadband services are services that can be used from mobile devices when there is handset signal. This further describes mobile Internet services to be generally provided as mobile broadband services to Internet enabled mobile devices.

In a study of Internet access conducted by Ogungbeni, Adekanye, Bamigbose & Sulaiman, (2016), respondents were asked to indicate their main source of connection to the Internet. The result indicated that a majority of respondents connect to the Internet through their telephone network service provider. In addition, respondents who connect to the Internet through the library and their university information and communication technology (ICT) center were few. These results show that access to the Internet through mobile devices is the trend among undergraduate students.

Researchers, including Aderonke and Mohammed, Aswathi, and Yahya (2014), have identified various mobile devices used by undergraduate students for Internet access. Aderonke's study at Bowen University found 44.6% using mobile phones and 33.9% using laptops (Aderonke, 2021). Mohammed et al. (2014) reported that 96.9% of students primarily use mobile phones for mobile Internet, with minimal usage of tablets (4.3%) and iPads (0.6%). Types of internet devices include;

- Smartphones emerge as the dominant mobile Internet device. They are multifunctional devices capable of accessing the internet through cellular data or Wi-Fi. They offer a wide range of applications for communication, entertainment, productivity, and more. Onyeachonam's (2015) study at the University of Lagos revealed 71.7% smartphone ownership.
- Computers or laptops offer full-fledged internet access and computing capabilities on the go. As highlighted in Onyeachonam's (2015) study, laptops constitute 64.3% of the mobile Internet devices owned by students.
- USB or wireless modems plug directly into a computer's USB port to provide internet connectivity through cellular networks. They're convenient for laptops without built-in cellular capabilities. They serve as communication interfaces connecting home networks to the Internet.
- Notebooks are growing worldwide due to their lower cost. They share similarities with laptops but are more portable.
- Tablets, larger than smartphones, offer a more expansive screen for browsing and multimedia consumption. They are suitable for tasks like reading, video streaming, and light productivity. Tablets offer portability and efficiency.
- iPads are versatile devices that bridge the gap between smartphones and laptops, offering a combination of portability and functionality for users who require a mobile internet device with a larger screen.

In conclusion, the spectrum of mobile Internet devices used by students varies, with smartphones and laptops dominating, while tablets and iPads exhibit lower utilization rates.

Under-utilization of Library services by Undergraduate Students

The problem of under-utilization of library services is a global one. This global phenomenon has been observed to include university libraries. This can be viewed in terms of lack of regular visit to the library and actual utilization of library resources and services. Undergraduate students could either be under-utilizing one of those or both. Library services include the provision of information resources and rendering of user oriented services. Literature has revealed that information availability does not mean accessibility and utilization.

Research has shown that there is a declining trend in library usage all over the globe and hence an increase of library non-users.

Peris and Otike (2016) posited that this could be suggestive of increased usage of networked electronic resources or availability of sources of information as majority of students regard the library as a place as opposed to being an information resource. Various user researches have probed students' attitudes as well as the characteristics of use, reasons for library visits, and factors related to the use of the different types of library materials. Unfortunately, this is the situation observed in Nigeria universities where undergraduate students especially the ones in final year complete their research/project works with very few of them making use of library services.

Peris and Otike (2016) also opined that university libraries today are faced the challenges of infrequent or non-use of resources largely because of inadequate awareness, perceived lack of relevance, lack of time, distance, lack of skills in the use of electronic resources, having personal books and/or borrowing books from friends. He further posited others as access to the internet from home, inadequate and poorly managed information resources; unhelpful disinterested staff, and unfriendly user conveniences coupled with other competitive sources of information. All these emphasizing on the fact that there are factors affecting the under- utilization of library services.

Overtime in some universities in Nigeria, it has been noticed that a majority of students rarely visit the library while others visit the library but do not make use of library resources and services. Some other reports noted that a good number of undergraduate students visit their library but under-utilize its services. Mwatela (2019) identified 15.56% and 4.4% of undergraduate students to visit the library more than only 6 times per semester and 1-3 times per semester respectively. He went further to inquire explanation for low usage of library characterized by less than 3 times per semester, the reasons were given as lack of time. This well indicates low library visits by students which therefore implies library services under- utilization.

Mwatela also identified in a study of use of library resources and services that a very small number of students reported utilizing the electronic resources. Only 5.10% reported using OPAC, 6.12% and 8.16% reported using E-books and E-journals respectively. 97% of the students reported browsing through the shelves as their main method of looking for

books in the library. This denotes that undergraduate students under-utilize electronic resources provided by the library. The main reasons attributed to under-utilization of these resources were students' lack of library and information skills, collectively referred to as information literacy.

In a recent survey carried out by EDUCASE, it was found that journals were under-utilized. The study highlighted that students frequented the library but predominantly relied on personal books, with minimal use of additional library resources. Ajayi (1993), as cited in Omehia, Obi, and Itohowo (2018), emphasized the disadvantage faced by students who fail to appreciate the value of the library. The quality of library services, as indicated by Omehia, Obi, and Okon (2018), also plays a crucial role in influencing the utilization or under-utilization of library services. They also argued that Nigerian university libraries often fall short of user expectations, leading to a lack of awareness regarding the library's role in academic studies. This underscores the importance of providing high-quality library services that meet the information needs of undergraduate students, encouraging their active utilization of library resources.

Ugah (2012) opined that the size of information sources affects the use of library services. Majority of students do not use the library because the library did not have enough materials. Ugah (2012) asserted that in Oyediran's (2008) study, low use of the library by students was observed. This was attributed to expressed accessibility problems. Ilako, I. A. (2016) stated that library resources and services are not being fully used by undergraduates because either they are not aware of the resources and services or do not

consider them as important for their studies. As identified, poor collection development by library staff, lack of awareness, and interest of students toward library resources and services prompt the under-utilization of library services.

Ogunmodede, Adio, and Odunola (2019) opined that no matter how large the stock of a library is, if the services and its resources are not fully used, such a library will be a white elephant. In other words, a library's relevance is not characterized by the size of its building or collection but by the level of its utilization.

The investigation of students' use of library resources showed that students go to the library only when they are in the examination period thus revealing that students use the library mostly to study and to do class assignments. (Ogunmodede, Adio and Odunola, 2013). Similarly, even though libraries are being used, they are, however, reduced to seasonal places of reading as most students make use of the library when preparing for examinations. It was also revealed that only few go to the library to read, while some of those who even go to the library are there either to see a friend or to discuss issues (Ogunmodede, Adio and Odunola, 2011). Library usage has been observed to increase during examination seasons. This is a clear indication that libraries are more popular spaces for study than for any other purposes (Peris & Otike, 2016). This further demonstrates a case synonymous to almost all Nigerian universities, characterized by students' zeal to pass examinations and not basically to acquire knowledge.

Haglund & Olsson (2008) asserted that most researchers used Google for everything and were confident that they could manage their information needs on their own. This therefore implies high dependence on mobile Internet devices. This could be considered as one of the factors affecting the under- utilization of library services, as students tend to become reluctant in going to the library.

Types of Library Services Available to Undergraduate Students

University libraries play a pivotal role in supporting the teaching, learning, and research endeavors of an institution. According to LRCN (2014), university libraries are expected to provide circulation services, inter-library loan services, reference and information services, current awareness services, selective dissemination of information (SDI), user education, literature searching, compilation of bibliographies, indexing and abstracting services, knowledge management services, preservation and conservation services, bindery services, information literacy services, archiving services, bibliographic services consultancy, photocopying/reprographic services, e-library services, translation services, Internet services, and book editing services.

In essence, university libraries offer fundamental services that include:

- **Provision of Information Materials:** Behind-the-scenes services involving the selection, acquisition, processing, organization, and placement of materials on library shelves.
- **Circulation Services:** Making processed materials available to users, involving activities such as lending books and recording loan transactions.

- Inter-Library Lending Services: Collaboration between libraries to share resources, addressing gaps in their respective collections.
- Referral Services: Directing users to alternative sources of information or other libraries.
- Reprographic and Photocopy Services: Providing devices for material reproduction, a service valued by students.
- Indexing and Abstracting Services: Offering descriptors or summaries to facilitate easy retrieval of materials.
- Current Awareness Services: Keeping users updated on new acquisitions, services, and developments.
- Selective Dissemination of Information: Tailoring information provision to specific user needs.
- Bibliographic Services: Compiling bibliographies to aid users in accessing information materials.
- Bindery Services: Binding worn-out or old books as needed.
- User Education Services: Educating students on effective library usage to foster independence.

In conclusion, these services collectively contribute to the effective functioning of university libraries and cater to the diverse needs of undergraduate students.

Effects of the Use of Mobile Internet Devices on Under-utilization of Library Services

Among other factors, the use of mobile Internet devices by students has been observed to have a significant effect on the under-utilization of library services. According to Ogunbeni, Adekanye, Bamibose and Suleiman (2016), some students find a strong temptation to use the Internet in unacceptable ways, such as the many forms of plagiarism. They find mobile Internet devices more appealing because they can easily copy and people's intellectual work into theirs. He further stated that the convenience of Internet-based research takes a toll on traditional library-based resources, making these long-established tools under-utilized by student researchers, Donner & Walton, (2013) argued that the arrival of this private, assessable but perhaps not optimal mobile Internet has implications for traditional public access venues such as the library. Sadly, students may see hard-copy and other more traditional research materials as less worthy of their attention, robbing them of excellent resources already in the collection of a campus library. Such is the aura of the Internet to award legitimacy.

Dania and Iwe-Ewenode (2016) in their study of use of mobile phones by Nigerian undergraduates stated that most students do not attend the university library as the mobile phone has become a tool to browse certain vital information. In other words, most students have abandoned the university library services as they now browse the Internet through their mobile phones to get information. The under-utilization of library resources and the services of the library professional is influenced by students' use of Internet

amongst other factors (Mwatela, 2013). Radcliff (2014) opined that the Internet is not a substitute for the library, but a search tool to be used in addition to traditional sources and services in the library. This means that undergraduate students should not replace the relevance of library services with mobile Internet but rather should consider it an addition/supplement.

Peris and Otiye (2016) asserted that students have admitted in the past that they hardly have any reason to borrow books as they have access to online resources, large, rich library collections only matter to the faculty and the graduate students. In other words, the undergraduates have little interest. He further opined that this situation is compounded by prevailing computer technologies as undergraduates can get enough from the web without ever visiting the library. The online revolution has made lots of information so accessible that students no longer see the benefits of using the library's resources and services viz-a-viz those of other information providers (Peris & Otiye, 2016). The central role of the library in an academic environment thereby becomes challenged compelling the library to learn new skills to effectively compete for the attention of its intended users.

Undergraduates in Nigeria, like in many other countries, rarely visit libraries and information centers and this case probably due to the advent of Internet. Grimes and Charters noted that online frequency use affects physical usage of the library as students' substitute Internet services for time spent in the library. But the effect of being an online user on library use is inconclusive.

Kumar and Kaur (2015) conducted a survey on Internet use the results showed that above 70% of respondents feel that the Internet is more useful, more preferred, more informative, easy to use, less expensive and time saving. This implies that undergraduate students find the use of mobile Internet devices a faster and more reliable way of getting information thereby neglecting the enormous benefits of provided library services. Jones and Madden (2002) found out that 73% of college students use the Internet more than the library for information searching while only 9% use the library more than the Internet. Momodu (2013) in a study of library utilization among college research year students of Ambrose Alli Ekpoma, when the research year undergraduates were asked where they got most of their project resource materials, only 8% used the college library while, 88% used the Internet. In other words, information resources used in writing projects are mainly sourced from the Internet. Only a few final year undergraduate students made use of the library services to source for information resources. This reveals a decline in the use of library services as a result of student's frequent use of mobile Internet devices.

Preference between use of Mobile Internet Services and Utilization of Library Services

Jones and Madden (2002) found out that 73% of college students use the Internet more than the library for information searching while only 9% use the library more than the Internet. Ilako (2016) discovered in his study of university students' perception on the use of mobile phones that undergraduate students preferred the use mobile Internet to the visit and of library services because:

1. They do not have to visit the library to find out about the availability of a book
2. Its time saving
3. Availability of mobile devices compared to the limited number of books
4. Easy accessibility from any location
5. It is portable
6. It is convenient

Kumar and Kaur (2005) conducted a survey on Internet use and the results revealed that above 70% of respondents feel that the Internet is more useful, more preferred, more informative, easy to use, less expensive time saving. It was also noted that students used mobile phone extensively for different purposes and they preferred mobile phones to other traditional media tools. According to the college students of Ambrose Ali University in a survey of library utilization, Internet can be visited at any time of the day and this makes it more preferable than the college library. Furthermore, a reason most respondents gave for Internet preference was the fact that they need not take permission before accessing the Internet at will unlike the college library.

Jones, M., & Madden, G. (2002) surmise that the Internet has greater potential for desirable information. They further stated that it is a faster means of accessing information, provides access to a wider range of information provides access to electronic journals, enables access to multiple files at once, provides access to information from home and gives more satisfactory answers to queries than library staff. Further studies also prove that one of the reasons why students prefer digital technology is because it

provides instant access to information from multiplicity of choices and this motivates them to learn. Students and teachers alike use the web because someone has already provided the information they are looking for (Ugwulebo and Okoro, 2016). Students require information regularly; they value instant access to information especially latest information resources. Therefore, mobile Internet devices seem to have gotten an edge over the library on this.

Omehia, et al. asserted that Nigerian undergraduates heavily depend on library resources. Despite some students leaning towards mobile Internet devices, others continue to appreciate and rely on library services to meet their information needs. Radcliff (2014) provided reasons supporting the preference for library services over mobile Internet usage, and they include:

1. Everything is not on the Internet
2. The Internet is not organized
3. The Internet does not have quality control
4. Sources on the Internet is harder to find
5. and fees pay for library use
6. Trained professionals available for assistance
7. E-books are available in the library
8. The Internet has fewer archival materials

It has been noted that undergraduates prefer direct human contact and gravitate towards on-site library services and resources instead of online use. In other words, students prefer library services offered through direct contact instead of any form of online communication. They want to be able to explain their information request face to face with the library professional. They also want to be able to search for the resources they need themselves from the physical location. Research has posited that while some undergraduate students prefer using mobile Internet devices for access to information others prefer utilizing library services. This is attributed to many reasons.

Empirical Studies

Ogunbeni, John I. (2021) Academic Self-Efficacy and Use of Mobile Internet for library Services by Undergraduates in Universities of South-West Nigeria

Many university libraries are adopting innovative ways of providing mobile interfaces and their applications so as to be effective in terms of delivery of service to patrons. Are undergraduates maximizing the use of these services and could underutilization of mobile technology-based library services by undergraduates be attributed to low academic self-efficacy? This study investigated academic self-efficacy and use of mobile technology-based library services by undergraduates in universities in South- West Nigeria. The design for the study was survey, involving multistage sampling technique. Two questionnaires were used to sample 1,086 undergraduates across three faculties in six universities in South-West Nigeria. 1,045 responses were analysed statistically. The study found that academic self-efficacy of undergraduates in universities in South-West Nigeria

is high. Undergraduates in South-West Nigeria use Short Messaging Services (SMS), e-books, mobile websites and databases to a large extent. There was low positive (Pearson $r = 0.084$) relationship between academic self-efficacy and use of mobile technology-based library services. This study concluded that it is expedient for undergraduates in universities in South-West Nigeria to increase their academic self-efficacy for greater use of mobile technology-based.

The use of various mobile digital technologies by university students may have positive or negative effect on their academic success (Chen et al., 2013; Mashhadi and Kargozari, 2011; Brown, 2011 and López, 2010). The effect may be negative if students spend most of their time online accessing resources that will not benefit them academically. In the use of mobile technology-based library services, individual can also display a level of self-efficacy; those with low academic self-efficacy may likely shy away from the use of these technologies. Even when they do, they may likely see it as a laborious exercise, whereas, even when use of mobile devices skills are not perfect, the individual with high academic self-efficacy may be pushed to keep using the mobile technology-based library services, believing that he or she is capable of utilising it, thereby, enhancing personal skills through practice.

Students with high academic self-efficacy are more likely than others to explore new technologies, software or databases. In the use of mobile technologies based library services, it can, therefore, be assumed that students with high academic self-efficacy would be more likely to take advantage of mobile technologies when compared to

students with low academic self-efficacy, as the later may lack the confidence or shy away from using mobile technologies based library services.

Today, Nigerian university students scarcely visit the libraries regularly like in the 1980s when there was no prevalence of mobile devices and internet. Academic libraries the world over are adopting technology in their operations since client satisfaction is greatly enhanced by the removal of the barrier of physical location (Tess, 2013). Many libraries are adopting innovative ways of providing mobile interfaces and their applications so as to be effective in terms of delivery of service to patrons.

Studies by Abubakar and Adetimirin (2015), Olawaseye and Abraham (2013) revealed that practical uses of e-resources are not up to the worth in comparison to investments made in acquiring these resources. The question to ask therefore is: could underutilization of mobile technology-based library services by university students be attributed to low academic self- efficacy? This study investigated academic self-efficacy and use of mobile technology-based library services by undergraduates in universities.

Sambo, Atanda Saliu (2021)

The Use of mobile internet and Smart Phones for Information Seeking by Undergraduate Students in Nigerian Specialised University

This study aims at establishing the use of smart phones for information seeking by undergraduate students in a Nigerian Specialised University. A descriptive survey design was adopted. Five objectives and five research questions were formulated to guide the study. A stratified random sampling technique was used to select one thousand four

hundred and three (1,403) respondents across the two colleges for the study whereas 84% were retrieved. The data collected were analysed using descriptive statistical tools such as frequency, percentage and means. The outcome of the study revealed that apple iOS topped the highest types of smart phone used for information seeking by undergraduate students follow by Google android, blackberry, open WebOS, MeeGo, window phone, Symbian and others. The result also, discovered that factors affecting the use of smart phones for information seeking by undergraduate students include poor battery, high rate of theft on campus, lack of technical experts on repairs when faulty within campus, high cost of data subscription/ Internet access, phone crashes, fragility, poor usage skills, unstable power supply for regular charging, among others. The paper concluded that undergraduates students at all levels should be encouraged to use smartphones for academic works and regular training should be conducted for undergraduate's students on how to maximize access to information using their smart phones.

Keywords – Nigeria, Specialised University, Academic library, Branch libraries, Information behaviour, Smartphone usage.

Since the advent of mobile technology in April 1973 they have been widely adopted by professionals from different fields as it the most pervasive technology that has great impacts on humans. A smartphone is a category of mobile phone that provides the functions of a small computer. Smartphones run complete operating system (OS) software that provides a standardized interface and platform for advanced third-party

apps. Popular smartphone OSes include Google's Android and Apple's iOS (Phone Scoop, 2017).

Smartphone's and the applications (Apps) that can be downloaded to Smartphone's are inventions that keep individuals connected to society, especially undergraduate students (Jesse, 2015). According to Smith and Tran (2017), the number of Nigeria's mobile subscribers has reached 150 million, and the number of its internet users has climbed to 97.2 million at penetration rates of 81% and 53%, respectively, according to a new report published by Jumia, Nigeria's largest online retailer. A large percentage of mobile and internet subscribers are undergraduate students who are digital natives. These young stars require information to be informed, get a better understanding of their field of study, get latest news and happenings around, get sports updates and keep communication with friends and family.

Web 2.0 integration in smart phones has made them very interesting to use by undergraduate students as it boosts communication, aid research, enhanced information sharing and enable them to get updated with news and happenings around them. Study materials can be downloaded to a smart phone, saved in folders and used later even without internet connectivity. According to Kowalski (2016), mobile devices make it easy for students to type and organize notes, while calculator apps can help with math problems. Similarly, mobile devices can even replace heavy paper textbooks as e-books, e-journals and electronic databases can be accessed and read with the use of smart phones. The usage of smart phones has a lot of prospects for undergraduate students as they can

go online with ease to seek information that meet their needs, communicate with friends and family members, make and receive calls, send and receive sms, record, watch and upload video, take pictures, play games and enjoy other entertainment features. In spite of these enormous benefits in the use of smart phones by undergraduate students, a lot of students are addicted to the use of Smartphone's which have hampered their concentration in their academics.

Chiso Ndukwe-Okafor (2019)

The Influence Of The Use Of Mobile Internet Devices In The Classroom By The Undergraduate Students At A University In Nigeria.

Mobile internet technology has been an emerging technology over the last few decades. This phenomenon presents both opportunities and challenges in higher education, especially in the classroom. The purpose of this study was to explore how students' use of mobile technology in the classroom affects their classroom engagement and learning. A sample of students from a University in Nigeria was surveyed to assess their perceptions of their use of mobile technology and for what they used it.

Collectively, the majority of the participants reported having access to mobile technology so that they could use the Internet. Most participants indicated that their use of mobile devices in the classroom facilitated their ability to collaborate with other students and concentrate better on their studies. Some of the participants reported that other students' use of mobile technology in the classroom was a source of distraction. The discussion offers avenues for future research regarding the effects of mobile technology on academic

performance and engagement. Student engagement underscores the view that the time and effort students devote to their educational activities is empirically linked to their desired college outcomes (Kuh, 2009). Astin (1984) stressed these outcomes and suggested that the measured level of student engagement (both quality and quantity) has an impact on the level of student development and learning. Engagement results reveal that individuals participating in tasks related to their proficiency continually learn from the experiences and show persistence because of their commitment to their work. Engagement is thus never a momentous event but a process and an activity that is always ongoing (Quaye & Harper, 2014). Kuh, Kinzie, Buckley, Bridges, and Hayek (2007) defined student engagement as “participation in educationally effective practices, both inside and outside the classroom, which leads to a range of measurable outcomes.”

Summary of Reviewed Literature

Analyzing the research focus, the use of mobile Internet devices has been reported to have a widespread impact in many universities in Nigeria. Mobile Internet devices are being used frequently and mainly for the purpose of educational and course related purposes. Mobile Internet devices such as smart phones, laptops and modems have successfully been identified as the types of mobile Internet devices used very frequently by undergraduate students in Nigeria universities.

The unanimous agreement of the researcher and reviewed literature is that despite the various types of services for example: circulation services, reference, bindery, reprographic, referral services, etc that are provided by the library for the undergraduate

students, the library still faces some level of under-utilization of services which could be attributed to many factors.

The library is still being frequently utilized either as a sitting space or for the purpose of utilization of services as reported in this review. Students preferences and reasons for preferences between library utilization and mobile Internet is also been reviewed but the effect of mobile Internet devices on the under-utilization of library services cannot be over looked.

None of the literature reviewed specifically dealt with the use of mobile Internet devices as factor affecting the under-utilization of library services by undergraduate students in the University of Benin. This is the gap in knowledge observed which this study is meant to fill.

CHAPTER THREE

METHODOLOGY

This chapter presents the method and steps the researcher used to collect data for the study, which shall be discussed under the following sub headings; Research Design, Population of the Study, Sample and Sampling Technique, Research Instrument, Validity of the instrument, Reliability of the instrument, Method of Data Collection, Method of Data Analysis.

Research Design

The survey research design was employed in the study. The reason for using the survey design is because the entire population cannot be studied for this research, the results derived will be generalized. It is also because of its ability to ensure accurate assessment through the study of a sample considered to be a representative of the entire population.

Population of the Study

The population of the study consists of all the library and information science students of the Faculty of Education in The University of Benin, Ugbowo, Benin city, Edo state.

Sample and Sampling Procedure

From the population, the sample size comprises of 100 from library and information science students in the Faculty of Education in The University of Benin, Ugbowo, Benin city, Edo state. Simple random sampling technique was used.

Research Instrument

The instrument used for the collection of data was the questionnaire, titled, “The Use of Mobile Internet Devices as Factor Affecting the Under-utilization Library Services by Undergraduate Students (UMIDAULSUSED). It contains 20 items aimed to elicit responses that can provide answers to the research questions.

The questionnaire is made up of two sections, (A and B). With section ‘A’ aimed at getting general facts about the students, and section ‘B’ containing questions that seek to elicit information on the research problem. The respondents were required to tick the correct item from the alternatives between ‘strongly agree, agree, disagree, strongly disagree’.

Validity of Research Instrument

After the construction of the instrument, it was submitted to the research supervisor for assessment, corrections and suggestions. The purpose of this was to establish the content validity of the instrument.

Reliability of the Instrument

The reliability of the instrument will be established using the split-half technique. 20 students from other faculties who are not part of the study will be used to ascertain the reliability of the instrument.

Method of Data Collection

The researcher administered the questionnaire to the respondents using an online link containing the questionnaire which the respondents filled swiftly.

Method of Data Analysis

In analyzing data collected, simple percentage analysis and straight tabulations was used.

The analysis given was based on the findings collected from data given in the questionnaire.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

This chapter presents the results and discussion of findings in line with the research questions asked.

This chapter is discussed under the following sub-headings;

- Questionnaire response rate.
- Analysis of respondents' bio-data.
- Answering of the research questions.
- Discussion of findings.

SECTION A: Demographic Data

Questionnaire respond rate

Table 1.1: Questionnaire respond rate

Number of Questionnaire administered	Number of Questionnaire answered
100	90

The table above shows that a total of 100 questionnaires were distributed, but only 90 responded.

Table 1.2: Gender of respondents

Sex	Frequency	Percentage (%)
Male	57	37.1%
Female	33	62.9%
Total	90	100%

Table 1.2 above shows the total number of respondents. **37.1%** are male, while **62.9%** are females. This implies females are more than males.

Table 1.3: Level of respondents

Level	Frequency	Percentage (%)
100	6	5.6%
200	15	16.9%
300	19	21.3%
400	50	56.2%

Table 1.3 shows the level of the respondents 5.6% are 100l, 16.9% are 200l, 21.3% are 300l, and 56.2% are 400l. This implies that majority of the respondents are in their final year.

SECTION B: Answering of the research questions.

The under-utilization library services by undergraduate students

Research Question One: What is the level of use mobile internet devices used by undergraduate students?

Table 2.1: The under-utilization library services by undergraduate students

S/N	ITEMS	Strongly Agree F(%)	Agree F(%)	Disagree F(%)	Strongly Disagree F(%)
1.	Do you often use a mobile internet device (e.g., smartphone, tablet) for academic purposes?	57 (63.3%)	22 (24.4%)	6 (6.7%)	5 (5.6%)
2.	Do you often use a mobile internet device (e.g., smartphone, tablet) for accessing course materials or educational resources?	58 (64.4%)	23 (25.6%)	6 (6.7%)	3 (3.3%)
3.	Do you use a mobile internet device (e.g, smartphone, tablet) for communication related to your academic activities (e.g emailing lecturers, participating in online discussions)?	53 (58.9%)	30 (33.3%)	6 (6.7%)	1 (1.1%)
4.	Do you use a mobile internet device (e.g., smartphone, tablet) for non-academic purposes (e.g., social media, entertainment) during your undergraduate studies?	52 (57.8%)	26 (28.9%)	7 (7.8%)	5 (5.6%)

Table 2.1 shows that majority of undergraduate students make use of mobile internet devices at a high rate or level, with 87.7% of respondents agreeing to using mobile

internet devices (e.g., smartphone, tablet) for academic purposes, indicating a high reliance on these devices for their studies. Similar to Item 1, a significant majority (90%) of respondents in item 2 either strongly agree or agree that they use mobile internet devices to access course materials or educational resources. This suggests that mobile devices are a critical tool for educational resource access. While 58.9% strongly agreed, 33.3% agreed to using mobile internet device for communication related to academic activities (e.g emailing lecturers, participating in online discussions. According to the survey, undergraduates also use mobile internet devices for non-academic activities, with 57.8% strongly agreed, and 28.9 agreed.

To answer the research question, the data above clearly shows a high frequency of mobile internet device use among undergraduate students for both academic and non-academic purposes.

Research Question Two: What are the different types of mobile internet devices used by undergraduate students in the University of Benin?

Table 2.2: The different types of mobile internet devices used by undergraduate students in the University of Benin

S/N	ITEMS	Strongly Agree F(%)	Agree F(%)	Disagree F(%)	Strongly Disagree F(%)
5.	Do you primarily use a smartphone for accessing the internet?	56 (62.2%)	26 (28.9%)	2 (2.2%)	6 (3.7%)
6.	Do you primarily use a tablet for accessing the internet?	37 (41.1%)	32 (35.6%)	14 (15.6%)	7 (7.8%)
7.	Do you primarily use a laptop or desktop computer for accessing the internet?	42 (46.7%)	30 (33.3%)	11 (12.2%)	7 (7.8%)
8.	Do you primarily use other types of mobile internet devices (e.g., smartwatch, e-reader) for accessing the internet?	23 (25.6%)	41 (45.6%)	16 (17.8%)	10 (11.1%)

Table 2.2 shows the different types of mobile internet devices used by undergraduate students in the University of Benin. 91.1% of respondents primarily use a smartphone for accessing the internet, 76.7% use a tablet, 80% use a laptop or desktop computer, while a lower majority (71.2%) of respondents either strongly agree or agree that they primarily use other types of mobile internet devices (e.g., smartwatches, e-readers) for accessing the internet. This suggests that while other mobile devices are used, they are less prevalent than smartphones, tablets, and laptops/desktops. To answer the research question, the data above indicates that undergraduate students predominantly use smartphones for accessing the internet, with a significant portion also relying on tablets and laptops/desktops. Other mobile devices are used but to a lesser extent.

Research Question Three: What is the level of Under-utilization of library services by undergraduate students?

Table 2.3: The level of Under-utilization of library services by undergraduate students

S/N	ITEMS	Strongly Agree F(%)	Agree F(%)	Disagree F(%)	Strongly Disagree F(%)
9.	Have you ever borrowed a book from the university library?	24 (26.7%)	26 (28.9%)	30 (33.3%)	10 (11.1%)
10.	Do you regularly use library resources (e.g., databases, journals) for academic purposes?	29 (32.2%)	26 (28.9%)	28 (31.1%)	8 (7.8%)
11.	Do you actively seek assistance from library staff (e.g., librarians) when conducting research or accessing resources?	23 (25.6%)	30 (33.3%)	23 (25.6%)	14 (15.6%)
12.	Do you believe that you are not utilizing library services to their full potential?	31 (34.4%)	36 (40%)	16 (17.8%)	7 (7.8%)

Table 2.3 shows the level of Under-utilization of library services by undergraduate students. The responses in item 9 are relatively evenly distributed, with a slight majority (55.6%) of respondents either strongly agreeing or agreeing that they have borrowed a book from the university library. However, a significant portion (44.4%) disagrees or strongly disagrees, indicating that many students do not utilize this library service frequently. Similar to Item 9, the responses in item 10 are split. A majority (61.1%) of respondents either strongly agree or agree that they regularly use library resources, while

38.9% disagree or strongly disagree, suggesting a mixed level of engagement with library resources for academic purposes. The responses in item 11 indicate a balanced distribution with 58.9% of respondents either strongly agreeing or agreeing that they actively seek assistance from library staff. However, 41.2% of respondents do not seek such assistance. An average of 37.2% which is the majority of respondents believe they are not utilizing library services to their full potential, while an average of 12.8% believe they are utilizing library services to their full potential.

To answer the research question, the data above suggests that while undergraduate students do engage with library services to some extent, many believe they are not fully utilizing these resources.

Research Question Four: What are the different types of library services available to the undergraduate students?

Table 2.4: The different types of library services available to the undergraduate students.

S/N	ITEMS	Strongly Agree F(%)	Agree F(%)	Disagree F(%)	Strongly Disagree F(%)
13.	Have you used library loan services to obtain or borrow materials?	16 (17.8%)	20 (22.2%)	30 (33.3%)	24 (26.7%)
14.	Have you utilized photocopying or printing services provided by the university library?	16 (17.8%)	30 (33.3%)	30 (33.3%)	14 (15.6%)
15.	Have you accessed quiet study areas or group study rooms within the university library?	26 (28.9%)	38 (42.2%)	15 (16.7%)	11 (12.2%)
16.	Have you attended any event organized by the university library?	8 (8.9%)	20 (22.2%)	32 (35.6%)	30 (33.3%)

Table 2.4 shows the different types of library services available to the undergraduate students. An average of 20% have made use of used library loan services to obtain or borrow materials, while an average of 30% do not, suggesting that library loan services are underutilized by the majority of students. When it comes to photocopying or printing services provided by the university library, an average of 25.55 make use of it, while 24.45 don't, indicating an equal division in the utilization of these services among students. An average of 35.55 have accessed quiet study areas or group study rooms within the university library, while an average of 14.45 have not, indicating that these study spaces are widely used by students. An average of 15.55 have attended events organized by the university library, while an average of 34.45 have not, indicating that library-organized events are not popular among the majority of students. In answer to the research question, the respondents acknowledged the presence of library services such as; library loan services, photocopying and printing services, quiet study areas, and library events.

Research Question Five: What is the effect of the use of mobile internet devices on the under-utilization of library services?

Table 2.5: Show the effect of the use of mobile internet devices on the under-utilization of library services

S/N	ITEMS	Strongly Agree F(%)	Agree F(%)	Disagree F(%)	Strongly Disagree F(%)
17	Do you find yourself using mobile internet devices (e.g., smartphones, tablets) more often than utilizing library services for academic purposes?	44 (48.9%)	36 (40%)	3 (3.3%)	7 (7.8%)
18	Do you believe that the convenience of accessing information through mobile internet devices has reduced your need to use library services?	44 (48.9%)	30 (33.3%)	11 (12.2%)	5 (5.6%)
19	Have you ever opted to search for academic resources online through mobile internet devices instead of visiting the library?	45 (50%)	37 (41.1%)	5 (5.6%)	3 (3.3%)
20	Do you think that the availability of information on mobile internet devices has contributed to the under-utilization of library services among undergraduate students?	44 (48.9%)	34 (37.8%)	8 (8.9%)	4 (4.4%)

Table 2.5 aims to show the effect of the use of mobile internet devices on the under-utilization of library services. An average of 44.45% of respondents rather use mobile internet devices instead of utilizing library services, this indicates a strong preference for mobile internet devices over traditional library services. An average of 41.44% believe

that the convenience of accessing information through mobile internet devices has reduced their need to use library services, indicating that convenience is a major factor in the decreased use of library services. An average of 45.7% would rather search for academic resources online through mobile internet devices instead of visiting the library, indicating a clear preference for online searches over physical library visits. 43.35% think that the availability of information on mobile internet devices has contributed to the under-utilization of library services, suggesting that mobile internet devices are a significant factor in the declining use of library services.

To answer the research question, the data indicates that the use of mobile internet devices has a considerable impact on the under-utilization of library services among undergraduate students. The preference for mobile devices is driven by the convenience and accessibility they offer, leading students to opt for online resources over traditional library visits.

Research Question Six: What is the students’ preference between the use of mobile internet devices on the under-utilization of library services?

Table 2.6: Show students’ preference between the use of mobile internet devices on the under-utilization of library services

S/N	ITEMS	Strongly Agree F(%)	Agree F(%)	Disagree F(%)	Strongly Disagree F(%)
21.	How do you feel about accessing information using mobile Internet devices compared to utilizing library services?	41 (45.6%)	41 (45.6%)	5 (5.6%)	3 (3.3%)
22.	Using mobile Internet devices for accessing information is more convenient than utilizing library services.	43 (47.8%)	37 (41.1%)	6 (6.7%)	4 (4.4%)
23.	Do you believe that library services are more effective in providing information compared to mobile Internet devices?	33 (36.7%)	24 (26.7%)	26 (28.9%)	7 (7.8%)
24.	When conducting research or studying, do you prefer using mobile Internet devices over utilizing library services?	41 (45.6%)	33 (36.7%)	6 (6.7%)	10 (11.1%)

Table 2. aims to show students’ preference between the use of mobile internet devices on the under-utilization of library services. An average of 45.6 feel better about accessing information using mobile Internet devices compared to utilizing library services, this highlights a clear preference for mobile devices over traditional library resources. An average of 44.45 feel using mobile Internet devices for accessing information is more convenient than utilizing library services, further emphasizing the convenience factor

driving the preference for mobile devices. The responses in item 23 are divided, with 63.4% of respondents either agreeing or strongly agreeing that library services are more effective in providing information compared to mobile internet devices. However, a significant portion (36.7%) either disagrees or strongly disagrees, indicating a lack of consensus on the effectiveness of library services. An average of 41.15 prefer using mobile Internet devices over utilizing library services when conducting research or studying. In summary, the table above shows that undergraduates prefer the use of mobile devices over library services, leading to the under-utilization of library services.

To answer the research question, the data above indicates a strong preference for mobile internet devices over traditional library services among undergraduate students. The convenience and accessibility offered by mobile devices are significant factors driving this preference.

Discussion of Findings

This study is focused on the use of mobile Internet devices as factor affecting the under-utilization of library services by undergraduate students in the University of Benin.

From the results presented above in line with the study, the following are the discussions of findings;

The analysis from the respondents' responses from research items 1-4 answers research question one. Ashwati and Yahya in a 2014 study revealed that a large majority of students use mobile internet, and this study is in agreement, as it shows that majority of undergraduate students make use of mobile internet devices at a high rate or level.

This study highlighted the different types of mobile internet devices used by undergraduate students, with the highest ranking being the mobile phone, followed by the laptop or desktop, then tablet, and lastly, other types of mobile internet devices (e.g., smartwatch, e-reader). This is supported by Onyeachonam (2015), who highlighted that majority primarily use smartphones.

This study shows the undergraduate's usage of library services is low, and they are not utilizing library services to its full potential.

This also study highlights the presence of library services such as; library loan services, photocopying and printing services, quiet study areas, and library events.

This study revealed that students would rather use mobile internet devices instead of utilizing library services, they believe that the convenience of accessing information through mobile internet devices has reduced their need to use library services, they would rather search for academic resources online through mobile internet devices instead of visiting the library, and also, they believe that the availability of information on mobile internet devices has contributed to the under-utilization of library services.

Finally, this study shows that undergraduates prefer the use of mobile devices over library services, leading to the under-utilization of library services. Supporting this study is Dania and Iwe-Ewenode (2016) who highlighted that students do not attend the university library as mobile internet devices has become a tool to browse vital information.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents the summary of findings, conclusion and recommendations, limitations of the study and suggestions for further studies.

Summary

The study examined the use of mobile Internet devices as factor affecting the under-utilization of library services by undergraduate students in the University of Benin. The main objective of the study was to investigate the use of mobile Internet devices as factor affecting the under-utilization of library services by undergraduate students in the University of Benin. The study also aimed at finding out the level of use of mobile Internet devices by undergraduate students, identify the different types of mobile Internet devices used, the level of the under-utilization of library services, identify the different types of library services available to undergraduate students, find out the effect of the use of mobile Internet devices on the under-utilization of library service, and to also find out the students' preference between the use of mobile Internet devices and the utilization of library services.

To achieve the aim of the study, the survey research design was used. Six research questions were formulated to guide the study, and a total of 100 questionnaires were

sampled. Data from the questionnaire were presented in tables, and analysed in simple percentage.

The findings of the study were based on the research questions raised which revealed the following:

- The level of use of mobile Internet devices by undergraduate students in the University of Benin is very high i. e undergraduate students in the University of Benin use mobile Internet devices for many reasons very often.
- The different types of mobile internet devices used by undergraduate students, with the highest ranking is the mobile phone, followed by the laptop or desktop, then tablet, and lastly, other types of mobile internet devices (e.g., smartwatch, e-reader).
- Undergraduates usage of library services is low, and they are not utilizing library services to its full potential.
- Library services available are; library loan services, photocopying and printing services, quiet study areas, and library events.
- the effect of the use of mobile internet devices on the under-utilization of library services is high due to the fact that students would rather use mobile internet devices instead of utilizing library services,
- Undergraduate students prefer the use of mobile Internet devices to the utilization of library services.

Conclusion

The study investigated the use of mobile Internet devices as factor affecting the under-utilization of library services by undergraduate students in the University of Benin. The study was able to determine the different types of mobile Internet devices used by undergraduate students, the level at which they use these devices which was discovered to be high (very often). It was also able to discover that the level of under- utilization of library services is very high as students prefer the use of mobile Internet devices to the utilization of library services. This has profound negative effects on library services utilization. In other words, the use of mobile

Internet devices is considered a factor that affects the under- utilization of library services by promoting, influencing or predicting the under- utilization of library services by undergraduate students in University of Benin.

Recommendations

The following recommendations were made based on the research outcome;

- The university library should discover and develop on platforms that can be used to provide library services to undergraduate students via mobile Internet devices so that the students preference of mobile Internet devices will be to the library's advantage and not otherwise.

- Mobile applications can be invented for the benefit of the university user community especially undergraduate students in the University of Benin.
- Undergraduate students should be ensured to be given adequate library user orientation as part of their 100 level orientation program so that they understand completely the value of library services utilization.
- Lecturers should devise means to enforce on their students compulsory and frequent library visits for academic work. This will prompt the never-library users to visit the library and most of them will get to enjoy utilizing the library services, this will in turn reduce mobile Internet device use.
- The university library should improve on the provision of library services to meet the information needs of its users.

Limitations of the Study

This study was limited in terms of time, resources and finance, and getting respondents to answer to the questionnaire.

Suggestions for Further Study

The study has illustrated that there are various important areas that would warrant further investigation. The following suggestions can be considered for further research:

1. Integrating mobile technology into library services.
2. The under- utilization of digital libraries in Nigerian universities.
3. Digital Preservation and Access in Nigerian University Libraries.

4. A survey on Information and Communication Technology in the provision of library services.
5. An assessment of library services satisfaction among undergraduate students in Nigerian universities.

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APPENDIX
DEPARTMENT OF EDUCATIONAL MANAGEMENT
FACULTY OF EDUCATION
UNIVERSITY OF BENIN
BENIN CITY.

**QUESTIONNAIRE ON THE USE OF MOBILE INTERNET DEVICES AS
FACTOR AFFECTING THE UNDER-UTILIZATION LIBRARY SERVICES BY
UNDERGRADUATE STUDENTS (UMIDAULSUSED)**

Dear Respondents,

The researcher is a student of the above-named Department, Faculty and University. He is conducting a research study on the use of mobile Internet devices as a factor affecting the under-utilization of library services by undergraduate students in the University of Benin. His target audience are undergraduate students. Here is a link to the questionnaire, .

Thank you for your anticipated participation.

DENNIS O. ODION.

Student

SECTION A

Instruction: Please tick (✓) as appropriate.

Demographic Background

Sex: Male () Female()

Course:

Level:

Research Question 1: What is the level of use of mobile Internet devices by undergraduate students?

S/N	ITEM	SA	A	D	SD
1.	Do you often use a mobile internet device (e.g., smartphone, tablet) for academic purposes?				
2.	Do you often use a mobile internet device (e.g., smartphone, tablet) for accessing course materials or educational resources?				
3.	Do you use a mobile internet device (e.g, smartphone, tablet) for communication related to your academic activities (e.g emailing lecturers, participating in online discussions)?				
4.	Do you use a mobile internet device (e.g., smartphone, tablet) for non-academic purposes (e.g., social media, entertainment) during your undergraduate studies?				

Research Question 2: What are the different types of mobile Internet devices used by undergraduate students in the University of Benin?

S/N	ITEM	SA	A	D	SD
1.	Do you primarily use a smartphone for accessing the internet?				
2.	Do you primarily use a tablet for accessing the internet				
3.	Do you primarily use a laptop or desktop computer for accessing the internet?				
4.	Do you primarily use other types of mobile internet devices (e.g., smartwatch, e-reader) for accessing the internet?				

Research Question 3: What is the level of the under-utilization of library services by undergraduate students?

S/N	ITEM	SA	A	D	SD
1.	Have you ever borrowed a book from the university library?				
2.	Do you regularly use library resources (e.g., databases, journals) for academic purposes?				
3.	Do you actively seek assistance from library staff (e.g., librarians) when conducting research or accessing resources?				
4.	Do you believe that you are not utilizing library services to their full potential?				

Research Question 4: What are the different types of library services available to the undergraduate students?

S/N	ITEM	SA	A	D	SD
1.	Have you used library loan services to obtain or borrow materials?				
2.	Have you utilized photocopying or printing services provided by the university library?				
3.	Have you accessed quiet study areas or group study rooms within the university library?				
4.	Have you attended any event organized by the university library?				

Research Question 5: What is the effect of the use of mobile Internet devices on the under-utilization of library service?

S/N	ITEM	SA	A	D	SD
1.	Do you find yourself using mobile internet devices (e.g., smartphones, tablets) more often than utilizing library services for academic purposes?				
2.	Do you believe that the convenience of accessing information through mobile internet devices has reduced your need to use library services?				
3.	Have you ever opted to search for academic resources online through mobile internet devices instead of visiting the library?				
4.	Do you think that the availability of information on mobile internet devices has contributed to the under-utilization of library services among undergraduate students?				

Research Question Six: What is the students' preference between the use of mobile internet devices on the under-utilization of library services?

S/N	ITEM	SA	A	D	SD
1.	How do you feel about accessing information using mobile Internet devices compared to utilizing library services?				
2.	Using mobile Internet devices for accessing information is more convenient than utilizing library services.				
3.	Do you believe that library services are more effective in providing information compared to mobile Internet devices?				
4.	When conducting research or studying, do you prefer using mobile Internet devices over utilizing library services?				