Lead City University Ibadan DO NOT COPY

Table of Contents

Lead City University Ibadan DO NOT COPY

Chapter Two: Literature Review

Chapter Three: Methodology

Lead City University Ibadan DO NOT COPY

Lead City University Ibadan DO NOT COPY

List of Tables

Lead City University Ibadan DO NOT COPY

List of Figures

Lead City University Ibadan DO NOT COPY

Chapter One

Introduction

1.1 Background to the Study

Education remains the backbone of sustainable development and building capacity of citizens in any nation and as such, learning outcome is a measurable achievement for ensuring and evaluating inclusive and equitable quality education that any society needs for an all- round development. It is an integral part of a quality education system. Quality education refers to a comprehensive and effective learning experience that equips individuals with the knowledge, skills, values, and competencies needed to thrive in various aspects of life[1].

Learning outcome describes what students are expected to know, understand, or be able to do as a result of their learning experiences. These outcomes articulate the intended achievements or competencies that learners should demonstrate upon completing a course, program, or educational activity. The learning outcome of secondary school students refers to the level of proficiency they attain in terms of knowledge, skills, attitudes, and values across the cognitive, affective, and psychomotor domains of educational objectives. This proficiency is crucial for developing self-confidence, self-reliance, effective citizenship, and the ability to respond to the opportunities and difficulties that arise in life.

In secondary education, the learning outcome generally include acquiring foundational knowledge in subjects as approved by the curriculum and in line with the National Policy

Lead City University Ibadan DO NOT COPY

on Education (NPE)like mathematics, English language, science, social studies, and arts[2].The outcome also focus on developing basic skills such as reading, writing, critical thinking, problem-solving, and communication. As students' progress through the educational levels, the learning outcome become more complex and specialized, aligning with the subject areas they choose to study[3].

Experts have also made attempts to clarify what educators should look for when testing or evaluating learning outcome[4]. In line with this, scholars have identified three domains of knowledge namely; cognitive, affective, and psychomotor. The cognitive aspect focuses on the aspects such as knowledge, understanding, information synthesis and application. The affective dimension focuses on the emotional, behavioural and moral effect of learning on the learning. The psychomotor dimensions on the other focus on the development of physical abilities of the learner. However, only the cognitive domain was fully developed as it is the major focus of academic evaluation. As a result, learning outcome is measured by knowledge, comprehension, application, analysis, synthesis and evaluation[2, 3.]

Knowledge focuses on the ability of students to recall factual information, such as facts, terms, and concepts. Students demonstrate their understanding by remembering and recognizing information. In the context of Nigerian secondary school students, the emphasis placed on the acquisition of information plays a pivotal role as a basic cornerstone in their educational trajectory[5]. This process of gathering factual knowledge, which includes things like facts, terms, and ideas, is the basis for developing critical thinking skills. In line with the NPE objective of promoting life-long learning, Nigerian

Lead City University Ibadan DO NOT COPY

secondary schools lay emphasis on getting information, which helps students to learn a lot of different subjects and overall do well in school[6].

The curriculum is structured so that students are exposed to a wide range of topics, which helps them understand the subjects. To assess student's knowledge of a particular subject, the teacher usually relies on examinations, quizzes, tests, and classroom discussions so that student can show how well they can remember facts taught in a class. When it comes to the secondary school educational system, it is very important for teachers to lay a strong foundation for learning. In this way, knowledge is the basic form of learning as it focuses mostly on the ability of students to regurgitate facts and figure that has been 'fed' to them by teachers. However, education is beyond simple knowledge acquisition. It is the basis for developing critical thinking and problem-solving skills. The main goal of teachers is to help students understand things more deeply. This is why comprehension is important[7].

Comprehension is when students are able to demonstrate their ability to understand and interpret information. Comprehension helps students to explain ideas, summarize information, and provide examples or illustrations. It plays a vital role in students' academic development and overall learning outcome. Comprehension refers to the ability of students to understand and interpret information presented to them, encompassing various skills such as understanding ideas, interpreting information, explaining concepts, summarizing content, and providing examples or illustrations. One aspect of comprehension is the ability of students to understand ideas presented in texts, lessons, or discussions[7]. This involves grasping the main concepts and key points, as well as

Lead City University Ibadan. DO NOT COPY

distinguishing between important information and supporting details. Students who excel in comprehension can analyze and interpret the meaning of the information they encounter[8]. Students are able to make connections between different pieces of information, infer implicit meanings, and draw conclusions based on evidence, thereby enhancing their critical thinking skills[4]. After students have attained comprehension, the next stage is application of knowledge.

Application refers to the ability of learners to use acquired knowledge, concepts, theories, and skills in new or unfamiliar situations. It involves applying what has been learned to solve problems, make decisions, perform tasks, or create new products. Application is a higher-order cognitive skill that builds upon lower-level cognitive processes such as remembering and understanding. At the level of application, students have developed the ability to apply their knowledge and understanding to solve problems or complete tasks. In the process of application, students use acquired knowledge in new situations or contexts. The acquisition of information in the Nigerian secondary school system is very important for preparing students for higher education and the needs of the modern job market. By helping students develop a deep understanding of facts and basic ideas, teachers can give students the tools needed to succeed in school and in their future careers[8].

In addition to application, another measure of learning outcome is the ability to analyses information received during the teaching and learning process. Analysis involves breaking down complex information into manageable parts, examining the relationships between these parts, and drawing conclusions or making inferences based on this

Lead City University Ibadan DO NOT COPY

examination. At the core of analysis is the ability to deconstruct information, identifying its constituent elements or components. Secondary school students are tasked with dissecting complex concepts, texts, or data sets to discern the fundamental building blocks that comprise them. This process of dissection enables learners to gain a clearer understanding of the underlying structure and organization of the information they are examining. Analysis requires secondary school students to engage in critical thinking processes, moving beyond simple recall and understanding towards a deeper examination and synthesis of information[8].

Synthesis of information is so important that it is regarded as a key component of learning outcome. Synthesis refers to the ability to combine or integrate different ideas, concepts, or information to create new understanding, perspectives, or solutions. It involves the higher-order cognitive process of bringing together disparate elements to form a coherent whole or to generate original insights[6]. This level involves the ability to integrate and combine information to create something new. Students at this level will be able to demonstrate their creativity by generating unique ideas or developing original solutions.

The ultimate dimension of learning outcome is evaluation. Students who have reached this level are able to critically evaluate information, arguments, or theories. They are equipped to make judgments based on criteria and evidence, and they can provide reasoned and well-supported opinions or assessments. Evaluation means that students have moved beyond rote learning into a stage where they are able to listen to their teachers, ask questions and make meaningful contributions in the classroom. It also

Lead City University Ibadan DO NOT COPY

includes having the ability for students to identify their learning gaps and ask for direction or help in becoming more proficient in their education. Scholars have observed that many secondary school students in Nigerian are far from this stage. Evidences of poor achievement, poor life and problem-solving skills and poor social skills prevalent among members of Nigerian society abound[2,3].

Indeed, experts have identified the relegation of the school library to a mere appendage as factors in the poor learning outcome in Nigeria. it is argued that poor school library services are responsible for poor quality of education in Nigerian schools[9].Consequently, researchers have examined how the school library and its operations affect academic activities, particularly learning outcome in secondary schools. Among the factors likely to affect learning outcome is the information literacy service rendered by school librarians and the use of library media resources by the students[10].

Information literacy skills refer to the educational programs, resources, and support systems designed to enhance individuals' ability to access, evaluate, and use information effectively while media resources refer to the collection of information materials in non-traditionally format, or communication tools or channels used to store information or data for users need. Information literacy skills aim to develop critical thinking, research skills, and digital literacy among students. Information literacy and media resources provides backbone to understanding media and the role of media to senior secondary students.

Information literacy skills may include library resources, librarian assistance, research guidance, and digital literacy training. In line with existing models, information literacy services involve, helping students in information task definition, information seeking

Lead City University Ibadan DO NOT COPY

strategies, information location and access, and information use. The services also include developing students' skills on how to locate and access media resources, and how to effectively use the information retrieved or obtained through media resources[4].

Information literacy skills encourage effective use of media resources. Media resources encompass a wide range of materials, both traditional and digital, that are used for educational purposes. These resources can include textbooks, newspapers, magazines, audiovisual materials, websites, online databases, and social media platforms[5].The use of library media resources refers to the frequency and purpose of using the resources made available by school to achieve educational objectives is also regarded as a common practice.

The utilization of library facilities, including resources such as books, periodicals, and research works, by students is expected to be a daily occurrence as the media resources are designed to support the school curriculum. The library facilities encompass the necessary resources within the library that serve to enhance the process of acquiring knowledge. The utilization of media resources fosters curiosity, enthusiasm, and self-assurance in individuals, enabling them to enhance their academic and social abilities and reach their full potential. The higher the level of accessibility to resources, the greater the probability of their utilization. This phenomenon can be attributed to readers' preference for utilizing library media resources that necessitate minimal effort to obtain[11].

The author provides additional clarification regarding the utilization of the media resources, emphasizing its reliance on the accessibility and provision of adequate information resources. Scholar posits that the frequent use of library media resources

Lead City University Ibadan DO NOT COPY

engenders enthusiasm and fosters self-assurance among users, hence facilitating the cultivation of their academic and social aptitudes, talents, and capacities[11]. However, the usage of media resources is contingent upon the presence and ease of access, of the information sources required by users. According to studies, frequency of use of the media resources can impede students' ability and aptitude to engage in effective research endeavors[11], [10].

Primarily, the predominant library information sources utilized by secondary school pupils used to be books and novels. Whereas, the modern era has witnessed a rise in students' preference for media resources such as atlases, maps, dictionaries, novels, and audiovisual resources[12]. However, the available information resources in school libraries often fail to adequately fulfill the information needs of the students. Furthermore, secondary school students have numerous limitations when utilizing the school library, such as inadequate access to current and updated reading materials, restricted operating hours, insufficient seating accommodations, and a dearth of experienced librarians to facilitate the processing of resources[13].

Therefore, to ensure the optimal utilization of media resources by secondary school students, several factors must be taken into consideration[12]. These factors include the availability of up-to-date and comprehensive information resources within the school library, the provision of suitable physical spaces to accommodate these resources, the employment of professional school librarians to effectively manage the library and create a conducive reading environment, as well as the allocation of sufficient funds to ensure

Lead City University Ibadan DO NOT COPY

the provision of current and relevant information resources and the employment of qualified and trained teacher librarians.

The use of media resources in education aims to engage students, provide visual and interactive learning experiences, and enhance information retention. In the case of secondary school students, media resources may be utilized by teachers to supplement classroom instruction and facilitate independent learning. This means that availability and use of media resources is essential for the learning outcome of secondary school students in Nigeria in general and Ogun state in particular.

The facts on ground however indicate that only a few school libraries in Nigeria provide media resources for their students. In majority of secondary school, there is no school libraries, so students are left to manage with a few textbooks and the lesson notes provided by their teachers. An appraisal of provision of library media resources by school libraries to support teaching and learning in Nigerian secondary schools showed that a significant number of the necessary materials were either unavailable or in accessible to the students[13].

Despite the various advantages that have been identified in the use of media resources by scholars around the world, the availability of media resources in Nigerian school libraries still fall below the level expected[12, 13, 14]. Many secondary schools in Nigeria lack school libraries or media resource center to support the curriculum thereby denying students access to valuable learning resources. In addition, many secondary school student lack information literacy skills mainly due to lack of exposure from teacher-librarians trained to equip them with these skills. This has raised the need to examine the influence of

Lead City University Ibadan DO NOT COPY

information literacy services and the use of school library media resources on the learning outcome of students in Nigeria with particular focus on senior secondary school students in Ogun state.

1.2 Statement of the Problem

Quality education is one of the tools for developing countries such as Nigeria to attain the Sustainable development goals. In line with this, education stakeholders usually demand that schools focus on learning outcome among the students. Students with positive learning outcome are more likely to become useful to societal and national development. It is not out of place to say that education in Nigeria is not meeting up to the expectation in achieving these goals. Evidence of poor academic achievement, poor life and problem-solving skills and poor social skills are prevalent. Various reports and empirical studies have referenced the poor learning outcome among school children in Nigeria. The education sector may not be able to progress from cognitive to other level of academic attainment such as comprehension, analysis, and evaluation unless students are provided with the kind of library service that support self-directed study.

Several studies have been conducted to examine factors affecting learning outcome among secondary school students in Nigeria, However, few studies have focused on the role of information literacy services and media resource use on the learning outcome of secondary school students, particularly with reference to Ogun state, Nigeria. In line with this perceived gap in literature, this study seeks to investigate the influence of information literacy and use of media library resources on the learning outcome of senior secondary school students in Ogun state.

Lead City University Ibadan DO NOT COPY

1.3 Aim and Objectives of the Study

The aim of this study was to determine the influence of information literacy skills and use of media library resources on the learning outcome of secondary school students in Ogun state. The objectives were to;

i. identify the level of learning outcome among senior secondary school students in Ogun state
ii. identify the level of information literacy skills available to senior secondary school students in Ogun state
iii. identify the level of media resources use among Senior secondary school students in Ogun state
iv. determine the influence of information literacy skills on the learning outcome of senior secondary school students in Ogun state
v. determine the influence of media resources use on the learning outcome of senior secondary school students in Ogun state
vi. ascertain the combined influence of information literacy skills and media resources use on the learning outcome of senior secondary school students in Ogun state

1.4 Research Questions

1. What is the level of learning outcomes among secondary school students in Ogun state
2. What are the types of information literacy skills possessed by secondary school students in Ogun state?

Lead City University Ibadan DO NOT COPY

3. What is the level of use of media resources used among secondary school students in Ogun state?

1.5 Hypotheses

$H_0$1 There is no significant influence of information literacy skills on the learning outcome of secondary school students in Ogun state

$H_0$2 There will be no significant influence of media resources use on the learning outcome of secondary school students in Ogun state

$H_0$3 There will be no significant combined influence of information literacy skills and media resources use on the learning outcome of secondary school students in Ogun state

1.6 Scope of the Study

The content scope of this study is to investigate the influence of information literacy skills and use of library media resources on the learning outcome of secondary school students in Ogun State. The dependent variable is learning outcome which is measured by metrics such as knowledge, comprehension, application, analysis, synthesis, and evaluation. There are two independent variables. The first is information literacy skills which focuses on training students on dimensions of information literacy such as task definition, information retrieval strategies, information location and access, and information use. The second independent variable is use of media resources measured by perceived ease of use and perceived usefulness. The population of the study are secondary school students in private schools and the geographical scope of the study

Lead City University Ibadan DO NOT COPY

focus on the 3 senatorial districts (Ogun Central, Ogun East and Ogun West) in Ogun State, Nigeria.

1.7 Significance of the Study

The study is significant as its finding could potentially benefit several stakeholders such as school administrators, school librarians, students, parents, educational policy makers, researchers and society at large.

Insights from the study can help school administrators in secondary schools, particularly, private secondary schools to understand the impact of information literacy skills and media resources on the academic performance of students. This knowledge can inform decisions related to curriculum development, resource allocation, and the implementation of effective learning strategies.

The study findings can provide valuable information for school librarians, enabling them to enhance library services which incorporate more effective media resources and information literacy skills into library programmes. Understanding the impact of these resources on student learning outcome can help school librarians improve their instructional practices and support student success.

Students in private secondary schools would benefit directly from the study by gaining access to improved information literacy skills and media resources. These resources can enhance their learning experiences, broaden their understanding of various subjects, and potentially improve their academic performance and critical thinking skills.

Lead City University Ibadan DO NOT COPY

Furthermore, policymakers at the state and national levels can use the study's findings to develop and implement policies that promote the integration of information literacy skills and media resources in the educational system. This can lead to the improvement of educational standards and the overall quality of education in private secondary schools in Ogun State and potentially serve as a model for educational reforms in other regions.

Most importantly, researchers and scholars in the field of education can use the study as a foundation for further research and analysis in the areas of information literacy, media resources, and learning outcome. The study's findings can contribute to the existing body of knowledge and stimulate further exploration of effective educational practices in Nigeria and beyond.

The study will also be of benefit to the society at large. This is because the end result of the research is to discover strategies that ensure students achieve improved academic performance. Students who excel in their studies are positive to the society in which they live as they are more likely to be assets instead of liability to the society.

1.8 Limitation to the Study

The study faced significant limitations as the researcher had to limit the respondents to three secondary schools in order to ensure timely data collection. In addition, majority of the respondents were reluctant to complete the study questionnaire. However, with proper explanation of the importance of the study and the help of the teachers and school authorities, the barrier was overcome.

1.9 Operational Definition of Terms

Lead City University Ibadan DO NOT COPY

Learning Outcome*:* learning outcome refers to a specific, observable, and measurable statement that describes what secondary school students in Ogun state are expected to know, understand, or be able to do as a result of a learning experience or educational program.

Knowledge: Knowledge represents the foundational level of learning. It involves ability of secondary school students in Ogun state to recall and remember information, facts, and concepts. In terms of learning outcome, this level is often assessed by quizzes or tests that evaluate a student's ability to memorize and understand basic information.

Comprehension: Comprehension goes beyond memorization, it covers the ability of secondary school students in Ogun state demonstration of their understanding of the information material such that they can interprete, explain, and summarize it in their own words.

Application: Application involves how secondary school students in Ogun state are taking advantage of the knowledge and comprehension gained and using it in practical contexts.

Analysis: It is the ability of secondary school students in Ogun state to break down information into its components and examine the relationships among these parts. It describes how the students identify patterns, distinctions, and connections within the subject matter.

Lead City University Ibadan DO NOT COPY

Synthesis: Synthesis involves the ability of secondary school students in Ogun state to create something new by combining elements in novel ways. Students at this level generate ideas, design solutions, and create original works or concepts.

Evaluation: It refers to how secondary school students in Ogun state make judgments about the quality, validity, or effectiveness of ideas, solutions, or materials.

Information Literacy Skills; This refers to a set of resources, programs, and support systems provided by secondary schools and school librarians in Ogun state private school to help students develop the skills and competencies needed to effectively locate, evaluate, manage, and use information.

Task Definition: Refers to the ability of secondary school students in Ogun state to clearly define the information problem, understanding the information needs, and setting goals for the research or information-seeking process.

Information Seeking Strategies: Refers to the proficiency of secondary school students in Ogun state in determining and implementing effective search strategies to locate and access information from a variety of sources, such as books, databases, websites, or experts.

Location and Access: Refers to the ability of secondary school students in Ogun state to find and retrieve relevant information resources efficiently and effectively, whether in print or digital formats.

Use of Media Resources: This refers to the consultation of various learning resources in the library such as audio-visual materials, charts, and web contents by secondary school

Lead City University Ibadan DO NOT COPY

students in Ogun state. The use of media resources encompasses the perceived ease of use and perceived ease of use and perceived usefulness.

Perceived Ease of Use: Refers to the extent that secondary school students in Ogun state consider library media resources to be easy to use compared to print resources.

Perceived Usefulness: Refers to the extent that secondary school students in Ogun state believe that the use of media resources can help them attain better learning outcomes.

Lead City University Ibadan DO NOT COPY

Endnotes

[1] L. C., Engel, & D. Rutkowski, *Global Influences on National Definitions of Quality Education: Examples from Spain and Italy*. **Policy Futures in Education**, 12(6), 2014, pp.769-783.

[2] R., Al-Zou'bi, *The Impact of Media and Information Literacy on Acquiring the Critical Thinking Skill by the Educational Faculty's Students*. **Thinking Skills and Creativity**, 39, pp.1007822021

[3], I. B Oluwatayo., A. O Ojo, S. I Isah., &Ojeleye, A. T. *Determinants of Learning Outcome in the Nigerian Primary School*s. **Journal Of Education**, 00220574221130954. 2023

[4] N.E. Adams, *Bloom's Taxonomy of Cognitive Learning Objectives*. **Journal of the Medical Library Association: JMLA**, 103(3), pp.152.2015

[5] J. T Akinboboye, & M. A Ayanwale, *Bloom Taxonomy Usage and Psychometric Analysis of Classroom Teacher Made Test*. **African Multidisciplinary Journal of Development,** 10(1), 2021. pp.10-21.

[6] E.M. Onyema, *Integration of Emerging Technologies in Teaching and Learning Process in Nigeria: the Challenges*. **Central Asian Journal of Mathematical Theory and Computer Sciences,** 1(1), 2020, Pp.35-39.

[7] S. G Isa, M. A Mammam, Y. Badar, &T. Bala. *The Impact of Teaching Methods on Academic Performance of Secondary School Students in Nigeria***. International Journal of Development Research,** 10(6), 2020. pp.37382-37385.

[8] E. E Achor, V. O Ajayi, A. G Ikwu, & E. I Onyeche. *A Survey of Teachers' Challenges of Assessing Domains of Educational Objectives and Bloom's Taxonomy Levels in Social Studies in Benue State, Nigeria*. **International Centre for Science, Humanities and Education Research Journal,** 4(3), 2020. pp.77-89.

[9] A.L. Agboke. *The Roles Quality Library Information Plays in Education, Technology and Economic Development in Nigeria.* **International Journal of Educational Policy Research and Review,** 6(3), 2019, Pp.1-6.

[10] V. W. Dike,& O. N. Amucheazi. *Information Literacy Education in Nigeria: Breaking Down Barriers through Local Resources*. In IASL Annual Conference Proceedings .2021

Lead City University, Ibadan DO NOT COPY

[11] A. E. Olanusi, & A. O Falade. *Availability and Utilisation of School Library Media Centre sand Information Resources in Selected Public Secondary Schools in Ondo and Ekiti States, Nigeria*. **Tin-City Journal of Library, Archival and Information Science,** 12(1), 2023, pp.14-25.

[12] S. KIbenne, & O. O. Durodolu. *Information Needs Versus Information Services: Assessing Predictors of Secondary Schools Students with Visual Impairment Satisfaction at School Library Media Centres in South-Eastern Nigeria*. **Library Philosophy and Practice,** 2021 pp.0_1-27.

[13] C.N. Onwuekwe. *Availability of Information Resources and Students Satisfaction with The Use of School Library in Ahoada East Local Government Area of Rivers State*. **Library Philosophy &Practice.** 2022

[14] E. C., Umeano, C. N Onyishi,. D. E Adimora,., & U. H. Onah, *Teachers' Expertise and Students' Learning Outcome in Secondary Schools in Enugu State, Nigeria*. **Journal of the Nigerian Academy of Education***,* 15(1). 2020

Lead City University Ibadan DO NOT COPY

Chapter two

Literature Review

2.1 Conceptual Review

2.1.1 Concept of learning outcome

2.1.2 Overview of information literacy skills

2.1.3 Media Resources Use

2.2 Theoretical Framework

2.2.1 Bloom's Taxonomy

2.2.2 The Big Six Information Literacy Skills Framework

2.2.3 Technology Acceptance Model

2.3 Review of Empirical Studies

2.3.1 Information Literacy Skills and Learning Outcome

2.3.2 Media Resources Use and Learning Outcome

2.3.3 Information Literacy Skills, Media Resources Use and the Learning Outcome

2.5 Conceptual Model

2.6 Summary of Gap in Literature Reviewed

Endnotes

Lead City University Ibadan DO NOT COPY

2.1 Conceptual Review

2.1.1 The Concept of Learning Outcome

Learning is a fundamental aspect of human development, encompassing the acquisition of knowledge, skills, behaviours, and attitudes. It is a dynamic process through which individuals engage with their environment, experiences, and information to make sense of the world around them[1]. Whether through direct observation, formal instruction, personal exploration, or trial and error, learning enables individuals to expand their understanding, refine their abilities, and adapt to new challenges[2].

At its core, learning involves the acquisition and assimilation of new information and knowledge. This can occur through various channels, including first hand experiences, interactions with others, or exposure to educational materials. When individuals encounter new information, they must process and understand it, often by integrating it with existing knowledge or frameworks. This process of comprehension is essential for building a solid foundation upon which further learning can occur[3].

For further learning to occur, or for knowledge to accumulate, retention plays a crucial role in effective learning. It involves encoding newly acquired information into memory and being able to recall it when needed. Strategies such as repetition, practice, and elaboration can enhance retention, ensuring that knowledge is retained over time and can be readily accessed for future use. However, retention alone is not sufficient; true learning is demonstrated through the application of knowledge in real-world contexts[3].

Lead City University Ibadan DO NOT COPY

The application of learning is where its true value is realized. Whether it is applying mathematical principles to solve a problem, utilizing language skills to communicate effectively, or employing critical thinking to make informed decisions, the ability to apply knowledge and skills in practical situations is a hallmark of meaningful learning. Application not only reinforces understanding but also fosters creativity, innovation, and problem-solving abilities[4].

Learning is not a static process; it requires adaptation and flexibility. As individuals encounter new information, experiences, or challenges, they may need to revise their beliefs, adjust their strategies, or refine their skills to accommodate new insights or perspectives. This process of adaptation is essential for personal growth and development, enabling individuals to navigate the complexities of an ever-changing world. Learning is thus a multifaceted and dynamic process that underpins human development and progress. Whether through acquiring new knowledge, honing skills, or refining attitudes, learning empowers individuals to thrive in their personal and professional lives[5].

In the context of secondary education, learning takes on a critical role in preparing students for academic success, personal development, and future endeavors. Secondary education, is a crucial period where students delve deeper into various subjects, develop essential skills, and explore potential career pathways. Learning in secondary education involves not only acquiring subject-specific knowledge but also honing critical thinking skills, fostering creativity, and nurturing social and emotional growth[5].

During secondary education, students encounter a diverse range of subjects, including mathematics, science, language arts, social studies, and electives. Through classroom

Lead City University Ibadan DO NOT COPY

instruction, interactive activities, and independent study, students engage with these subjects to deepen their understanding, develop proficiency, and prepare for higher education or the workforce. Beyond academic content, secondary education emphasizes the development of essential skills such as communication, problem-solving, collaboration, and digital literacy, which are vital for success in the modern world.

Effective learning in secondary education requires engaging and relevant instructional practices that cater to diverse learning styles and abilities. Teachers play a crucial role in facilitating learning by creating a supportive and stimulating learning environment, delivering engaging lessons, providing constructive feedback, and offering individualized support when needed. Additionally, the integration of technology and experiential learning opportunities can enhance student engagement and promote deeper learning experiences[6].

In the context of secondary education, learning extends beyond the classroom walls. Co-curricular activities, such as sports, clubs, community service, and extracurricular programs, provide students with opportunities to apply their knowledge and skills in real-world contexts, develop leadership abilities, and explore their interests outside of academics. These experiences contribute to the holistic development of students and foster a sense of belonging and social responsibility Learning is demonstrated by changes in the learners' behavior, attitude, knowledge and abilities. Put simply, learning has the power to bring about lasting transformations inside the learner[7].

Learning encompasses a diverse range of change in conduct. The changes can be easily observed in the explicit actions of the learner or they can be changes in his reservoir of

Lead City University Ibadan DO NOT COPY

ideas. Learning is sometimes characterized as a modification in conduct that becomes evident when individuals use knowledge, skills, or practices acquired via education. Learning is linked to behavioural changes in the cognitive, emotional, and psychomotor domains. Cognitive domain deals with how a student obtains processes and utilizes the knowledge. It is the "thinking" realm. This domain focuses on intellectual skills and is familiar to educators[5].

For educators and other stakeholders in the educational system, the outcome of all activities in the school should be geared towards learning. In line with this, the first task of a teacher preparing for a class is to write out the expected learning outcome for the class he/she is about to take. The term "learning outcome" refers to the knowledge, skills, and abilities that learners are expected to acquire or demonstrate as a result of their participation in a learning experience or educational program. It is a statement that describes the specific, measurable, and observable results that learners should achieve upon completion of a learning activity or course[6]. Measuring learning outcome are crucial in education as they provide a clear and focused direction for teaching and learning. They help educators design effective learning experiences, assess student progress, and evaluate the overall effectiveness of educational programs[8].

By defining learning outcome, educators can ensure that learners are actively engaged in meaningful learning activities and that their efforts are aligned with the intended educational goals .Learning outcome are often expressed in terms of observable behaviors or competencies that learners should be able to demonstrate. For example, a learning outcome might state that "students will be able to write a well-structured essay

Lead City University Ibadan DO NOT COPY

that effectively analyzes a given text." This outcome clearly specifies what learners are expected to achieve and provides a basis for assessment[9].

Other approach to evaluate learning outcomes include class attendance, formative assessments and general engagement and exchanges in class and learning activities. These outcomes can be further classified into affective, behavioural and cognitive indicators[10]. Affective can be regarded as learners' participation in class. This relates with the way a student expresses feelings and emotions and how he/she participates in class discussions and conversation. It also incorporates team/group work, cooperation and general class engagement. The behavioural (i.e. learners' behaviour in class) is concerned with the way a learner shows instinctive behaviours, physical/ psychomotive functions and motions in class[11].

This could be positive or bad, and when positive, kids are well comported, and when negative, they are given disciplinary rulings as a result of negative activities such as an act of vandalism or lateness to school or overall class disturbance. The cognitive aspect, which is students' academic achievement in class, is a demonstration of knowledge, comprehension, application, analysis, and synthesis. According to this argument, the primary consequences in education encompass change in the knowledge, abilities, and attitudes of individuals arising from their experiences. Examinations play a crucial role in assessing students' learning results and are considered the primary indicator of educational quality in the Nigerian system[12].

Several research have examined the learning results of pupils in different contexts and from various dimensions. Students' learning outcome were defined as a comprehensive

Lead City University Ibadan. DO NOT COPY

assessment of many qualities and talents, comprising both cognitive and affective aspects. These outcomes serve as an indicator of how their learning experiences have contributed to their personal growth and development. Cognitive outcome encompass the attainment of explicit information and competencies, such as those obtained through a major. It pertains to the new knowledge and understanding that students gain compared to their previous state of knowing.

A scholar categorized learning outcome into two distinct categories: consumption and investment. The consumption side is described as the rewards that students receive from engaging in the learning activity. The investment aspect on the other handen compasses a range of outcome associated with improving an individual's productive abilities and future welfare[13]. From the examination of literature, a total of 37 variables representing various components of the classroom physical learning environment that affects learning outcome were discovered and mapped with the specific domains of learning outcome they usually affect[14].

The effectiveness of the educational system is often judged by learning outcome

of students[15]. In line with this, teachers usually outline the expected learning outcome in their learning plans and base their evaluation and assessment on whether the learning outcome have been achieved. This evaluation of whether learning outcome have been achieved is often determined through various means such as standardised test scores and exams coupled with teacher observation.

This assertion was supported by another study which revealed that examination results in the UK have been generated from the annual survey of school leavers[16]. In Nigeria, the

Lead City University Ibadan DO NOT COPY

significance of examinations, as stated in the Federal Republic of Nigeria National Policy on Education, lies in the fact that all secondary schools must align their curricula to fulfil the criteria set by the senior school certificate exams. The structure of grading candidates' results in the examinations was such that the distinction grade is represented by A1 to B3. The credit grade is represented by C4 to C6. The standard pass grade is represented by D7 and E8 whereas the failure grade is represented by F9[17]. This assessment often focus on testing how well students can remember what has been taught, how they can apply learnt knowledge and how they can synthesise the information provided in order to come up with new information.

In essence, students are often assessed based on cognitive, affective, and psychomotor domains of learning. The domains of learning encompass cognitive, affective, and psychomotor aspects, each vital for comprehensive development. In the cognitive domain, individuals acquire intellectual skills such as comprehension, analysis, and synthesis, enabling them to understand, evaluate, and apply information effectively. The cognitive domain pertains to intellectual skills and knowledge acquisition, involving processes like comprehension, analysis, and critical thinking. Individuals in this domain recall facts, understand concepts, apply learned information, analyze complex data, evaluate ideas, and create innovative solutions. For instance, students may memorize historical dates, explain scientific concepts, solve mathematical problems, analyze literature, evaluate artwork, or develop hypotheses based on existing knowledge[18].

In contrast, the affective domain revolves around emotions, attitudes, values, and beliefs, fostering interpersonal skills, empathy, ethical behavior, and self-awareness. In this

Lead City University Ibadan DO NOT COPY

domain, learners demonstrate openness to new ideas, engage actively in learning activities, internalize values like respect and empathy, prioritize principles such as integrity and honesty, and exhibit consistent behavior aligned with their deeply held beliefs. For example, students may engage in classroom discussions, volunteer for community projects, advocate for social justice causes, or demonstrate leadership qualities. The affective domain focuses on emotions, attitudes, and values, nurturing qualities like empathy, ethical behavior, and self-awareness. Through fostering positive attitudes and values, learners develop interpersonal skills and deepen their emotional intelligence[19].

Meanwhile, the psychomotor domain focuses on physical skills, coordination, and motor abilities, emphasizing tasks like perception, preparation, imitation, precision, coordination, and adaptation. Learners develop manual dexterity, hand-eye coordination, muscle strength, and motor control through activities such as identifying shapes by touch, positioning hands correctly before typing, learning to ride a bicycle, playing a musical instrument, driving a car, or adapting swimming strokes to navigate rough waters[18]. Modern theorists have made attempt to identify specific metrics that represent learning.

The metrics for measuring learning outcome has been influenced by the perception of the main goal of learning as a process that alter knowledge, skills, behaviours, feelings and emotions, ideas, attachment to learning, a sense of oneself, a sense of others, and a sense of membership. Therefore, learning outcome is mostly focused on the cognitive aspect laying emphasis on the ability of learners to understand and apply what they have learnt.

Lead City University Ibadan. DO NOT COPY

Therefore learning outcome is based on different levels of cognitive achievement such as knowledge, comprehension, application, analysis, and evaluation.

However, as revealed by a Nigerian scholar, a significant proportion of the teachers' assessment focused primarily basic cognitive achievements such as knowledge and comprehension, whereas application, analysis, synthesis, and evaluation were often overlooked. This suggests that teachers in Nigeria only focus on posing problems that prioritise the application of lower levels of cognitive demand in class, while completely disregarding the use of higher levels of cognitive demand[6]. This is consistent with the results reported by other Nigerian scholars who have reported lack of deep learning among Nigeria students[8, 20, 21]. Therefore, scholars have emphasized that assessment should demand a higher level of proficiency from pupils rather than mere rote memory of concepts and procedures. Test items should be created to provoke intricate cognitive processes, such as application, analysis, synthesis, and evaluation[6]. Studies have also suggested that, even at the basic cognitive level, Nigerian students are not doing so well.

Moreso, some reasons have been attributed to be responsible for students under achievement in schools, these includes methods of studying, intelligence, gender, motivation, attitudes, science teachers and their attitudes, and self-adequacy[8]. In the same vein, another study conducted on the academic outcome among Library and Information Science students in Nigeria revealed that the level of students' learning outcome in the schools were low[22]. The study further revealed that, in term of knowledge acquired by students (measured by tests or performance, skills, behaviour and attitudes); consumption in terms of benefits derived by students and investment in terms of outputs related to the

Lead City University Ibadan. DO NOT COPY

enhancement of an individual's productive activities, all of the students performed below expectation. Another study also reported that students' outcome in English language as a subject is very low among Nigerian secondary school students as evidenced by poor performance in external examinations[14]. Furthermore, scholars also noticed that students often display disruptive tendencies indicating that their learning have not brought out the desired behavioural changes befitting of educated students. Students were reported to be lacking in the qualities that determine academic excellence and knowledge. Many students participate in examination misconduct and wantonly engaged in acts of corruption, prostitution, cultism, and various antisocial behaviours[23]. In addition, despite graduating with flying colours, many graduate remain unemployable due to poor grasp of what they have been taught in school. In view of a soaring enrolment rate in Nigerian colleges and the number of graduates churned out annually, moral and ethical standards, social values, financial skills and human empathy are blatantly, horribly lacking in the thoughts, statements and acts of Nigerian youths[24]. In view of this, questions have been raised on factors that could helped improve learning outcomes among students. These factors can include information literacy skills and library media resources use by students.

2.1.2 Overview of Information Literacy Skills

Information literacy skills is a concept that has been around for a significant period of time. However, its emergence as focal point for information professionals coincided with the emergence of information technology and the attendant information explosion[25]. It is therefore logical to say that the need for information literacy skills is woven around the navigating the uncertain quality and rising quantity of information resources which

Lead City University Ibadan DO NOT COPY

necessitate information users, including school pupils, must have the capacity to discern credible information and the understanding of how to use information efficiently[26].

The Association of College and Research Libraries (ACRL) defines information literacy as a combination of abilities that enables an individual to "recognize when information is needed and have the ability to access, analyse, and use effectively the desired information." The relevance of information literacy as an educational concept has grown even more vital due to rapid technological progress and proliferating information resources[27]. A similar organisations, the Society of College, National, and University Libraries (SCONUL), an association in the United Kingdom and Ireland conceptualise information literate individuals as those with the ability to "demonstrate an awareness of how they gather, use, manage, synthesise and create information and data in an ethical manner and the skills to do so effectively"[28].

These two definitions have formed the basis for the evaluation of information literacy skills among various categories of people and inspire various frameworks for measuring and evaluating information literacy skills. However, a scholar pointed out that information literacy is a fluid term, moulded by our experiences, and developments in our information rich culture. The idea of 'information literacy' cannot be connected to the work of a single author, a single study, a single stream of research, nor a single driving force or reason, such as poverty, disease, illiteracy, or unemployment. Rather, the idea indicates a convergence of thinking from numerous advancements, disciplines, sectors and areas of research[29].

Lead City University Ibadan DO NOT COPY

Information literacy abilities are crucial to success in an individual's personal, professional, and academic life. In fact, the use of information literacy abilities extends beyond the academic world and reaches right into social and economic domains. People confront an increasingly huge and diverse sea of knowledge and information through various sources such as the internet, mass media, and libraries. These pieces of information arrive in many various formats and from a limitless number of sources. However, just because so much information is so easily and quickly available does not indicate that all of it is good or even genuine. Information literacy helps us with the abilities to be able to differentiate factual information from obsolete, misleading, or fraudulent information[30], [31].

The value of Information literacy develops as people gain the ability to verify or dispute expert ideas and become independent seekers of truth, giving them the ability to create their arguments in the process of improving their knowledge[32]. In a world where people are inundated with information from multiple sources, being able to read is no longer enough. According to former President of the United States, Barack Obama, people should acquire the skill to compare and interpret information they receive from various sources. What this portends for students is that they should be able to make sense of information they obtain from various sources such as textbooks, classroom and even the media[33].

Similarly, another scholar submitted that information literacy is so crucial in our evolving information culture because, without it, information society will never reach its maximum capacity and instead will remain an unrealized dream"[34]. The Society of

Lead City University Ibadan DO NOT COPY

College, National, and University Libraries (SCONUL) endorsed the Seven Pillars of Information Skills concept in 1999. Since then, the methodology has been accepted by librarians and educators worldwide to assist them in imparting information literacy skills to their students. It is considered as a broad "core" paradigm for higher education to which a series of "lenses" reflecting the various types of learners may be added. This model's seven pillars are expressed as Identity, Scope, Plan, Gather, Evaluate, and Present[35]. However, this is not the only mean of evaluating information literacy skills.

In the context of secondary schools, information literacy prepares students with the abilities needed to execute effective literature searches, and assess sources critically and consequently, equipping students with the skills needed for them to perform well in their research papers, projects, and presentations. At work, people may certainly meet scenarios that will force them to hunt for new facts to make some rational conclusions. In today's, information economy, employers are increasingly searching out people who understand and can adapt to the features of the Information Age. Therefore, an information literate person who has "learned how to learn," becomes a far more attractive job candidate[36]. This is because, with their strong analytical, critical thinking, and problem-solving skills, the information literate individual is anticipated to be able to adapt to work settings and so become a valuable employee. Other traits of an information-literate individual include the spirit of inquiry and tenacity which can be a critical skill set needed to get the work done.

A scholar observed that existing school system does not effectively prepare students to handle the demands of an increasingly complicated information and knowledge-driven

Lead City University Ibadan DO NOT COPY

world. It also fails to appropriately cultivate the abilities required for lifetime learning or development in learners, the ability to critically examine practice performance and make the necessary modifications to enhance learning outcomes[37].

In modern education, information is continually developing and where up-to-date information is vital. In modern education, information literacy is seen as a key ability. According to the Report on Medical Education Learning Objectives published by the Association of American Medical Colleges: Physicians must be able to retrieve (from digital databases and other resources), maintain, and use biomedical information to solve problems and make appropriate decisions about the treatment of patients and populations. Similarly, the CanMEDS competency framework of the Royal College of Physicians and Surgeons of Canada said that Physicians need to "critically assess information and its provenance and contribute this information effectively to clinical decision-making."[38].

Information literacy skills are demonstrated by ideas such as the ability to seek, retrieve, and use information, the ability to manage information, and the ability to make key choices concerning information resources. Information literacy skills is a significantly more extensive term comprising qualities such as critical thinking, synthesis, communication, and research methodologies. Therefore, the definition and comprehension of the notion seems to be tied to the way in which the concepts of competence and abilities are defined and understood. Without being primed, undergraduate students demonstrate a poor level of ability in identifying the source of information and considering source credibility[39]. Identifying reliable material is problematic for young web users because they are less cognitively developed than adults

Lead City University Ibadan DO NOT COPY

and are at more risk for incorrectly trusting a source's self-asserted authenticity. This can be seen in the study of scholars who investigated the information literacy skills of extension workers, the findings of the study shows that majority of the respondents possess information literacy skills to utilise e-resources, this is as a result of their maturity and ability to distinguish sources[40].

A scholar researched Information Literacy Skills in using e-resources and found out that students' use of e-resources is determined by their capacity to analyse information critically. Majority of the respondents agreed that their use of e-resources is determined by their ability to decide to adopt continually developing advancements in information technology. The findings also show that majority of the respondents agreed that they use e-resources because they can compare and critically evaluate if the information collected is credible and relevant. This is a signal that critical literacy that enables pupils to evaluate information sources and resources is crucial, especially in this era of ICT[41].

However, while digital technology use among the youths may be on the rise, their level of information literacy is not witnessing the same level of increase or improvement. This has been demonstrated in a host of studies. In one of those studies conducted in China, scholars examined the information literacy level of college students in Guangzhou area of Guangdong Province, China, and give a basis for advising students to develop information literacy. The study reported that the number of pupils utilising computers and mobile phones is on the rise with nearly half of the students having their first interaction with mobile phones in junior high school. However, their information literacy skill level is below the expected level.

Lead City University Ibadan DO NOT COPY

The students scored on various measures such as information management, communication, information retrieval and acquisition. The study therefore concluded that information literacy of the students can be categorized as moderate level. It was observed that, while the use of digital gadgets is high, the general level of information literacy still needs to be enhanced, especially for attach importance to information retrieval and acquisition, management and communication literacy[42].

In Nigeria, a study on information literacy skills among secondary school students in Lagos State, Nigeria found that the respondents possessed moderate level of information literacy skills across various domains such as identification of information needs and information retrieval. The findings also showed that information literacy abilities contributed tremendously to media resource use among the respondents and there was a significant association between information literacy skills and media resource use of the students. The study recommended that there is need for students to acquire in-depth information literacy skills to be able to analyze and evaluate information gathered from the media resources; school authorities and other concerned stakeholders in Nigeria should incorporate subjects on information skills development into the schools' time table; and there is also the need for training and re-skilling of Teacher-librarians across the secondary schools[43].

Similarly, a study on assessing the level of information literacy skills among secondary school students in Ogun State revealed that the students possessed moderate degree of information literacy abilities. In addition, information literacy skills were found to be the major contributor to media resources utilisation among secondary school students in

Lead City University Ibadan DO NOT COPY

Ogun State, Nigeria[44]. This finding is supported by a similar study which assessed the information literacy level among secondary school students in Ilorin. The findings of the survey revealed that more than half of the respondents can detect lack of expertise in a given area. The study also found that majority of the respondents can explain current knowledge on a topic.

However, it was found that a large proportion of the respondents cannot recognise expert search tools. Also, from the study, it was found that majority of the respondents do not use Boolean operators in their search for information. Conclusively, the study reveals that information literacy abilities are crucial for every human being because information is vital to everyone and every line of life. It was advised that policy makers in education sector should try and integrate information literacy skills as a subject in the secondary school curriculum so as to ensure that the students have the requisite information literacy abilities rather than obtaining these skills through self-education. It was also proposed that teachers that have skills in information literacy skills should be employed as the facilitators in this topic[45].

Another study conducted among students from Owerri, Imo State also investigated information literacy competency of secondary school students in Owerri West, South East of Nigeria. The crux of the paper is to ascertain the level of information literacy knowledge and skills of the students, and their practical ability to effectively utilize information knowledge and skills. The findings revealed that the respondents possess low level of information literacy skills. Their practical ability to effectively utilize information literacy skills was found to be on the average. This was revealed through the

Lead City University Ibadan DO NOT COPY

responses on information literacy skills. The responses were significantly low in the areas of evaluating information, distinguishing sources of information and formulating search strategies[46].

For secondary schools in Nigeria, being information literate is highly crucial so that the students would be able to sieve through and select relevant and credible information they get from the internet, newspapers, television and even friends for their school work. With the increasing trend of information digitization and the manner information and communication technologies (ICTs) are being used in our daily lives, information literacy becomes increasingly necessary competency to equip the students with the required skills to navigate in the endless offer of information to meet their information needs in school.

Scholars suggest that a good means of measuring and assessing information literacy, as well as investigating pedagogies to increase it, are vital in understanding its educational impact and employing it to prepare our young ones for their future tasks. However, the report of average or poor information literacy skills among secondary school researchers from Ghana explored the level of information literacy among school pulpils focusing how students recognize their information needs, the strategies they employ to locate and access necessary information, how they evaluate search results, and the challenges they face in effectively using information.

The findings indicate that students seek information for various purposes including academic tasks, problem-solving, personal and career development, staying updated on current issues, decision-making, entertainment, employment, and leisure. They predominantly seek guidance from knowledgeable individuals and teachers to fulfill their

Lead City University Ibadan DO NOT COPY

information needs. Students demonstrate adeptness in selecting appropriate search tools, employing relevant keywords, identifying suitable search techniques, and devising effective search strategies utilizing both internet resources and the library. Additionally, they engage in critical reading to discern key points and evaluate the credibility of search results[47].

In Kenya, researchers examined information literacy practices as a tool for accessing and utilizing information among Kenyan secondary school students. Findings show that some information literacy practices were available in secondary schools but not effectively practiced resulting to students proceeding to institutions of higher learning without adequate information literacy skills. The study concludes that information literacy is a prerequisite tool for accessing and using information in secondary schools. Information literacy skills enables students to conduct independent information search, efficiently retrieve information using modern technologies, critically evaluate their findings and effectively apply relevant information into their day-to-day situations. Therefore, the incorporation of information literacy practices into secondary schools' curriculum would institutionalize information literacy in secondary schools[48].

Students would be able to sieve through and select relevant and credible information they get from the internet, newspapers, television and even friends for their school work. With the increasing trend of information digitization and the manner information and communication technologies (ICTs) are being used in our daily lives, information literacy becomes increasingly necessary competency to equip the students with the required skills to navigate in the endless offer of information to meet their information needs in school.

Lead City University Ibadan DO NOT COPY

An experts suggest that a good means of measuring and assessing information literacy, as well as investigating pedagogies to increase it, are vital in understanding its educational impact and employing it to prepare our young ones for their future tasks. No large-scale examination or study has been undertaken so far in Nigeria to find out students' level of information literacy skills, as well as specific information literacy skills they are good at or deficient in.

2.1.3 Media Resources Use

The teaching and learning going on at the secondary school level require diverse human and material resources. One of these resources is the library. The modern school library holds a central position in the school's educational program and is often referred to as the heart of the school or the laboratory of laboratories. This is because modern education relies heavily on resources, and the school resource center, also known as the school library, plays a crucial role in supporting the curriculum and advancing the teaching and learning program. The demand for resource-driven knowledge is increasing rapidly due to global challenges in educational development, which has led to a push for the provision of modern information communication technological devices to acquire higher levels of skills and qualifications. Developed countries have adopted electronic learning to meet the growing demand for education worldwide[49,50].

The establishment of well-equipped school libraries that contain suitable media resources is considered highly essential for effective teaching and learning. Library resources are vital tools in education. Library resources in the modern sense encompass all items that are capable, in one way or the other, of conveying information, values, processes,

Lead City University Ibadan DO NOT COPY

experiences and techniques that can be used to actively engage 'learners' in the learning process[51]. School libraries aim to enhance teaching and learning activities, encourage students to develop reading habits, and inspire them to achieve academic success. As a results, experts have suggested that the minimum requirement should include books, pamphlets, newspaper clippings, official gazettes, government publications, atlases, maps, charts, photographic records, films, record players, cassette tapes/players, film projections, slides, pictures, photographs, realia, and periodicals[52].

The book collections consist of reference books, non-fiction books, and fiction books. The purpose of providing these school library materials is to facilitate the achievement of curricular objectives in secondary school disciplines, including Social Studies. The school library should be organised in a manner that supports the achievement of educational policy objectives. This can be achieved by carefully selecting, acquiring, and processing media resources that are suitable for this purpose. The library should make both printed and digital media resources accessible to the school community, with a particular focus on students[53].

Media resources encompass a wide range of materials used in various forms of media, including print, broadcast, and digital platforms. Media resources for education encompass a wide range of digital media and technologies used to enhance teaching and learning experiences. These resources serve as the foundation for creating and disseminating information, entertainment, and educational content. Example of media resources that can be found in school libraries include images, audio, video, interactive simulations, virtual realities, webinars, educational games, podcasts[54].

Lead City University Ibadan DO NOT COPY

Images include photographs, illustrations, diagrams, and other visual representations that can be used to illustrate concepts and ideas. Audio media resources include recordings of lectures, discussions, music, and other auditory materials that can be used to provide information and engage learners. On the other hand, visual media resources includes recordings of lectures, demonstrations, experiments, and other visual content that can be used to illustrate concepts and engage learners. In addition, more technologies have led to the creation of media resources such as interactive simulations and virtual reality (VR).

Interactive simulations are computer-based simulations that allow learners to explore and experiment with different variables and scenarios. They are sophisticated computer-based applications designed to immerse learners in dynamic environments where they can actively engage with various parameters and scenarios. These simulations leverage advanced algorithms and user interfaces to offer a hands-on learning experience, enabling students to manipulate variables, observe outcomes, and understand complex concepts in a highly interactive manner. By facilitating exploration and experimentation, interactive simulations foster deeper understanding, critical thinking, and problem-solving skills across a diverse range of subjects and disciplines. Through real-time feedback and dynamic adjustments, users can uncover relationships, test hypotheses, and refine their knowledge, making interactive simulations invaluable tools for education, training, and research endeavors[55].

Virtual reality (VR) and augmented reality (AR) are cutting-edge technologies that offer immersive experiences for learners, enabling them to engage with life like simulations and interact with virtual objects. VR plunges users into entirely digital environments,

Lead City University Ibadan. DO NOT COPY

surrounding them with 3D visuals and often incorporating auditory and tactile feedback to create a sense of presence in a virtual world. AR overlays digital elements onto the real world, enhancing the user's perception by blending virtual content with their physical surroundings. These technologies revolutionize learning by providing hands-on experiences that are not limited by physical constraints, allowing learners to explore complex concepts, practice skills, and deepen understanding in dynamic and interactive ways. By merging the virtual and real worlds, VR and AR empower learners to engage with content in unprecedented ways, making education more engaging, effective, and accessible[56].

Webinars are online seminars conducted either live or recorded, enabling participants to engage with presenters and fellow attendees remotely. These digital events offer a platform for sharing knowledge, expertise, and information across various topics and disciplines. During live webinars, participants can interact with presenters through features like chat, polls, and Q&A sessions, fostering real-time engagement and dialogue. Recorded webinars, on the other hand, provide flexibility for learners to access content at their convenience, allowing them to pause, rewind, and review material as needed. With the accessibility and convenience of online delivery, webinars facilitate continuous learning, professional development, and knowledge sharing, bridging geographical barriers and accommodating diverse schedules. Whether used for training, education, or networking purposes, webinars offer an interactive and dynamic medium for learning and collaboration in the digital age[57].

Lead City University Ibadan DO NOT COPY

Educational games are interactive digital experiences designed to impart knowledge or develop skills in learners while engaging them in gameplay. These games are crafted to align with educational objectives, covering a wide range of subjects and learning areas. By incorporating elements such as quizzes, puzzles, challenges, and simulations, educational games make learning enjoyable and engaging. They often offer immediate feedback, allowing players to track their progress and reinforce their understanding of concepts. Educational games can be tailored to various age groups and learning levels, making them versatile tools for educators and learners alike. Whether played individually or collaboratively, these games promote critical thinking, problem-solving, and subject mastery in an entertaining and interactive format[58].

Library media resources have a positive effect on educational outcomes because they take into account the diverse ways in which individuals acquire, retain, and apply knowledge, which vary depending on various factors[59]. The purpose is to offer educational content that aligns with the individual learning preferences and styles of the students[60]. Media resources in the modern era has advanced to include those based on the use of artificial intelligence and customized algorithms to modify the material based on the incoming inputs[61]. Through the use of media resources, students can actively engage in their own education. For instance, adaptive media technology, an online educational software, adapts its lesson based on a student's preferred learning style by evaluating their quiz replies. The implementation of interest-based adaptive media technique (AMT) has the potential to effectively aid students in quickly comprehending and retaining abstract topics[62].

Lead City University Ibadan DO NOT COPY

This approach exemplifies requirements engineering with a specific emphasis on learning outcome, tailoring training to suit the needs of individual students. The primary duty of media resources is to tailor the educational resources provided to individual students. Scholars have provided evidence indicating that the implementation of media is tailored to students' cognitive preferences leads to increased levels of success. Every student has the ability to determine their own learning speed and style[63]. Consequently, classrooms have the capability to be tailored to suit the individual requirements of every student[64].

Scholars opined that enhancing the efficacy of individualized training can be achieved by considering the students' aptitude and expertise. The use of media resources in various formats allows for the customization of education by adjusting the difficulty level or the presentation method of a particular activity within a specific course sequence[65]. Educational institutions now have the ability to create an atmosphere that focuses on the specific requirements of each student[66].

All these media resources can be used in a variety of educational settings, including traditional classrooms, online learning environments, and informal learning settings. They can be used to support different learning styles and preferences, and can help to make learning more engaging and effective. The school library media resources play a crucial role in the education of secondary school students, potentially impacting their academic performance[67]. The High-Level Policy Committee on Curriculum Development and the Nigerian Educational Research and Development Council have taken steps to ensure a smooth transition of themes, topics, and experiences from primary to junior secondary school levels. The School Library Media Centre's learning resource collections

Lead City University Ibadan DO NOT COPY

are carefully chosen to align with the educational curriculum's goals[68]. A functional SLMC is essential for supporting teaching and learning programs in Nigerian schools, as it directly impacts students' lives, inspiring their imagination, learning, and creativity.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations Development Programme (UNDP), among others, have recognized the importance of having library resources in educational settings and have made significant contributions to the provision of instructional resources in Nigeria. Some organizations have facilitated the establishment of micro-teaching and language laboratories, while others have aided certain states in Nigeria in setting up resource centers[69].

It was also reported that the USPID/Indiana University Project in Nigeria established educational resources centers between 1959 and 1966, and trained Nigerians in audio-visual communication. These centers were responsible for training teachers in modern techniques and learning resources to enhance the quality of education[70]. The significance of library resources was emphasized by another scholar who stated that media resources are essential for studying and teaching, including recommended textbooks, class support books, journals, past examination papers, reference books, and research materials for higher degree students and lecturers[71]. However, studies have reported various issues with library media resources, especially in developing countries such as Nigeria.

Nigerian scholars conducted a study on the allocation of educational resources and identified various obstacles hindering the successful diversification of the Nigerian education program. The research findings indicated that the available resources in the

Lead City University Ibadan DO NOT COPY

Nigerian education program are the combined contributions of students, parents, stakeholders, coordinators, and non-governmental agencies. The study suggested that the government should allocate physical, financial, and human resources to enhance the quality control and assurance of the educational system. Furthermore, additional funding should be obtained and effectively employed to promote the diversification of Nigerian remote education and boost staff job satisfaction[72].

Similarly, scholars conducted a study on the distribution of financial resources with the aim of improving educational productivity and students' outcomes in Nigeria. The study employed an ex post facto research design to examine financial resources, sources of funding for education, and the management of educational money. The investigation unveiled that the school is anticipated to yield significant productivity and positive outcomes for the children. It is suggested that schools employ incentives to encourage teachers to improve, and that school managers develop the practice of planning ahead before receiving government funding[73].

Another study was undertaken to investigate the impact of teaching and learning materials on student performance in the Kenyan secondary schools within the context of free day secondary school in Embakasi district, Kenya. The study discovered that teaching and learning supplies, such as chalks, dusters, and charts, were accessible and being used. However, there is a shortage of physical facilities and a lack of human resources, which are leading to subpar education quality. The report recommended that the government increase funding for teaching resources in order to enhance the quality

Lead City University Ibadan DO NOT COPY

and condition of physical facilities, as well as to hire additional teachers for the FDDSE program to achieve optimal effectiveness[74].

A scholar from Kenya conducted a study on the challenges faced by visually impaired students when trying to utilize electronic information resources in the Kenyatta University Postmodern library. The study discovered that the majority of students were unable to access and utilize electronic resources, while students with visual impairments lacked self-sufficiency in utilizing such resources. The study suggests that library administration could promote learner independence by providing them with self-reliant skills information and organizing training and induction sessions for staff and students[75]. The lack of resources allocation for libraries is a challenge to the use of media resources by students in Africa.

This is further highlighted in research conducted on the allocation of resources and the establishment of incentives to enhance the quality of teaching and learning. The study focused on examining the allocation of resources and the implementation of incentives in order to improve teaching and learning in public education. It aimed to understand the methods and techniques employed by leaders in this field. They disclosed that ensuring equitable access to education for all children has been a primary obstacle in public schooling. The allocation of resources must align with the goal of eliminating current disparities and narrowing the achievement gap. Furthermore, they discovered that the allocation and enhancement of resources should prioritize the advancement of teaching and learning, which presents significant leadership challenges[76]. It is important to note

Lead City University Ibadan. DO NOT COPY

that resource allocation in education does not occur in isolation; rather, it is influenced by policy conditions that can either facilitate or hinder effective leadership opportunities.

Researchers conducted a study on the difficulties faced in managing resources and their impact on students' academic performance in national examinations. The study specifically focused on the coping methods employed in public primary schools located in Makindu, Makueni County, Kenya. The researchers examined the areas of quality management, school leadership, and academic achievement. They focused on the primary difficulties in resource management and the impact of these obstacles on academic performance. The study discovered a strong and meaningful association between the efficacy of resource management systems and students' academic achievement in national examinations. The researchers advised school administrators to include instructors and students in the decision-making process and management practices that improve students' academic performance in national exams[77].

A Nigerian scholar examined the utilization of e-learning tools among secondary school educators in Kwara State. The study aims to determine the extent to which e-learning tools are available, accessible, and usable by secondary school teachers in Kwara. It was found that only a few secondary schools in the state possess accessible e-learning tools such as media resources, and even those that do face several challenges such as inadequate network connectivity, unreliable power supply, and insufficient manpower. Furthermore, the study found that the teachers did not have any difficulties in accessing the e-learning resources that were accessible. However, it was noted that there was a lack of equipped computer rooms and not all teachers possessed personal computers, among

Lead City University Ibadan DO NOT COPY

other discoveries. There was no significant disparity in the utilization of e-learning resources between males and females, and age did not play a role in determining the effectiveness of using these resources. The conclusion was reached that e-learning is indispensable for secondary schools, as evidenced by the widespread usage of computers in most entrance examinations nowadays. Proposals were made to foster cooperation between the government, specifically the Ministry of Education, and other agencies in order to facilitate e-learning. It was suggested that financial resources be allocated and workers be trained and retrained. The study examined the utilization of e-learning tools in both private and public secondary schools, and provided various recommendations[78].

An empirical study conducted in Nigeria evaluated the information literacy proficiency and use of media resources among secondary school students in Lagos State, Nigeria. The study found that secondary school students in Lagos State, Nigeria possess a modest level of information literacy skills. The results also demonstrated a substantial impact of information literacy skills on the utilization of media resources by the participants. Furthermore, a statistically significant correlation was seen between the students' information literacy abilities and their usage of media resources. The study suggests that students should acquire comprehensive information literacy skills in order to effectively analyze and evaluate information obtained from media sources. It also recommends that school authorities and other stakeholders in Nigeria should include subjects focused on developing information skills in the school curriculum. Additionally, there is a need for training and re-skilling of Teacher-librarians in secondary schools[43].

Lead City University Ibadan DO NOT COPY

Another study examined the availability and choice of media resources among secondary school pupils in Lagos State, with regards to their academic performance. The discussion revolved around the available sorts of media materials, their accessibility locations, and the frequency at which they can be accessed. The study determined that in order to attain sustainable development goals in Nigeria, it is crucial to have both access to and a preference for sufficient and pertinent media resources. The study suggests that school library media specialists should develop a high level of proficiency in collecting, organizing, and retrieving media resources. This will enable school library staff to effectively assist students in accessing, retrieving, and utilizing appropriate media resources in a timely manner and in the correct format. One way to accomplish this is by arranging and categorizing media resources in a manner that enables students to readily and expeditiously retrieve the necessary information for their study and personal needs[79].

Another study examined the difficulties and potential opportunities of media resource centers in certain private secondary schools located in the Osogbo city of Osun State. The study utilized a research design based on case study methodology. The key findings indicate that staff mostly rely on books as their main source of information in the library. In addition, they were unable to access additional library information resources, including both physical and digital documents. The findings additionally indicated that users encounter numerous limitations when utilizing the Media Resource Centre, such as inadequate availability of current and updated reading materials, restricted operating hours for reading, insufficient seating facilities, and absence of a professional librarian for material processing. The study concludes that in order to effectively utilize the Media

Lead City University Ibadan DO NOT COPY

Resource Centre, it is necessary to have up-to-date and sufficient information resources in school libraries, as well as the provision of professional Media Specialists, Paraprofessionals, and Skilled Maintenance Personnel to oversee library management. These initiatives could be undertaken in cooperation with all relevant parties involved in secondary education nationwide. Nevertheless, the study advised that sufficient funding is essential for the supply of contemporary and updated information resources, as well as for the recruitment of competent and well-trained Media Specialists[80].

2.2 Theoretical Framework

This section explains the various theories and models that can be used to describe the relevance of learning outcome of private secondary school students in Ogun state. Based on this, the following theories were evaluated to demonstrate the relationships between the study variables such as information literacy and use of media resources which include the Technology acceptance model, the Bloom taxonomy of academic achievement and the Big6 information literacy model.

2.2.1 Technology Acceptance Model (TAM}

The main aim of TAM was to elucidate the mechanisms that underlie the adoption of technology, with the purpose of forecasting the behaviour of individuals and offering a theoretical rationale for the effective integration of technology[81]. The primary aim of TAM was to provide practitioners with guidance on actions they may undertake before implementing systems. In order to achieve the goals of the theory, a series of actions were undertaken. The author initiated the creation of the technology acceptance model by defining the mechanisms that mediate the connection between external elements, such as

Lead City University Ibadan DO NOT COPY

the qualities of information systems, and the actual use of the system. The model was derived from the Theory of Reasoned Action, which offered a psychological framework for understanding human behaviour that was absent in the existing literature on Information Systems at that particular time.

Technology Acceptance Models (TAM) identified perceived ease of use and perceived usefulness, as the preditor of behavioural intention to use technology (Figure 2.1). Perceived ease of use and perceived usefulness encompass the anticipation of favourable behavioural results and the conviction that the behaviour will not require excessive effort. The impact of perceived usefulness on actual use might be immediate, highlighting the significance of this characteristic in predicting behaviour. Perceived ease of use does not have a direct impact on use behaviour, but it forms the basis for the influence of perceived usefulness.

The TAM posits that if an application is anticipated to possess a high level of user-friendliness, it is more probable that it will be deemed valuable by the user and hence increase the likelihood of technological adoption. Perceived ease of use and perceived usefulness are two critical factors in understanding the utilization of library media resources by secondary school students.

Perceived Ease of Use refers to the degree to which students believe that using library media resources is effortless and uncomplicated. It encompasses factors such as the user interface, accessibility, and user-friendliness of the resources. If students perceive library resources to be easy to navigate and understand, they are more likely to engage with them

Lead City University Ibadan DO NOT COPY

frequently. For example, if the library catalog is intuitive to search and navigate, students may be more inclined to explore a wider range of resources.

Perceived Usefulness pertains to the extent to which students believe that utilizing library media resources will enhance their learning and academic performance. It involves assessing whether students perceive the resources as valuable tools for achieving their academic goals. If students perceive library resources as relevant and beneficial to their studies, they are more likely to utilize them regularly. For instance, if students believe that accessing online databases or e-books from the library will improve their research skills and help them succeed in their assignments, they are more likely to incorporate these resources into their academic routine.

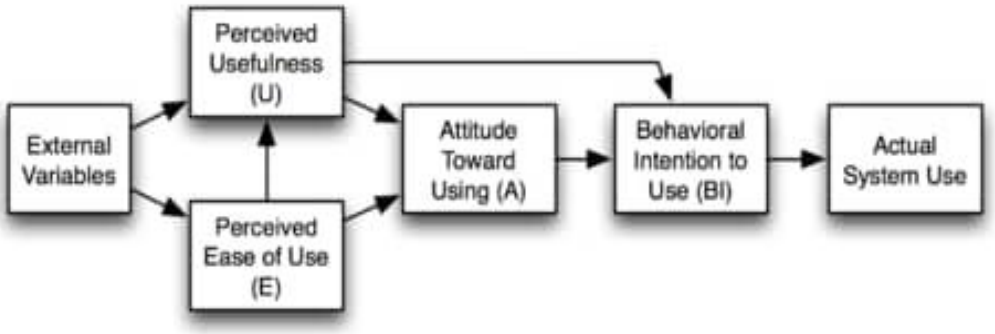

Figure 2.1: Technology Acceptance Model[81]

2.2.2 The Big6 Information Literacy Framework

The Big6 Information Literacy Framework is a structured approach to teaching and developing information literacy skills. Developed by Mike Eisenberg and Bob Berkowitz in the late 1980s, the Big6 model provides a systematic process for solving information-related problems and making informed decisions. It consists of six stages or steps that guide individuals through the research and information-seeking process[82]:

Task definition stage involves defining the information problem or task at hand. It requires clarifying the purpose of the inquiry, identifying information needs, and setting specific goals and objectives for the research. For secondary school students, this means understanding the assignment requirements, clarifying the research topic, and determining the scope of the information needed for their projects or assignments. Teachers can guide students in formulating research questions, brainstorming keywords, and articulating their information needs. Task definition must be followed by the appropriate information seeking strategies.

Information seeking strategies involves the ability to determine the best sources and strategies for finding information relevant to a particular task. This may involve brainstorming keywords, selecting appropriate search tools and databases, and planning search strategies. In this step, students explore different sources and develop effective search strategies to locate relevant information. Secondary school students need to learn how to use a variety of resources, including library catalogs, databases, websites, and reference materials. Teacher librarians can provide guidance on selecting appropriate search tools, evaluating the credibility of sources, and using advanced search techniques to refine their results.

Lead City University Ibadan DO NOT COPY

The next step in the Big6 model is location and access which focuses on accessing the selected resources. It involves locating materials both physically and electronically, understanding how to access databases or libraries, and obtaining necessary permissions or credentials. Once students have identified potential sources, they need to locate and access the information efficiently. Teacher librarians are also essential in this stage to teach students how to use library catalogs, navigate online databases, access and digital archives to access materials not available locally.

Use of Information is another component of information literacy skill which emphasizes critical thinking skills, as individuals analyze, synthesize, and interpret information to address their information needs effectively. Students must be able to analyze and synthesize information from various sources to meet their information needs. This involves critically evaluating sources, extracting key information, and synthesizing multiple sources to develop their understanding of the topic. Teacher librarians can also guide students in analyzing the credibility, relevance, and currency of sources, as well as integrating information into their own work while avoiding plagiarism.

Synthesis involves summarizing key findings, synthesizing different perspectives, and drawing conclusions based on evidence. In this step, students are expected to demonstrate the ability to organize and present the information in a coherent manner, incorporating their own analysis and insights. Secondary school students need to develop skills in summarizing information, synthesizing multiple viewpoints, and presenting their findings effectively. This also call for the role of teacher librarians who can support students in

Lead City University Ibadan DO NOT COPY

structuring their research papers, creating outlines, and citing sources using appropriate citation styles.

The last step in the Big6 model is evaluation. It involves reflecting on the entire information-seeking process and evaluating its effectiveness. Individuals assess the outcomes of their research, reflect on their learning experiences, and identify areas for improvement in future inquiries. Students should be able to assess the quality of their research outcomes, reflect on challenges encountered, and identify areas for improvement in their information literacy skills. .

The Big6 Information Literacy Framework provides a structured and adaptable approach to information literacy instruction, applicable across various contexts and disciplines. By guiding learners through each stage of the research process, the Big6 model promotes critical thinking, problem-solving, and lifelong learning skills essential for success in academic, professional, and personal endeavors.

University Ibadan DO NOT COPY

Figure 2.2: Big6 Information Literacy Model[82]

2.2.3 Bloom Taxonomy

Bloom's taxonomy is widely used to represent the growing complexity of cognitive skills as pupils go forward from a beginning to more advance level in their knowledge. Cognitive domain deals with six levels namely; Knowledge (remembering previously learned information, memorize), comprehension (grasping the meaning of information, interpret), application (applying knowledge to actual situation, putting theory into practice), analysis (breaking down objects or ideas into simpler parts and seeing how the parts relate and are organized, interpret elements of structure), synthesis (rearranging component ideas into a new whole, develop creative thinking), and evaluation (make judgments about value of ideas or materials, assess effectiveness). Affective domain is crucial for learning, but is typically not particularly addressed[83].

This domain focuses on attitude, motivation, readiness to participate, valuing what is being learnt and finally implementing the discipline principles into real life. Stages in this domain are not as sequential as the cognitive domain, but have been described as the following: receiving, responding, valuing, organizing, and characterization. Psychomotor domain is concerned with development of muscle skills and coordination. Objectives of this domain involve motor competence, manipulation of materials or objects or an act which demands neuromuscular coordination. The entire assessment to maintain standard must cover all the three domains of educational objectives and must be set paramount when the teachers are assessing students' outcomes. Experts stated that the application of

Lead City University Ibadan DO NOT COPY

assessment in three domains poses some severe issues and that most teachers do focus on cognitive domain without paying attention to other domains such as psychomotor and affective domains[84].

2.3 Review of Empirical Studies

2.3.1. Media Resource Use and Learning Outcome

The relationship between media resource use and learning outcome among secondary school students is a topic of significant interest in education research. Media resources, including digital technologies, online platforms, educational videos, and interactive applications, have become increasingly prevalent in educational settings for instance, media resources provide students with access to a vast array of information beyond what traditional textbooks offer. They can access educational videos, interactive simulations, online courses, and multimedia presentations to supplement their learning. More so, well-designed media resources can enhance student engagement and motivation by presenting information in dynamic and interactive formats.

Information resources with features such as animations, gamification elements, and real-world examples can capture students' interest and make learning more enjoyable. Furthermore, media resources can cater to different learning styles, allowing students to engage with content through visual, auditory, or kinesthetic means. This versatility can accommodate diverse student preferences and enhance comprehension and retention. Moreover, many media resources allow students to learn at their own pace, pausing, rewinding, or fast-forwarding through content as needed. This flexibility can accommodate individual learning preferences and support personalized learning

Lead City University Ibadan DO NOT COPY

experiences. Besides, some media resources facilitate collaborative learning experiences, allowing students to interact with peers, share ideas, and engage in group activities. Collaborative learning can foster communication skills, critical thinking, and teamwork abilities. Another point of note is that Digital media platforms often include built-in assessment tools that allow students to receive immediate feedback on their progress. These tools can help students monitor their understanding of the material and identify areas for improvement.

Despite the potential benefits, there are also challenges associated with the use of media resources in education. These include issues such as digital equity (ensuring all students have access to necessary technology), the quality of online information, distractions, and the need for teacher training to effectively integrate media resources into instruction. Research on the relationship between media resource use and learning outcomes among secondary school students has yielded mixed findings. While some studies have found positive associations between media use and academic achievement, others have found more nuanced relationships influenced by factors such as the quality of media resources, student engagement, and instructional strategies.

Media resources have the potential to enhance learning outcome among senior secondary school students by providing access to diverse content, supporting engagement and motivation, accommodating different learning styles, and facilitating collaborative learning experiences. However, their effective integration into instruction requires careful consideration of instructional design, digital literacy skills, and ongoing support for both students and teachers. Empirical reviews has came up with different opinions. For

Lead City University Ibadan DO NOT COPY

example, a study on Multimedia tools in the teaching and learning processes: A systematic review. Access to quality education is still a major bottleneck in developing countries. Efforts at opening the access to a large majority of citizens in developing nations have explored different strategies including the use of multimedia technology. This paper provides a systematic review of different multimedia tools in the teaching and learning processes with a view to examining how multimedia technologies have proven to be a veritable strategy for bridging the gap in the provision of unrestricted access to quality education and improved learners' performance.

The review process includes conducting an extensive search of relevant scientific literature, selection of relevant studies using a pre-determined inclusion criterion, literature analysis, and synthesis of the findings of the various studies that have investigated how multimedia have been used for learning and teaching processes. The review examines various case study reports of multimedia tools, their success and limiting factors, application areas, evaluation methodologies, technology components, and age groups targeted by the tools. Future research directions are also provided. Apart from text and images, existing tools were found to have multimedia components such as audio, video, animation and 3-D. The study concluded that the majority of the multimedia solutions deployed for teaching and learning target the solution to the pedagogical content of the subject of interest and the user audience of the solution while the success of the different multimedia tools that have been used on the various target groups and subjects can be attributed to the technologies and components embedded in their development[85].

Lead City University Ibadan DO NOT COPY

In Kuwait, a study on factors influencing the use of multimedia technologies in teaching English language. The results reveal that there are seven factors that have an impact in using multimedia in teaching English subject, which are: facilitation, motivation, performance, behavioral, social, pedagogical, and effort factors. Moreover, the study proves that teachers have positive perceptions of multimedia technologies, but still need more supplements and supports[86]. This is important as the acceptance of library media resource is an important factor in getting students to also use these resources

As the multimedia classroom gained enormous importance from the government of Bangladesh to modernize the educational system, this study initiated the objective to investigate the state of those classrooms at secondary schools. The study used a mixed-method approach with qualitative and quantitative data to explore the execution and possible improvements for those multimedia classes. Five secondary schools were selected purposively from each of the two districts named Sylhet and Cumilla. From these ten schools, hundred students and hundred assistant teachers were selected randomly to conduct ten focus group discussions (FGD) with each of the two groups. Moreover, ten interviews were conducted with the head teachers.

Besides those, classrooms were observed while the multimedia was in use, along with a case study in a school. Although head teachers and assistant teachers mentioned many classes using multimedia, the students' words and observed class information gave alternative facts. Almost similar types of outcomes were found regarding digital content development, monitoring, and mentoring activities. While teachers were optimistic about the quality of digital content and classroom teaching, researchers found those to be less

Lead City University Ibadan DO NOT COPY

standard. In terms of monitoring the multimedia classroom, the majority of head teachers were more concerned about the number of multimedia used in the classroom due to administrative obligations than the quality[87].

Researchers from India reports on investigating pre-service English teachers' perceptions on the use of multimedia in EFL teaching and learning process: pedagogically implication. This research aimed to investigate the pre-service English teachers' perception toward the use of multimedia in EFL teaching and learning process and to observe kind of multimedia are used by the pre-service English teachers' in EFL teaching and learning process. The participant of this research was the 63 senior students of English Department Galuh University. The questionnaire and interview were the instruments used in this research to collect the data. Survey monkey application was used in analyzing the questionnaire by displaying it into the figure and data interpretation based on the answer from a close-ended questionnaire, while the data from telephone interviews were analyzed by displaying data interpretation from the interviewees.

Another study on the use of media resources found that the students had a positive attitude towards multimedia. Most of the participants agreed that they like multimedia because it helped them in the teaching and learning process. In this era, we can easily found multimedia. PowerPoint, YouTube Videos, Podcast, Canva, PowToon, Picture, CALL, MALL, Digital Comic, Song, PowToon, and Movie are some the kinds of multimedia that can be used by pre-service English teachers' as the solution to make the learning process more interesting and enhance the students' language pedagogy. This research concludes that using multimedia in the teaching and learning process was

Lead City University Ibadan DO NOT COPY

important to improve their achievements, understanding, performances, and to achieve objectives of language pedagogy[88].

In this technological age, integration of multimedia technology with traditional teaching methods is considered as a key promoter of creating effective teaching and learning atmosphere across the globe. Comprehending its importance, the present study aimed at investigating the effectiveness, adaptation, and contribution of technology-based ELT in different domains of English language alongside its key challenges at the secondary level (6-10 classes) education in Bangladesh via analyzing English teachers and learners' responses against it. The results highlighted that technology integrated ELT had a stringent contribution to improving teaching-learning atmosphere ever than before via creating an interactive environment along with drawing and retaining students' attention throughout the class.

In another study, students were found highly motivated to ELT classes equipped with multimedia technology as they could visualize the subject matter with reading. Key challenge filtered from the study pointed, teachers required adequate prior training to operate the multimedia and to prepare subject contents using AV tools. Majority of respondents believed, the use of technological tools with conventional methods not only inspires students' creativity but also leads the students to create new knowledge, and thus, helps develop a capable future generation open to face any global challenges[89].

Computer-based media such as interactive multimedia plays an important role in learning Indonesian language skills. The objective of this research is to determine the effectiveness of interactive multimedia in learning Indonesian language skills in higher

Lead City University Ibadan DO NOT COPY

education. This experimental research used the port-test along with a control group design. The population of this research was the second semester students of the Elementary School Education Study Program at four higher education institutions. To determine the experimental class, the random sampling technique was used considerably. IKIP PGRI Wates is an experimental class through which interactive multimedia is compared to three control groups namely Slamet Riyadi University of Surakarta using video subscription media, Tunas Pembangunan Surakarta University applying media prize, and Ahmad Dahlan University of Yogyakarta using the power point media. The data on Indonesian language skills tests include tests of listening, speaking, reading and writing abilities. The data were then analyzed using the one-way ANOVA. The results show that the application of interactive multimedia is effectively used in learning language skills compared to learning using other media. In addition, interactive multimedia can also be applied to study independently outside the classroom[90].

A recent study aims to find out the use of multimedia as a technological device in English learning from the perspective of the teacher. This study involved 2 participants: the two 12 th-grade English teachers of SMAN 2 Semarang. This study applied a qualitative approach with a phenomenological approach. Data were collected through observation and in-depth interviews based on three categories; kinds of multimedia, advantages, and disadvantages, and how the teacher uses the media. A thematic analysis design is used in this study. This started at the data collecting phase and lasts through the transcription, reading and re-reading, analysis, and interpretation stages of the data. It is concluded that the teachers have a positive perspective toward using multimedia technology in the

Lead City University Ibadan DO NOT COPY

classroom to teach English. The use of multimedia technology has had a major impact on the advancement of education, especially English learning[91].

YouTube videos are immensely used for English language learning at tertiary level both by the language learners and teachers in Bangladesh. Incorporation of new media tool like YouTube has inspired learners and teachers to make English language teaching-learning more fruitful. The aim of the current study is to investigate the use of YouTube in enhancing learners' English language proficiency. Qualitative research method is used in the study. Data was collected through six Focus Group Discussions with 30 students from tertiary level. Each FGD consisted of five informants from tertiary level.

The collected data was analysed through coding and presenting the emerged broad themes under key headings. The result of the study shows that students of tertiary level find YouTube as a motivating medium through which they are able to enhance their speech delivery, pronunciation, intonation, grammatical skills, listening skills, and elucidate personal language problems. However, the study also indicates that the language learning videos accessible in YouTube sometimes comprise of culturally unsuited dress-up and attitude of the speaker which give the learners cultural shock. The study recommends learners and teachers choose culturally appropriate language learning videos for active and fruitful learning[92].

In another study titled 'The Effectiveness of Multimedia Learning in Enhancing Reading Comprehension Among Indigenous Pupils'. The study explores multimedia learning as an approach to teaching reading comprehension. Besides, this study aims to answer two questions, which are the effectiveness of multimedia learning in helping indigenous

Lead City University Ibadan DO NOT COPY

pupils learn comprehension and which elements of media are effective in enhancing reading comprehension among indigenous pupils in Malaysia. Two instruments used to collect the data from 20 indigenous pupils in one primary school located in Kluang, Malaysia, and an action research design was used to achieve the purpose. The respondents were chosen through the judgment sampling technique. SPSS was used to analyse the data collected from the test, and thematic analysis was employed to analyse the semi-structured interview. The result shows that the implementation of multimedia learning in teaching reading comprehension is useful as the combination of multiple elements of media scaffolded the process of understanding. On the other hand, audio is the least effective in helping pupils comprehend the information[93].

Video tutorials was identified as one of the most effective tools to teach or learn a foreign language. According to scholars, video tutorials is one of the best ways to make an otherwise tedious task an enjoyable activity. Learning in general is supposed to be fun, and no other activity could possibly make learning a foreign language as interesting as video tutorial which use appealing models and aesthetic backgrounds. Helping students who learn English as a second language subconsciously absorb, as they follow the story, a wide range of vocabulary, present-day grammar, sentence varieties, formal and informal, and pronunciation along with intonation and accent, movies do not just help them pick up a language, but they speed up the learning process and create an unbelievable interest in the students to practice the learned language[94].

A study from Tasikmalaya, West Java reports the implementation of video conference as a distance learning media that enhances teachers' productivities in teaching English in a

Lead City University Ibadan DO NOT COPY

state high school. To give much greater size sample, this study took two sample classes with the overall fifty-six students participated in the study by using cluster sampling technique. This study employed a qualitative research design focusing on the survey study method. A self-administration of twenty questionnaires provided to identify the distinctions perceptions between male and female students thought. A depth information appear to be as important to gain more in-depth information and continuous responses to explore the advantages and its disadvantages of video conferencing that have been undertaken by interviewing the students.

After interview the students, the researcher found that, that despite some limitation, the teaching and learning process with video conferencing was successful, then male students appear more favorably and react positively compared to female students. By having more positive responses, video conferencing proven to enhance teachers' productivities. More significantly, students argue on its advantages and disadvantages of video conferencing that was undertaken by interview. The advantages of video conference such as video conference could connect between teachers and students wherever they are, video conference allow them to access lessons with teachers separately, video conference motivated, video conference enhances teachers' role, responsibility, creativity, and students' insights and learning experiences using new learning systems. Besides, video conference also has weaknesses or disadvantages when it is applied such as interactions limits, unstable internet connections, unclear sounds, video delay, and background noises. This can be noted that today learning and teaching process can benefit from using video conference as a distance learning media that teachers can used to improve their

Lead City University Ibadan DO NOT COPY

productivity, as well as substitution for teachers' absences in the classroom, so that learning can be done, and teacher productivity maintained wherever they are.[95].

Scholars in Asia have also highlighted the importance of multimedia in the teaching-learning process because it can create a good learning environment for both teachers and students. The concern is how effectively a teacher can use multimedia. Based on the phenomenon, this study aimed to explore the effectiveness of multimedia use in English lessons at SMPN 1 Meulaboh. This study also attempted to examine what factors that caused the need for multimedia use in learning English. The population of this study were all English teachers and students of SMPN 1 Meulaboh. Data collection techniques were interview and questionaire. The results showed that the use of multimedia in learning English at SMP 1 Meulaboh was effective. Factors that caused the need to use multimedia in learning English include;(1). supporting teachers in presenting learning materials,(2). encouraging teachers and students to have good learning environments,(3) Facilitating the teachers in evaluating students' achievement during the teaching-learning process[96].

Another researcher investigated the pre-service English teachers' perception toward the use of multimedia in EFL teaching and learning process and to observe kind of multimedia are used by the pre-service English teachers' in EFL teaching and learning process. The participant of this research was the 63 senior students of English Department Galuh University. The questionnaire and interview were the instruments used in this research to collect the data. Survey monkey application was used in analyzing the questionnaire by displaying it into the figure and data interpretation based on the answer

Lead City University Ibadan DO NOT COPY

from a close-ended questionnaire, while the data from telephone interviews were analyzed by displaying data interpretation from the interviewees.

A related research showed that the students had a positive attitude towards multimedia. Most of the participants agreed that they like multimedia because it helped them in the teaching and learning process. In this era, we can easily found multimedia. PowerPoint, YouTube Videos, Podcast, Canva, PowToon, Picture, Digital Comic, Song, PowToon, and Movie are some the kinds of multimedia that can be used by pre-service English teachers' as the solution to make the learning process more interesting and enhance the students' language pedagogy. This research concludes that using multimedia in the teaching and learning process was important to improve their achievements, understanding, performances, and to achieve objectives of language pedagogy[97].

In another study, researcher examined how multimedia may be used to increase student engagement and active learning in English classes. The Grade 10 students at Sta. Maria National High School, Sta. Maria, Trento, and Agusan del Sur served as the study's subjects. The experimental and control groups both received pre-and post-tests. The experimental group got multimedia-based training, while the control group was taught using traditional methods such as chalk and talk. Following the intervention, students' academic performance greatly improved. The students responded favorably to the utilization of a PowerPoint presentation, video, audio, flashcards, and charts as a component of a multimedia-based education program. As a result, it was discovered that teaching English 10 effectively involves employing multimedia-based training. The results of this study thus advise teachers, particularly at the secondary level, to

Lead City University Ibadan DO NOT COPY

incorporate the use of multimedia techniques in English topics to increase the students' involvement and active learning. This complies with the requirements of contemporary pedagogy, which further promotes an atmosphere of active learning in the classroom[98].

Currently, teachers face many challenges in teaching. This is due to the times, which causes a teacher to need to innovate in teaching methods. Learning to use technology is one of the steps that can be used by teachers in this era to be able to face these challenges, especially English teachers. This research will then be carried out using descriptive qualitative research. The data used in this study comes from the results of previous research and studies that still have relevance to the research content. The results of this study then found that learning English using multimedia technology can increase students' motivation and interest in learning. Of course, this must be done by providing open access to teaching materials and information. In the future, multimedia technology will become more common as a learning aid. Even though there are still limitations in using technology in learning, with proper computer knowledge on the part of the teacher, learning using this technology can be carried out correctly[99].

This current research regarding the contribution of multimedia in an academic context and self-efficacy toward students' speaking performance was a quantitative correlational study. The population of the research was engineering students of the State Polytechnic of Sriwijaya in the academic year 2021-2022. The number of samples was 140 respondents. The data were collected through a questionnaire and speaking test. The data were analyzed using descriptive analyses, Pearson Product Moment Coefficient

Lead City University Ibadan DO NOT COPY

Correlation, Linear Regression, and Compare Means. The result showed that multimedia and efficacy contributed significantly to students' speaking performance.

The result also showed that there was no significant mean difference in self-efficacy of engineering students on the basis of gender. Some points need to be considered. First, support the students with suitable multimedia for each learning process. Second, facilitate them with reliable multimedia that can increase their efficacy in practicing speaking. Third, warn them about the misuse of multimedia and remind them of the function of multimedia in the learning process. Fourth, all parties involved in the learning process of speaking must do their best to improve the students' speaking performance. Fifth, simultaneously consider the variables of multimedia usage and self-efficacy to improve the students' speaking performance[100].

This research aims to know students need of interactive multimedia to learn Indonesian language skill. It was conducted in the Department of Primary School Teacher Education during the even semester of 2016/2017 academic year. Data collection techniques were observation, interview and literature study. The data were then analyzed qualitatively descriptive by the stages of data reduction, data presentation, and conclusion. The result of this research shows that lecturers still implement conventional teaching by using power point and modules as well as dominating the speech method. In other hand, both students and lecturers state there needs to be interactive multimedia to help students during the learning process. Students need attractive multimedia to avoid boredom. Based on the result of observation, 98.62% of students state interactive multimedia should be given learning objective, 71.72% of them desire short and brief lesson, 27.59% desire

Lead City University Ibadan DO NOT COPY

detail explanation of material, 99.31% desire inclusion of language implementation example, 97.24% desire learning evaluation, 82.07% desire bright colors appearance, 12.41% desire dark colors appearance, 90.34% desire the inclusion of back sound and sound effect, 96.55% desire the inclusion of animation and picture, and 100% students desire for menu button on interactive media for Indonesian language skill[101].

Nowadays, in 21st-century learning, English teachers are demanded to be creative in teaching. Using media in teaching is one of the samples of teacher creativity. This study aims to determine the teachers' perception of using media in teaching English at SMK N 1 Kinali. This type of research is descriptive research through a qualitative approach. In this study, the researcher used purposive sampling, involving three English teachers at SMK N 1 Kinali who used media during the teaching and learning process in the classroom. In collecting data, the researcher conducted observations and interviews with three teachers regarding what media the teacher used in learning English and how the teachers' perception of using media in teaching English. The researcher found several media used in teaching English by teachers including; graphic media, audio media, project silent media, media games, and simulation. In addition, researchers also found that teachers have a positive perception of the use of media in teaching English. The teacher already has an understanding that the presence of media will support the smoothness of the teaching and learning process. However, teachers do not always use the media during the teaching and learning process. In terms of using the media, teachers also experience problems including a lack of internet access around the school environment and attacks on the media by students for matters not related to the teaching

Lead City University Ibadan DO NOT COPY

and learning process. However, behind that, all teachers are also trying to prepare media based on student characteristics which include different ways of learning, different interests in using media, and different levels of understanding[102].

Educational mobile applications bridge the teaching learning processes effectively. This study aims to investigate the teachers practices in using educational mobile applications to teach English in senior high school in Semarang. This study utilize case study approach to achieve the objectives of the study. Questionnaire, interview, document analysis, and classroom observation were applied to investigate the teachers practices in using educational mobile applications in relation to multimedia learning theory and the Technological Pedagogical Content Knowledge (TPACK) theory. An evaluation rubric was used to find out the effectiveness of the educational mobile applications the participants used in teaching. Then a compatibility checklist was used to find out the compatibility of the educational mobile applications with the current curriculum, the 2013 curriculum. The findings revealed that the teachers were aware of multimedia learning when they chose to use certain educational mobile applications to teach English. They also possessed what the TPACK suggested. Therefore, they had the tools they needed to integrate technology into their classrooms. The study showed that from the five educational mobile applications the teachers used, Google Classroom was the most effective, whereas Goggle Drive was the least effective. The other three, 360 Video, YouTube, and Google Slides could, meanwhile, be considered effective apps. In case of compatibility of the educational mobile apps with the 2013 curriculum, it could be said

Lead City University Ibadan DO NOT COPY

that all of the educational mobile applications were compatible with the curriculum since they were applicable in classroom settings[103].

Research was also conducted on the influence of the using of learning multimedia and motivation to the result of students' Arabic learning in the class. The research method used in this research was experiment research by using treatment with levels designs 2x2, data were collected through the test and motivation questionnaire. The data analysis in this research used variance analysis test (ANOVA) in two directions (2x2) by using F test on the significance level α= 0, 05 and an advance test by using Scheffe test. The result of the research showed that the students who learned by using learning multimedia had higher average scores than compared with the students who didn't use learning multimedia. Study motivation of students who learned by using learning multimedia had average scores which were higher than the students who didn't use learning multimedia in their learning process in the class. There were influences of interaction between the using of learning multimedia and motivation to study to the learning result of students' Arabic learning. At the group of students who had high learning motivation, the result of students' Arabic learning which used learning multimedia was higher than the result of students' Arabic learning which didn't use learning multimedia[104].

As the skill that usually becomes the reference of students' success in learning English, teaching speaking needs to be given closer attention, especially in teaching English to elementary school students. Therefore, a careful choice of good approach, technique or media is required. This article aims at finding out the advantages of using multimedia-based teaching materials in teaching speaking to elementary school students in Kabanjahe,

Lead City University Ibadan DO NOT COPY

North Sumatra. This is a descriptive study taking the fifth year elementary schools students at SD SwastaMasehi in Kabanjahe of Karo Regency as the participants. The data were collected using observations and interviews. The data were analyzed qualitatively. The results of the study show that using multimedia-based materials benefits the speaking learning process in terms of increasing the students' interest, reducing the students' shyness, increasing students' motivation, and promoting student-centered learning. It is concluded that using multimedia-based materials helps build elementary school students' speaking ability[105].

The media and technological advances have massively changed our lives. Therefore, in light of the emerging media landscape, the notion of literacy has been expanded and the need to develop media literate learners who are producers as well as consumers has been reinforced. Being literate in the 21st century requires the integration of new curricula in the current education system to challenge the critical understanding of learners and help them assimilate the diverse codes involved in the contemporary media system. Given this context, this research aims to investigate the state of media literacy education in the secondary school system in Morocco. The purpose of this study is to examine the integration of media literacy education in the secondary school focusing on teachers' attitudes. For this purpose, a survey research is conducted with a sample of 190 teachers. The survey data are described and analyzed using descriptive as well as inferential statistics. Based on the findings, the implementation of media literacy education as an official component in the Moroccan secondary school curriculum is significantly influenced by organizational, systematic, and attitudinal factors. The challenges of

Lead City University Ibadan DO NOT COPY

incorporating and developing media literacy in the Moroccan educational system are multiple, including inadequate school support, weak professional development, and obsolete classroom practices. Eventually, this study is an attempt to provide a starting point to the quantitative evaluation of media literacy education and make an argument for the implementation of the field within Moroccan educational institutions[106].

2.3.2. Information Literacy Skills and Learning Outcome of Senior Secondary School Students

Information literacy skills are crucial for senior secondary school students to navigate the vast amount of information available to them, both online and offline. These skills enable students to effectively locate, evaluate, use, and communicate information in various formats. Literatures has revealed that Information literacy skills help students conduct research effectively. They learn how to identify appropriate sources, use search strategies to locate relevant information, and evaluate the credibility and reliability of sources. Information literacy fosters critical thinking skills by encouraging students to analyze and evaluate information critically. They learn to question assumptions, recognize biases, and consider multiple perspectives when evaluating information. Students with strong information literacy skills are better equipped to complete assignments, projects, and research papers successfully. They can locate high-quality sources, synthesize information effectively, and present their findings coherently, leading to higher academic achievement. Information literacy includes understanding ethical and legal issues related to information use, such as copyright, plagiarism, and digital rights.

Lead City University Ibadan DO NOT COPY

Students who develop these skills become responsible digital citizens who respect intellectual property rights and use information ethically. Information literacy skills support problem-solving abilities by teaching students how to identify information needs, locate relevant information, and apply it to solve problems or make decisions effectively. Information literacy is a lifelong skill that extends beyond formal education. Students who develop strong information literacy skills are better prepared for future learning and professional endeavors, as they can adapt to new information environments and technologies throughout their lives. Information literacy encompasses media literacy skills, which are essential for navigating the digital media landscape. Students learn to critically evaluate media messages, identify misinformation and propaganda, and understand the influence of media on society and culture.

Information literacy involves effectively communicating information to others. Students learn how to organize and present information in various formats, such as written reports, presentations, or multimedia projects, enhancing their communication skills. Information literacy empowers students to become self-directed learners who can independently seek out information and learn new concepts beyond the classroom. They develop the confidence and skills to pursue their interests and continue learning throughout their lives. Information literacy skills play a vital role in shaping the learning outcomes of senior secondary school students. By equipping students with the ability to locate, evaluate, use, and communicate information effectively, information literacy fosters academic achievement, critical thinking, problem-solving, digital citizenship, media literacy, communication skills, and lifelong learning abilities. Integrating information literacy

Lead City University Ibadan DO NOT COPY

instruction into the curriculum can help students develop these essential skills and succeed academically and beyond. However, several controversies has come with regards to names and nomenclatures of information literacy and digital literacy. Some authors places information literacy under digital literacy while some did otherwise.

A study aimed to acquire knowledge about Singapore secondary school (ages 13 to 16 years old) students' skills in searching, evaluating and using information. A comprehensive instrument encompassing the basic information literacy (IL) skills, as well as a new dimension of ethical usage of information and collaborative information seeking was used for data collection. From August to November 2010, a total of eight schools comprising 3,164 students participated in this study. It was a matter of concern that various kinds of libraries, including school libraries, were found to be under-utilized. From the test that was administered to assess the IL skills of students, the results were found to be generally unsatisfactory as each of the major categories of IL skills recorded a score that is below 50 (out of a maximum of 100) except for “task definition”. For skills related to “information seeking strategies”, “location & access” and “information use”, the types of schools, academic streams of study, and students' family background seemed to have significant influences[107].

A study assess information literacy skills of undergraduates in Nigerian universities. A self-assessed questionnaire was developed to collect data from the final year undergraduates in 15 universities. A total of 1,350 final year Library and Information Science (LIS) students responded to the questionnaire which was used for analysis. The study revealed that the majority of the LIS final year undergraduates mostly consult

Lead City University Ibadan DO NOT COPY

journal articles, followed by internet information and online databases during their research process. The undergraduates rated well-known author(s), current information, credible information, accurate and relevant information as very important when evaluating online information resources. It was found that the students rated their ability to organize information and integrate ideas from consulted information as high. While they were deficient in ability to correctly paraphrase ideas to avoid plagiarism and use citation and referencing styles correctly. On the whole, almost half of the final year undergraduates of LIS rated their level of information literacy skills to be moderate[108].

Another study investigated the information literacy skills of Library and Information Science students in Delta State University, Abraka and Ambrose Alli University, Ekpoma, Edo State, Nigeria. Information literacy instruction is yet to be accorded its correct place in the programmes of study in higher educational institutions. The study adopted a survey approach and a questionnaire structure on a 3-point Likert scale was used for data collection. The sample for the study was 148 (300 level) students. Frequency count and mean statistics were used for data analysis. It was found that the library and information students were information literate, but the researcher was not unmindful of Dunning-Kruger Effect on this finding. Inability of departments to make Information Literacy a compulsory course (100L-final year) for students and inability of lecturers to give students complex take home work (term papers, assignments, seminars) that could be used for the assessment of their information literacy skills were the greatest challenges. The solutions to the problems amongst others are Faculty members and librarians teaching the course should be more pragmatic in course delivery having standards and

Lead City University Ibadan. DO NOT COPY

contemporary trends in mind; and adequate financial provision to libraries in order to enable constant organization of literacy programmes[109].

A study conducted in Nigeria examined information literacy among the regular undergraduate students of Modibbo Adama university of Technology Yola. The study was guided by six objectives and six research questions. Survey research method was adopted for the study. The population of the study was 8280, and the sample size was 368. 300 questionnaires were filled and returned representing 82% response rate. Data collected were analyzed by descriptive statistics. The major findings of the study among others show that majority of students information needs were driven by class assignment, quest for information and information apathy. Most of the students do not have access to online journals, databases and online public access catalog and majority of them do not have the skills required to cite information sources properly. However, majority of the students have the capacity to evaluate information before putting it to use. Following these major findings, it was recommended that information literacy should be introduced by the school management as a core course for incoming students and proper orientation should be given to students on the importance of information. Information resources should be provided to student at their convenience, and that students should be educated on ethical issues relating to the use of information[110].

In eastern Nigeria, researchers examined influence of information literacy skills on utilization of library resources and services by students of tertiary institution in Owerri, Imo State. The population of the study comprised of ten thousand, eight hundred and eighteen (10,818) registered students of the institutions surveyed. The sample of the study

Lead City University Ibadan DO NOT COPY

2,162 was derived using proportionate sampling technique. The instrument used for data collection was structured questionnaire. The reliability index of the instrument was found to be 0.81 using Pearson Product Moment Correlation coefficient. Data collected were analyzed using mean, standard deviation, the results showed that students in tertiary possess high level of information literacy skills and the students' level of information literacy skills influences their use of print resources, audio-visual resources, electronic information resources and library services[111].

Information literacy skills are crucial to 21st century undergraduates who need to filter information from different sources, with a view to coming up with accurate information to complete courses, assignments and research projects. Adequate information literacy skills would empower an individual to become a lifelong learner. The study investigated patterns of information literacy skills among undergraduates in federal universities in southwestern Nigeria. Questionnaire survey and focus group discussions were used to elicit information from 1,318 respondents. Out of the 1,318 copies of questionnaire administered, 1,169 were duly completed and analysed giving a response rate of 88.7%. Multi-stage sampling procedure was adopted for the selection of 300L undergraduates for the study. The study found that the level of information literacy skills of the respondents was relatively high. Focus group discussions substantiated the findings of the quantitative aspect of the study by affirming that the level of information literacy skills was relatively high. The study showed a significant relationship between information literacy skills and gender indicating, a significant difference in the information literacy skills of male and female undergraduates. Male undergraduate's level of information literacy skills was

Lead City University Ibadan DO NOT COPY

higher than that of their counterparts. Institution and faculty had no statistically significant relationship with the information literacy skills of undergraduates. It was recommended that undergraduates should be regularly given complex tasks that would sustain the high level of information literacy skills, to enable them compete favourably with their counterparts globally[112].

A study explores the level of academic performance and information literacy skill of undergraduate students in Bangladesh. In addition, the study examines the impact of information literacy skill on students' academic performance. To achieve the objectives, the study uses primary data collected from 325 students and employs several statistical and econometric methods. The study firstly uses information literacy skill index to measure the level of students' information literacy skill and secondly, uses a linear regression estimated by OLS method to examine the impact of information literacy skill on students' academic performance. The study finds that most of the students' Grade Point Average (GPA) is medium standard which ranges between 3.01 and 3.50 and the level of information literacy skill is lower which ranges between 10 and 20. Besides, the study also finds that study hour, family income, class attendance, past academic result and information literacy skill are the significant factors which influence students' academic performance. More specifically, the study finds that students' GPA may be increased by 0.012 if students' information literacy skill is increased by one unit. Therefore, the study suggests nursing students' information literacy skill to improve the students' academic performance[113].

Lead City University Ibadan DO NOT COPY

A research paper aims to present an overview of information literacy (IL) instruction in Pakistan from the following perspectives: research literature produced; IL instruction as a credit course at LIS schools; and continuing professional development (CPD) activities for information professionals. This study was based on a review of the literature on IL, a survey of LIS schools, searching through the electronic messages archives of the professional groups, and exchange of information with peers. The findings revealed that 13 research papers were published on IL from Pakistan. Out of 12 LIS schools, four offered a 3-credit hour course on IL instruction at the Masters level. Continuing professional development opportunities were limited in Pakistan. A few university libraries just started formal IL programs. We recommended that IL be included in the curriculum at all LIS schools. Research studies on different aspects of IL must be conducted. LIS schools and associations must prepare the professionals to run IL instruction programs[114].

As Thailand moves through the 21st Century, the education system and resultant labour force must be prepared for the rapid changes in Thailand's society, culture, politics, economy, and technologies. Previously, the 21st century framework has identified crucial elements to their future success as information literacy, media literacy, and information and communication technology (ICT) literacy skills. Given this priority, by use of multistage clustering sampling, 600 Thai junior high school students were selected, from which a five-level, 73-item Likert type agreement scale questionnaire was used to collect data from October 2017 to December 2017. The analysis of the student's skills in information literacy, media literacy, and ICT literacy was conducted with the use of

Lead City University Ibadan DO NOT COPY

SPSS Version 24 and mean ((x)), standard deviation (SD), the Kaiser-Meyer-Olkin (KMO) test, and Bartlett's test of sphericity for analysis. Furthermore, a second-order confirmatory factor analysis was undertaken in which AMOS Version 24 software was used. Based on the second order CFA, it was found that the Information, Media and Technology Skills (IMTS) model was composed of three components that corresponded to the empirical data, with the most important element being ICT literacy, followed by media literacy, and finally, information literacy[115].

2.4. 2.Media Resource Use, Information Literacy Skills and Learning Outcome

Research on the relationship between media resource use, information literacy skills, and learning outcome of senior secondary school students suggests several key findings looking at the concepts independently, and collectively. Senior secondary school students frequently utilize various media resources such as books, online articles, videos, and social media platforms for learning purposes. The extent and effectiveness of their media resource use can significantly impact their learning outcome. Information literacy skills, including the ability to access, evaluate, and use information effectively, play a crucial role in students' academic success. Students with higher information literacy skills are better equipped to navigate the vast amount of information available and discern credible sources from unreliable ones. There is evidence to suggest a positive correlation between media resource use, information literacy skills, and learning outcomes among senior secondary school students.

Students who demonstrate proficiency in accessing and critically evaluating information tend to achieve higher academic performance compared to those who lack these skills.

Lead City University Ibadan DO NOT COPY

With the increasing prevalence of digital media and online resources, digital literacy has become an essential component of information literacy. Senior secondary school students need to develop digital literacy skills to effectively utilize digital media for learning and research purposes. Educators play a crucial role in fostering media literacy and information literacy skills among senior secondary school students. Implementing instructional strategies that promote critical thinking, information evaluation, and responsible media consumption can enhance students' ability to utilize media resources effectively and improve their learning outcomes. Encouraging collaborative learning environments where students can share and discuss information enhances their information literacy skills and exposes them to diverse perspectives. Collaborative activities such as group projects, peer reviews, and discussions foster critical thinking and help students develop a deeper understanding of the subject matter. Given the rapidly evolving nature of media technologies and information landscapes, senior secondary school students need to cultivate a mindset of lifelong learning and adaptability. Teaching them how to learn independently, evaluate new media platforms, and stay updated with relevant information sources prepares them for academic success and future challenges in a digital world[116].

Concerns over fake news have triggered a renewed interest in various forms of media literacy. Prevailing expectations posit that literacy interventions help audiences to be “inoculated” against any harmful effects of misleading information. This study empirically investigates such assumptions by assessing whether individuals with greater literacy (media, information, news, and digital literacies) are better at recognizing fake

Lead City University Ibadan DO NOT COPY

news, and which of these literacies are most relevant. The results reveal that information literacy—but not other literacies—significantly increases the likelihood of identifying fake news stories[117].

Empirically, there are dearth of literature that connotes that trio of media literacy, information literacy and learning outcome. A study moreover buttressed this point by stating that Digital competences, computer skills, information literacy and related abilities represent a crucial element in ICT education (Information and Communication Technologies). They are less frequently investigated in the frame of secondary education than in higher education. We assess these contexts in secondary education through science mapping and visualizing techniques, examining publishing patterns and trends. Databases Web of Science (WOS) and Scopus are used. Publishing exhibits logarithmic inverse relationship between rank and frequency (power laws). Only a few chief publications among hundreds account for an important share of all published research. WOS-based visualizations (VOSviewer software) of concepts used in titles, abstracts and keywords show several clusters of research: computer-, information-, as well as digital-related.

Further analysis reveals that the major terms which define these clusters predominate in different periods. Computer-related are earlier terms, followed by information-related, and now digital-related. As some concepts mature terminology embraces more trendy novel concepts. Clusters of co-citing and co-cited sources shows differences among publications. Proceedings play an important role as sources of co-citations but are cited more weakly. Both co-citing and co-cited sources exhibit well defined clusters with little

Lead City University Ibadan DO NOT COPY

convergence between Library and Information Science on one side and Education and Educational Research, and Computer Science on the other even though the respective publications employ similar terminological concepts. The lack of exchange between these research domains calls for more co-operation in order to boost synergy in these critical twenty-first century skills[118].

In a related study, researchers examined the use of digital learning media as a source of information literacy and student activity. The study adopted using mixed methods and data collection was conducted using instruments in the form of questionnaires and observation sheets. The data analysis used was editing, tabulating, analyzing, concluding. The results of research for information literacy of students that the aspect that has the highest interval is found in the fourth aspect, namely the ability individually or in groups to use information effectively to achieve certain goals with a value of 3.74 while the lowest aspect with a value of 33.00 in the second aspect is the ability to access information that needed effectively. Teachers and their students can access this information as a learning resource. In the learning activities of students for meetings I and II there was an increase in every aspect. These aspects include based on the introduction, student orientation to problems, organizing students to study, guiding investigations, developing and presenting work, analyzing and evaluating problem-solving processes it can be concluded that information literacy and learning activities can be put to good use during learning and increase learning activities in supporting information[119].

Lead City University Ibadan DO NOT COPY

Another study that aim to analyze the development of mobile learning in learning media to improve digital literacy and student learning outcomes in physics subjects .The results of the study show that the use of mobile learning in student learning can be used as a learning support tool, media and learning resource and can be applied at the student level. The benefits of using mobile learning in learning are that it can facilitate the teaching and learning process both in the classroom and outside the classroom, attract students' attention and can generate enthusiasm and motivation in learning so that the material being delivered can be conveyed properly and can be understood by students, besides another benefit of using mobile learning is that it can support students towards independent learning. The development of mobile learning as a learning medium has been carried out by several researchers, who develop mobile learning. The results of the development carried out indicate that the media developed is more likely to focus on the teaching material only. Mobile learning developed is focused as a means of practicing working on questions that can provide various types of questions that are varied and challenging[120].

Furthermore, a review article presents the current trends in media and information literacy in scientific publications of the early 21st century based on the content analysis of Russian and foreign researches. The study highlighted that the major function of media and information literacy is to provide access to information and knowledge and promote free, independent and pluralistic mediated social environments. some; - media literacy as a vital, survival skill for an individual; - minimizing online risks and expanding online opportunities in media literacy education; - information or digital literacy in the

Lead City University Ibadan DO NOT COPY

educational and professional contexts; - focus on studying human behaviour in social computer-mediated interactions and challenges of global cross-cultural communication; - promoting people's media and information literacy for active social change; - media literacy and digital literacy as critical instruments against various online risks and manipulations; - media and information literacy integrated into the school curriculum and university syllabus; - media literacy education aimed at students' applying their critical thinking skills to media messages and creating media texts; - focus on media language and representation analysis in media and film studies; - national peculiarities of promoting media and information literacy in different countries; - international media literacy based on the effective strategies used in different cultures. Besides, the authors emphasize the following problem zones in media literacy education for further research and development: training and education programs for media studies for all levels of education; teacher training courses in media education; increasing media awareness of all stakeholders and organizations in the social sphere; international collaboration and research in media education and a wide exchange of research findings; practical application of media literacy education for various social groups[121].

Lead City University Ibadan DO NOT COPY

2.4 Conceptual Model

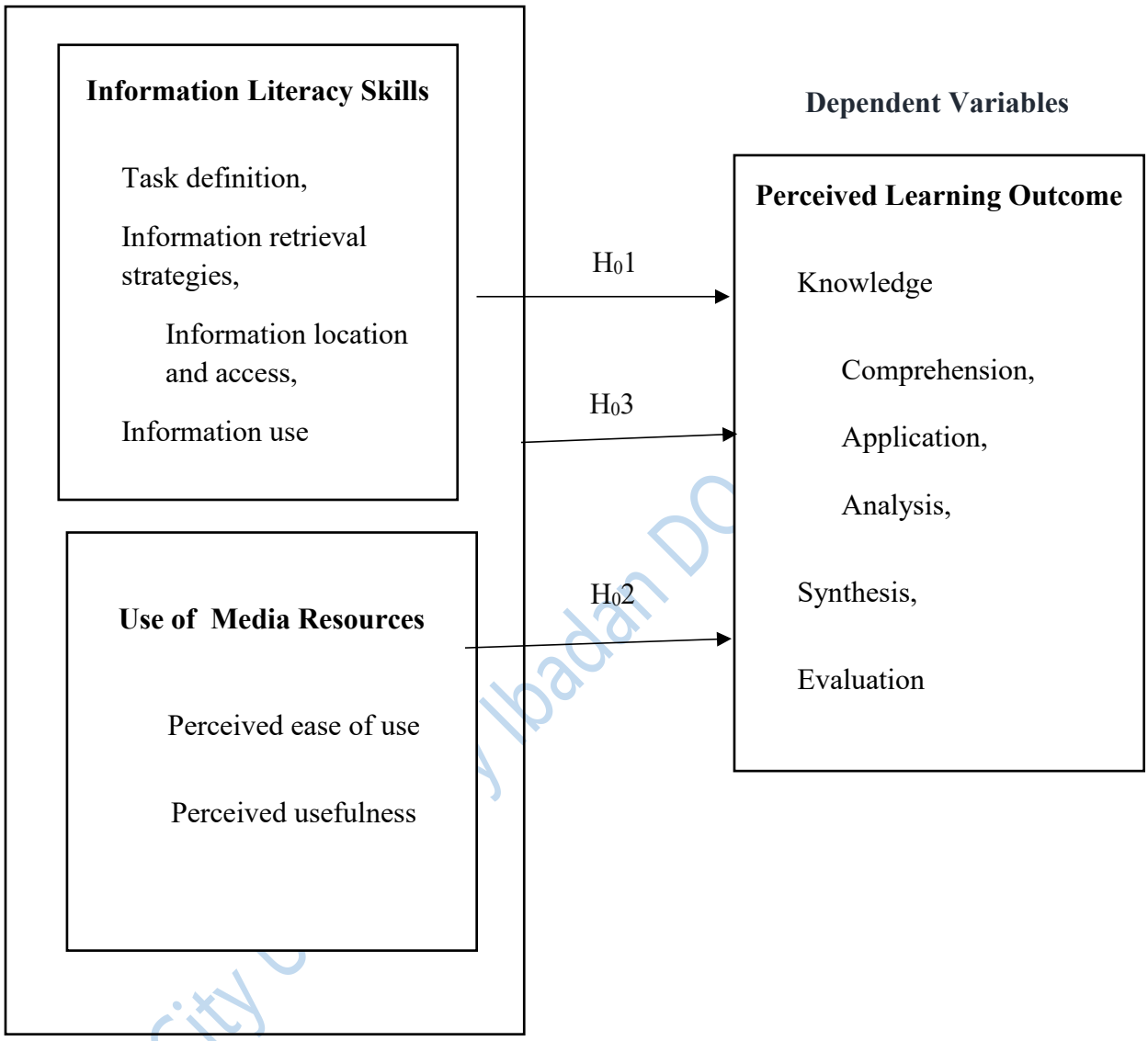

Figure 2.4: Conceptual model on the influence of computer literacy skills and media resources use on the learning outcome of secondary school students (Researcher: 2024)

The conceptual model shows the variables in the study and the interaction between them. The dependent variable is learning outcome which is measured by metrics adopted from the bloom taxonomy of learning outcome. The metrics measure different stages or element of learning outcome to determine how effective is the teaching and learning

process. However, it is recognized that various factors may determine the learning outcome exhibited by students. One of such factors is use of media resources by students. Use of media resources is therefore the first variable in this study. It is measured by metrics adapted from the technology acceptance model. Those metrics are perceived ease of use and perceived usefulness. It is assumed that when students overcome their inhibitions and make use of media resources, their learning outcome will improve. However, learning outcome may also be determined by the level of information literacy skills of each student.

Information literacy skill is the second variable in this study. It is measured by metrics adopted from the big6 information literacy model. The metrics included; task definition, information retrieval strategies, information location and access, and information use. It is considered important as students move to make the best use of abundant information resources available in their schools and beyond. In view of a dearth of study on the combined influence of information literacy skills and media resources, this study aims to fill the research gap by examining the influence of information literacy skills, digital media use on the learning outcome of secondary school students in Ogun state.

2.5 Summary of Gaps in Literature Reviewed

The review of literature on students' learning outcome and how it can be influenced by information literacy skills and use of media resources have thrown up useful insight for the current study. The review of literature suggests that learning outcome is a major issue globally with many countries making efforts to achieve the best learning outcome among its learners. The importance attached to learning outcome, especially in primary and

Lead City University Ibadan DO NOT COPY

secondary is considerable as it is indicated that effective learning shapes an individual to be an asset to the society while poor learning outcome create maladjusted individuals who are capable of becoming a burden to the society.

However, despite the importance attached to learning outcome, scholars had found it difficult to reach a consensus on the appropriate metrics until the invention of frameworks such as the Bloom taxonomy which clearly outlines what educators should look for in their students to considered then as successful. These metrics have also been applied to varying degrees especially in the development world where the emphasis is more on rote learning designed to provide students with certain information which they must remember and be able to repeat same whenever called upon, especially during formal assessments.

Several studies conducted in Nigeria and other developing countries have shown that assessment of learning outcome often scratch the surface with the main focus on testing the ability of student to recall what they have been thought in the classroom. Other measure of learning outcome such as knowledge synthesis, evaluation, and application are rarely tested. Even with the focus on knowledge, the literature shows that many students are still lacking with poor performance reported in standardized assessments such as examinations conducted by the West African Examination Council, National Examination. Studies have however reported mixed findings on the role of media information resources use and learning outcome.

Media information use, especially by school children is highly recommended by scholars who have reported on the evolution of use of media resources over the years. Even

Lead City University Ibadan DO NOT COPY

before the advent of the internet, visual media such as charts, maps, atlases and models have been helping students to understand complex concepts better. The emergence of information technology has also led to the development of further media resources such as 3-D models, software, digital video, webinar, immersive technology and others. However, studies have shown that librarian school libraries rarely have these modern resources and the little that are available are not always accessible to the students. In addition, student often lack the information literacy skills to make effective use of these media where they are available.

Lead City University Ibadan DO NOT COPY

Endnotes

[1] F. Fauth, &J.González-Martínez. *On the Concept of Learning Transfer for Continuous and Online Training: A Literature Review*. **Education Sciences**, 11(3), 2021. pp.133.

[2] J. Cronje.*Towards A New Definition of Blended Learning*. **Electronic Journal Of E-Learning**, 18(2), 2020. Pp114-121.

[3] R. Ishak., *Future Challenges for School Leaders in Implementing the Concept of Learning Organizations in Malaysian Schools: Experts' Opinions*. **Int. J. Adv. Corp. Learn**., 13(1), 2020. Pp.77-85

[4] F. Lukitasari, L. Nurlaela, R. Ismawati., & T. Rijanto, *Comparison of Learning Outcomes between Discovery Learning with Inquiry Learning Reviewed of Student Learning Independence at Vocational High School.* **International Journal for Educational and Vocational Studies,** 2(10). 2020.

[5] H. Kopnina, *Education for the Future? Critical Evaluation of Education for Sustainable Development Goals*. **The Journal of Environmental Education**, 51(4), 2020 Pp.280-291.

[6] A. S. Munna, & M. A. Kalam. *Teaching and Learning Process to Enhance Teaching Effectiveness: Literature Review***. International Journal of Humanities and Innovation** (IJHI), 4(1), 2021 pp 1-4.

[7] H.H.Chiou, *The Impact of Situated Learning Activities on Technology University Students' Learning Outcome***. Education+ Training**, 63(3), 2020 Pp.440-452.

[8] B. O. Ellah, & C. C. Nnadi. Students' *Ability Levels in Physics: The Predictive Effect of Study Habit, Cognitive Preference and Error Patterns*. **Journal Of the International Centre for Science, Humanities and Education Research,** 4(3), 2020, pp25-34.

[9] C. Wekerle, M. Daumiller, & I.Kollar, *Using Digital Technology to Promote Higher Education Learning: The Importance of Different Learning Activities and their Relations to Learning Outcomes*. **Journal Of Research on Technology in Education,** 54(1), 2022 pp 1-17.

[10] J. Blackmore, D. Bateman, J. O'Mara, &J. Loughlin, *The Connections between Learning Spaces and Learning Outcomes: People and Learning. Literature Review*.2019

Iead City University Ibadan DO NOT COPY

[11] A. Owoseni, E. Ibem, & A. Opoko, *Impact of Physical Learning Environment on Students' Learning Outcomes in Secondary Schools in Lagos State, Nigeria*. **Universal Journal of Educational Research,** 8(8), 2020,3635-3642.

[12] Y. Sani, G. C. Uwaleke, & E. P. Chuks, *Assessment of the Effects of Environmental Factors on Students Academic Performance in Public Secondary Schools in FCT Abuja Nigeria.* 2022

[13] C. P.Ihuoma, & A. A.Ebere. *Environmental Variables and Students' quality Learning Outcomes in Public Secondary Schools in Rivers State, Nigeria*. **Journal Of Educational Research,** 2022, 40, pp.52-62.

[14] P. J. Alufohai, *School-Based Factors Affecting Senior Secondary School Students' Achievement in English Language in Edo State*. **European Journal of Research and Reflection in Educational Sciences**, 4(9). 2016

[15]L. Kyriakides, C. Christoforou, & C. Y. Charalambous, *What Matters for Student Learning Outcomes: A Meta-Analysis of Studies Exploring Factors of Effective Teaching. Teaching and Teacher Education,*2013 36, 143-152.

[16]C. Kieran, *Algebra Teaching and Learning. Encyclopedia of Mathematics Education*, 2020, Pp.36-44.

[17]O.J., Omotosho, *Assessment of students" performance: Grading systems*. **In Information and Knowledge Management**. 3(2), 2013. pp. 26-50

[18]H. J. Yun, & J.Cho, *Affective Domain Studies Of K-12Computing Education: A Systematic Review from a Perspective on Affective Objectives.* **Journal Of Computers in Education,** 9(3), 2022, pp.477-514.

[19] N. A. M. Noor, N. M. Saim, R. Alias, & S. H. Rosli. *Students' Performance on Cognitive, Psychomotor and Affective Domain in the Course Outcome for Embedded Course.* **Universal Journal of Educational Research**, 8(8), 2020 pp 3469-3474.

[20] U. N. Agwagah, & E. N. Ezieke. *Effect of Formative Assessment Practice on Students' Academic Achievement in Upper Basic Mathematics in Enugu East LGA, Enugu State, Nigeria.* **Godfrey Okoye University International Journal of Education**, 3(1), 2023 pp.1-10.

[21]B. C. Ezeanyi, O. B. Fidel-Imoisili, & E. B. Sowunmi. *Assessment of Difficult Mathematics Concepts as Perceived by Primary School Teachers in Enugu State, Nigeria*. **GPH-International Journal of Educational Research**, 4(10), 2021, pp.18-29.

Lead City University Ibadan DO NOT COPY

[22]J. A. Akerele, R. A. Awoyemi, &, S. O. Ogunniyi. *Attitude as Predictor of Academic Achievement of Students in Introduction to Library Studies in Federal Colleges of Education in Southern Nigeria.* **Library Philosophy and Practice**, 2022, pp 1-18.

[23]D. Ekpoto, C. Odey, & J. I. Akpa, *Student-Related Variables and Academic Outcome of Social Science Education Students in the University of Calabar, Nigeria*. **International Journal of Curriculum and Instruction**, 13(2), 2021, pp.1133-1147.

[24]C. O. Odey, D. F. Ekpoto, & J. I. Akpa, *Empirical Relationship between Industrial Conflict andStudents' Attitude Towards Academic Activities in the University of Calabar,* **Nigeria. Journal of the Social Sciences**, 48(3), 2020, pp1342 - 1352

[25] T. Withorn, J. Eslami, H. Lee, M. Clarke, C. Caffrey, C. Springfield, & A. Haas, *Library Instruction and Information Literacy*. **Reference Services Review**, 49(3/4), 2020, pp.329-418.

[26] E. Vidal, M. L. Apaza, M. Ortega, A. Huamantuna, & R. Aqquepucho, *toward the Development of Information Literacy Skills: A Framework for Beginners in Higher Education. In 2021 XVI Latin American Conference on Learning Technologies (LACLO),* IEEE. 2021 Pp. 542-545.

[27]M.Gross, H.Julien,& D. Latham, *Librarian Views of the ACRL Framework and the Impact of Covid-19 on Information Literacy Instruction in Community Colleges*. **Library &Information Science Research,** 44(2), 2022, pp.101151.

[28]R. Shukla, '*The SCONUL Seven Pillars of Information Literacy*: *Core Model' to Test the Skills of LIS Students, University of Jammu, India.* **Library Philosophy and Practice***,* 5851. 2021

[29] Z. M. Abdullahi, *Information Literacy Skills and Use of E-Resources by Undergraduate Students in Nigeria in Relation to Kuhlthau's Model of Information Search Process (ISP*). **Library Philosophy and Practice (E-Journal).** 4992. 2021

[30]P. B.Mardani, & R. R.Silalahi, The *Digital Information Literacy Skill Level on College Student (Case: Final-Year College Student*). **International Journal of Multicultural and Multireligious Understanding,** 8(1), 2021, pp197-206.

[31]A.Hicks, & A. Lloyd, *Reaching into the Basket of Doom: Learning Outcomes, Discourse and Information Literacy*. **Journal Of Librarianship and Information Science**, 55(2), 2023. pp282-298.

[32]C. Shannon, J. Reilly, & J. Bates, *Teachers and Information Literacy: Understandings and Perceptions of the Concept.* **Journal Of Information Literacy**, 13(2), 2019. pp 41-72.

Lead City University Ibadan DO NOT COPY

[33] S. M. Jones-Jang, T. Mortensen, &J. Liu, *Does Media Literacy Help Identification of Fake News? Information Literacy Helps, but other Literacies Don't.* **American Behavioral Scientist,** 65(2), 2021, pp.371-388.

[34]B. Vaidya, *Librarians and Information Professional Activities in Nepal During COVID-19 Pandemic.* **Access: An International Journal of Nepal Library Association,** 1(1), 2022 Pp.68-73.

[35] S. Thanuskodi, *Information Literacy Skills among Library and Information Science Professionals in India*. **Library Philosophy and Practice,** 2019, Pp.1-24

[36]A. Farajpahlou, & M. Badnorooz, *Using the Information Literacy Framework 2016for Evaluating Information Literacy of Higher Education Students (Case Study: Shahid Chamran University of Ahvaz*). **Library and Information Science Research**, 10(1), 2020. pp.185-204.

[37] S. Hanks, H. Neve, & T. Gale, *Preparing Health Profession Students for Practice in Complex Real-World Settings: How Do Educators Respond toa Model of Capability?* **International Journal of Practice-Based Learning in Health and Social Care**, 9(1), 2021, pp50-63.

[38]N.Churchill, *Development of Students' Digital Literacy Skills through Digital Storytelling with Mobile Devices*. **Educational Media International**, 57(3), 2020 Pp.271-284.

[39]B. M. ABUBAKAR, *Library and Information Science (LIS) Education in Nigeria: Emerging Trends, Challenges and Expectations in the Digital Age*. **Journal Of Balkan Libraries Union,** 8(1), 2021, pp.57-67.

[40]I.S. Song, A. A. Buba & U. M. Song, *Awareness and Use of Online Public Access Catalogue (OPAC) By Undergraduate Students in Federal University Libraries in Northern Nigeria*. **International Journal of Information and Communication Technology** (ICT)15(2), 2018, pp75-86

[41]I. R.Odede,& N.Zawedde, *"Information Literacy Skills in Using Electronic Information Resources"* **Library Philosophy and Practice**(E-Journal). 2018 pp1947.

[42]L. Liu, S. Wang., J. Chen, H. Li, J. Gui, &R. Zhang, *Information Literacy of Higher Vocational College Students in Digital Age.* **Journal Of Librarianship and Information Science**, 09610006231224445. 2024

[43]B. Amusan, *Information Literacy Skills and Media Resource Utilization among Secondary School Students in Lagos State, Nigeria.* **Library Philosophy and Practice***,* 2020, pp.1-13.

Lead City University Ibadan DO NOT COPY

[44]O. A. Osunrinade, *Demographic Factors, Information Literacy Skills and Media Resources' Utilisation Among Secondary School Students in Ogun State, Nigeria. Information Impact:* **Journal Of Information and Knowledge Management**, 9(3), 2018, pp.1-17.

[45]I. O. Adeyemi, *An Empirical Study on the Traits of Information Literacy Level among Senior Secondary Students in Ilorin, Nigeria.* **Library Philosophy &Practice**. 2017

[46] C. O. Onyeneke, & C. Obichere, *Information Literacy Competency of Secondary School Students of Owerri West, South East, Nigeria*. Paper Presented At: IFLA WLIC 2018 – Kuala Lumpur, Malaysia – Transform Libraries, Transform Societies in Session S01 - Africa. In: Libraries As Centers of Community Engagements for Development, 22-23 August 2018, Kuala Lumpur, Malaysia.2017

[47]K. Gyesi,. *The Use of Computers by Students to Access Information Literacy: Case of Okuapeman Senior High School (SHS), Ghana***. Library Philosophy and Practice**, 2020, pp.1-25.

[48]M. M. Gekara, B. W. Namande, &C. R. Makiya*, "Information Literacy Practices as a Tool for Accessing and Utilizing Information in Secondary Schools in Kenya*", **African Journal of Emerging Issues**, 3(2), 2021. pp.. 39 – 61.

[49]Z. Zhang, G. Xu, J.Gao, L.Wang, Y.Zhu, Z. Li, & W. Zhou, *Effects of E-Learning Environment Use on Visual Function of Elementary and Middle School Students*: *A Two-Year Assessment—Experience from China***. International Journal of Environmental Research and Public Health,** 17(5), 2020 pp1560.

[50]F. W.Ariesta, *Effectiveness of E-Learning Media to Improve Learning Outcomes Natural Science in Primary Schools*. **Journal of Education Research and Evaluation**, 3(2), 2019. Pp.88-95.

[51]E.Jamogha, O.Jamogha, & S. O.Efosa-Isibor, *Availability and Utilization of Library Information Resources by Students in Selected Secondary Schools in Ondo West Local Government Area, Ondo State, Nigeria*. **Library Philosophy and Practice**, 2021, pp.0_1-16.

[52]E. B. Ngera, M. Echaune, & P. K. Wamalwa. *Library Resources as Predictor of Students' Learning Outcomes in Physics at Secondary Schools in Trans Nzoia County, Kenya*. **East African Journal of Education Studies,** 6(2), 2023.pp335-346.

[53]S. Krashen, &J. Bland, *Compelling Comprehensible Input, Academic Language and School Libraries*. **Children's Literature in English Language Education**, 2(2), 2014, pp.1-12.

Lead City University Ibadan DO NOT COPY

[54]M. K. Merga, *School Librarians as Literacy Educators Within a Complex Role*. **Journal Of Library Administration,** 60(8), 2020. Pp.889-908.

[55]K.Perkins, *Transforming STEM Learning at Scale*: **Phet Interactive Simulations. Childhood Education**, 96(4), 2020. Pp.42-49.

[56] S. Valenti, B. Lund, & T. Wang, *Virtual Reality as a Tool for Student Orientation in Distance Education Programs: A Study of New Library and Information Science Students***. Information Technology and Libraries**, 39(2). 2020

[57]O. U. Idhalama, M. O. Igbinovia, & C. A. Ezeabasili, *Use of Webinar Tools for Teaching and Learning by Library and Information Professionals in Nigeria*. **Information Development,** 37(3), 2021, pp334-344.

[58]A. Abduganiyev, & M. Mustafoyeva, *Educational Resources Based on Virtual Reality*. **Academic Research in Educational Sciences,** 2(4), 2021, pp 2035-2042.

[59]M. A. Alkhawaldeh, & M. A. S. Khasawneh, *Understanding the Perceptions and Challenges of Teachers in The Age of Technology*. **Journal of Namibian Studies: History Politics Culture,** 37, 2023, pp1-24.

[60]I. A. Gabriel, & A. M. Osuafor, *Effect of Adaptive Learning Approach on Students' Achievement in Chemistry in Awka Education Zone of Anambra State*. **Journal of Research & Method in Education,** 11(6), 2021. pp 22-28.

[61]G.White, *Adaptive Learning Technology Relationship with Student Learning Outcomes*. **Journal Of Information Technology Education: Research**, 2020. pp19, 113-130.Https://Doi.Org/10.28945/4526

[62]H.Al-Chalabi, & A.Hussen, *Analysis & Implementation of Personalization Parameters in The Development of Computer-Based Adaptive Learning Environment*. **SAR Journal Science and Research**, 3(1), 2020 3–9. Https://Doi.Org/10.18421//SAR31-01.

[63]N. Ali, F. Eassa, & E. Hamed, *Personalized Learning Style for Adaptive E-Learning System*. **International Journal of Advanced Trends in Computer Science and Engineering,** 8(1), 2019 pp223-230. Http://Www.Warse.Org/IJATCSE/Static/Pdf/File/Ijatcse4181 12019.Pdf

[64]N. B. Normadhi, L. Shuib, H. N. M. Nasir, A. Bimba, N. Idris, &V. Balakrishnan, *Identification of Personal Traits in Adaptive Learning Environment: Systematic Literature Review. Computers &Education,* 2019.pp130, 168–190.Https://Doi.Org/10.1016/Jcompedu. 2018.11.005.

Heal City University Ibadan DO NOT COPY

[65]M.Alshammari, &A. Qtaish, *Effective Adaptive E-Learning Systems According to Learning Style and Knowledge Level*. **JITE Research**, 18, 2019 pp529–547. *Https://Doi.Org/10.28945/4459.*

[66] El Beqqali, *Requirements Monitoring and Diagnosis for Improving Adaptive E-Learning Systems Design*. **Journal Of Information Technology Education: Research,** 2019 18, pp.161-184. Https://Doi.Org/10.28945/4270.

[67]F. K. Adenariwo, &A. S. Sulyman *Availability and Accessibility of Electronic Information Resources in Academic Libraries as Predictors of Academic Performance of Students*. **Library Philosophy and Practice**, 2022. pp 1-10

[68] N. A. Udofia, *The New Educational Curriculum in Nigeria.* **J. Interdiscip. Stud. Educ**, 10, 2021 pp..1-20.

[69]J. A. Aina, & E. A. Adekanye, *Audio-Visual Resources Availability and Use for Library Services among Colleges of Education in Lagos State, Nigeria.* **International Journal of Library and Information Science,** 5(10), 2013 pp.417-425.

[70]E. M. Akhmetshin, R. R. Ibatullin, A. R. Gapsalamov, V. L. Vasilev, & S. Y. Bakhvalov. *Audiovisual Aids Application in the Secondary-Level Vocational Education Establishments: Efficiency Analysis and Assessment*. **International Journal of Educational Management,** 33(2), 2019. pp 374-392.

[71] R. C. Ojobor, E. T. Babarinde, & V. O. Fagbemi,. *Audio-Visual Resources in Library: An Enhancing Tool for Effective Teaching and Learning in Primary Schools in Nsukka LGA.* **Library Philosophy and Practice**, 2020. pp1A-16.

[72]J. Harindintwari, *Educational Resources and Student Performance in Public Primary Schools of Nyamasheke and Gasabo Districts in Rwanda* (Doctoral Dissertation, The Open University of Tanzania). 2022.

[73]O. A. Oyekan, S. S. Adelodun, & N. O. Oresajo, *Allocation of Financial Resource to Enhance Educational Productivity and Students' Outcomes in Nigeria*. **International Journal of Development and Management Review**, 10(1), 2015. pp 201-209.

[74]J. A. Akungu, *Evaluate Library Electronic Information Resources Use by Undergraduate Students of Lead City University, Ibadan, Nigeria.* **Library Philosophy and Practice**, 2019. pp.1-24.

[75]B. W. Kiruki, & S. M.Mutula, *Accessibility and Usability of Library Websites to Students with Visual and Physical Disabilities in Public Universities in Kenya.* **International Journal of Knowledge Content Development &Technology,** 11(2). 2021

Lead City University Ibadan DO NOT COPY

[76] P. M. Agnetta, G. H. Kiende, & O. N. Ogulu, *Adequacy of Selected School Resources and Its Influence on Learners' Academic Performance in Public Secondary Schools in Makueni County, Kenya.* **Journal Of Education,** 2(3), 2022 Pp56-72.

[77]N. A. Erick, & C. Ayienda, I*nfluence of Resources on Academic Performance in Public Primary Schools in Manga Sub-County*, Nyamira County, Kenya.2022

[78]A. T. Toryuha,T. M. Ajala, A. J. Mbakeren *The Use of E-Learning Resources by Secondary School Teachers in Kwara State*. **GSJ:** 8(4), 2020

[79]O. Osunrinade, & O. Adeniyi, *Access and Preference to Media Resources for Sustainable Development: A Case Study of Secondary Schools in Lagos State*. **Nigerian School Library Journal,** 2019.pp18, 159-168.

[80] Y. O. Oladapo, M. O. Nasir, M. O. Adeoye., Mrs. A. O. Gariba, & K. O. Salami, *Challenges and Prospects of Media Resources Centre in Selected Private Secondary Schools in Osogbo Metropolis, Osun State, Nigeria***. Library Philosophy and Practice (E-Journal).** 2021

[81]A. A., Adeoye, & A. O. Olanrewaju, *Use of Technology Acceptance Model (Tam) To Evaluate Library Electronic Information Resources Use by Undergraduate Students of Lead City University, Ibadan, Nigeria*. **Library Philosophy and Practice**, 2019. 1-24.

[82]E., Rahmah, *Information literacy level of students of Universitas Negeri Padang using the Big 6 Model. In 1st Progress in Social Science*, Humanities and Education Research Symposium (PSSHERS 2019). Atlantis Press. 2020, pp. 146-149

[83]Arievitch, I.M., *Reprint of: The vision of Developmental Teaching and Learning and Bloom's Taxonomy of Educational Objectives*. **Learning, Culture and Social Interaction**, 27, 2020, pp.100473.

[84]I., Aheisibwe, L., Kobusigye, & J. Tayebwa, *Bridging Education Gap in Higher Institutions of Learning Using Bloom's Taxonomy of Educational Objectives*. **African Educational Research Journal,** 9(1), 2021. pp.69-74.

[85]M. D. Abdulrahaman, N. Faruk, A. A. Oloyede, N. T. Surajudeen-Bakinde, L. A. Olawoyin, O. V. Mejabi, &A. L. Azeez, *Multimedia Tools in the Teaching and Learning Processes: A Systematic Review.* **Heliyon**, 6 (11). 2020

[86] Z. Aljazzaf, *Factors Influencing the Use of Multimedia Technologies in Teaching English Language in Kuwait.* **International Journal of Emerging Technologies in Learning (IJET),** 15(5), 2020. pp.212-234.

Lead City University Ibadan DO NOT COPY

[87]S. K. Ropum, M. M. Islam, & M. F. Rabbi, *Multimedia Classrooms of the Secondary Schools in Bangladesh: A Situation Analysis*. **Journal of Research in Instructional**, 2(2), 2022, pp.175-196.

[88]D. Faridah, L. Irianti, &R. L. Fachriyani, *Investigating Pre-Service English Teachers' Perception on the Use of Multimedia in EFL Teaching and Learning Process: Pedagogical Implication* **.Jadila: Journal of Development and Innovation in Language and Literature Education,** 1(2), 2020, pp.2019-222.

[89] P. Mallick, M. Maniruzzaman, & S. Das, *Addressing Impact of Technology in English Language Teaching at Secondary Level Education in Bangladesh*. **International Journal of English Literature and Social Sciences (IJELS),** 5(3). 2020

[90]B. E. Praheto, M. R. Andayani, & N. E. Wardani, The *Effectiveness of Interactive Multimedia in Learning Indonesian Language Skills in Higher Education*. **Rupkatha J. Interdiscip. Studs. Humanity,** 12(1), 2020, pp.1-11.

[91]R. Izlin, & E. Widiyati, Teachers*' Perspective on Using Multimedia Technology for Teaching English.* **IJIET: International Journal of Indonesian Education and Teaching,** 7(2), 2023, pp.172-182.

[92]M. M. Hasan, F. Ibrahim, S. M. Mustapha, M. M. Islam, &M. A. Al Younus, *The Use of Youtube Videos in Learning English Language Skills at Tertiary Level in Bangladesh*. **IUKL Res. J,** 6, 2018, pp.27-36.

[93]M. S. Bin Abdul Samat, &A. A. Aziz, The *Effectiveness of Multimedia Learning inEnhancing Reading Comprehension Among Indigenous Pupils.* 2020

[94]R. Selvarajan, &V. Thiyagarajan, *Role of Videos to Enhance Learning Skill in English Language Teaching.* **Language In India,** 18(1). 2018

[95] Y. B. Permatasari, *Male and Female Students' Perceptions toward the Implementation of Video Conference as a Distance Learning Media that Enhances Teachers' Productivities*. **JALL Journal of Applied Linguistics and Literacy,** 2(2), 2018, pp.101-112.

Lead City University Ibadan DO NOT COPY

[96]A. Syahputra, & T. Hidayati, *The Effectiveness of Use Multimedia in English Teaching at SMPN 1 Meulaboh. In 1st International Conference on Social Sciences and Interdisciplinary Studies* (ICSSIS 2018) Atlantis Press. 2019, pp.47-48.

[97]D. Faridah, L. Irianti, &R. L. Fachriyani, *Investigating Pre-Service English Teachers' Perception on the Use of Multimedia in EFL Teaching and Learning Process: Pedagogical Implication. Jadila*: **Journal of Development and Innovation in Language and Literature Education,** 1(2), 2020, pp.2019-222.

[98]D. E. Paman-Viador, & E. D. Dioso, *The Effects of Multimedia-Based Instruction towards the English Performance of Grade 10 Students*. **EPRA International Journal of Multidisciplinary Research** (IJMR), 9(8), 2023, 20-28.

[99]D. M. Rispatiningsih, *The Role of Technology in Supporting English Learning in Elementary Schools*. **Akselerasi: JurnalIlmiah Nasional**, 4(3), 2022, 183-192.

[100]E. E. Kusmartini, *Contribution ofMultimedia and Self-Efficacy towards Students' Speaking Performance: Correlational Study*. **Jurnal Bahasa InggrisTerapan**, 8(2),2022, 92-104.

[101]B E. Praheto, M. R. Andayani, & N. E. Wardani, *Students Need of Interactive Multimedia to Learn Language Skill*. In SEWORD FRESSH 2019: Proceedings of the 1st Seminar and Workshop onResearch Design, For Education, Social Science, Arts, and Humanities, SEWORD FRESSH 2019, Surakarta, Central Java, Indonesia (P. 81).

[102]S. A. Putri., M.Melvina,& M. K.Ikhsan, *Vocational High-School Teachers' Perceptions of Media Used in EFL Classroom*. **English Teaching and Linguistics Journal (ETLIJ**), 4(1), 2023, pp.67-74.

[103] O. D. Aryani, D. A. L. Bharati, & P. Astuti, *Teachers Practices in Using Educational Mobile Applications to Teach English*. **English Education Journal**, 11(1), 2021, pp.37-55

[104] Z. Yasin, & R. Husain, *The Effect of the Using of Learning Multimedia and Motivation to The Result of Arabic Learning*. In Proceedings of the 1st International

Lead City University Ibadan DO NOT COPY

Conference on Science and Technology for An Internet of Things, Yogyakarta, Indonesia. 2019

[105]R. Sofyan, & B.Tarigan, *Using Multimedia-Based Materials in Teaching Speaking to Elementary School Students in Kabanjahe. ABDIMAS TALENTA*: **JurnalPengabdianKepada Masyarakat,** 4(2), 2019, pp.692-698.

[106]H. A. Hattani. *Media Literacy Education in Secondary School: Teachers' Attitudes*. **Journal Of Media Research-RevistaDe Studii Media**, 12(33), 2019, Pp.5-26.

[107] S. Foo, S. Majid, A. I. Mokhtar, X. Zhang, Y. K.Chang, B. Luyt, & Y. L.Theng,"*Information Literacy Skills of Secondary School Students in Singapore*", **Aslib Journal of Information Management**, 66(1), 2014, Pp. 54-76.

[108]C. C. Okeji, O. M. Ilika, &E. E. Baro*, Assessment of Information Literacy Skills: A Survey of Final Year Undergraduates of Library and Information Science in Nigerian Universities*. **Global Knowledge, Memory and Communication**, 69(6/7), 2020, pp. 521-535.

[109]J. Chukwusa, *An Assessment of The Information Literacy Skills of Students in Nigerian Universities.* **Indian Journal of Information Sources and Services***,* 11(1), 2021, pp.9-15.

[110]M. Aliyu, *Information Literacy Among Undergraduate Students of Modibbo Adama University of Technology, Yola*. **Nigerian Libraries**, 51(2), 2018., pp.97-111.

[111]O. F. Mbajiorgu, & I. V. Ubochi, *Influence of Information Literacy Skills on Students' Utilization of Library Resources and Services in Tertiary Institutions in Owerri, Nigeria*. **Information Technologist,** 18(1). 2021

[112]R. O. Oyedapo, & A.S. Oyeniyi, *Patterns of Information Literacy Skill Proficiencies of Undergraduates in Federal Universities in Southwestern Nigeria.* **Jewel Journal of Librarianship,** 15(2), 2020, pp.68-78.

Lead City University Ibadan DO NOT COPY

[113] . P. Banik,& B. Kumar, *Impact of Information Literacy Skill on Students' Academic Performance in Bangladesh*. **International Journal of European Studies,** 3(1), 2019, Pp.27-33.

[114]K. Ameen, & M.Ullah, *Information Literacy Instruction: An Overview of Research and Professional Development inPakistan*. In Information Literacy: Key to an Inclusive Society: 4th European Conference, ECIL 2016, Prague, Czech Republic, October 10-13, 2016, Revised Selected Papers 4. Springer International Publishing. 2016, pp. 555-562

[115] S. Moto, T. Ratanaolarn, S. Tuntiwongwanich, & P. Pimdee, A *Thai Junior High School Students' 21st Century Information Literacy, Media Literacy, and ICT Literacy Skills Factor Analysis*. **International Journal of Emerging Technologies in Learning (Online),** 13(9), 2018, pp.87.

[116] A. Bozkurt, *Educational Technology Research Patterns in the Realm of the Digital Knowledge Age.* **Journal of Interactive Media in Education**, (1)., 2020

[117]S. M. Jones-Jang, T. Mortensen, &J. Liu, *Does Media Literacy Help Identification of Fake News? Information Literacy Helps, but other Literacies Don't*. **American Behavioral Scientist,** 65(2), 2021, pp.371-388.

[118]K. Stopar, & T.Bartol, *Digital Competences, Computer Skills and Information Literacy in Secondary Education: Mapping and Visualization of Trends and Concepts.* **Scientometrics,** 118(2), 2019, pp.479-498.

[119]N. A. Lahaya., E. Nusantari, M. S. Hamidun, L. Dama, D. W. K. Baderan,. & C. J. Lamangantjo, *Using Digital Learning Media as Information Literacy to Improve Learning Activity*. **JurnalPenelitian Pendidikan IPA**, *9*(5), 2023, Pp.3765-3771.

[120] R. E. Wijaya, M. Mustaji, & H. Sugiharto, *Development of Mobile Learning in Learning Media to Improve Digital Literacy and Student Learning Outcomes in Physics Subjects: Systematic Literature Review*. **Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences**, 4(2), 2021, pp.3087-3098.

Lead City University Ibadan DO NOT COPY

[121]F. Alexander, & M.Galina, *Current Trends in Media and Information Literacy in Research and Scientific Publications of the Early 21st Century*. **International Journal of Media and Information Literacy,** *5*(2), 2020, pp.153-163.

Lead City University Ibadan DO NOT COPY

Chapter Three

Methodology

This chapter present the framework that guided the conduct of the research. It outlines the research design, delineates the research population and documents the procedure for selecting the study sample. The chapter also indicate the research instrument as well as the approach to the data processing adopted in the study.

3.1 Research Design

The descriptive survey research design was used in this study. The descriptive survey is ideal for this study since it aims to obtain insight into a phenomenon while also giving fundamental information on the study's variable. Furthermore, a survey was considered most effective in the collection of primary data from a large number of respondents such as those targeted for this study.

3.2 Population

The population of this study comprised of One thousand, three hundred and thirty-six (1336) senior secondary school students from one hundred and eighty (180) secondary schools in three (3) senatorial districts in Ogun State, Nigeria. The schools were selected by balloting from three senatorial districts namely Ogun Central, Ogun East, and Ogun West in order to ensure that the respondents cut across the entire state. Senior secondary students were selected for the study because they have spent considerable years in the schools and they are expected to have been exposed to the use of media resources. The students are also expected to be old enough to participate active in a study such as this

Lead City University Ibadan DO NOT COPY

and provide relevant information needed for the research. The breakdown of the study population is provided in Table 3.1

Table 3.1: Population Distribution

S/N	Schools	Students Population
1.	Our Lady of Apostle secondary Schl, old Epe Garage, Ijebu Ode	383
2.	Command Day Secondary School, Lafenwa, Abeokuta	494
3.	Comprehensive High School, Ayetoro	459
	Total	**1336**

Source[4]

3.3 Sample Size and Sampling Techniques

The sample size is the number of sampling units drawn from a population for the purpose of detailed examination. A sample is a representative of the population, which allow valid conclusions about the entire population. The sample size for this study was three hundred and seven (307) secondary school students. Multistage sampling technique was used to determine the sample to be drawn from each school. In the first stage, the researcher adopted purposive sampling to select one school from each of the three senatorial districts in Ogun state to ensure that the respondents cut across the state. In the second stage, the sample was determined using the Taro Yamane formula. : **n= N/ (1+N (e) 2)** Where: n represents the sample size. N represents the population under study. e represents the margin error.

Lead City University Ibadan DO NOT COPY

For the current study;

n= 1,336/ (1+1,336(0.05)2)

n= 1,336/ (1+ 1,336(0.0025)

n= 1,336/ (1+3.34)

n= 1,336/4.34

n= 307

In the third stage of the sampling procedure, proportional sampling technique was used to allocate samples to each school according to their contribution to the overall sample. The breakdown of the sample is provided in Table 3.2.

Table 3.2: Sample Distribution

S/N	Schools	Students Population	Sample Fraction	Sample
1.	Our Lady of Apostle secondary Schl, Old Epe Garage, Ijebu Ode	383	$\frac{383}{1336} \times 100 = 29\%$	$\frac{29}{100} \times 307 = 90$
2.	Command Day Secondary School,Lafenwa, Abeokuta	494	$\frac{494}{1336} \times 100 = 37\%$	$\frac{37}{100} \times 307 = 113$
3.	Comprehensive High School, Ayetoro	459	$\frac{459}{1336} \times 100 = 34\%$	$\frac{34}{100} \times 307 = 104$
	Total	**1336**		**307**

Source: Researcher's Computation, 2024

Lead City University Ibadan DO NOT COPY

3.4 Description of Research instrument

A structured questionnaire adapted from various studies was used as the main instrument for data collection. The questionnaire is divided into four main sections.

Section A; This consist mainly of the demographic information about the respondents, example of questions in the section include age, gender, school etc.

Section B contains questions related to use of library media resources. The items in this section were adapted from the technology acceptance model[1]. It has two main subheadings namely; perceived ease of use, and perceived usefulness. Examples of items in the section include; "I feel that using library media resources would make my assignments and projects easier to accomplish" "I do not make errors frequently when using library media resources ';. All of the items are rated on 4 points Likert Scale, e.g.; Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD).

Section C is the information literacy skills scale. It is adapted from an existing work[2]. The section has various subdivisions in line with the big6 information literacy model such as Task definition, Information Search strategies, Information location and access, Information use. In all, the section has eighteen items. Examples of the statements and questions include I can assess the credibility, reliability, and relevance of information sources.; "I can access physical resources such as libraries, archives, and the internet" etc. All of the items are rated on 4 points Likert Scale, e.g.; Very High Extent (VHE), High Extent (HE), Low Extent (LE), and Very Low Extent (VLE)

Lead City University Ibadan DO NOT COPY

Section D contains questions related to the learning outcome of secondary school students. The items in this section were adapted from a research work based on the bloom's taxonomy[3]. It has two main subheadings namely; perceived ease of use, and perceived usefulness. Examples of items in the section include; "I can summarize information to demonstrate comprehension." "I can make judgments about the value or quality of arguments or evidence'; All of the items are rated on 4 points Likert Scale, e.g.; Very High Extent (VHE), High Extent (HE), Low Extent (LE), and Very Low Extent (VLE)

3.5 Validity of Research Instrument

Validity is the degree to which an instrument measures what it is supposed to measured. The research instrument was tested for content and face validity by the research supervisor and other experts in the field. Their suggestions and amendments were incorporated into the final version of the instrument.

3.6 Reliability of Research Instrument

The reliability of the research instrument was measured through a pre-test. The researcher administered the research instrument on twenty (20) students from a public secondary school in Ibadan, [Muslim Grammar School, Ibadan, Oyo State who are not part of the original study. The responses were analysed to determine the Cronbach alpha value of each section of the scale. The results of the analysis revealed that the research instrument has a Cronbach Alpha value of 0.738.

Lead City University Ibadan DO NOT COPY

3.7 Method of Data Collection

A letter introducing the researcher as a student was obtained from the Department of Information Management, Lead City University Ibadan respectively which was used to gain permission to conduct the research with approved ethical clearance from the institutions. The researcher administered the questionnaire with the aid of two research assistants who were properly trained for three days on the process of the data collection. The collection of data lasted for two weeks.

3.8 Method of Data Analysis

Descriptive and Inferential statistics were used to analyze the data. Descriptive statistics such as frequency count, mean and standard deviation was used for the demographic analysis and research questions while regression analysis was used for hypotheses one and two. Hypotheses three was tested using multiple regression analysis. The analysis was conducted using the IBM SPSS Statistics data analysis software.

Lead City University Ibadan DO NOT COPY

Endnotes

1. A. A., Adeoye, & A. O. Olanrewaju, *Use of Technology Acceptance Model (Tam) To Evaluate Library Electronic Information Resources Use by Undergraduate Students of Lead City University, Ibadan, Nigeria*. **Library Philosophy and Practice**, 2019. 1-24.

2. E., Rahmah, *Information literacy level of students of University Negeri Padang using the Big 6 Model. In 1st Progress in Social Science*, Humanities and Education Research Symposium (PSSHERS 2019). Atlantis Press. 2020, pp. 146-149 I.,

3. Aheisibwe, L., Kobusigye, & J. Tayebwa, *Bridging Education Gap in Higher Institutions of Learning Using Bloom's Taxonomy of Educational Objectives*. **African Educational Research Journal,** 9(1), 2021. 69-74.

4. Ogun State Ministry of Education. *Student Population in Senior Secondary Schools*, 2023

Lead City University Ibadan DO NOT COPY

Chapter Four

Results and Discussion of Findings

This chapter presents the results of data analysis based on the questionnaire administered during the research. The researcher administered three hundred and seven (307) copies of the study questionnaire to respondents from three secondary schools namely (Our Lady of Apostle Secondary School, Old Epe Garage, Ijebu Ode, Command Day Secondary School, Lafenwa, Abeokuta Comprehensive High School, Ayetoro). However, at the end of the exercise, two hundred and forty-eight (248) were found to be properly filled and returned. The analysis in this chapter is based on the 248 questionnaire properly filled and returned by the respondents which represents about 81% return rate.

4.1 Demographic Data Presentation

Table 4.1: Demographic Analysis

Demographics	Metrics	Frequency	Percent
Gender	Male	95	38.5
	Female	153	61.5
	Total	**248**	**100.0**
Age	13 years	41	16.5
	14-15 years	57	23.0
	16-18 years	85	34.3
	18 years and above	65	26.2
	Total	**248**	**100.0**
Class	S S 1	91	36.7
	S S 2	106	42.8
	S S 3	51	20.5
	Total	**248**	**100.0**

Source: Fieldwork 2024

Lead City University Ibadan DO NOT COPY

Table 4.1 provides demographic data on gender, age, and class distribution for a group of 248 respondents. From the table, majority of the respondents 153(61.5%) are female, followed by male 95(38.5%). The age distribution shows that majority 85(34.3%) of the respondents are within age range of 16 and 18 years of age, followed by 65(26.2%) who are 18years and above. Next is the 57(23%) who are within age range of 14 and 15 years and lastly are a substantial number 41(16.5%) who are 13years of age. Regards class distribution, majority 106(42.8%) of the respondents are in Senior Secondary Class 2 followed by 91(36.7%) who are in Senior Secondary Class 1 and the last on the ladder is Senior Secondary Class 3 who amounted to 51(20.5%) of the distribution. In summary, the majority of participants are female, most are aged between 16-18 years, and the largest class group is S S 2.

Lead City University Ibadan DO NOT COPY

4.2. Analysis of Research Questions

4.2.1 Research Question One: What is the level of learning outcome among senior secondary school students in Ogun state?

Table 4.2. Level of Learning Outcome Among Senior Secondary School Students In Ogun State

COPY

Cognitive Domain **I Can…**	**V**ery **H**igh **E**xtent	**H**igh **E**xtent	**L**ow **E**xtent	**V**very **L**ow **E**xtent	Mean
recall facts and information related to the topic.	201 (81.1%)	47 18.9%	--	--	3.81
identify key concepts or terms relevant to the subject.	134 (54.1%)	113 (45.9%)	--	--	3.54
list examples or characteristics associated with the topic.	147 (59.8%)	85 (34.4%)	14 (5.7%)	--	3.54
explain the meaning or significance of concepts in my own words.	137 (55.7%)	96 (38.5%)	14 (5.7%)	--	3.50
summarize information to demonstrate comprehension.	126 (53.3%)	112 (45.9%)	2 (0.8%)	---	3.52
interpret diagrams, charts, or graphs related to the subject matter.	177 (55.7%)	97 (39.3%)	9 (4.1%)	2 (0.8%)	3.50
use knowledge or concepts in new situations or contexts.	119 (48.4%)	126 (51.6%)	--	--	3.48
demonstrate skills or techniques learned in practical scenarios.	109 (44.6%)	101 (45.5%)	22 (9.1%)	2 (0.8%)	3.34
break down complex ideas or information	1799	67	--	--	3.73

into component parts.	(73.0%)	(27.0%)			
identify patterns or relationships among different elements.	139 (55.4%)	105 (43.0%)	4 (1.7%)	--	3.54
make judgments about the value or quality of arguments or evidence.	129 (51.6%)	87 (35.2%)	30 (12.3%)	2 (0.8%)	3.38
critique the strengths and weaknesses of different viewpoints.	181 (73.0%)	67 (27.0%)			3.73
justify my opinions or decisions based on reasoned arguments.	176 (71.9%)	67 (27.3%)	2 (0.8%)		3.71
generate new ideas, solutions, or products based on existing knowledge.	144 (57.9%)	92 (37.2%)	12 (5.0%)		3.53
design innovative approaches or strategies to address a problem.	181 (73.0%)	67 (27.0%)			3.73
Average Mean					**3.6**

Lead City Univers

Affective Domain					
I enjoy coming to school every day.	171 (69.4%)	62 (25.6%)	12 (5.0%)		3.64
I feel motivated to learn new things in my classes.	143 (57.9%)	91 (37.2%)	12 (5.0%)		3.53
I care about doing well in my schoolwork.	60 (49.6%)	53 (43.8%)	15 (5.8%)	2 (0.8%)	3.42
I value working with others during group activities.	113 (46.7%)	108 (45.0%)	12 (5.0%)	8 (3.3%)	3.35
I feel proud when I achieve good grades.	143 (57.9%)	91 (37.2%)	12 (5.0%)		3.53
Average Mean					**3.5**
Psychomotor Domain					
I can…					
neatly write and draw in my notebooks.	135 (55.4%)	87 (35.5%)	15 (5.8%)	8 (3.3%)	3.43
easily perform physical activities in physical education (PE) class (e.g., running, jumping).	126 (50.8%)	107 (43.4%)	14 (5.7%)		3.45
accurately follow the steps in science experiments or cooking activities.	135 (55.4%)	87 (35.5%	15 (5.8%)	8 (3.3%)	3.43
I am able to follow along and keep up with dance or rhythm activities in music class.	134 (56.4%)	85 (35.9%)	16 (6.8%)	2 (0.9%)	3.48
I am able to perform hands-on activities (like using a microscope, building models) accurately and effectively.	103 (41.8%)	103 (41.8%)	29 (11.5%)	12 (4.9%)	3.20
Average Mean					**3.4**
Grand Mean					**3.5**

Decision rule: low mean is < 2.5, moderate mean is = 2.5 and high mean is > 2.5

Source: Field work, 2024.

Table 4.2 presents data on three domains of learning outcome namely, Cognitive, Affective, and Psychomotor—in terms of the participants' self-assessment of their abilities or attitudes. In the cognitive domain, the ability to recall facts scored the highest mean (3.81), with 81.1% of respondents indicating that they can recall facts and information related to the topic taught in class to a "Very High Extent" while the remaining 18.9% indicating high extent. Also, all of the respondents indicated that they can identify key concepts or terms relevant to the subject with 54.1% strongly agreeing and 45.9% agreeing. This item has a mean of 3.54. The respondents also rated themselves high in other cognitive indicators such as being able to explain the meaning or significance of concepts in my own words (55.7% "Very High Extent"; 38.5%); summarising information to demonstrate comprehension (53.3% “Very High Extent"; 45.9% High Extent); and interpreting diagrams, charts, or graphs related to the subject matter (55.7% “Very High Extent"; 39.3%).

Furthermore, all of the respondents (48.4%"Very High Extent"; 51.6% High Extent) indicated that they can break down complex ideas or information into component parts resulting in a mean score of 3.73. the Table also show that, virtually all the respondent can identify patterns or relationships among different elements (55.4% “Very High Extent"; 43% High Extent); make judgments about the value or quality of arguments or evidence (55.4% “Very High Extent"; 35.2% High Extent); critique the strengths and weaknesses of different viewpoints (73% “Very High Extent"; 27% High Extent); justify their opinions or decisions based on reasoned arguments (71.9% “Very High Extent"; 27.3% High Extent); generate new ideas, solutions, or products based on existing

Lead City University Ibadan DO NOT COPY

knowledge (57.9% “Very High Extent"; 37.2% High Extent), and design innovative approaches or strategies to address a problem The lowest mean score (3.34) was for demonstrating skills or techniques in practical scenarios, indicating a slight gap in hands-on applications of knowledge(73% “Very High Extent"; 27% High Extent). The overall average mean for the cognitive domain is 3.6, indicating a high level of cognitive ability among the students.

In the affective domain, the results shows that the statement "I enjoy coming to school every day" received the highest mean score (3.64); feeling motivated to learn new things (3.53 mean) and feeling proud when achieving good grades (3.53 mean). The lowest mean score (3.35) was for valuing working with others during group activities, suggesting that collaborative work might be less appealing for some participants. The overall average mean for the affective domain is 3.5, showing positive attitudes toward school and learning.

Similarly, the analysis of the responses in the psychomotor domain reflects participants' physical skills and abilities to perform hands-on or motor-related tasks. The ability to perform physical activities in PE class had a high mean score (3.45), with 50.8% responding "Always." The ability to follow steps in experiments and neatly write and draw both had a mean score of 3.43, showing consistent motor skill abilities. The lowest mean (3.20) was for the ability to perform hands-on activities accurately and effectively, suggesting that some participants may find it challenging to perform detailed tasks like using a microscope or building models. The overall average mean for the psychomotor domain is 3.4, indicating a good level of physical and motor skills.

Lead City University Ibadan DO NOT COPY

The overall grand mean across all domains is 3.5, indicating that, on average, participants rate their learning abilities and engagement quite highly in cognitive, affective, and psychomotor domains.

The Cognitive Domain scores the highest overall (mean of 3.6), showing strong cognitive abilities among participants, particularly in recalling information and breaking down complex ideas. The Affective Domain has an average mean of 3.5, with participants showing positive attitudes toward school and learning. The Psychomotor Domain has a slightly lower mean (3.4), reflecting good but less pronounced motor skills and hands-on learning abilities.

The grand mean is 3.5 which indicates a high level of learning outcome among the respondents. The grand mean is a reflection of all the dimensions namely cognitive, affective, and psychomotor.

Lead City University Ibadan DO NOT COPY

4.2.2. Research Question Two: What are the types of information literacy skills possessed by senior secondary school students in Ogun state?

Table 4.3 Types of Information Literacy Skills Possessed by Senior Secondary School Students in Ogun State

Perceived Ease of Use	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean
I often become confused when I use library media resources	143 (57.9%)	91 (37.2%)	12 (5.0%)		3.53
I make errors frequently when using library media resources	107 (43.8%)	123 (50.4%)	12 (5.0%)	2 (0.8%)	3.37
Interacting with the library media resources is often frustrating	164 (66.4%)	69 (27.9%)	14 (5.7%)		3.61
I need to consult colleagues often when using library media resources	112 (45.1%)	119 (48.4%)	15 (5.7%)	2 (0.8%)	3.38
Interacting with library media resources requires a lot of my mental effort	125 (50.4%)	123 (49.6%)			3.50
Average Mean					**3.5**

Perceived Usefulness					
I feel that using library media resources would make my assignments and projects easier to accomplish.	137 (55.7%)	93 (37.7%)	15 (5.7%)	2 (0.8%)	3.48
I believe that accessing library media resources would enhance my academic performance.	125 (50.4%)	123 (49.6%)			3.50
library media resources are valuable for achieving my learning objectives.	94 (37.7%)	125 (50.8%)	27 (10.7%)	2 (0.8%)	3.25
library media resources provide helpful guidance in completing school assignments	137 (55.7%)	93 (37.7%)	16 (6.6%)		3.49
Overall, I believe that accessing library resources would be advantageous for my educational journey	60 (49.6%)	53 (43.8%)	15 (5.8%)	2 (0.8%)	3.42
Average Mean					**3.4**
Grand Mean					**3.45**

Decision rule: low mean is < 2.5, moderate mean is = 2.5 and high mean is > 2.5

Source: Field work, 2024.

Lead City

Table 4.3 presents data on the use of library media resources among the respondents. The use of library media resources was examined under two main dimensions; Perceived Ease of Use and Perceived Usefulness.

This dimension of perceived ease of use focuses on how intuitive and accessible students find library media resources. The high percentage of students who "Strongly Agree" or "Agree" with statements like "I often become confused when I use library media resources" (57.9% strongly agree, 37.2% agree, mean = 3.53) and "Interacting with the library media resources is often frustrating" (66.4% strongly agree, 27.9% agree, mean = 3.61) highlights a challenge in the usability of these resources. The mean values for these items, ranging from 3.37 to 3.61, indicate a significant number of students encounter difficulties, errors, and confusion while using the resources. The need for frequent consultation with colleagues (45.1% strongly agree, 48.4% agree, mean = 3.38) further underscores the students' struggle in navigating library tools independently. Although the students acknowledge that interacting with these resources demands considerable mental effort (mean = 3.50), the overall average mean score of 3.5 suggests that most students experience difficulty when using library media resources. The reliance on peers and the frustration expressed could indicate the need for better training, improved resource design, or more accessible support systems within the library environment.

The responses in the dimension of perceived usefulness shows that, despite the challenges in ease of use, students seem to recognize the potential value of library media resources in enhancing their academic performance. For instance, a majority "Strongly Agree" (55.7%) or "Agree" (37.7%) with the statement that "using library media resources would make assignments and projects easier to accomplish" resulting in mean of 3.48. Similarly, majority of the respondents (50.4%) strongly agree, and agree (49.6%)

Lead City University Ibadan DO NOT COPY

that the use of library media resources would "enhance academic performance" leading to a mean of 3.50. This shows an awareness among students of the practical benefits of engaging with library tools, even if they find it challenging at times.

However, the perception of the resources being valuable for learning objectives (mean = 3.25) is somewhat lower than other items in this category, suggesting a gap between the potential usefulness of the resources and the students' experience in utilizing them effectively. The average mean score of 3.4 for perceived usefulness indicates a generally positive outlook on the value of library media resources, although this perception is slightly tempered by the difficulties in using them.

The grand mean of 3.45 across both dimensions illustrates that while students acknowledge the usefulness of library media resources, the barriers related to ease of use may limit their effective use of these resources . The findings suggest that efforts to improve the user interface, provide better support, and offer training in the use of these resources could significantly enhance the students' experience, increasing both the ease of use and the perceived value of library media resources in achieving their academic goals.

Lead City University Ibadan DO NOT COPY

4.2.3. Research Question Three: What is the level of information literacy skills among senior secondary school students in Ogun state?

Table 4.4. Level Of Information Literacy Skills Among Senior Secondary School Students In Ogun State?

Task Definition. I can …	**Very High Extent**	**High Extent**	**Low Extent**	**Very Low Extent**	**Mean**
Clearly identify the purpose and requirements of the information needed.	137 (55.7%)	96 (38.5%)	14 (5.7%)		3.50
Define specific goals and objectives for the task.	159 (64%)	85 (34.4%)		4 (1.6%)	3.61
Determine the scope and timeframe for completing the task.	137 (55.7%)	107 (43.4%)		2 (0.8%)	3.54
Average Mean					**3.6**
Information Seeking Strategies: I can …	**Very High Extent**	**High Extent**	**Low Extent**	**Very Low Extent**	**Mean**
Develop a plan for finding relevant information, including search keywords and databases.	261 (56.6%)	93 (37.7%)	12 (4.9%)	2 (0.8%)	3.50
Use various sources such as books, articles, websites, and databases to gather information.	137 (55.7%)	77 (31.1%)	28 (11.5%)	4 (1.6%)	3.41
Employ effective search techniques, including Boolean operators and filters, to refine search results.	107 (43.8%)	122 (50.4%)	12 (5.0%)	2 (0.8%)	3.37

Average Mean					**3.4**
Location and Access: I can …					
Access physical resources such as libraries, archives, and the internet	126 (53.3%)	112 (45.9%)	2 (0.8%)	---	3.52
Use online resources and databases to access digital information.	177 (55.7%)	97 (39.3%)	9 (4.1%)	2 (0.8%)	3.50
Obtain permission or credentials to access restricted information, if necessary.	119 (48.4%)	126 (51.6%)	--	--	3.48
Average Mean					**3.5**
Use of Information: I can …					
Extract relevant information from various sources.	177 (55.7%)	97 (39.3%)	9 (4.1%)	2 (0.8%)	3.50
Organize and structure the information in a coherent manner.	119 (48.4%)	126 (51.6%)	--	--	3.48
Apply the information to address the task requirements effectively.	109 (44.6%)	101 (45.5%)	22 (9.1%)	2 (0.8%)	3.34
Average Mean					**3.4**
Synthesis: I can …	Very High Extent	High Extent	Low Extent	Very Low Extent	Mean
Integrate information from multiple sources to create a comprehensive understanding of the topic.	143 (57.9%)	91 (37.2%)	12 (5.0%)		3.53
Generate new ideas or perspectives by synthesizing diverse information.	60 (49.6%)	53 (43.8%)	15 (5.8%)	2 (0.8%)	3.42
Create a coherent and logical presentation or document based on the synthesized information.	113 (46.7%)	108 (45.0%)	12 (5.0%)	8 (3.3%)	3.35
Average Mean					**3.4**

Evaluation: I can …				
Assess the credibility, reliability, and relevance of information sources.	181 (73.0%)	67 (27.0%)		3.73
Critically analyze the strengths and weaknesses of the information gathered.	176 (71.9%)	67 (27.3%)	2 (0.8%)	3.71
Determine the suitability of the information for addressing the task requirements.	144 (57.9%)	92 (37.2%)	12 (5.0%)	3.53
Average Mean				**3.7**
Grand Mean				**3.5**

Decision rule: low mean is < 2.5, moderate mean is = 2.5 and high mean is > 2.5

Source: Field work, 2024.

Table 4.4 provides a detailed breakdown of the information literacy skills possessed by senior secondary school students in Ogun State. The analysis spans six key dimensions—Task Definition, Information Seeking Strategies, Location and Access, Use of Information, Synthesis, and Evaluation.

The first dimension examined is task definition. In this dimension, students assess their ability to clearly define the scope and purpose of an information task. With a high average mean score of 3.6, the students report a strong capacity in this area. The ability to define specific goals and objectives for tasks stands out, with 64% of students reporting a "Very High Extent" (mean = 3.61), reflecting a confident understanding of how to set targets. Additionally, 55.7% of students can clearly identify the purpose of information (mean = 3.50), and 55.7% can determine the task scope and timeframe (mean = 3.54).

Lead City University Ibadan Dig

This overall high competence in task definition highlights that students are adept at organizing their information needs and setting clear objectives before starting a project.

The second dimension is information seeking strategies. This dimension examines students' ability to develop plans for finding relevant information and using effective search techniques. While 56.6% of students report a "Very High Extent" in developing a plan to find information using keywords and databases (mean = 3.50), only 43.8% exhibit the same confidence in employing effective search techniques like Boolean operators and filters (mean = 3.37). Furthermore, 55.7% of students can gather information from a variety of sources such as books, articles, and websites (mean = 3.41), though this ability could be improved given the significant minority who struggle with this skill. The overall results indicate that students are relatively proficient in planning searches but may benefit from additional training in using more advanced search techniques. The average mean score here is 3.4, slightly lower than for task definition, indicating some challenges.

The third dimension is of information literacy skills is location and access. This dimension measures students' ability to locate and access both physical and digital resources. The results show that a notable 53.3% of students report a "Very High Extent" in accessing physical resources such as libraries (mean = 3.52), while 55.7% confidently use online databases to find digital information (mean = 3.50). Additionally, 48.4% of students can obtain permission or credentials to access restricted information if necessary (mean = 3.48). These findings suggest that most students have little difficulty accessing various forms of information, whether physical or digital, though there is a small subset

Lead City University Ibadan DO NOT COPY

who may face challenges in navigating these systems. The average mean score of 3.5 indicates a high level of competence in this area.

The fourth dimension focuses on the use of information. Students' ability to use and apply the information they have gathered is captured in this dimension. The results show that, 55.7% of students report a "Very High Extent" in extracting relevant information from multiple sources (mean = 3.50), and 48.4% can organize and structure this information coherently (mean = 3.48). However, the ability to apply the information effectively to address task requirements is somewhat lower, with only 44.6% of students rating themselves at a "Very High Extent" (mean = 3.34). These results indicate that while students are generally capable of gathering and organizing information, they may find it more challenging to apply this information effectively in solving specific tasks or problems. The average mean score of 3.4 suggests moderate proficiency.

The fifth dimension is information synthesis. The results here also show that 57.9% of students can integrate information from multiple sources at a "Very High Extent" (mean = 3.53), but their ability to generate new ideas or perspectives by synthesizing diverse information is slightly lower, with only 49.6% rating this ability highly (mean = 3.42). Similarly, 46.7% report a "Very High Extent" in creating coherent presentations or documents based on synthesized information (mean = 3.35). These results suggest that while students can gather and integrate information, they may struggle with using this information creatively or producing high-quality outputs based on their synthesis. The average mean score for this dimension is 3.4, reflecting a moderate level of competence.

Lead City University Ibadan. DO NOT COPY

The last dimension is information evaluation. It can be seen that 73.0% of students rate their ability to assess the credibility of sources at a "Very High Extent" (mean = 3.73), and 71.9% report a similar level of confidence in critically analyzing the strengths and weaknesses of the information they gather (mean = 3.71). Additionally, 57.9% can determine the suitability of information for addressing task requirements (mean = 3.53). These findings indicate that students are highly skilled at evaluating information, which is a critical competency for ensuring the quality of the information they use in their academic work. Evaluation is the highest-rated dimension, with an impressive average mean score of 3.7, indicating strong proficiency in assessing the credibility, reliability, and relevance of information.

The overall grand mean of 3.5 indicates that senior secondary school students in Ogun State possess a relatively high level of information literacy skills. They excel in defining tasks and evaluating the credibility of information but demonstrate moderate proficiency in areas like information synthesis, search techniques, and applying information effectively. To enhance these students' information literacy, interventions could focus on improving advanced search skills, promoting critical thinking, and fostering the ability to apply and synthesize information in creative ways.

Lead City University Ibadan DO NOT COPY

4.3. Presentation of Hypotheses

4.3.1 Hypothesis One: There will be no significant influence of information literacy services on the learning outcome of senior secondary school students in Ogun state

Table 4.5a-C: Significant Influence of Information Literacy Skills on the Learning Outcome of Senior Secondary School Students in Ogun State

.**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.651[a]	.424	.419	.26146

a. Predictors: (Constant), Information literacy skills

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.034	1	6.034	88.272	.000[b]
	Residual	8.203	246	.068		
	Total	14.238	247			

a. Dependent Variable: Learning outcome

b. Predictors: (Constant), Information literacy skills

lead City University Ibadan DO NOT COPY

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.361	.232		5.869	.000
	Information Literacy Skills	.618	.066	.651	9.395	.000

a. Dependent Variable: Learning outcome

Source: Field work, 2024.

Table 4.5 presents the results of a regression analysis examining the relationship between information literacy skills and learning outcome of senior secondary school students in Ogun state.

The model summary reveals that information literacy skills has a moderate positive relationship with learning outcomes of senior secondary school students in Ogun state, as indicated by the correlation coefficient (R) of 0.651. The R Square value of 0.424 indicates that 42.4% of the variance in learning outcome of senior secondary school students in Ogun state can be explained by information literacy skills. Also, the adjusted R Square of 0.419: suggests that, after adjusting for the number of variables, 41.9% of the variance in learning outcome is explained by information literacy services.

The ANOVA Table shows that the regression model is statistically significant, with an F-statistic of 88.272 and a p-value of 0.000. This indicates that information literacy skills significantly affects learning outcome of senior secondary school students in Ogun. The

Lead City University Ibadan DO NOT COPY

total explained variance (sum of squares) attributed to information literacy skills is 1.361 which further confirms that information literacy services significantly predict learning outcomes.

The coefficients table further illustrates the relationship between information literacy skills and learning outcome of senior secondary school students in Ogun state. The unstandardized coefficient for information literacy skills is 0.618, meaning that for every unit increase in information literacy skills, learning outcome of senior secondary school students in Ogun state improves by 0.618 units. With a t-value of 9.395, and a p-value of 0.000, this relationship is statistically significant, affirming the importance of information literacy skills in enhancing learning outcomes of senior secondary school students in Ogun state, the null hypothesis stating that there will be no significant influence of information literacy skills on learning outcome of senior secondary school students in Ogun State, Nigeria is hereby rejected.

4.3.2. Hypothesis Two: There will be no significant influence of media resources use on the learning outcome of senior secondary school students in Ogun state

Table 4.6a-c: Influence of Media Resources Use on the Learning Outcome of Senior Secondary School Students in Ogun state

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.805[a]	.649	.646	.20421

a. Predictors: (Constant), Media resources use

Lead City University Ibadan DO NOT COPY

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.233	1	9.233	221.404	.000[b]
	Residual	5.004	120	.042		
	Total	14.238	246			

a. Dependent Variable: Learning outcome

b. Predictors: (Constant), Media resources use

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.255	.154		8.151	.000
	Media resources use	.655	.044	.805	14.880	.000

b. Dependent Variable: Learning outcome

Source: Field work, 2024.

Table 4.6 presents the results of a regression analysis exploring the relationship between (predictor) and learning outcome (dependent variable). The model summary reveals that library media resources use has a significant positive relationship with learning outcome of senior secondary school students in Ogun state, as indicated by the correlation

Lead City University Ibadan DO NOT COPY

coefficient (R) of 0.805. The R Square value of 0.649 indicates that 64.9% of the variance in learning outcome of senior secondary school students in Ogun state can be explained by library media resources use. Also, the adjusted R Square 0.646: suggests that, after adjusting for the number of variables, 64.6% of the variance in learning outcome is explained by library media resources use.

The ANOVA Table shows that the regression model is statistically significant, with an F-statistic of 221.404 and a p-value of 0.000. This indicates that library media resources use significantly affects learning outcome of senior secondary school students in Ogun State. The total explained variance (sum of squares) attributed to library media resources use is 1.255 which further confirms that library media resources use significantly predict learning outcome among the respondents.

The coefficients table further illustrates the relationship between library media resources use and learning outcome of senior secondary school students in Ogun state. The unstandardized coefficient for library media resources use is 0.655, meaning that for every unit increase in library media resources use, learning outcome of senior secondary school students in Ogun state improves by 0.655 units. With a t-value of 14.880, and a p-value of 0.000, this relationship is statistically significant, affirming the importance of library media resources use in enhancing learning outcome of senior secondary school students in Ogun state, the null hypothesis stating that there wll be no significant influence of library media resources use on learning outcome of senior secondary school students in Ogun State, Nigeria is hereby rejected.

Lead City University Ibadan DO NOT COPY

4.3.3. Hypothesis Three: There will be no significant combined influence of information literacy skills and media resources use on the learning outcome senior secondary school students in Ogun state

Table 4.7a-c: Combined Influence of Information Literacy Skills and Media Resources Use on The Learning Outcome Senior Secondary School Students in Ogun state

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.805[a]	.649	.643	.20506

a. Predictors: (Constant), Information literacy skills and Media resources use

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	9.234	2	4.617	109.802	.000[b]
	Residual	5.004	245	.042		
	Total	14.238	247			

a. a. Dependent Variable: Learning outcome

b. Predictors: (Constant), Information literacy skills and Media resources use

Lead City University Ibadan. DO NOT COPY

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.242	.182		6.813	.000
Information literacy skills	.648	.074	.796	8.723	.000
Media resources use	.011	.087	.011	.126	.003

b. Dependent Variable: Learning outcome

Source: Field work, 2024.

Table 4.7 presents the results of a multiple regression analysis that explores the relationship between information literacy skills, media resources use, and learning outcome among senior secondary school students in Ogun state. The model summary reveals that information literacy skills and library media resources use has a very strong positive influence on learning outcome of senior secondary school students in Ogun state. This is indicated by the correlation coefficient (R) of 0.805. The R Square value of 0.649 indicates that 64.9% of the variance in learning outcome of senior secondary school students in Ogun state can be explained by library media resources use and information literacy skills. Also, the adjusted R Square 0.643: suggests that, after adjusting for the number of variables, 64.3% of the variance in learning outcome is explained by information literacy skills and library media resources use.

The ANOVA Table shows that the regression model is statistically significant, with an F-statistic of 109.802 and a p-value of 0.000. This indicates that information literacy

Lead City University Ibadan DO NOT COPY

skills and media resources use significantly predict learning outcome of senior secondary school students in Ogun State. The total explained variance (sum of squares) attributed to library media resources use is 1.242 which further confirms that information literacy skills and media resources use significantly predict learning outcome among the respondents.

The coefficients table further illustrates the relationship between information literacy skills, media resources use and learning outcome of senior secondary school students in Ogun state. The unstandardized coefficient for information literacy skills is 0.648, meaning that for every unit increase in information literacy skills, learning outcome of senior secondary school students in Ogun state improves by 0.648 units. However, the unstandardized coefficient for library media resources use is 0.011, meaning that for every unit increase in library media resources use , learning outcome of senior secondary school students in Ogun state improves by 0.011 units. With a a p-value of 0.000, and 0.003 respectively for information literacy skills and media resources use, this relationship is statistically significant. This means that the null hypothesis stating that there will be no significant combined influence of information literacy skills and media resources use on learning outcome of senior secondary school students in Ogun State, Nigeria is hereby rejected.

Lead City University Ibadan DO NOT COPY

4.4. Discussion of Findings

The study has collected and analysed empirical data to determine the influence of library media resources use and information literacy skills on the learning outcome of senior

secondary school students in Ogun State. The findings have been in line with the research questions and hypotheses.

The finding relating to the first research question indicates a high level of academic outcome among the respondents. The finding on show that the student rated themselves high in cognitive, affective, and psychomotor domains. This finding is contrary to what has been reported in majority of previous studies on students' learning outcome, particularly in Nigeria. As revealed by a Nigerian scholar, a significant proportion of the teachers' assessment focused primarily basic cognitive achievements such as knowledge and comprehension, whereas application, analysis, synthesis, and evaluation were often overlooked. This suggests that teachers in Nigeria only focus on posing problems that prioritise the application of lower levels of cognitive demand in class, while completely disregarding the use of higher levels of cognitive demand[6]. This is consistent with the results reported by other Nigerian scholars who have reported lack of deep learning among Nigeria students[8, 1, 2].

A study also observed the achievement of students in key subjects has remained consistently poor over the years. Some reasons have been attributed to be responsible for students under achievement in schools, these includes methods of studying, intelligence, gender, motivation, attitudes, science teachers and their attitudes, and self-adequacy[3]. In the same vein, another study conducted on the academic outcome among Library and Information Science students in Nigeria revealed that the level of students' learning outcomes in the schools were low[4]. The study further revealed that, in term of knowledge acquired by students (measured by tests or performance, skills, behaviour and attitudes);

Lead City University Ibadan DO NOT COPY

consumption in terms of benefits derived by students and investment in terms of outputs related to the enhancement of an individual's productive activities, all of the students performed below expectation.

Another study also reported that students' outcome in English language as a subject is very low among Nigerian secondary school students as evidenced by poor performance in external examinations[14]. Furthermore, scholars have reported that many students participate in examination misconduct and wantonly engaged in acts of corruption, prostitution, cultism, and various antisocial behaviours[5]. In addition, despite graduating with flying colours, many graduate remain unemployable due to poor grasp of what they have been taught in school. In view of a soaring enrolment rate in Nigerian colleges and the number of graduates churned out annually, moral and ethical standards, social values, financial skills and human empathy are blatantly, horribly lacking in the thoughts, statements and acts of Nigerian youths[6]. In view of this, questions have been raised on factors that could helped improve learning outcome among students. These factors can include information literacy skills and library media resources use by students.

The second research question focused on the use of library media resources among the studets. It was found that, while students acknowledge the usefulness of library media resources, the barriers related to ease of use may limit their effective use of these resources. This finding is supported by related studies. A study examined the difficulties and potential opportunities of media resource centers in certain private secondary schools located in the Osogbo city of Osun State. The key findings indicate that students and teachers encounter numerous limitations when utilizing the Media

Lead City University Ibadan DO NOT COPY

Resource Centre, such as inadequate availability of current and updated reading materials, restricted operating hours for reading, insufficient seating facilities, and absence of a professional librarian for material processing. The study concludes that in order to effectively utilize the Media Resource Centre, it is necessary to have up-to-date and sufficient information resources in school libraries, as well as the provision of professional Media Specialists, Paraprofessionals, and Skilled Maintenance Personnel to oversee library management[7].

In a related study, Nigerian scholar examined the utilization of e-learning tools among secondary school educators in Kwara State. It was found that only a few secondary schools in the state possess accessible e-learning tools such as media resources, and even those that do face several challenges such as inadequate network connectivity, unreliable power supply, and insufficient manpower. Furthermore, the study found that the teachers did not have any difficulties in accessing the e-learning resources that were accessible. However, it was noted that there was a lack of equipped computer rooms and not all teachers possessed personal computers, among other discoveries. The conclusion was reached that e-learning is indispensable for secondary schools, as evidenced by the widespread usage of computers in most entrance examinations nowadays[8].

Another study examined the availability and choice of media resources among secondary school pupils in Lagos State, with regards to their academic performance. The discussion revolved around the available sorts of media materials, their accessibility locations, and the frequency at which they can be accessed. The study suggests that school library media specialists should develop a high level of proficiency in collecting, organizing, and

Lead City University Ibadan DO NOT COPY

retrieving media resources. This will enable school library staff to effectively assist students in accessing, retrieving, and utilizing appropriate media resources in a timely manner and in the correct format. One way to accomplish this is by arranging and categorizing media resources in a manner that enables students to readily and expeditiously retrieve the necessary information for their study and personal needs[9].

The finding on the third research question show that senior secondary school students in Ogun State generally exhibit high level of information literacy, though certain areas show room for improvement. They excel in defining tasks and evaluating the credibility of information but demonstrate moderate proficiency in areas like information synthesis, search techniques, and applying information effectively. This is supported by studies conducted by previous researchers. For instance an empirical study conducted in Nigeria evaluated the information literacy proficiency and use of media resources among secondary school students in Lagos State, Nigeria. The study found that secondary school students in Lagos State, Nigeria possess a modest level of information literacy skills. The results also demonstrated a substantial impact of information literacy skills on the utilization of media resources by the participants[10].

Another study on information literacy skills among secondary school students in Lagos State, Nigeria found that the respondents possessed moderate level of information literacy skills across various domains such as identification of information needs and information retrieval. The findings also showed that information literacy abilities contributed tremendously to media resource use among the respondents and there was a significant association between information literacy skills and media resource use of the

Lead City University Ibadan DO NOT COPY

students. The study recommended that there is need for students to acquire in-depth information literacy skills to be able to analyze and evaluate information gathered from the media resources; school authorities and other concerned stakeholders in Nigeria should incorporate subjects on information skills development into the schools' time table; and there is also the need for training and re-skilling of Teacher-librarians across the secondary schools[11]. Similarly, a study on assessing the level of information literacy skills among secondary school students in Ogun State revealed that the students possessed moderate degree of information literacy abilities. In addition, information literacy skills were found to be the major contributor to media resources utilisation among secondary school students in Ogun State, Nigeria[12].

Similarly, scholars in Ghana reported that students seek information for various purposes including academic tasks, problem-solving, personal and career development, staying updated on current issues, decision-making, entertainment, employment, and leisure. They predominantly seek guidance from knowledgeable individuals and teachers to fulfill their information needs. Students demonstrate adeptness in selecting appropriate search tools, employing relevant keywords, identifying suitable search techniques, and devising effective search strategies utilizing both internet resources and the library. Additionally, they engage in critical reading to discern key points and evaluate the credibility of search results[13].

However, there are some findings contrary to this study. In one of those studies conducted in China, scholars examined the information literacy level of college students in Guangzhou area of Guangdong Province, China,. The study reported that the number

Lead City University Ibadan DO NOT COPY

of pupils utilising computers and mobile phones is on the rise with nearly half of the students having their first interaction with mobile phones in junior high school. However, their information literacy skill level is below the expected level. The students scored on various measures such as information management, communication, information retrieval and acquisition. It was observed that, while the use of digital gadgets is high, the general level of information literacy still needs to be enhanced, especially for attach importance to information retrieval and acquisition, management and communication literacy[14]. Another study conducted in Singapore secondary school also found that each of the major categories of IL skills recorded a score that is below 50 (out of a maximum of 100) except for "task definition". For skills related to "information seeking strategies", "location & access" and "information use", the types of schools, academic streams of study, and students' family background seemed to have significant influences[15].

Another study also found that a large proportion of students cannot recognise expert search tools. Also, from the study, it was found that majority of the respondents do not use Boolean operators in their search for information. Conclusively, the study reveals that information literacy abilities are crucial for every human being because information is vital to everyone and every line of life[16]. Another study conducted among students from Owerri, Imo State also investigated information literacy competency of secondary school students in Owerri West, South East of Nigeria. The findings revealed that the respondents possess low level of information literacy skills. Their practical ability to effectively utilize information literacy skills was found to be on the average. This was revealed through the responses on information literacy skills. The responses were

Lead City University Ibadan DO NOT COPY

significantly low in the areas of evaluating information, distinguishing sources of information and formulating search strategies[17].

The test of the first hypothesis revealed that information literacy skills significantly affects learning outcome of senior secondary school students in Ogun State. This finding is supported by related studies. In eastern Nigeria, researchers examined influence of information literacy skills on utilization of library resources and services by students of tertiary institution in Owerri, Imo State. The results showed that students in tertiary possess high level of information literacy skills and the students' level of information literacy skills influences their use of print resources, audio-visual resources, electronic information resources and library services[18].

A study explores the level of academic performance and information literacy skill of undergraduate students in Bangladesh. In addition, the study examines the impact of information literacy skill on students' academic performance. The study finds that most of the students' Grade Point Average (GPA) is medium standard which ranges between 3.01 and 3.50 and the level of information literacy skill is lower which ranges between 10 and 20. Besides, the study also finds information literacy skill is one of the significant factors which influence students' academic performance. More specifically, the study finds that students' GPA may be increased by 0.012 if students' information literacy skill is increased by one unit [19].

The test of the second hypothesis show that library media resources use significantly affects learning outcome of senior secondary school students in Ogun State. A similar

Lead City University Ibadan DO NOT COPY

study conducted in Kuwait revealed that there are seven factors that have an impact in using multimedia in teaching English subject, which are: facilitation, motivation, performance, behavioral, social, pedagogical, and effort factors. Moreover, the study proves that teachers have positive perceptions of multimedia technologies, but still need more supplements and supports[20]. This is important as the acceptance of library media resource is an important factor in getting students to also use these resources

In another study, students were found highly motivated to ELT classes equipped with multimedia technology as they could visualize the subject matter with reading. Key challenge filtered from the study pointed, teachers required adequate prior training to operate the multimedia and to prepare subject contents using AV tools. Majority of respondents believed, the use of technological tools with conventional methods not only inspires students' creativity but also leads the students to create new knowledge, and thus, helps develop a capable future generation open to face any global challenges[21].

Indonesian scholars also found that computer-based media such as interactive multimedia plays an important role in learning Indonesian language skills. The results show that the application of interactive multimedia is effectively used in learning language skills compared to learning using other media. In addition, interactive multimedia can also be applied to study independently outside the classroom[22]. Similarly, a concluded that the teachers have a positive perspective toward using multimedia technology in the classroom to teach English. The use of multimedia technology has had a major impact on the advancement of education, especially English learning[23].

Lead City University Ibadan DO NOT COPY

In another study titled 'The Effectiveness of Multimedia Learning in Enhancing Reading Comprehension Among Indigenous Pupil, findings shows that the implementation of multimedia learning in teaching reading comprehension is useful as the combination of multiple elements of media scaffolded the process of understanding. On the other hand, audio is the least effective in helping pupils comprehend the information[24].

Furthermore, a study from Tasikmalaya, West Java reports the implementation of video conference as a distance learning media that enhances teachers' productivities in teaching English in a state high school. After interview the students, the researcher found that, that despite some limitation, the teaching and learning process with video conferencing was successful, then male students appear more favourably and react positively compared to female students. By having more positive responses, video conferencing proven to enhance teachers' productivities[25].

Scholars in Asia have also highlighted the importance of multimedia in the teaching-learning process because it can create a good learning environment for both teachers and students. The concern is how effectively a teacher can use multimedia. Based on the phenomenon. The results showed that the use of multimedia in learning English at SMP 1 Meulaboh was effective[26].

Related research showed that the students had a positive attitude towards multimedia. Most of the participants agreed that they like multimedia because it helped them in the teaching and learning process. In this era, we can easily found multimedia. PowerPoint, YouTube Videos, Podcast, Canva, PowToon, Picture, Digital Comic, Song, PowToon,

Lead City University Ibadan DO NOT COPY

and Movie are some the kinds of multimedia that can be used by pre-service English teachers' as the solution to make the learning process more interesting and enhance the students' language pedagogy. This research concludes that using multimedia in the teaching and learning process was important to improve their achievements, understanding, performances, and to achieve objectives of language pedagogy[27].

In another study, researcher examined how multimedia may be used to increase student engagement and active learning in English classes. it was discovered that teaching English effectively involves employing multimedia-based training. The results of this study thus advise teachers, particularly at the secondary level, to incorporate the use of multimedia techniques in English topics to increase the students' involvement and active learning. This complies with the requirements of contemporary pedagogy, which further promotes an atmosphere of active learning in the classroom[28].

Furthermore, the test of the third hypotheses revealed that both information literacy skills and library media resources use has a combined significant influence on learning outcome of senior secondary school students in Ogun State. However, information literacy has a stronger influence when combined with library media resources use. Research on the relationship between media resource use, information literacy skills, and learning outcomes of senior secondary school students suggests several key findings looking at the concepts independently, and collectively. This finding is backed by empirical evidence as revealed in previous related studies. Studies have shown that information literacy skills, including the ability to access, evaluate, and use information effectively, play a crucial role in students' academic success. Students with higher

Lead City University Ibadan DO NOT COPY

information literacy skills are better equipped to navigate the vast amount of information available and discern credible sources from unreliable ones. There is evidence to suggest a positive correlation between media resource use, information literacy skills, and learning outcome among senior secondary school students.

Students who demonstrate proficiency in accessing and critically evaluating information tend to achieve higher academic performance compared to those who lack these skills. With the increasing prevalence of digital media and online resources, digital literacy has become an essential component of information literacy[29]. Another study empirically investigates such assumptions by assessing whether individuals with greater literacy (media, information, news, and digital literacies) are better at recognizing fake news, and which of these literacies are most relevant. The results reveal that information literacy—but not other literacies—significantly increases the likelihood of identifying fake news stories[30].

In a related study, researchers examined the use of digital learning media as a source of information literacy and student activity. In the learning activities of students for meetings I and II there was an increase in every aspect. These aspects include based on the introduction, student orientation to problems, organizing students to study, guiding investigations, developing and presenting work, analyzing and evaluating problem-solving processes it can be concluded that information literacy and learning activities can be put to good use during learning and increase learning activities in supporting information[31].

Lead City University Ibadan DO NOT COPY

Another study that aim to analyze the development of mobile learning in learning media to improve digital literacy and student learning outcome in physics subjects. The results of the study show that the use of mobile learning in student learning can be used as a learning support tool, media and learning resource and can be applied at the student level. The benefits of using mobile learning in learning are that it can facilitate the teaching and learning process both in the classroom and outside the classroom, attract students' attention and can generate enthusiasm and motivation in learning so that the material being delivered can be conveyed properly and can be understood by students, besides another benefit of using mobile learning is that it can support students towards independent learning. The development of mobile learning as a learning medium has been carried out by several researchers, who develop mobile learning. The results of the development carried out indicate that the media developed is more likely to focus on the teaching material only. Mobile learning developed is focused as a means of practicing working on questions that can provide various types of questions that are varied and challenging[32].

Lead City University Ibadan DO NOT COPY

Endnotes

[1] U. N. Agwagah, & E. N. Ezieke. *Effect of Formative Assessment Practice on Students' Academic Achievement in Upper Basic Mathematics in Enugu East LGA, Enugu State, Nigeria.* **Godfrey Okoye University International Journal of Education**, 3(1), 2023 pp. 1-10.

[2]B. C.Ezeanyi,O. B.Fidel-Imoisili,&E. B.Sowunmi. *Assessment of* E. B. *Difficult Mathematics Concepts as Perceived by Primary School Teachers in Enugu State, Nigeria*. **GPH-International Journal of Educational Research**, 4(10), 2021, 18-29.

[3] B O. Ellah,& C. C. Nnadi. Students' *Ability Levels in Physics: The Predictive Effect of Study Habit, Cognitive Preference and Error Patterns*. **Journal Of the International Centre for Science, Humanities and Education Research,** 4(3), 2020, pp. 25-34.

[4]J. A. Akerele, R. A. Awoyemi, &, S. O. Ogunniyi. *Attitude as Predictor of Academic Achievement of Students in Introduction to Library Studies in Federal Colleges of Education in Southern Nigeria.* **Library Philosophy and Practice**, 2022, pp 1-18.

[5] D. Ekpoto, C. Odey, & J. I. Akpa, *Student-Related Variables and Academic Outcome of Social Science Education Students in the University of Calabar, Nigeria*. **International Journal of Curriculum and Instruction**, 13(2), 2021, 1133-1147.

[6]C. O. Odey, D. F. Ekpoto,& J. I. Akpa, *Empirical Relationship between Industrial Conflict and Students' Attitude Towards Academic Activities in the University of Calabar,* **Nigeria. Journal of the Social Sciences**, 48(3), 2020, pp. 1342 - 1352

[7] Y. O. Oladapo, M. O. Nasir, M. O. Adeoye., Mrs. A. O. Gariba, & K. O. Salami, *Challenges and Prospects of Media Resources Centre in Selected Private Secondary Schools in Osogbo Metropolis, Osun State, Nigeria***. Library Philosophy and Practice (E-Journal).** 2021

[8]A. T. Toryuha,T. M. Ajala, A. J. Mbakerenthe *Use of E-Learning Resources by Secondary School Teachers in Kwara State*. **GSJ:** 8(4), 2020

[9]O. Osunrinade, & O. Adeniyi, *Access and Preference to Media Resources for Sustainable Development: A Case Study of Secondary Schools in Lagos State*. **Nigerian School Library Journal,** 2019. pp18, 159-168.

[10] B. Amusan, *Information Literacy Skills and Media Resource Utilization among Secondary School Students in Lagos State, Nigeria.* **Library Philosophy and Practice***,* 2020 pp. 1-13.

[11]B. Amusan, *Information Literacy Skills and Media Resource Utilization among Secondary School Students in Lagos State, Nigeria.* **Library Philosophy and Practice***,* 2020 pp. 1-13.

Lead City University Ibadan DO NOT COPY

[12]O. A. Osunrinade, *Demographic Factors, Information Literacy Skills and Media Resources' Utilisation Among Secondary School Students in Ogun State, Nigeria. Information* **Impact***:* **Journal Of Information and Knowledge Management**, 9(3), 2018 pp. 1-17.

[13]K. Gyesi *The Use of Computers by Students to Access Information Literacy: Case of Okuapeman Senior High School (SHS), Ghana***. Library Philosophy and Practice**, 2020, pp. 1-25.

[14]L. Liu, S.Wang., J. Chen, H. Li, J. Gui, &R. Zhang, *Information Literacy of Higher Vocational College Students in Digital Age.* **Journal of Librarianship and Information Science**, 09610006231224445. 2024

[15] S. Foo, S. Majid, A. I. Mokhtar, X. Zhang, Y. K.Chang, B. Luyt, & Y. L.Theng," *Information Literacy Skills of Secondary School Students in Singapore*", **Aslib Journal of Information Management**, 66(1),2014, pp. 54-76.

[16]I. O. Adeyemi, *An Empirical Study on the Traits of Information Literacy Level among Senior Secondary Students in Ilorin, Nigeria.* **Library Philosophy &Practice**. 2017

[17] C. O.Onyeneke, & C. Obichere, *Information Literacy Competency of Secondary School Students of Owerri West, South East, Nigeria*. Paper Presented At: IFLA WLIC 2018 – Kuala Lumpur, Malaysia – Transform Libraries, Transform Societies inSession S01 - Africa. In: Libraries As Centers of Community Engagements for Development, 22-23 August 2018, Kuala Lumpur, Malaysia.2017

[18] O. F. Mbajiorgu, & I. V. Ubochi, *Influence of Information Literacy Skills on Students' Utilization of Library Resources and Services in Tertiary Institutions in Owerri, Nigeria*. **Information Technologist,** 18(1).2021

[19] P. Banik,& B. Kumar, *Impact of Information Literacy Skill on Students' Academic Performance in Bangladesh*. **International Journal of European Studies,** 3(1), 2019, Pp.27-33.

[20] Z. Aljazzaf, *Factors Influencing the Use of Multimedia Technologies in Teaching English Language in Kuwait.* **International Journal of Emerging Technologies in Learning (IJET),** 15(5), 2020. pp. 212-234.

[21] P. Mallick, M. Maniruzzaman, & S. Das, *Addressing Impact of Technology in English Language Teaching at Secondary Level Education in Bangladesh*. **International Journal of English Literature and Social Sciences (IJELS),** 5(3). 2020

Lead City University Ibadan DO NOT COPY

[22]B. E. Praheto, M. R. Andayani, &N. E. Wardani, The *Effectiveness of Interactive Multimedia in Learning Indonesian Language Skills in Higher Education*. **Rupkatha J. Interdiscip. Studs. Humanity,** 12(1), 2020, pp. 1-11.

[23]R. Izlin, & E. Widiyati, *Teachers' Perspective on Using Multimedia Technology for Teaching English.* **IJIET: International Journal of Indonesian Education and Teaching,** 7(2), 2023, pp. 172-182.

[24]M. S. Bin Abdul Samat, &A. A. Aziz, The *Effectiveness of Multimedia Learning in Enhancing Reading Comprehension Among Indigenous Pupils.* **Arab World English Journal,** 11(2), 20202, pp. 90-302.

[25] Y. B. Permatasari, *Male and Female Students' Perceptions toward the Implementation of Video Conference as a Distance Learning Media that Enhances Teachers' Productivities*. **JALL Journal of Applied Linguistics and Literacy,** 2(2), 2018, pp. 101-112.

[26]A. Syahputra, & T.Hidayati, *The Effectiveness of Use Multimedia in English Teaching at SMPN 1 Meulaboh. In 1st International Conference on Social Sciences and Interdisciplinary Studies* (ICSSIS 2018) Atlantis Press. 2019, pp. 47-48.

[27]D. Faridah, L. Irianti, &R. L. Fachriyani, *Investigating Pre-Service English Teachers' Perception on the Use of Multimedia inEFL Teaching and Learning Process: Pedagogical Implication. Jadila*: **Journal of Development and Innovation in Language and Literature Education,** 1(2), 2020, pp. 2019-222.

[28]D. E. Paman-Viador, & E. D. Dioso, *The Effects of Multimedia-Based Instruction towards the English Performance of Grade 10 Students.* **EPRA International Journal of Multidisciplinary Research (IJMR),** 9(8), 2023, pp. 20-28.

[29] A.Bozkurt, *Educational Technology Research Patterns in the Realm of the Digital Knowledge Age.* **Journal of Interactive Media in Education**, (1)., 2020

[30]S. M. Jones-Jang, T. Mortensen, &J. Liu, *Does Media Literacy Help Identification of Fake News? Information Literacy Helps, but other Literacies Don't*. **American Behavioral Scientist,** 65(2), 2021, pp. 371-388.

Lead City University Ibadan DO NOT COPY

[31]N. A. Lahaya., E. Nusantari, M. S. Hamidun, L. Dama, D. W. K. Baderan,. & C. J. Lamangantjo, *Using Digital Learning Media as Information Literacy to Improve Learning Activity*. **JurnalPenelitian Pendidikan IPA**, *9*(5), 2023, Pp.3765-3771.

[32] R. E. Wijaya, M. Mustaji, & H. Sugiharto, *Development of Mobile Learning in Learning Media to Improve Digital Literacy and Student Learning Outcomes in Physics Subjects: Systematic Literature Review*. **Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences**, 4(2), 2021, pp. 3087-3098.

Lead City University Ibadan DO NOT COPY

Chapter Five

Conclusion

The study examined the influence of library media resources use and information literacy skills on the learning outcome of senior secondary school students in Ogun State. The researcher has collected empirical data and analysed same to bring out findings in line with the research questions and hypotheses. This chapter presents the findings, conclusions and recommendations of the study.

5.1 Summary of Findings

The findings of the study can be summarized as follows;

The study found a high level of academic outcome among the respondents. The finding on show that the student rated themselves high in cognitive, affective, and psychomotor domains.

It was also found that, while students acknowledge the usefulness of library media resources, the barriers related to ease of use may limit their effective use of these resources.

The finding on the third research question show that senior secondary school students in Ogun State generally exhibit high level of information literacy, though certain areas show room for improvement. They excel in defining tasks and evaluating the credibility of information but demonstrate moderate proficiency in areas like information synthesis, search techniques, and applying information effectively.

The test of the first hypothesis revealed that that information literacy skills significantly affects learning outcome of senior secondary school students in Ogun State.

The test of the second hypothesis show that library media resources use significantly affects learning outcome of senior secondary school students in Ogun State.

Lead City University Ibadan DO NOT COPY

Furthermore, the study found that both information literacy skills and library media resources use has a combined significant influence on learning outcome of senior secondary school students in Ogun State. However, information literacy has a stronger influence when combined with library media resources use.

5.2 Conclusion

This study highlights the importance of information literacy skills and the use of library media resources in enhancing the learning outcome of senior secondary school students in Ogun State. The findings show that students generally rated themselves high in the cognitive, affective, and psychomotor domains, reflecting positive learning outcome, While students recognize the value of library media resources, challenges related to ease of use, such as frequent confusion and frustration, may hinder the effective utilization of these resources. Furthermore, the study found that students possess a high level of information literacy skills, excelling in task definition and evaluation but exhibiting moderate proficiency in synthesis, search techniques, and applying information effectively. The test of hypotheses confirmed that both information literacy skills and library media resources use significantly impact learning outcome, with information literacy having a stronger influence when combined with resource use.

5.3 Recommendations

In line with the findings of this study, the researcher has made the following recommendations;

1. Educational institutions in Ogun State should provide additional training in advanced information search techniques, such as the use of Boolean operators and filters. This would empower students to navigate digital and physical information sources more effectively.
2. Schools should incorporate exercises that encourage students to synthesize information from multiple sources, fostering critical thinking and creativity in how they apply gathered data to solve tasks or generate new ideas.

Lead City University Ibadan DO NOT COPY

3. Secondary schools in Ogun State should enhance the usability of library media resources by offering user-friendly platforms, training sessions, and guides to reduce confusion and frustration. This would improve the students' ability to interact with and benefit from these resources.
4. In view of the issues noticed in the use of library media resources, peer-assisted learning can help students who struggle with applying information effectively. Collaborating with peers may ease barriers to library resource use and encourage collective problem-solving techniques.
5. Educational stakeholders should embed information literacy as a core component of secondary school curricula. This can be done by integrating tasks that require students to practice their literacy skills through research projects, critical evaluation assignments, and presentations.
6. Schools should periodically assess the effectiveness of library media resources in supporting academic performance. Feedback from students can help tailor resources to better meet their academic needs and remove barriers to ease of use.

5.4 Contribution to Knowledge

The study has made certain significant contributions to knowledge which can be discussed in term of conceptual, theoretical, and empirical. This study provides a comprehensive conceptual framework that links information literacy skills and the use of library media resources to learning outcomes. By identifying the specific domains of cognitive, affective, and psychomotor skills, the study contributes to understanding how these skills interact with information resources to improve students' academic performance.

In term of theoretical contributions, the study reinforces the theoretical significance of information literacy in shaping learning outcome, supporting the idea that proficiency in information literacy significantly enhances students' ability to define tasks, search for relevant data, and critically evaluate information. Furthermore, the study demonstrates how ease of use factors, derived from technology acceptance models, affect the adoption and utilization of library resources.

Lead City University Ibadan DO NOT COPY

Empirically, the study offers new insights into the specific areas where senior secondary school students excel or struggle with information literacy. It adds to the body of knowledge by showing that while students are generally proficient in task definition and evaluation, they face challenges in areas like information synthesis and search techniques. The study also provides evidence of the combined influence of information literacy and library media resource use on learning outcome, emphasizing the stronger role of information literacy when used in conjunction with these resources. These findings can guide policy and educational reforms aimed at improving students' overall academic performance.

5.5 Suggested Areas for Further Studies

This study has examined the influence of library media resources use and information literacy skills on the learning outcome of senior secondary school students in Ogun State. Future studies can expand on the topic or adopt a new perspective. Topics that can be considered include the following;

1. Influence of library media resources use and information literacy skills on the learning outcome of secondary school students in southwest Nigeria.
2. Library funding, library use and academic achievement of primary school pupils in Ogun State.
3. Librarian competence, use of digital resources and information literacy skills among secondary school students.

Lead City University Ibadan DO NOT COPY

Bibliography

Books

Rahmah, E., *Information literacy level of students of Universitas Negeri Padang using the Big 6 Model. In 1st Progress in Social Science*, Humanities and Education Research Symposium (PSSHERS 2019). Atlantis Press. 2020, pp. 146-149

Syahputra, A. & Hidayati, T. *The Effectiveness of Use Multimedia in English Teaching at SMPN 1 Meulaboh. In 1st International Conference on Social Sciences and Interdisciplinary Studies* (ICSSIS 2018) Atlantis Press. Pp. 2019, 47-48).

Conference Proceedings

Ameen, K. & Ullah, M. *Information Literacy Instruction: An Overview of Research and Professional Development in Pakistan*. In Information Literacy: Key to an Inclusive Society: 4th European Conference, ECIL 2016, Prague, Czech Republic, October 10-13, 2016, Revised Selected Papers 4 (Pp. 555-562). Springer International Publishing. 2016

Dike, V. W. & Amucheazi. O. N. *Information Literacy Education in Nigeria: Breaking Down Barriers through Local Resources*. In IASL Annual Conference Proceedings.2021

Onyeneke, C. O.& Obichere, C. *Information Literacy Competency of Secondary School Students of Owerri West, South East, Nigeria*. Paper Presented At: IFLA WLIC 2018 – Kuala Lumpur, Malaysia – Transform Libraries, Transform Societies in Session S01 - Africa. In: Libraries As Centers of Community Engagements for Development, 22-23 August 2018, Kuala Lumpur, Malaysia.2017

Praheto, B. E. Andayani, M. R. & Wardani, N. E. *Students Need of Interactive Multimedia to Learn Language Skill*. In SEWORD FRESSH 2019: Proceedings of the 1st Seminar and Workshop on Research Design, For Education, Social Science, Arts, and Humanities, SEWORD FRESSH 2019, Surakarta, Central Java, Indonesia (P. 81).

Vidal, E. Apaza, M. L. Ortega, M. Huamantuna, A. & Aqquepucho, R. *Toward the Development of Information Literacy Skills: A Framework for Beginners in Higher Education. In 2021 XVI Latin American Conference on Learning Technologies (LACLO)*2021 Pp. 542-545.IEEE.

Yasin, Z. & Husain, R. *The Effect of the Using of Learning Multimedia and Motivation to The Result of Arabic Learning*. In Proceedings of the 1st International Conference on Science and Technology for An Internet of Things, Yogyakarta, Indonesia.2019

Journal Articles

Abduganiyev, A. & Mustafoyeva, M. *Educational Resources Based on Virtual Reality*. **Academic Research in Educational Sciences,** 2(4), 2021 pp. 2035-2042.

Abdullahi, Z. M. *Information Literacy Skills and Use of E-Resources by Undergraduate Students in Nigeria in Relation to Kuhlthau's Model of Information Search Process (ISP*). **Library Philosophy and Practice (E-Journal).** 2021, pp. 4992.

Lead City University Ibadan DO NOT COPY

Abdulrahaman, M. D. Faruk, N. Oloyede, A. A. Surajudeen-Bakinde, N. T. Olawoyin, L. A. Mejabi, O. V. & Azeez, A. L. *Multimedia Tools in the Teaching and Learning Processes: A Systematic Review.* **Heliyon**, 6 (11). 2020

Abubakar, B. M. *Library and Information Science (LIS) Education in Nigeria: Emerging Trends, Challenges and Expectations in the Digital Age*. **Journal Of Balkan Libraries Union,** 8(1),202, pp. 57-67.

Achor, E. E Ajayi, V. O Ikwu, A. G & Onyeche. E. I *A Survey of Teachers' Challenges of Assessing Domains of Educational Objectives and Bloom's Taxonomy Levels in Social Studies in Benue State, Nigeria*. **International Centre for Science, Humanities and Education Research Journal,** 4(3), 2020. pp. 77-89.

Adams, N.E. *Bloom's Taxonomy of Cognitive Learning Objectives*. **Journal of the Medical Library Association: JMLA**, 103(3), pp. 152.2015

Adenariwo, F. K. & Sulyman, A. S. *Availability and Accessibility of Electronic Information Resources in Academic Libraries as Predictors of Academic Performance of Students*. **Library Philosophy and Practice**, 2022. pp 1-10.

Adeyemi, I. O. *An Empirical Study on the Traits of Information Literacy Level among Senior Secondary Students in Ilorin, Nigeria.* **Library Philosophy & Practice**. 2017

Agboke. A.L. *The Roles Quality Library Information Plays in Education, Technology and Economic Development in Nigeria.* **International Journal of Educational Policy Research and Review,** 6(3), 2019, Pp.1-6.

Agnetta, P. M. Kiende, G. H. & Ogulu, O. N. *Adequacy of Selected School Resources and Its Influence on Learners' Academic Performance in Public Secondary Schools in Makueni County, Kenya.* **Journal Of Education,** 2(3), 2022, Pp56-72.

Agwagah, U. N. & Ezieke. E. N. *Effect of Formative Assessment Practice on Students' Academic Achievement in Upper Basic Mathematics in Enugu East LGA, Enugu State, Nigeria.* **Godfrey Okoye University International Journal of Education**, 3(1), 2023, pp. 1-10.

Aheisibwe, I., Kobusigye, L., & Tayebwa, J. *Bridging Education Gap in Higher Institutions of Learning Using Bloom's Taxonomy of Educational Objectives*. **African Educational Research Journal,** 9(1), 2021. pp. 69-74.

Aina, J. A. & Adekanye, E. A. *Audio-Visual Resources Availability and Use for Library Services among Colleges of Education in Lagos State, Nigeria.* **International Journal of Library and Information Science,** 5(10),2013 pp. 417-425.

Akerele, J. A. Awoyemi, R. A., &, Ogunniyi. S. O. *Attitude as Predictor of Academic Achievement of Students in Introduction to Library Studies in Federal Colleges of Education in Southern Nigeria.* **Library Philosophy and Practice**, 2022, pp 1-18.

Akhmetshin, E. M. Ibatullin, R. R. Gapsalamov, A. R. Vasilev, V. L.& Bakhvalov. S. Y. *Audiovisual Aids Application in the Secondary-Level Vocational Education Establishments: Efficiency Analysis and Assessment*. **International Journal of Educational Management,** 33(2), 2019. pp 374-392.

Lead City University Ibadan DO NOT COPY

Akinboboye, J. T & Ayanwale, M. A *Bloom Taxonomy Usage and Psychometric Analysis of Classroom Teacher Made Test*. **African Multidisciplinary Journal of Development,** 10(1), 2021. pp. 10-21.

Al-Chalabi, H. & Hussen, A. *Analysis & Implementation of Personalization Parameters in The Development of Computer-Based Adaptive Learning Environment*. **SAR Journal Science and Research**, 3(1), 2020 pp. 3–9. Https://Doi.Org/10.18421//SAR31-01.

Alexander, F. & Galina, M. *Current Trends in Media and Information Literacy in Research and Scientific Publications of the Early 21st Century*. **International Journal of Media and Information Literacy,** *5*(2), 2020, pp. 153-163.

Ali, N. Eassa, F. & Hamed, E. *Personalized Learning Style for Adaptive E-Learning System*. **International Journal of Advanced Trends in Computer Science and Engineering,** 8(1), 2019, pp 223-230. Http://Www.Warse.Org/IJATCSE/Static/Pdf/File/Ijatcse4181 12019.Pdf

Aliyu, M. *Information Literacy Among Undergraduate Students of Modibbo Adama University of Technology, Yola*. **Nigerian Libraries**, 51(2), 2018., 97-111.

Aljazzaf, Z. *Factors Influencing the Use of Multimedia Technologies in Teaching English Language in Kuwait.* **International Journal of Emerging Technologies in Learning (IJET),** 15(5), 2020. pp. 212-234.

Alkhawaldeh, M. A. & Khasawneh, M. A. S. *Understanding the Perceptions and Challenges of Teachers in The Age of Technology*. **Journal of Namibian Studies: History Politics Culture,** 37, 2023 pp1-24.

Alshammari, M. & Qtaish, A. *Effective Adaptive E-Learning Systems According to Learning Style and Knowledge Level*. **JITE Research**, 18, 2019, pp. 529–547. Https://Doi.Org/10.28945/4459.

Alufohai, P. J. *School-Based Factors Affecting Senior Secondary School Students' Achievement in English Language in Edo State*. **European Journal of Research and Reflection in Educational Sciences** 4(9). 2016

Al-Zou'bi, R., *The Impact of Media and Information Literacy on Acquiring the Critical Thinking Skill by the Educational Faculty's Students*. **Thinking Skills and Creativity**, 39, pp. 1007822021

Amusan, B. *Information Literacy Skills and Media Resource Utilization among Secondary School Students in Lagos State, Nigeria.* **Library Philosophy and Practice***,* 2020 Pp.1-13.

Ariesta, F. W. *Effectiveness of E-Learning Media to Improve Learning Outcomes Natural Science in Primary Schools*. **Journal Of Education Research and Evaluation**, 3(2), 2019. Pp.88-95.

Arievitch, I.M., *Reprint of: The vision of Developmental Teaching and Learning and Bloom's Taxonomy of Educational Objectives*. **Learning, Culture and Social Interaction**, 27, 2020. p.100473.

Aryani, O. D. Bharati, D. A. L. & Astuti, P. *Teachers Practices in Using Educational Mobile Applications to Teach English*. **English Education Journal**, 11(1), 2021, pp. 37-55.

Banik, P. & Kumar, B. *Impact of Information Literacy Skill on Students' Academic Performance in Bangladesh*. **International Journal of European Studies,** 3(1), 2019, Pp.27-33.

Bin Abdul Samat, M. S. & Aziz, A. A. *The Effectiveness of Multimedia Learning in Enhancing Reading Comprehension Among Indigenous Pupils.* **Arab World English Journal,** 11(2), 2020, pp. 90-302.

Blackmore, J. Bateman, D. O'Mara, J. & Loughlin, J. *The Connections between Learning Spaces and Learning Outcomes: People and Learning.* **Literature Review**. 2019

Lead City University Ibadan DO NOT COPY

Bozkurt, A. *Educational Technology Research Patterns in the Realm of the Digital Knowledge Age.* **Journal of Interactive Media in Education**, (1)., 2020

Chiou, H. H. *The Impact of Situated Learning Activities on Technology University Students' Learning Outcome***. Education+ Training**, 63(3),2020, pp. 440-452.

Chukwusa, J. *An Assessment of the Information Literacy Skills of Students in Nigerian Universities.* **Indian Journal of Information Sources and Services**, 11(1), 2021, pp. 9-15.

Churchill, N. *Development of Students' Digital Literacy Skills through Digital Storytelling with Mobile Devices*. **Educational Media International**, 57(3),2020, pp. 271-284.

Cronje. J. *Towards A New Definition of Blended Learning*. **Electronic Journal of E-Learning**, 18(2), 2020. Pp114-121.

Dounas, L. Salinesi, C. & El Beqqali, O. *Requirements Monitoring and Diagnosis for Improving Adaptive E-Learning Systems Design*. **Journal Of Information Technology Education: Research,** 18, 2019, pp. 161-184. Https://Doi.Org/10.28945/4270.

Ekpoto, D. Odey, C. & Akpa, J. I. *Student-Related Variables and Academic Outcome of Social Science Education Students in the University of Calabar, Nigeria*. **International Journal of Curriculum and Instruction**, 13(2), 2021, pp. 1133-1147.

Ellah, B. O.& Nnadi. C. C. Students' *Ability Levels in Physics: The Predictive Effect of Study Habit, Cognitive Preference and Error Patterns*. **Journal Of the International Centre for Science, Humanities and Education Research,** 4(3), 2020, pp25-34.

Engel, L. C., & Rutkowski, D. *Global Influences on National Definitions of Quality Education: Examples from Spain and Italy*. **Policy Futures in Education**, 12(6), 2014, pp. 769-783.

Ezeanyi, O B. C. Fidel-Imoisili B., & Sowunmi. *Assessment of* E. B. *Difficult Mathematics Concepts as Perceived by Primary School Teachers in Enugu State, Nigeria*. **GPH-International Journal of Educational Research**, 4(10), 2021, pp. 18-29.

Farajpahlou, A. & Badnorooz, M. *Using the Information Literacy Framework 2016for Evaluating Information Literacy of Higher Education Students (Case Study: Shahid Chamran University of Ahvaz*). **Library and Information Science Research**, 10(1), 2020. pp. 185-204.

Faridah, D. Irianti, L. & Fachriyani, R. L. *Investigating Pre-Service English Teachers' Perception on the Use of Multimedia in EFL Teaching and Learning Process: Pedagogical Implication.* **Jadila: Journal of Development and Innovation in Language and Literature Education,** 1(2), 2020, pp. 2019-222.

Fauth, F. & González-Martínez. J. *On the Concept of Learning Transfer for Continuous and Online Training: A Literature Review*. **Education Sciences**, 11(3), 2021. pp. 133.

Foo, S. Majid, S. Mokhtar, A. I. Zhang, X. Chang, Y. K. Luyt, B. & Theng," Y. L. *Information Literacy Skills of Secondary School Students in Singapore*", **Aslib Journal of Information Management**, 66(1), 2014, Pp. 54-76.

Gabriel, I. A. & Osuafor, A. M. *Effect of Adaptive Learning Approach on Students' Achievement in Chemistry in Awka Education Zone of Anambra State*. **Journal of Research & Method in Education,** 11(6), 2021. pp 22-28.

Lead City University Ibadan DO NOT COPY

Gekara, M. M. Namande, B. W. & Makiya, C. R. *"Information Literacy Practices as a Tool for Accessing and Utilizing Information in Secondary Schools in Kenya"*, **African Journal of Emerging Issues**, 3(2), 2021. Pp. 39 – 61.

Gross, M. Julien, H. & Latham, D. *Librarian Views of the ACRL Framework and the Impact of Covid-19 On Information Literacy Instruction in Community Colleges*. **Library &Information Science Research,** 44(2), 2022, pp. 101151.

Gyesi,. K. *The Use of Computers by Students to Access Information Literacy: Case of Okuapeman Senior High School (SHS), Ghana***. Library Philosophy and Practice**, 2020, Pp.1-25.

Hanks, S. Neve, H. & Gale, T. *Preparing Health Profession Students for Practice in Complex Real-World Settings: How Do Educators Respond toa Model of Capability?* **International Journal of Practice-Based Learning in Health and Social Care**, 9(1), 2021, pp50-63.

Hasan, M. M. Ibrahim, F. Mustapha, S. M. Islam, M. M. & Al Younus, M. A. *The Use of Youtube Videos in Learning English Language Skills at Tertiary Level in Bangladesh*. **IUKL Res. J,** 6, 2018, pp. 27-36.

Hattani., H. A. *Media Literacy Education in Secondary School: Teachers' Attitudes*. **Journal of Media Research-RevistaDe Studii Media**, 12(33), 2019, Pp.5-26.

Hicks, A. & Lloyd, A. *Reaching into the Basket of Doom: Learning Outcomes, Discourse and Information Literacy*. **Journal of Librarianship and Information Science**, 55(2), 2023. pp282-298.

Idhalama, O. U. Igbinovia, M. O. & Ezeabasili, C. A. *Use of Webinar Tools for Teaching and Learning by Library and Information Professionals in Nigeria*. **Information Development,** 37(3), 2021, pp334-344.

Ihuoma, C. P. & Ebere. A. A. *Environmental Variables and Students' quality Learning Outcomes in Public Secondary Schools in Rivers State, Nigeria*. **Journal of Educational Research,** 40, 2022, pp. 52-62.

Isa, S. G Mammam, M. A Badar, Y. & Bala. T. *The Impact of Teaching Methods on Academic Performance of Secondary School Students in Nigeria***. International Journal of Development Research,** 10(6), 2020. pp. 37382-37385.

Ishak., R. *Future Challenges for School Leaders in Implementing the Concept of Learning Organizations in Malaysian Schools: Experts' Opinions*. **Int. J. Adv. Corp. Learn**., 13(1), 2020. Pp.77-85.

Izlin, R. & Widiyati, E. Teachers*' Perspective on Using Multimedia Technology for Teaching English.* **IJIET: International Journal of Indonesian Education and Teaching,** 7(2), 2023, pp. 172-182.

Jamogha, E. Jamogha, O. & Efosa-Isibor, S. O. *Availability and Utilization of Library Information Resources by Students in Selected Secondary Schools in Ondo West Local Government Area, Ondo State, Nigeria*. **Library Philosophy and Practice**, 2021, pp. 0_1-16.

Jones-Jang, S. M. Mortensen, T. & Liu, J. *Does Media Literacy Help Identification of Fake News? Information Literacy Helps, but other Literacies Don't*. **American Behavioral Scientist,** 65(2), 2021, pp. 371-388.

KIbenne, S. & Durodolu. O. O. *Information Needs Versus Information Services: Assessing Predictors of Secondary Schools Students with Visual Impairment Satisfaction at School Library Media Centres in South-Eastern Nigeria*. Library **Philosophy and Practice,** 2021, pp. 0_1-27.

Kiruki, B. W. & Mutula, S. M. *Accessibility and Usability of Library Websites to Students with Visual and Physical Disabilities in Public Universities in Kenya.* **International Journal of Knowledge Content Development &Technology,** 11(2). 2021

Lead City University Ibadan DO NOT COPY

Kopnina, H. *Education for the Future? Critical Evaluation of Education for Sustainable Development Goals*. **The Journal of Environmental Education**, 51(4), 2020 Pp.280-291.

Krashen, S. & Bland, J. *Compelling Comprehensible Input, Academic Language and School Libraries*. **Children's Literature in English Language Education**, 2(2), 2014, pp. 1-12.

Kusmartini, E. E. *Contribution of Multimedia and Self-Efficacy towards Students' Speaking Performance: Correlational Study*. **Jurnal Bahasa InggrisTerapan**, 8(2), 2022, pp. 92-104.

Kyriakides, L. Christoforou, C. & Charalambous, C. Y. *What Matters for Student Learning Outcomes: A Meta-Analysis of Studies Exploring Factors of Effective Teaching.* **Teaching and Teacher Education***,* 36, 2013, pp. 143-152.

Lahaya., N. A. Nusantari, E. Hamidun, M. S. Dama, L. Baderan,. D. W. K. & Lamangantjo, C. J. *Using Digital Learning Media as Information Literacy to Improve Learning Activity*. **JurnalPenelitian Pendidikan IPA**, *9*(5), 2023, Pp.3765-3771.

Liu, L. Wang., S. Chen, J. Li, H. Gui, J. & Zhang, R. *Information Literacy of Higher Vocational College Students in Digital Age.* **Journal of Librarianship and Information Science**, 09610006231224445. 2024

Lukitasari, F. Nurlaela, L. Ismawati., R. & Rijanto, T. *Comparison of Learning Outcomes between Discovery Learning with Inquiry Learning Reviewed of Student Learning Independence at Vocational High School.* **International Journal for Educational and Vocational Studies,** 2(10). 2020.

Mallick, P. Maniruzzaman, M. & Das, S. *Addressing Impact of Technology in English Language Teaching at Secondary Level Education in Bangladesh*. **International Journal of English Literature and Social Sciences (IJELS),** 5(3). 2020

Mardani, P. B.& Silalahi, R. R.The *Digital Information Literacy Skill Level on College Student (Case: Final-Year College Student*). **International Journal of Multicultural and Multireligious Understanding,** 8(1), 202, pp197-206.

Mbajiorgu, O. F. & Ubochi, I. V. *Influence of Information Literacy Skills on Students' Utilization of Library Resources and Services in Tertiary Institutions in Owerri, Nigeria*. **Information Technologist,** 18(1). 2021

Merga, M. K. *School Librarians as Literacy Educators Within a Complex Role*. **Journal Of Library Administration,** 60(8), 2020. Pp.889-908.

Moto, S. Ratanaolarn, T. Tuntiwongwanich, S. & Pimdee, P. A *Thai Junior High School Students' 21st Century Information Literacy, Media Literacy, and ICT Literacy Skills Factor Analysis*. **International Journal of Emerging Technologies in Learning (Online),** 13(9), 2018, pp. 87.

Munna A. S., & A. Kalam. M. *Teaching and Learning Process to Enhance Teaching Effectiveness: Literature Review***. International Journal of Humanities and Innovation** (IJHI), 4(1), 2021 pp 1-4.

Ngera, E. B. Echaune, M. & Wamalwa. P. K. *Library Resources as Predictor of Students' Learning Outcomes in Physics at Secondary Schools in Trans Nzoia County, Kenya*. **East African Journal of Education Studies,** 6(2), 2023. pp335-346.

Noor, N. A. M. Saim, N. M. Alias, R. & Rosli. S. H. *Students' Performance on Cognitive, Psychomotor and Affective Domain in the Course Outcome for Embedded Course.* **Universal Journal of Educational Research**, 8(8), 2020 pp 3469-3474.

Lead City University Ibadan DO NOT COPY

Normadhi, N. B. Shuib, L. Nasir, H. N. M. Bimba, A. Idris, N. & Balakrishnan, V. *Identification of Personal Traits in Adaptive Learning Environment: Systematic Literature Review.* **Computers & Education**, 2019.pp130, 168–190.Https://Doi.Org/10.1016/Jcompedu. 2018.11.005.

Odede, I. R.& Zawedde, N. *"Information Literacy Skills in Using Electronic Information Resources"* **Library Philosophy and Practice**(E-Journal). 2018 pp1947.

Odey, C. O. Ekpoto, D. F. & Akpa, J. I. *Empirical Relationship between Industrial Conflict and Students' Attitude Towards Academic Activities in the University ofCalabar,*2021 **Nigeria. Journal of the Social Sciences**, 48(3), 2020, pp1342 - 1352

Ojobor, R. C. Babarinde, E. T. & Fagbemi,. V. O. *Audio-Visual Resources in Library: An Enhancing Tool for Effective Teaching and Learning in Primary Schools in Nsukka LGA.* **Library Philosophy and Practice**, 2020. pp1A-16.

Okeji, C. C. Ilika, & O. M. Baro, E. E. *Assessment of Information Literacy Skills: A Survey of Final Year Undergraduates of Library and Information Science in Nigerian Universities*. **Global Knowledge, Memory and Communication**, 69(6/7), 2020, pp. 521-535.

Oladapo, Y. O. Nasir, M. O. Adeoye., M. O. Gariba, A. O. & Salami, K. O. *Challenges and Prospects of Media Resources Centre in Selected Private Secondary Schools in Osogbo Metropolis, Osun State, Nigeria***. Library Philosophy and Practice (E-Journal).** 2021

Olanusi, A. E., & Falade. A. O *Availability and Utilisation of School Library Media Centre sand Information Resources in Selected Public Secondary Schools in Ondo and Ekiti States, Nigeria*. **Tin-City Journal of Library, Archival and Information Science,** 12(1), 2023, pp. 14-25.

Oluwatayo., I. B Ojo, A. O Isah., S. I & Ojeleye, A. T. *Determinants of Learning Outcome in the Nigerian Primary School*s. **Journal Of Education**, 00220574221130954. 2023

Omotosho, O.J., *Assessment of students" performance: Grading systems***. In Information and Knowledge Management.** 3(2), 2013. pp. 26-50

Onwuekwe. C.N. *Availability of Information Resources and Students Satisfaction with The Use of School Library in Ahoada East Local Government Area of Rivers State*. **Library Philosophy &Practice.** 2022

Onyema, E.M. *Integration of Emerging Technologies in Teaching and Learning Process in Nigeria: the Challenges*. **Central Asian Journal of Mathematical Theory and Computer Sciences,** 1(1), 2020, Pp.35-39.

Osunrinade, O. & Adeniyi, O. *Access and Preference to Media Resources for Sustainable Development: A Case Study of Secondary Schools in Lagos State*. **Nigerian School Library Journal,** 2019. pp18, 159-168.

Osunrinade, O. A. *Demographic Factors, Information Literacy Skills and Media Resources' Utilisation Among Secondary School Students in Ogun State, Nigeria. Information Impact:* **Journal Of Information and Knowledge Management**, 9(3), 2018, Pp.1-17.

Owoseni, A. Ibem, E.& Opoko, A. *Impact of Physical Learning Environment on Students' Learning Outcomes in Secondary Schools in Lagos State, Nigeria***. Universal Journal of Educational Research,** 8(8), 2020, pp. 3635-3642.

Oyedapo, R. O. & Oyeniyi, A.S. *Patterns of Information Literacy Skill Proficiencies of Undergraduates in Federal Universities in Southwestern Nigeria.* **Jewel Journal of Librarianship,** 15(2), 2020, pp. 68-78.

Lead City University Ibadan DO NOT COPY

Oyekan, O. A. Adelodun, S. S. & Oresajo, N. O. *Allocation of Financial Resource to Enhance Educational Productivity and Students' Outcomes in Nigeria*. **International Journal of Development and Management Review**, 10(1), 2015. pp 201-209.

Paman-Viador, D. E. & Dioso, E. D. *The Effects of Multimedia-Based Instruction towards the English Performance of Grade 10 Students*. **EPRA International Journal of Multidisciplinary Research** (IJMR), 9(8), 2023, pp. 20-28.

Perkins, K. *Transforming STEM Learning at Scale*: **Phet Interactive Simulations. Childhood Education**, 96(4), 2020. Pp.42-49.

Permatasari, Y. B. *Male and Female Students' Perceptions toward the Implementation of Video Conference as a Distance Learning Media that Enhances Teachers' Productivities*. **JALL Journal of Applied Linguistics and Literacy,** 2(2), 2018, pp. 101-112.

Praheto, B. E. Andayani, M. R. & Wardani, N. E. The *Effectiveness of Interactive Multimedia in Learning Indonesian Language Skills in Higher Education*. **Rupkatha J. Interdiscip. Studs. Humanity,** 12(1), 2020, pp. 1-11.

Putri., S. A. Melvina, M.& Ikhsan, M. K. *Vocational High-School Teachers' Perceptions of Media Used in EFL Classroom*. **English Teaching and Linguistics Journal (ETLIJ)**, 4(1), 2023, Pp.67-74.

Rispatiningsih, D. M. *The Role of Technology in Supporting English Learning in Elementary Schools*. **Akselerasi: JurnalIlmiah Nasional**, 4(3), 2022, pp. 183-192.

Ropum, S. K. Islam, M. M. & Rabbi, M. F. *Multimedia Classrooms of the Secondary Schools in Bangladesh: A Situation Analysis*. **Journal of Research in Instructional**, 2(2), 2022, pp. 175-196.

Sani, Y. Uwaleke, G. C. & Chuks, E. P. *Assessment of the Effects of Environmental Factors on Students Academic Performance in Public Secondary Schools in FCT Abuja Nigeria.* 2022

Selvarajan, R. & Thiyagarajan, V. *Role of Videos to Enhance Learning Skill in English Language Teaching.* **Language In India,** 18(1). 2018

Shannon, C. Reilly, J. & Bate, J. *Teachers and Information Literacy: Understandings and Perceptions of the Concept.* **Journal Of Information Literacy**, 13(2),2019. pp 41-72.

Shukla, R. '*The SCONUL Seven Pillars of Information Literacy*: *Core Model' to Test the Skills of LIS Students, University of Jammu, India.* **Library Philosophy and Practice***,* 5851.2021

Sofyan, R. & Tarigan, B. *Using Multimedia-Based Materials in Teaching Speaking to Elementary School Students in Kabanjahe.* **ABDIMAS TALENTA: JurnalPengabdianKepada Masyarakat,** 4(2), 2019, pp. 692-698.

Song, I.S. Buba A. A. & Song, U. M. *Awareness and Use of Online Public Access Catalogue (OPAC) By Undergraduate Students in Federal University Libraries in Northern Nigeria*. **International Journal of Information and Communication Technology** (ICT)15(2), 2018, pp75-86

Stopar, K. & Bartol, T. *Digital Competences, Computer Skills and Information Literacy in Secondary Education: Mapping and Visualization of Trends and Concepts.* **Scientometrics,** 118(2), 2019, pp. 479-498.

Lead City University Ibadan DO NOT COPY

Thanuskodi, S. *Information Literacy Skills among Library and Information Science Professionals in India*. **Library Philosophy and Practice**, 2019 Pp.1-24.

Toryuha, A. T., Ajala T. M. Mbakeren A. J. *The Use of E-Learning Resources by Secondary School Teachers in Kwara State*. **GSJ:** 8(4), 2020

Udofia, N. A. *The New Educational Curriculum in Nigeria.* **J. Interdiscip. Stud. Educ***,* 10,2021 Pp.1-20.

Umeano, E. C., Onyishi,., C. N Adimora,. D. E, & Onah, U. H. *Teachers' Expertise and Students' Learning Outcomes in Secondary Schools in Enugu State, Nigeria*. **Journal of the Nigerian Academy of Education***,* 15(1).2020

Vaidya, B. *Librarians and Information Professional Activities in Nepal During COVID-19 Pandemic.* **Access: An International Journal of Nepal Library Association,** 1(1), 2022 Pp.68-73.

Valenti, S. Lund, B. & Wang, T. *Virtual Reality as a Tool for Student Orientation in Distance Education Programs: A Study of New Library and Information Science Students***. Information Technology and Libraries**, 39(2). 2020

Wekerle, C. Daumiller, M. & Kollar, I. *Using Digital Technology to Promote Higher Education Learning: The Importance of Different Learning Activities and their Relations to Learning Outcomes*. **Journal Of Research on Technology in Education,** 54(1), 2022, pp 1-17.

White, G. *Adaptive Learning Technology Relationship with Student Learning Outcomes*. **Journal Of Information Technology Education: Research**, 2020. pp19, 113-130.Https://Doi.Org/10.28945/4526

Wijaya, R. E. Mustaji, M. & Sugiharto, H. *Development of Mobile Learning in Learning Media to Improve Digital Literacy and Student Learning Outcomes in Physics Subjects: Systematic Literature Review*. **Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences**, 4(2), 2021, pp. 3087-3098.

Withorn, T. Eslami, J. Lee, H. Clarke, M. Caffrey, C. Springfield, C. & Haas, A. *Library Instruction and Information Literacy*. **Reference Services Review**, 49(3/4), 2020, pp. 329-418.

Yun, H. J. & Cho, J. *Affective Domain Studies Of K-12Computing Education: A Systematic Review from a Perspective on Affective Objectives.* **Journal of Computers in Education,** 9(3), 2022, 477-514.

Zhang, Z. G. Xu, J.Gao, L.Wang, Y.Zhu, Z. Li, & W. Zhou, *Effects Of E-Learning Environment Use on Visual Function of Elementary and Middle School Students*: *A Two-Year Assessment—Experience from China***. International Journal of Environmental Research and Public Health,** 17(5), 2020 pp1560.

Theses/Dissertations

Akungu, J. A. *Influence of Teaching and Learning Resources on Students' Performance in Kenya Certificate of Secondary Education in Free Day Secondary Education in Embakasi District,* Nairobi: Kenyatta University. 2014

Erick, N. A. & Ayienda, C. I*nfluence of Resources on Academic Performance in Public Primary Schools in Manga Sub-County*, Nyamira County, Kenya. 2022

Harindintwari, J. *Educational Resources and Student Performance in Public Primary Schools of Nyamasheke and Gasabo Districts in Rwanda* (Doctoral Dissertation, The Open University of Tanzania). 2022.

Lead City University Ibadan DO NOT COPY

Appendix

Questionnaire

Lead City University, Ibadan.
Department of Information Management
Questionnaire On
Information Literacy Skills, Media Resources Use, And Learning Outcome of Secondary School Students

Dear respondent,

This questionnaire is designed to elicit response for the completion of post graduate research work in Library and Information Science. The researcher seeks your candid response. Be assured that your responses are private and will be used strictly for academic and research purposes.

Thanks

Section A: Demographic Information

Name of School: ……..

Class; S S 1, ( ) S S 2 ( ) S S 3 ( )

Age: below 12 years ( ); 13-15 years, ( ); 16-18 years, ( ); 18 years and above ( )

Gender:Male ( ) Female ( )

Section B: Learning Outcome

Instruction: the items are designed to evaluate the quality of learning outcome among students. Choose any option that best apply to you

Key: Very High Extent (VHE), High Extent (HE), Low Extent (LE), and Very Low Extent (VLE)

	Cognitive Domain	**VHE**	**HE**	**LE**	**VLE**
1.	I can recall facts and information related to the topic.				
2.	I can identify key concepts or terms relevant to the subject.				
3.	I can list examples or characteristics associated with the topic.				
4.	I can explain the meaning or significance of concepts in my own words.				
5.	I can summarize information to demonstrate comprehension.				

Lead City University Ibadan DO NOT COPY

6.	I can interpret diagrams, charts, or graphs related to the subject matter.				
7.	I can use knowledge or concepts in new situations or contexts.				
8.	I can demonstrate skills or techniques learned in practical scenarios.				
9.	I can break down complex ideas or information into component parts.				
10.	I can identify patterns or relationships among different elements.				
11.	I can make judgments about the value or quality of arguments or evidence.				
12.	I can critique the strengths and weaknesses of different viewpoints.				
13.	I can justify my opinions or decisions based on reasoned arguments.				
14.	I can generate new ideas, solutions, or products based on existing knowledge.				
15.	I can design innovative approaches or strategies to address a problem.				
	Affective Domain	**Always**	**Often**	**Rarely**	**Never**
16.	I enjoy coming to school every day.				
17.	I feel motivated to learn new things in my classes.				
18.	I care about doing well in my schoolwork.				
19.	I value working with others during group activities.				
20.	I feel proud when I achieve good grades.				
	Psychomotor Domain				
21.	I can neatly write and draw in my notebooks.				
22.	I can easily perform physical activities in physical education (PE) class (e.g., running, jumping).				
23.	I can accurately follow the steps in science experiments or cooking activities.				

Lead City University Ibadan DO NOT COPY

24.	I am able to follow along and keep up with dance or rhythm activities in music class.				
25.	I am able to perform hands-on activities (like using a microscope, building models) accurately and effectively.				

SECTION C: **Use of Library Media Resources**

Instruction: the items are designed to evaluate use of media resources among students. Choose any option that best apply to you

Key: Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD)

S/No	Perceived Ease of Use	SA	A	D	SD
1.	I often become confused when I use library media resources				
2.	I make errors frequently when using library media resources				
3.	Interacting with the library media resources is often frustrating				
4.	I need to consult colleagues often when using library media resources				
5.	Interacting with library media resources requires a lot of my mental effort				
	Perceived Usefulness				
6.	I feel that using library media resources would make my assignments and projects easier to accomplish.				
7.	I believe that accessing library media resources would enhance my academic performance.				
8.	library media resources are valuable for achieving my learning objectives.				
9.	library media resources provide helpful guidance in completing school assignments				
10.	Overall, I believe that accessing library resources would be advantageous for my educational journey				

SECTION D: Information Literacy Skills

Instruction: the items are designed to evaluate the level of information literacy skills among students. Choose any option that best apply to you

Lead City University Ibadan DO NOT COPY

Key: Very High Extent (VHE), High Extent (HE), Low Extent (LE), and Very Low Extent (VLE)

S,N	**Task Definition. I can …**	**VHE**	**HE**	**LE**	**VLE**
1.	Clearly identify the purpose and requirements of the information needed.				
2.	Define specific goals and objectives for the task.				
3.	Determine the scope and timeframe for completing the task.				
	Information Seeking Strategies: I can …				
4.	Develop a plan for finding relevant information, including search keywords and databases.				
5.	Use various sources such as books, articles, websites, and databases to gather information.				
6.	Employ effective search techniques, including Boolean operators and filters, to refine search results.				
	Location and Access: I can …				
7.	Access physical resources such as libraries, archives, and the internet				
8.	Use online resources and databases to access digital information.				
9.	Obtain permission or credentials to access restricted information, if necessary.				
	Use of Information: I can …				
10.	Extract relevant information from various sources.				
11.	Organize and structure the information in a coherent manner.				
12.	Apply the information to address the task requirements effectively.				
	Synthesis: I can …				
13.	Integrate information from multiple sources to create a comprehensive understanding of				

Lead City University Ibadan DO NOT COPY

	the topic.				
14.	Generate new ideas or perspectives by synthesizing diverse information.				
15.	Create a coherent and logical presentation or document based on the synthesized information.				
	Evaluation: I can …				
16.	Assess the credibility, reliability, and relevance of information sources.				
17.	Critically analyze the strengths and weaknesses of the information gathered.				
18.	Determine the suitability of the information for addressing the task requirements.				

Lead City University Ibadan DO NOT COPY

Bio-data

A. Personal Data

1. Full Name: Modupe Adunni ADISA

2. Address: 125, Opara 11 Estate, Rounda, Abeokuta, Ogun State.

3. Email: medupeadica68@gmail.com

4. Date/Place of Birth: Ayetoro/15 April, 1968

5. Nationality: Nigerian

6. Name and Address of Next of Kin: Mr Rotimi Emmanuel Adisa

Add. Same as above

B. Educational Background

Educational Institutions attended with dates and Qualifications:

i. Primary Education: Ayetoro Community Primary School, Ayetoro

ii. Secondary Education: Muslim Progressive High School, Oke Odan (Senior school certificate) 2002

iii. Higher Educational Institutions: University of Ibadan (Bachelor of Library and Information Studies) **2014**

C. Working Experience with Dates

Organisation: Moshood Abiola Polytechnic Abeokuta 1996-Till Date

Role: Librarians II

Date: 1996-Till Date

D. Awards and Fellowships:

E. Membership of Professional Bodies

i. Member, Nigerian Library Association, Ogun State.

ii. Librarians Registration Council of Nigeria (LRCN)

F. Research Publication

i. Adisa, Modupe Adunni (2014). User Education programme and information utilization among medical undergraduate students in two medical institutions libraries in Ogun state

ii. Adisa, Modupe Adunni (2011). Gelede Festival in Iboro Yewa North Local Government, Ogun state.

iii. Adisa, Modupe Adunni (2010). A bibliography on Aquaculture

iv. Adisa, Modupe Adunni (2009). A bibliography on Tourism centres in Nigeria 2011- 2008

Load City University Ibadan DO NOT COPY

Referee

Dr. Adeyeye Sophia

Head of Department,
Department of Information Management,
Lead City University, Ibadan
Oyo State.
0 806 112 7708.

Barrister Olubisi Albert

Deputy University Librarian,
Lead City University Ibadan,
Oyo State.
+234 803 237 6012
broalbert@yahoo.com

Signature _____ **Date** _____

Lead City University Ibadan DO NOT COPY

The University Compliance Certification

This is to certify that this thesis by Modupe Adunni ADISA with Matriculation Number LCU/PG/002744, in the Department of Information Management, Lead City University, Ibadan, is in FULL compliance with the approved university format and style.

_____ _____

Signature Date

Lead City University Ibadan DO NOT COPY

LcuLibrary

ModupeADISALCULibrary

QuickSubmit

QuickSubmit

Lead City University

Lead City University Ibadan DO NOT COPY

DocumentDetails

SubmissionID

trn:oid:::1:3049912872

SubmissionDate

Oct21,2024,7:45PMGMT+1

DownloadDate

Oct21,2024,7:51PMGMT+1

FileName

Information_Literacy_Skill_for_Plagiarism_1.docx

FileSize

108.2KB

154Pages

33,377Words

11%OverallSimilarily

Thecombinedtotalofallmatches,includingoverlappingsources,foreachdatabase.

FilteredfromtheReport

- Bibliography
- Small Matches (less than 10 words)

MatchGroups

217 Not Cited or Quoted 9%

Matcheswithneitherin-textcitationnorquotationmarks

3MissingQuotations0%

Matchesthatarestillverysimilartosourcematerial

25Missing Citation 1%

Matchesthathavequotationmarks,butnoin-textcitation

0CitedandQuoted0%

Matcheswithin-textcitationpresent,butnoquotationmarks

TopSources

9% Internetsources

3% Publications

5% Submittedworks(StudentPapers)

Lead City University Ibadan DO NOT COPY

IntegrityFlags

0IntegrityFlagsforReview

Nosuspicioustextmanipulationsfound.

Oursystem'salgorithmslookdeeplyatadocumentforanyinconsistenciesthatwouldsetitapartfro manormalsubmission.Ifwenoticesomethingstrange,weflagit for you to review.

Lead City University Ibadan DO NOT COPY