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The Availability and Utilization of ICT/Internet Resources on Students Studies as Effective Tools for the Implementation of CCMAS in Nigeria: A Systematic Review

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Abstract— *This research study is a review of the literature on the accessibility and effectiveness of using the internet on students' academic performance as a critical approach for effective CCMAS implementation. The primary goal of the CCMAS is to assess the factors that influence students' internet use. The research also intends to discover the numerous activities that students engage in while using the internet, as well as to evaluate the various technologies that students employ when surfing the internet. The researcher read several papers. The articles studied were all about variables impacting students' internet use. Nine of the 12 papers examined the roles of the internet in students' activities, while fourteen articles focused on the technologies students used for accessing the internet. Only tertiary education articles were examined for inclusion. Because it provides learners with the opportunity to read publications, dissertations, theses, and papers that are normally unavailable in libraries, the internet has a substantial impact on student academic achievements. In terms of CCMAS, the study found that greater internet use was particularly advantageous in terms of boosting learning outcomes. The study also revealed that internet use promotes distraction when time is spent on social media instead of studying. As a result, it is advised that university officials give instructions to assist students in overcoming some of the obstacles encountered when accessing online e-libraries. The study indicated that increased internet use was extremely beneficial in improving learning outcomes. The study also discovered the negative effects of internet use, which causes distraction when time is devoted to on social media rather than studying. As a result, it is advised that university officials issue instructions to assist students in overcoming some of the obstacles encountered when utilizing the internet.*

Keywords— *CCMAS, Students, Internet, Studies, Information and Communication Technology, Learning Outcomes*.

I. INTRODUCTION

Information and Communication Technology (ICT)

This has become an indispensable method of teaching in the 21st century world in which virtually every human endeavor has become digitalized. It became popular during COVID-19 lockdown as a viable measure to overcome the challenges of social distance and prohibition of movement and physical contact. Caritas University Enugu keyed into the trend and trained lecturers on how to use Microsoft Team App to connect students at their various locations for lectures. There are varieties of software currently in use for lecture including Zoom, Goggle Meet, Microsoft Team, Video Cloud Meeting, etc. It is most effective in learning and teaching method for Distance Learning Programme.

Indeed, ICT has almost controlled every element of economic, social, and intellectual transaction through forms which include e-learning, e-phone, e-reading, electronic government, e-banking, and e-library, among others. There are also several ICT technologies presently utilized in schools, such as a digital whiteboard, power point, and so on. Around the world, they are increasingly being used for efficient teaching and learning. It facilitates teaching and learning, but it might be costly and out of reach for all students in terms of data usage. There is also the issue of inadequate network and epileptic electricity to drive information and communication technology teaching and learning.

Globalisation provides possibilities and difficulties for higher education students to place a premium on the ICTs, or information and communication technologies, such as internet use. The internet is excellent for quickly searching for information and assisting students in completing their assignments by simply searching for what they need to know on a search engine. It also allows people to communicate with each other from different locations at the same time in order to exchange ideas and information. The internet represents a major technology for communication and information that has resulted in a global revolution in the information environment. By engaging one's own learning efforts in other learners into issue solving methodologies, students might acquire alternative viewpoints on a topic debate.

[34]. as a result, as a very significant mediating function, internet-based learning increases students' happiness with learning [15]. Internet connectivity is a tool that has become a very important element in people's daily lives. In the mid-1990s, the worldwide web became available to higher education institutes as a tool for improving students' academic experience

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due to its potential to operate as an instrument of support in the many purposes over which individuals use it [48]. Internet access has greatly increased over the previous few decades and is now available everywhere, including homes, workplaces, travel, and schools [10]. Today, actual research [49] show that students' academic performance may be influenced by access to information. The utilization of reputable online resources is more important for academic research, particularly in high-level courses that demand an academic examination on literature [50]. [51] Learning engagement and digital preparedness play important roles in students' progress in university e-learning settings. The internet is nearly ubiquitous; most students have internet access on their smartphones [10].
Learning is becoming less instructor-centered and more learner-centered, and it is taking place any location, spanning classroom to homes and businesses. E-Learning, or Internet-based learning, gives users a flexible and individualized approach to learn. It provides on-demand learning possibilities and lowers learning costs. [52]. As a result, research on the influence on internet usage on student learning outcomes is required before using online use in learning. The link between internet use and educational achievement will open up new opportunities to improve the setting for learning and utilize technology for solving challenges in economics, society, and politics. As a result, we assure that this is the field of informatics.

Statement of Problem

Insufficient of funding for the effective operations of universities, in particular their library systems, has hampered the adequate availability of current books, current literate materials, and publications, which have recently become costly as a result of the global economic recession, global political instability, and devaluation of currencies, aggravated through the knowledge explosion discovered in the globally technological community around which the globe has turned. Due to the aforementioned concerns, Nigerian students' attention has switched to the use of online resources for studying, performing research, and gathering general information. The National University Commission's (NUC) proposal to replace the official minimum academic standard (BMAS) with 100% adoption of the core intellectual standard (CCMAS) is becoming a reality. Because of the rising emphasis on internet use and its multiple benefits, students who are familiar with such technology may lose a significant interest in using the library. As a result, the goal of this study is to assess the influence of internet usage on how students learn as a means of assuring that the implementation of CCMAS.

Objectives of the Study

The primary goal of this study was to evaluate students' availability of internet access as an effective technique for achieving the implementation of CCMAS outcomes for learning. The particular goal is to: 1. evaluate the factors that impact students' internet use in higher education.
2. Identify the numerous activities in which students utilize the internet in higher education.
3. Evaluate the various technologies that students use to connect to the internet and their availability.
4. Determine the challenges associated with use of the internet by students in higher institutions.

II. Review of Literecture

The internet is a technology consisting of interconnecting networks of computers that are part of a worldwide network system that allows users to exchange and publish vast amounts of information and services via the World Wide Web's (WWW's) and email infrastructure.2020 (Merriam-Webster).

Information Technology (IT)

Information Technology (11) is concerned with the computer system that assists the internet. The web is a technology that serves as interconnected networks of computers of worldwide networks collaborate to share and publish vast amounts of information as well as services via the WWW (World Wide Web), and the infrastructure required to support email. 2020 (Merriam-Webster). Information Technology (IT) is concerned with computer systems that serve to store, transport, process, and show information. The primary purpose of technology is to help individuals and society.

Interaction between people is a method of creating new technological networks that allow people to speak with one another in an effective manner. Internet-based learning is concerned with the interaction of individuals with the internet via online education service providers, which is significant from the standpoint of HCI. Nowadays, the internet has become a hub for sharing vast amounts of knowledge and interaction for educational purposes, such as e-learning and distant learning. [35].

Distance Education Distance learning has traditionally been utilized to give educational chances for students who do not fit into the traditional educational structure. People who work in multiple locations, study at home, live in secluded areas, or have a physical ailment are examples. Distant learning is a method of remote learning in which professors and students are separated geographically. Students can learn without being physically present in a classroom; they are not required to attend schools or institutions. Even if the instructor and student are physically separated throughout the learning process, good teaching can still place. Online programs and courses, mostly delivered via the Internet, have become the mainstream of higher learning. Distance learning began in the twenty-first century, and with this learning system, anybody in the globe, from anywhere, may study independently [32].

Internet Use

The internet increases users' awareness of the relevance of the globe around them. The internet serves as a repository for many forms of information. Utilization of the internet will continue to expand as long as individuals have simple access to it. According to recent data, the internet allows users to explore academic websites alongside other sites such as social networking sites, internet gaming, and cyber-sex [33]. According to research conducted by [8] on the effects of using the internet on learning outcomes and face-to-face contact, most students have access to the internet on their smartphones because an outcome of the prevalence of internet. This allows

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students to enhance their academic knowledge [52]. According to [53], computer use and access to internet resources are significantly crucial to pupils.

Time Spent on the Internet

It has recently been observed that teenagers nowadays spend a substantial amount time using the internet for a variety of reasons [54]. Regular use of the internet has been linked to issues with sustaining daily routines, school achievement, and family relationships. A study on college students' technology use and educational achievement carried out [1] found that high school students spend significantly larger amounts of time using technology for educational and work-related purposes, while students spend greater time spent through cell phones, online chatting, and social networking. Users and non-users of Facebook revealed similarly average daily internet use, with the highest group recommended being between 1 and 2 hours every pay day. Facebook users, on the other hand, had worse GPAs and spent a lesser amount of time per week studying than non-users. According to [1], kids squander time using the internet due to their non-focused approach (email, gaming, as well as social network) as well as the diversity of knowledge on certain topics on the internet. [42] A research was conducted to analyze the amount of available and usage of teaching materials for successful education in computer science in Anambra State's technical colleges.

Impact of Internet

[22] Distinguished between heavy and light internet users. Academic work, in his opinion, is the primary reason students utilize online resources on campus. Students identified as heavy internet users were found to utilize the internet for recreational purposes more than light internet users. His research also indicated that the greater the amount the internet is utilized for academic purposes, the more it is believed to have a favorable impact on academic scores. A lot of scholars (Torres, 2016) concurred that internet use improves academic achievement. They believe that students who utilize the internet more for educational resources were less probable to fail their exams. As a result, the disadvantages of not having internet connection outweigh the benefits. People that engage in interactive activities with classmates and professors, as well as use a variety of online resources for course work, tend to perform better academically [38]. Internet access has become a daily necessity in most people's life. However, the internet's addictive qualities make everyone who uses it excessively vulnerable to becoming victim of its harmful consequences. Its negative repercussions include disrupted sleeping habits, the breakdown of social connections, job losses, poor mental and physical health, and poor academic achievement. The major consequence of using the internet primarily on social networking and mailings was psychological concerns that ranged from mood swings to changed conduct, withdrawn attitude, and loneliness. This happens because they are still in some type of internet virtual world. [38] discovered in their study that when students' academic performance improves, their internet addiction decreases. This suggests that the web addiction has an impact on pupils' academic performance. Also. Computers literate pupils who are not hooked to the usage of computer facilities outperform those who are[15] Discovered that internet addiction has a major impact on students' academic achievement and mental health. He discovered that pupils in the high and substantial category of internet addiction had a negative influence upon their academic achievement and metal health compared with those who used the internet moderately. [55], reported similar results in their study, which classified internet users as light, moderate, and intensive, respectively. They observed that pupils who usage internet access at school as well as in their homes (moderate use) do better than those who do not. Additionally, students who solely utilized online resources during school (light users) had poorer marks than those who were not connected to the internet.

Old and modern technologies in higher education teaching

1, Teaching Methods from the Past
2. Students learn via repetition and memory with this strategy.
3. There is however little or no opportunity for critical thought.
4. Fear of Using Technology in the Classroom

What exactly are the new techniques of instruction?

ICT in Education & Learning.
Collaborative Learning,
Spaced Learning,
Flipped Classroom,
Self-Learning,
Gamification,
Crossover Learning, a brief Individuals and Group Presentations,
PowerPoint Presentations, and so on.

Summary

Old Teaching	New Teaching
Conventional Speed	Twitch speed
Mono-tasking	Multi-tasking
Linear approaches	Non-linear approaches
Stand-alone	Connected
Competitive	Collaborative
Passive	Active
Separating learning and playing	Learning by playing
Technology as foe	Technology as friend

Technology and Teaching

We have a responsibility to guarantee that all of our students' children are conversant with the advances in technology that is fast transforming the globe. By implementing the CCMAS with technology, we strengthen our fundamental role as a university and provide our students with the tools they need to perform well in the workplace.

It's worth asking whether many of us utilize technology in our classrooms.

Approaches to use technology

Learning occurs through every moment, whether inside and outside of university, thanks to technology, which benefits students. Learning may take place at any time, in any location.

Be flexible with location and duration

Use technology to modify the pace and space utilized for making learning more engaging, and use interactive online resources to perform virtual excursions to other locations.

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Make learning more mobile

Utilize mobile technology such as cell phones, GPS, data blogs, and pocket computers.

Social networks

Encourage learners to utilize social networking technologies to cooperate efficiently and sustainably in the design and administration of their very own learning.

Create Learning Platforms

Enable access to your study materials at any time using learning platforms and virtual learning environments.

Facilitate 1:1 support

Use online messenger services or email to encourage 1:1 support and mentoring for learners.

Wider audience:

Learn from other institutions through video conferencing and social networks. Allow learners as creators of content to present to a wider and authentic audience.

Challenges in Accessing the Internet

According to [50] the most significant barriers to full internet utilization include insufficient access, inherent hazards as well as issues such as pornography and frauds, among others. Despite indications suggesting students prefer online resources over other sources of information, they have been contested. As a result, internet connection should be available at all times, and instructors or lecturers should link students to educational sites for additional pertinent information

III. Summary, Conclusions And Recommendations

Summary

The project aims to conduct a literature evaluation on the influence of using the internet on student learning outcomes. The study looks into the following topics: The elements that impact students' internet use. The different activities that students engage in when using the internet. The numerous internet access technologies that students use. The research examined more than thirty-five publications and journals, and it was discovered that the internet is viewed as one of the instruments that affect students' learning results. Prior study on the subject has revealed that a considerable proportion of respondents in representative surveys utilize the internet for a variety of academic-related purposes. Even while technology has had some detrimental effects on education, it is obvious that technology has also simplified and flexible the educational system.

Inclusion and exclusion criteria

The analysis covered all papers about the usage of internet resources in higher education institutions. Furthermore, the articles evaluated were less than 10 years old. The research, however, omitted any papers that did not concern the usage of online resources among students in higher education.

Key findings

The study discovered the following from the examination of literature on the issue of the influence of internet usage on student learning outcomes: Students utilize the internet for a variety of purposes. The study discovered that perceived utility and attitude toward the internet were major factors in assessing a student's behavioral intent in utilizing internet access for academic reasons. The research of online learning demonstrates that students' perceptions for its simplicity of usage, usefulness, attitudes toward online learning, and social effect of students' referent group are recognized as significant aspects of students' desire to practice online. In accordance to the research, male students are more likely than girls to use the internet, which has a detrimental impact on their performance.

This is based on the behavior of male students, who tend to be more active and spend more time on the internet than girls. Extroverted personalities can contribute to poor learning results; moreover, the study shows that students who spend over six (6) hour on the internet have poor learning outcomes. Extroverted personalities are associated with poor learning results; however, the study shows that students who spend over six (6) hours on web surfing have higher CGPAs because they perform better study on the internet to broaden their knowledge and boost test preparation.

The internet helps student to access more information; one of the many benefits is that students may obtain any type of material they want to know from the internet using internet search engines such as Google search, and it also allows students to be more flexible with their assignments.

Globalisation in education, according to the report, students now have access to studying from anywhere in the globe via the internet while remaining in their comfort zone, thanks to platforms such as Google Meet, Zoom, electronic learning, screen casting, and so on. Students utilize online games for leisure, and console games and other gaming software devices are simple to use. Online games aid in the development of cognitive abilities, coordination, attention, and focus.

Utilization of the web in tertiary institutions improves educational growth by allowing students to utilize cellphones, tablets, computers, and other modern gadgets; yet, bad internet connection and excessive subscription costs are more commonly highlighted as important issues for students. The internet has facilitated globalization in education, since students from all over the world may now learn regardless of their location.

The challenges associated with the use of internet by students

The study shows the challenges associated with the use of internet by students. Below are some of the challenges: Technical Issues and poor internet connection. Many students are not provided with the high bandwidth or the strong internet connection that online courses require, and thus fail to catch up with their virtual course mates: Their weak monitors make it hard to follow the Course Management System and their learning experience becomes a problem. Moreover, most of them live off campus and find it difficult to keep in tune with the technical prerequisites for the chosen course. Some of them do not even possess computers and must seek technical support from Learning Resource Centers.

Adaptability Struggle Students' learning experiences are drastically altered when they go from traditional classroom to face-to-face lecturing online. Their intolerance to change prevents them from adapting for the online educational environment, which takes a while for them to become

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acclimated to. While passively listening and taking notes are expected in a typical classroom, online conversations or developing a website necessitate activity. Students with a "traditional" attitude struggle to adjust to Computer literacy. Although kids are typically tech aware and thus capable of using computers properly, a big concern among students nowadays is a lack of computer literacy. Many of them are unable to use simple applications that include Word and PowerPoint from Microsoft and hence are unable to manage their files. In addition, many students find it difficult to solve simple computer difficulties since they lack knowledge in this field.

Time Management

Students struggle with time management since internet research takes an enormous amount of time and effort. Students become addicted to the web when they conduct their usual study on it, and news stories on social networking sites may keep student on the internet all day, causing them to fall behind in their academic performance. High cost of subscription and Self-Motivation

The cost of subscribing to internet packages is rather high, causing difficulty in using the internet for studying. Although the internet enables learners to study or access education regardless of their location, some students lacked self-motivation in eLearning, which is a necessary criterion. Many students fall behind and consider abandoning up after enrolling in distant learning courses due to problems in navigating a technical medium.

IV. CONCLUSION

The study's goal was to conduct a literature evaluation on the influence of internet usage on student learning outcomes in order to effectively implement CCMAS. According to the findings, the availability and use of online resources are extremely helpful for the learning outcomes of students and for the successful implementation of CCMAS; however, there are several negative impacts that can cause students' learning outcomes to decline; therefore, students must set time boundaries for themselves when using the internet, and authorities should assist students in overcoming a few of the challenges faced by students in learning electronically with the internet.

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