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USAGE OF DIGITAL TOOLS FOR EFFECTIVE CLASSROOM COMMUNICATION PROCESS IN SENIOR SECONDARY SCHOOLS IN UDU LOCAL GOVERNMENT AREA, DELTA STATE, NIGERIA

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ABSTRACT
The research work is focused on examining the usage of digital tools in classroom communication process. Digital tools as it concerns this work are same as information and communication technology (ICT) tools, as digital tools evolved from ICT, hence can also be referred to as ICT tools. The communication process is concerned with classroom activities such as teaching and learning that involve the teacher and students in a classroom. The paper in its findings from the teachers and students of the selected schools in Udu LGA, Delta State, are of the position that digital tools can facilitate resourceful classroom communication process or teaching and learning process if appropriately used by the teacher and students alike. The study adopted the descriptive survey design method because it involves the use of questionnaire. The questionnaire has a sampled population of three hundred (300) respondents that include hundred (100) teachers and two hundred (200) students drawn from ten (10) public senior secondary schools of the selectee local government area. A questionnaire contained thirty (30) items shared into four (4) tables of eight (8) items in two (2) tables each and seven (7) items of another two (2) tables, constructed, validated and administered on the sampled respondents with all questionnaire retrieved back. The collected data was analyzed with the aid of a simple percentage method. The findings from the respondents of the sampled secondary schools in Udu LGA relatively have digital tools but are not significantly and resourcefully utilized in the instructional process. Based on the findings, some recommendations were made for the stakeholders so as to obtain the maximal usage of these resourceful tools made dormant as a result of lack of usage.

Keywords: Usage, Digital tools, Classroom communication processes, Challenges, Benefits.

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Introduction

Education no doubt is the bedrock for a nation's growth and development in all its sectors, with communication as an essential requirement in the teaching and learning process. No nation can achieve the much desired economic advancement until as a matter of policy, the leaders and stakeholders in the sector invigorate the essential technologies into all facets of our educational system, posited Igbunu (2022). Education provides the learner with the needed knowledge and skills for as to effectively function within a society. According to Anho (2014), education is a veritable platform for resolving socio-cultural, economic, political, scientific and technological challenges confronting various sectors of human endeavors. Education facilitates the acquisition of knowledge, skills, values, beliefs and attitudes.

Communication as a concept is the transfer, transmission or exchange of ideas, knowledge, attributes, from one source to another, from a person to person or from a group of persons to another. Information and communication technology (ICT), in today's world refers to technological devices called digital tools that determined the efficiency and effectiveness that aids in communication and information handling. To affirm this, ESCAP (2000), stated that digital devices or tools made of hardware, software, networks and media evolved from ICT and used for data collection, data processing, information sharing and communication by the mediums of voice, texts and images. According to Mbaeze, Ukwandu and Anudu (2010), citing World Bank (2002), defined information and communication technologies vis-à-vis digital tools as modern tools used by educators and teachers to modify the teaching methods so as to arouse the students' interest and attention. The usage of digital tools in the classroom cannot be resourceful without appropriate communication, which is the process of information sharing or exchange between persons or group of persons with the aid of speech, writing, symbols that involve the sender and receiver(s).

The usage of digital tools make for easy access to academic resources for learners, institutions of learning, and research bodies worldwide. Digital devices are a set of technological tools used in the classroom to create, store, manage and broadcast information from a sender or teacher to receivers or students. Examples of digital devices or tools like smart boards, smart classrooms, smart phones and gadgets, touch pads, and many others are major technological breakthroughs for resourceful classroom communication process, which in the teaching and learning process, is believed that digital devices or tools if resourcefully used in the classroom system will positively impact the classroom process.

Hence, the teaching and learning process carried out in classrooms are aimed at achieving the development and refinement of man's intellectual and technological potentials. The desirable behavioral changes achieved through the medium of education can be rewarding for learners and society at large. However, these desired behavioral changes can hardly occur without an effective classroom communication processes. UNESCO (2025), defined communication as the act of communicating with people. And classroom communication as an interaction between the teacher and students in the classroom by verbal, and non-verbal mediums. Teaching and learning are achieved through meaningful communication to improving learners' behaviors. Teachers and learners alike are beneficiaries of the technology, as its application can aid in efficient presentations, develop resourceful teaching notes, develop tests and examination questions, store and efficiently transfer educational resources speedily between teachers and students, and between their peers. According to Nwagwu, (2006), the usage of digital tools in the classroom process aid learners to work and promptly submit their assignments, project works, and test responses, leading to economic use of time and reduction in financial burden on the part of the learners and parents.

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Lee and Nera (2008) defined digital tools as digitized tools to transmit information in the form of text books, audio, video and graphics over the internet or network. Idowu and Esere (2013) as cited by Igbunu (2022), believes that though of essence in advancing knowledge and skills in the classroom, but teachers' poor understanding of the impact of digital tools' usage in education to facilitate resourceful knowledge and skills delivery has created serious challenges for its integration in a classroom communication process. The classroom communication processe involves three basic elements which are; the instructor/teacher, who is the sender of the message/taught concept, the receivers or students, and the message which is the subject/course concept.

According to Onoriode et al. (2019), ICT as a digital platform on which digital tools strive, has created the avenue for teachers and learners to share knowledge on contemporary issues. The usage of digital tools in the teaching-learning process has come to play a new role of mentoring, and coaching of learners instead of the conventional spoon feeding approach. These tools provide learners with access to variety of programs and learning resources, enabling them to learn independently, interact and share learning experiences with teachers and each learner.

In the assertion of Igbunu (2020), modern ICT compliant teachers use digital devices or tools to teach learners and make uninteresting and difficult lessons to become interesting and motivating. Adeyanji (2013) opined that technology from which digital tools evolved, is the expert application of scientific knowledge in problem solving. He further stated that technology has greatly impacted the way lessons are presented and taught in the classroom to students.

Statement of the Problem

The study attempts to analyze the degree of digital tools usage by senior secondary teachers and students in classroom communication process in Udu LGA. Many students in Delta State secondary schools use digital devices for non-academic purposes and so not officially allowed in the classroom. The teachers with digital tools rarely use them for teaching and learning in the classroom process and schools are from providing the ideal facilities. This observed anomaly necessitated the study.

Aim and Objectives of the Study

The objective of this study is to evaluate the usage of digital tools by teachers and students, the challenges and benefits of digital tools in classroom communication process in the selected schools in Udu LGA, Delta State. The specific objectives of the study are to:

i. find out if the usage of digital tools in the classroom causes distractions to students and teachers during teaching and learning process and the usage effect on the academic performance of students.

ii. find out if teachers use digital tools to enhance students' performance and encourage their usage in classroom communication process.

Research Questions

Based on the stated problems, the research questions below were formulated.

a) Does the absence of ICT infrastructure affect the use of digital tools in classroom communication process?

b) To what extent do teachers make use of digital tools during classroom instructional delivery or classroom communication process?

c) Does the use of digital tools by students during classroom communication process affect their academic performance?

d) Do teachers encourage students' use of digital tools during classroom teaching-learning process?

Methodology

The study adopted the descriptive survey research design method which allows for the use of questionnaire as a research instrument. The study randomly selected ten (10) public senior secondary schools in Udu LGA of Delta state. The population of the study comprised of one hundred (100) teachers of ten per school and two hundred (200) students of twenty per school, amounting to three hundred (300) respondents of the sampled population. The instrument used for data collation is a questionnaire titled digital tools usage questionnaire (DTUQ) in the selected senior secondary schools in Udu LGA. The questionnaire had four (4) research questions represented with four (4) tables of thirty (30) sub-questions or items, designed to obtain data from the teachers and students of the respective schools. The collected data will be analyzed with the aid of the simple percentage (%) method.

Results and Discussions

Table 1: Absence of ICT infrastructure affects use of digital tools in classroom delivery process

S/N	Items	Responses
1	Does school management provides airtime or data used by teachers and students during the classroom process?	No
2	Do the data used by students be purchased by students?	No
3	Does the school have strong network signal to connect digital tools for effective usage?	No
4	Is there projector or smart board in the classroom for communication process?	No
5	Are you provided with data by the school for use in your device?	No
6	Is your school linked with active internet signal?	No
7	Does the school have wifi services for academic purpose?	No
8	Is your school or classroom connected with LAN?	No

The table above shows that the ICT infrastructure needed to facilitate the usage of digital tools in the classes are absent or minimal as captured by responses in table.

Table 2: The degree of digital tools usage in classroom communication process

S/N	Items	Responses
1	Does the teacher see the use of digital tools as a stressful teaching method?	No
2	Do teachers utilize digital tools like iPad, WhatSapp, YouTube, etc., in classroom communication process?	No
3	Does the teacher sometimes use a digital tool in classroom communication process?	No
4	Do teachers prefer the use of digital tools in classroom communication process?	No
5	Does the lack of power supply limit the use of digital tools in teaching deliveries?	Yes
6	Is the classroom equipped with smart boards for instructional delivery?	No
7	Are students allowed to use digital tools for classroom assignments during class?	No
8	Do teacher and students collaborate in the use of digital tools in lessons deliveries?	No

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The table 2 shows that digital tools are not being used during classroom communication process as a result of numerous challenges such as the poor power supply, high cost of purchasing digital tools and high cost of data subscription, etc. And this has resulted in the limited use in lessons deliveries.

Table 3. The impact of digital tools on the academic performance of students

S/N	Items	Responses
1	Can students acquire knowledge and skills with the aid of digital tools during teaching and learning process?	Yes
2	Can the use of digital tools in teaching and learning motivate students?	Yes
3	Can digital tools be used in visualizing subjects' concepts by learners?	Yes
4	Do students learn and remember easily with the use of digital tools in learning process?	No
5	Do digital tools facilitate learning and ease the tension of excessive explanation?	Yes
6	Do digital tools have the capacity to update students academically via networking?	Yes
7	Can digital tools used in instruction enhance students' retention power?	Yes

The table reveals that the use of digital tools in classroom instruction can facilitate teaching and learning process. And have the capacity to arouse learners' interest and enhance students' academic performance, but they are not allowed.

Table 4. Teachers should encourage students' use of digital tools in the classroom teaching-learning process

S/N	Items	Responses
1	Do students' make use of digital tools during instruction in the classroom?	No
2	Are students allowed to use their knowledge of digital tools in the class during instruction?	No
3	Should students be allowed to use digital tools to enhance learning?	Yes
4	Do students spend too much of their useful time with digital tools?	Yes
5	Should teachers exercise control on how students qualitatively use their digital tools?	Yes
6	Are students guided on how best to use digital tools during classroom communication process if allowed?	Yes
7	Do digital tools in the hands of students, without guide cause lack of concentration in the classroom?	Yes

The table shows that digital tools used by students without control by teachers can cause distraction and concentration loss during the classroom communication process.

Discussion of findings

The study's findings reveal a profound infrastructural barrier to the integration of digital tools in the classroom, as unanimously confirmed by all respondents in Table 1. The 100% agreement that the absence of ICT infrastructure affects usage underscores a foundational challenge, rendering existing tools ineffective even when present. This aligns directly with the challenges outlined by the GoGuardian Team (2024), who identify poor connectivity, lack of devices, and broader ICT infrastructure limitations as critical impediments. The complete consensus among participants suggests that without addressing these fundamental gaps in hardware and connectivity, any discussion of digital integration remains theoretical, as schools lack the basic capacity to facilitate effective usage.

Beyond infrastructure, the data indicates a stark underutilization of available technology within the pedagogical process itself. Table 2 shows that 87.5% of respondents believe there is no acceptable degree of digital tool usage in classroom teaching and learning, with teachers having negligible personal use and students largely denied access. This underutilization is further exacerbated by a clear lack of pedagogical encouragement, as evidenced in Table 4, where 71.43% of responses indicated teachers do not encourage students' use of digital tools. This points to a significant human factor challenge, corroborated by the GoGuardian Team (2024), who note that many teachers lack the foundational digital knowledge and skills for effective integration. Consequently, even in instances where minimal infrastructure exists, a combination of inadequate training and possibly hesitancy leads to underutilization, preventing the tools from becoming a natural part of the communication and instruction process.

Despite the prevalent challenges, the study identifies a strong perceived potential for digital tools to positively impact learning outcomes when effectively employed. As shown in Table 3, 85.71% of responses affirmed that the usage of digital tools can affect academic performance, indicating a widespread belief in their pedagogical value. This suggests that educators recognize the benefits, such as enhanced engagement or access to resources, in principle. However, this recognition exists in tension with the realities documented in the other tables. The GoGuardian Team (2024) contextualizes this tension by highlighting how challenges like student misappropriation of technology for entertainment and the resulting distractions can undermine these potential benefits. Thus, the positive perception of impact is likely aspirational, hinging on a future state where infrastructure and training are sufficient to harness the tools effectively while mitigating their risks.

Therefore, the findings paint a picture of a system caught in a cycle of constraint. The near-total absence of functional infrastructure (Table 1) creates the primary barrier, which in turn contributes to low usage (Table 2) and a lack of teacher encouragement (Table 4). This cycle stifles the realization of the acknowledged academic benefits (Table 3). The challenges enumerated by the GoGuardian Team (2024), ranging from high costs and poor connectivity to teacher preparedness and student discipline issues, provide a comprehensive framework for understanding these findings. Ultimately, the study demonstrates that effective classroom communication via digital tools is less a question of teacher or student willingness and more a systemic issue requiring coordinated investment in infrastructure, comprehensive teacher professional development, and strategies for managing the socio-behavioral pitfalls associated with technology integration in educational settings.

Conclusion

In this technologically evolving world, the basic knowledge and skills of digital tools are essential for qualitative education in a country such as Nigeria. The application of digital tools in classroom communication if effectively managed can improve classroom activities for increased productivity and the ease of teaching and learning concepts. The resourceful usage by both teachers and learners alike can enhance better and improved performances for teachers and students in our classrooms, bringing about increased productivity for teachers, learners and for the betterment of societies.

Recommendations

Based on the findings of the study, the following were recommended;

1. Government should ensure that essential ICT infrastructure is put in place across the length and breath of the country to facilitate flawless operation of internet services.

2. Stakeholders as a way of donations, should encourage the usage of digital tools for teaching and learning at the secondary school level to motivate teaching and learning.
3. Government organs saddled with the task of education should ensure training workshops are organized for teachers on the use of digital tools in classroom communication process.
4. Government at the Federal and State levels should make available steady electricity power supply to government-owned schools to encourage the use of digital tools in classrooms.

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