

AVAILABILITY AND UTILIZATION OF DIGITAL TECHNOLOGY IN THE TEACHING/LEARNING OF CHRISTIAN RELIGIOUS STUDIES: A CASE STUDY OF FEDERAL COLLEGE OF EDUCATION OBUDU.

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Abstract

This study was aimed at determining the availability and utilization of digital technologies in the study of Religious Instruction at the Federal College of Education Obudu. The population comprised about 120 years one to three students offering religious instruction in the 2022/23 academic session. A researcher constructed questionnaire titled “Digital Technology Availability and Utilization Assessment Questionnaire” (DTAUAQ) was used to obtain information from the respondents. The obtained data were analyzed using frequency count and simple percentage. It was found that many of the technologies are not available to the students. Also, a good number of the students do not make frequent use of the available technologies in their study of Religious Studies. It was therefore inferred that with the status quo, the realization of the empowering role of ICT enhanced education will remain a mirage to students who specialize in Religious Studies. Consequently, it was recommended among other things that heads of institutions should ensure that all the recommended digital technologies be made available to every department in their colleges whereas the Heads of Departments should ensure their integration in teaching and learning.

Keywords: Digital Technology, Information and Communication Technology, ICT Enhanced Education.

Introduction

The strategic use of digital technology in almost every field of human endeavor since the second half of the 20th century has necessitated the integration of such technologies in the classroom. This is especially the case in the advanced nations of the world. The developing nations are however not completely left behind in this innovation. A case in point is Nigeria where the federal government has observed that education is facing the severe shortage of ICT skills and personnel necessary for attaining an education that is universally accessible, empowering, inclusive and enriching. This observation has also led to government’s emphasis on “ICT Enhanced Education” which among other things is said to be empowering. According to the Federal Ministry of Education (2019) it is empowering in the sense that:

- Teachers and trainers use technology to support all learning across the curriculum, functioning as coaches mentors, advocates and managers of information,
- Through on-going and professional development, all teachers and trainers acquire the knowledge and skills to integrate technology into a challenging and interdisciplinary curriculum which addresses specific needs, developmental levels and leaning styles of learners;
- The teachers and trainers are transformed through technology from authority-experts to facilitators guiding the students/learners to use technology to find answers online;
- The students/learners are empowered to find their own answers, making the learning process to become more interesting

- The students/learners are transformed from passive recipients of the knowledge of the teachers/trainers to active participants in knowledge seeking and knowledge construction, with the teachers/trainers often learning new technology programmes along with them.

These expected functions of ICT enhanced education must have accounted for the inclusion of such facilities as typewriter, computer, projector, slides of Bible lands cameras, radio video cassettes among the facilities needed for the teaching and learning of Christian Religious Studies (NCCE, 2012). It also justifies the inclusion of Introduction to Computer Studies I and II among the General Studies courses for years one and two students respectively in Colleges of Education who do not offer Computer Science as their major course of study. Ordinarily speaking, one would not expect such a course to be made compulsory for students offering Religious Studies which was initially construed to be concerned with the investigation of basic components of human society and culture and the impartation of morals. Contrary wise, a look at the goals of Arts and Social Science courses (of which Christian Religious Studies is a component) at the National Certificate of Education level proves otherwise. Among the said goals is to help students acquire basic knowledge and values needed to enhance the quality of their lives and the life of the nation. Another goal of Arts and Social Science is to help the students acquire the spirit of self-reliance, positive image and balanced personality.

One of the guaranteed means through which a Christian Religious Studies student can acquire basic knowledge and values needed to enhance the quality of life after being exposed to the rudiments of computer science through the General Studies courses in this 21st century is through the application of digital technology (i.e. electronic tools, devices, systems and resources which generate, store or process data) in his course of study. Hence, the inclusion of the above mentioned facilities for the teaching and learning of this course.

The importance of technology to the teaching of Religious Education in particular is aptly captured by Tuyizere (2020) when she noted that in the 21st century, the teaching of religious education is no longer concerned with imparting morals and passing of national examinations as it has traditionally been but that the teaching of religious education ought to be concerned with empowering learners with lifelong skills that enable them to meet the new demands of development and market economy that are driven by technological innovations. Continuing, Tuyizere said that if one must survive and succeed in today's fast changing world, it is necessary that the person acquires a breadth of skills rooted in academic competencies such as literacy in technology... Okoro and Ekpo (2016) also believe that implementing ICTs in the process of teaching religion can improve students' interest as well as enhance creative thinking. Other benefits of digital technology include enabling students to associate concrete and tangible facts with abstract concepts, promotion retention as well as exposing students to practical skills. The integration of digital technology in the study of religion will also make students to participate actively in the class rather than being passive listeners to whatever the teacher has to offer.

It is against this background that this study is designed to find out the extent to which Religious Studies students of the Federal College of Education Obudu utilize digital technologies in learning their course of study.

Statement of the problem

It is a well-known fact that despite the above advantages of digital technology, many students seem not to know how to use them to maximize their learning of religion. Thus, irrespective of the number of hours they spend on the internet and social media per day, most of them can hardly use these technologies to find answers to simple questions in their field of study. Whereas some students indulge in different forms of fraudulent practices using these

technologies, others use them basically for recreational activities to the point that they constitute a major source of distraction to their studies. This seemingly ignorance of appropriate use digital technologies in learning by students in this 21st century constitutes the problem of this study.

Purpose of the study

The purpose of this study is to find out the extent to which Religious Studies students of the Federal College of Education Obudu understand the importance of digital technologies in learning Christian Religious Studies as well as to determine the extent to which they use the available technologies to enhance their learning of the subject. Specifically, the study will:

- (i) Identify what digital technologies are available for students use in their learning of Christian Religious Studies in the Federal college of Education Obudu,
- (ii) Determine the extent to which the students make use of the available technologies in learning their course of study
- (iii) Examine what the students perceive as the benefits of applying digital technologies in the study of Christian Religious studies.
- (iv) Identify the factors affecting students' use of digital technologies to learn Christian Religious Studies.

Research questions

The following research questions will guide the study:

1. What digital technologies are available for students' use in learning CRS at the Federal College of Education Obudu?
2. To what extend do the students utilize the available digital technologies to study CRS?
3. What do students perceive as the benefits of using digital technologies to study CRS?
4. What factors limit students' use of digital technology in learning CRS?

Significance of the study

The findings of this study is significant in that it will expose both students and lectures of Christian Religious Studies to the importance of integrating digital technologies in both the teaching and learning of the course and thus challenge them to do so. This, it is hoped will make them seek ways of overcoming whatever obstacles they may be facing in their bid to make effective use of these technologies in their subject area. Such a move will hopefully enhance the capacity of the lecturers and thus, make them more competent in handling their subject. The students themselves will equally be equipped with the skills needed to function effectively in the 21st century through utilizing digital technologies in learning their subject.

Literature Review

It is necessary to start this review by firstly clarifying the relationship between Information and Communication Technology (ICT) and digital technology. According to Lisedunetwork (2023), Information and Communication Technologies is a common term referring to the technologies used for collecting, storing, editing, and communicating information in various formats. It includes any communication device or application encompassing radio, television, cellular phones, computers and network, hardware and software, satellite systems and so on and the various associated services and applications. Digital technology on the other hand is defined as the branch of scientific or engineering knowledge that deals with the creation and practical use of digital and computerized devices, methods, systems e.t.c (Random House, 2023). Digital technologies enable immense amount of information to be compressed on small

storage devices that can be easily preserved and transported. It encompasses various technologies that operate based on digital data, such as computers, smart phones, digital cameras, digital audio players, etc. It also quickens the speed of data transmission. As a subset of ICT digital technology focuses on the use of *digital data* and *electronic systems*.

Goodman (2023) has identified the following 20 examples of digital technologies: Websites, Buying and Selling Online, Smartphones, Digital Televisions, Video-streaming, eBooks, Digital Music, Geolocation, Blogs, Social Media, Computers, Printers, Self-Scan Machines, ATMs, Digital Cameras, Cars and Other Vehicles, Clocks, Robotics, Banking and Finance

Springer Nature (2022) identifies the benefits of digital technologies to include: the opportunities to develop a range of skills (e.g. subject related skills, communication skills, negotiation skills, emotion control skills, organizational skills, creativity, metacognitive skills, life and career skills), opportunity to develop digital skills (e.g. information skills, media skills, ICT skills), positive attitudes and behavior towards ICTs, positive emotions (e.g. increased interest, motivation, attention, engagement, confidence, reduced anxiety, positive achievement emotions, reduction in bullying and cyberbullying. Commenting on the benefits of the internet, Okoro and Ekpo (2016) remark that it provide many kinds of information and learning tools in educational lines and that by using multimedia activities, teachers can attract students' interest in learning process and that students understand more if they learn by using something that will attract their interest. They further opine that by implementing ICT in religious teaching process students interest and creative thinking will be improved and that it will enable them associate between concrete, tangible facts from the abstract ones, to help promote students retention and to facilitate the simulation and recovery faces. Other benefits they highlighted include making them active participants rather than spectators in teaching and learning process.

Pertaining specifically to Religious Instruction, Utkarsh-Lockesh and Fokide (as cited in Tuyizere, 2020) opine that technology is a tool to aid Religious Education teaching-learning process and should not be used as a separate tool but should be integrated in all subjects taught in all classrooms. Continuing, they say that using technology enhances in Religious Education students' critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate tools and resources.

Aikonen (as cited in Okoro and Ekpo, 2016) observed that the use of ICT in Religious Education was comparatively a later development with churches, students and religious education instructors showing little interest in it. He went further to remark that since ICT has entered the classroom over the decades, pedagogical development should be encouraged through training of teachers in the use of ICT in religious instruction. The fact that religious education scholars in general did not initially see a relationship between religious education and technology is evident in the words of Marcus (2018) when he posits that despite concern about the impact of online education on the higher education landscape, few scholars of religion and education have published research on the subject and that there is in fact a paucity of research on the relationship between religious studies education and technology in general. Marcus supported his viewpoint by noting that one scholar reviewed more than 400 articles in a journal of religious education and found no articles on digital technologies.

The benefits of the use of technology in learning is highlighted by Newton (as cited in Marcus, 2018) when he proposed that instructors have the responsibility to help students understand technology especially smartphones as a tool that can facilitate study habits (e.g. note taking and oral processing), collaborative intellectual exchange (e.g. backchannel conversations during class via shared notes), online research and identification of reference works, and the production of new knowledge and resources through nontraditional assignments. Tulinayo, Ssentum and Najjuma (2018) also found the mobile phone to be mostly

used by students as those of them who cannot photocopy or print out their class note, use their mobile phones to access, read and store these class notes. Moreover, mobile phone results in increased cooperation among students and between students and lecturers, instant communication, downloading audio and video facilities, flexibility associated with storage and replay of stored files (Kaliisa and Picard, 2017). Digital technologies are also used for developing course materials, delivering and sharing contents, communication among learners, lecturers, and the outside world, creation and delivery of presentations and lectures, academic research, administrative support and students' enrollment Rumanyika (2015).

As advantageous as digital technologies are to teaching and learning, Oye, Noorminshah, & Rahim (as cited in Tulinayo, Ssentume & Najjuma, 2018) have identified high cost involved, socioeconomic and technological conditions, lack of systemic approach to teaching and learning, awareness and attitude towards digital technologies, administrative and technical support, staff development, limited infrastructure and limited expertise in the use of digital technology tools as some factors that create barriers to their adoption. Similarly, Israel and Israel (2019) reported absence of greater number of ICT tools as a factor militating against effective implementation of computer education in Cross River State secondary schools. Also, Wheller (2011) sees higher education as resisting the adoption of technology when he remarks that while industries such as music, newspapers, film and publishing have seen radical changes in their business models and practices as a direct result of new technologies, higher education has so far resisted the wholesale changes that have seen elsewhere. The extent to which these factors affect the use of digital technologies in learning Religious Studies by students of the Federal College of Education Obudu will also be investigated in this study.

Methodology

This study adopted the case study research design because it is focused on a particular institution. According to McCombes (2019), a case study is a detailed study of a specific subject, such as a person, group, place, event, organization or phenomenon. Case studies are commonly used in social, educational, clinical and business research.

The population of the study comprises all the NCE students offering Christian Religious Studies at the Federal College of Education, Obudu. The span years one to three. Their total number is about 120. Given the few number of students offering Religious Studies in the institution, sampling was not done and hence, every member of the population within the reach the researcher at the study period was included.

The research instrument is a questionnaire entitled "Digital Technologies Availability and Utilization Assessment Questionnaire" (DTAUAQ). It was constructed by the researcher in conjunction with a lecturer with sound knowledge of research. This instrument consisted of two sections. The first section dealt with students' gender and year of study whereas the second section has four parts that dealt with accessibility, extent of use, perceived benefits, and hindrances to regular use of the technologies respectively.

The research instrument was validated by an expert in Educational Measurement and Evaluation coupled with sound knowledge of ICT. The research data were analyzed using frequency count and simple percentage.

Results

The results are presented in tables 1-4 according to the research questions

Table 1

Frequency of Respondents Indicating the Availability of the Mentioned Technologies

Digital Technologies	Frequency
Computer	22
Internet	23
Smartphone	42
Digital Television	16
Video Streaming	3
Electronic Books	6
Social Media	20
Printer	2
Scanner	5
Digital Camera	10
Digital Clock	19
Digital Music	13
e-mail	13
Power point Projector	4
Smart Board	3
You Tube	17
Flash drive	2
Discs	3
Blogs	0

Table 1 shows that Computer, Internet, Smartphone, Digital television, Social media, Digital camera, Digital clock, Digital music, e-mail, and you tube are some of the technologies available to between 10 and 42 students for learning Christian Religious Studies whereas others are available to very few number of students. This data show that comparatively, few number of the respondents agree to the availability of digital technologies.

Table 2: Extent of Utilization of the Indicated Technologies in Learning CRS

Digital Technologies	Frequently		Rarely		Never	
	No.	%	No.	%	No.	%
Computer, CD, and Flash Drive	27	31.1	29	33.3	31	35.6
Printer	19	24.1	22	27.8	38	48.1
Scanner	19	23.2	22	27.8	38	48.1
Smart Phone	63	75	15	17.9	6	7.1
e-mail	32	38.1	20	23.8	32	38.1
Blogs	11	15.3	9	12.5	52	72.2
Smart Board	16	19.8	13	16	52	64.2
Digital Television	45	55.6	18	22.2	18	22.2
Social Media	53	61.6	21	24.4	12	14
Websites	35	41.7	28	33.3	21	25
Average		38.6		23.9		37.5

Table 2 shows the number and percentages of respondents indicating their extent of use of the indicated technologies in learning Christian Religious Studies. It could be seen from the table that smartphone, social media, and digital television are the only technologies that are frequently used by more than half of the total respondents, whereas 31.1%, 38.1%, and 41.7% of the respondents frequently use computer, e-mail, and websites respectively in learning their subject. On the other extreme, 35.6%, 48.1%, 48.1%, 38.1%, 72.2%, and 64.2% have never made use of computer, printer, scanner, e-mail, blogs, and smart board respectively in their study of Christian Religion. On the average, 38.6% of the respondents frequently use the technologies, 23.9% rarely use the technologies and 37.5% never use the technologies in learning Religious Studies. This shows a low extent of utilization of available digital technologies by the students.

Table 3: Perceived Benefits of Learning CRS Using Digital Technologies

Benefits	Strongly Agree		Agree		Disagree	
	No.	%	No	%	No	%
Helps us develop interest in CRK	48	56.5	27	31.8	10	11.8
Helps us read relevant topics from the internet	42	51.2	32	39	8	9.8
Helps us find answers to assignments	51	66.2	16	20.8	11	14.3
Helps us download free eBooks	23	31.5	24	32.9	26	35.6
Topics read from the internet are better understood	37	45.1	36	43.9	9	11
Helps to discover new facts beyond what lecturers taught in the classroom	50	58.1	26	30.2	10	11.6
Social media helps us share knowledge with others	32	41	36	46.2	10	12.8
Helps us record and play back lecturers' teachings	32	37.6	34	40	19	22.4
Helps us acquire basic ICT skills	30	39.5	23	30.3	23	30.3
Listen to Religious messages from You tube and TV	45	51.1	26	29.5	17	19.3
Average		47.8		35.5		17.9

Table 3 shows the percentages of the respondents that either agree strongly, agree, or disagree with the indicated benefits of using digital technologies to learn Religious Studies. The table shows that on the average, 47.8% strongly agree to the indicated benefits, 35.5 just agree, and only 17.9 disagree with the stated benefits. This means that aggregately speaking, about 82% of the respondents agree with the stated benefits of learning CRK with digital technologies.

Table 4: Factors Militating against Frequent use of Digital Technologies in Learning CRS

Perceived Factors	Frequency
Non-availability to students of digital technologies	27
Lack of knowledge of how to use digital technologies	24
Lectures do not use the technologies in teaching CRS	13
Our lecturers do not encourage us to use digital technologies for learning	7
Lack of money to purchase the technologies	30
Lack of regular electricity	21
Social media distracts us from concentrating on our studies	13
Digital technologies encourage examination malpractice	17
They make us unserious with lecture attendance	12
They expose people to many bad things	11

Table 4 shows that 27, 24, 30, and 21 respondents respectively identified non-availability of digital technologies, lack of knowledge of how to use digital technologies, lack of money to purchase the technologies and lack of regular electricity as factors militating against their frequent use of the identified technologies. Very few number of respondents identified the other factors mentioned as responsible for their infrequent use digital technologies.

Discussion of Findings

The first research question sort to find out the digital technologies that are available for students' use in learning CRS at the Federal College of Education Obudu. The data in table 1 shows that Computer, Internet, Smartphone, Digital television, Social media, Digital camera, Digital clock, Digital music, e-mail, and you tube among others are available to a few students. A critical look at the table however shows that beside smartphone which are available to 42 out of 86 respondents, few number of students see the other technologies as available. This finding agrees with Tulinayo, Ssentume and Najjuma, (2018) who mentioned limited infrastructure and limited expertise in the use of digital technology tools among other things as some factors that create barriers to their adoption. It also supports Israel and Israel (2019) who reported absence of greater number of ICT tools as a factor militating against effective implementation of computer education in Cross River State's secondary schools.

The second research question was aimed at finding out the extent to which the students utilize the available digital technologies to study CRS? The finding in this regard was that CRS students of the Federal College of Education, Obudu utilize the available technologies to a very low extent. This corroborates with Wheller (2011) who sees higher education as resisting the adoption of technology. The finding is also in agreement with Arenyeka (2012) when he submits that Nigerian students seem to be languishing in the dust behind the moving train of the 21st century as a result of poor computer education in many secondary schools across the country.

The third research questions which investigated students' perception of the benefits of using digital technologies to the study of CRS led to the finding that more than three quarter of the respondents agree with all the benefits indicated in table 3. This is without prejudice to the low level of utilization of these technologies as found from responses to research question two. These benefits are among those identified by Tulinayo, Ssentum and Najjuma (2018) and Kaliisa and Picard (2017).

Research question 4 was meant to reveal why most of the respondents do not utilize digital technologies in learning Christian Religion. The finding identified lack of knowledge of how to use digital technologies, lack of money to purchase the technologies and lack of regular electricity, failure of lecturers to use the technologies in teaching CRS, as some of the factors militating against their frequent use of these technologies. This finding is in consonant with Tuyizere (2020) who noted that barriers to technological adoption in Religious Education teaching may include lack of enabling factors such as availability of technology equipment, knowledge, skills, lack of trained personnel; limited resources for staff, cost factors, management issues, reliability of technology systems and networks, software; disruption of energy; time security and infrastructure.

Implications

The implication of the above findings is that the realization of the empowering role of ICT enhanced education (as highlighted in the introductory part of this paper) will remain a mirage to students who specialize in Religious Studies. It also implies that graduates of Religious Studies may find it difficult to get employed in the present technology driven world.

Conclusion

There is no gain saying the fact that the Federal Government of Nigeria and the Ministry of Education have formulated sound educational policies bordering on technology. Most of these policies however are drowned at the shore of implementation. The students' inability to make effective use of digital technology in learning as found in this study is partly due to government's failure to provide the needed technologies to the departments where they are needed. An investigation of available technologies will authenticate this assertion. Also, the absence of competent teachers who should make use of the available technologies in teaching limits the extent to which students can utilize them in learning. This is evident in the fact that the available technologies where they exist are locked up in the college stores for many years due to the absence of competent manpower to utilize them. There is therefore every need to match policies with action as far as the pursuit of ICT enhanced education is concerned.

Recommendations

Consequent upon the findings and conclusion of this study, we hereby recommend as follows:

1. The Heads of institutions should do their best to ensure the provision to every department in their college of all recommended learning facilities.
2. The Heads of Departments and Deans of Schools should draw the attention of their head of institution to the absence of any prescribed equipment in their departments and ensure that every equipment is effectively utilized.
3. The NCCE should deny accreditation to any department that lacks the needed teaching/learning materials.
4. ICT capacity building courses should be organized for lecturers to acquaint them with the use of technology in teaching.
5. Lecturers should encourage students to make effective use of available technologies in learning by giving them learning tasks that involve the use of technologies.

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