

Enablers of Digital Classroom Utilization of Academic Staff of Universities in South-South Geo-Political Zone, Nigeria.

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Abstract

This study investigated the enablers of digital classroom utilization of academic staff in universities in South-South Geo-political Zone, Nigeria. Two research questions and two hypotheses guided the study. The study adopted the analytic descriptive survey design. The population consisted of 13 public universities in South-South Geo-political Zone. A sample of 569 academic staff was drawn from 6 state universities using stratified and simple random sampling techniques. The instrument for data collection was a self-constructed questionnaire titled; “Enablers of Digital Classroom Utilization Questionnaire (EDCUQ)”. The instrument was validated and the reliability index of 0.82 was established using Cronbach Alpha statistics. Simple percentage was used to answer the research questions while chi-square was used to test the hypotheses at 0.05 level of significance. The results of the study revealed among others that majority of academic staff in South-South Geo-political Zone are not ready to utilize digital classroom and do not possess the technical skills required for effective utilization of digital classrooms for instructional delivery. Based on the findings, conclusion was drawn and the following recommendations among others were made: the management of universities in South-South Geo-political Zone should provide training and retraining programmes for their academic staff to equip them with the technical skills needed in the utilization of digital classrooms for instructional delivery and government should subsidize the cost of ICT facilities and equally provide technical support services to universities on ICT technology in order to enhance and sustain ICT related innovations in south-south universities.

Introduction

Classrooms refer to rooms where instructions are delivered in schools, colleges and universities. The classroom is therefore a room in a school where students converge under the guidance and control of a teacher who teaches them and consciously make effort to guide and aid the students to learn. The classroom is one of the most important physical facilities in an institution of learning. Universities cannot exist and achieve goals without the availability and utilization of classrooms. Universities are institutions of learning where students are admitted in order to receive tertiary education. Worldwide and in Nigeria, universities are responsible for the production of skilled human capital, knowledge and its advancement, intellectual properties and scientific solutions to present and emerging problems of society.

To achieve stated goals, universities are expected to carry out instructional delivery. Instructional delivery is the conscious delivery of instructions in a manner that promotes effective teaching and learning. Educationists consider the word instruction as a body of knowledge, skills and values that are planned to be inculcated into students in a dynamic teaching and learning interaction between the teacher and students (Williams, 2013). Academic staff are trained and certified to deliver instructions in Universities. Academic staff are therefore expected to enter a classroom

with a plan which usually contains the set of knowledge, skills and values which they systematically transfer to students. Such planned instructions can sometimes be seen as the specific outcomes to be achieved as they enter the classrooms to interact with their students.

The delivery of instructions in universities does not take place in a vacuum. The right environment for interactions that brings about effective delivery of instructions is usually a well-equipped and conducive classroom. Classroom is one of the most critical physical facilities in universities. Given the critical role classrooms play in education delivery in universities, the need for improvement in the quality of classrooms cannot be overemphasized. The emergence of digital classroom appears to be one of the known innovations for improvement of the quality of classrooms in universities. Digital classroom refer to classroom in which information and communication technologies (gadgets) are installed for teacher and students utilization during teaching and learning. Heick, (2019) describe digital classroom as classroom where software and hardware computer devices and programmes are installed for effective instructional delivery experience. Digital classroom utilization enabler's identified in this study are digital classroom utilization readiness and technical skills (<https://www.livestiles.org>).

Utilization readiness is usually associated with adoption and implementation of change. Thus, it can be described as the degree to which an individual or group of people are ready to adopt and implement planned change. By adoption and implementation they become leaders of innovation, creative problem solvers and full of confidence in the classroom. Change is constant; every field of human endeavour requires change to improve performance and productivity. The education industry is one of the industries where rapid growth of planned change and innovation appears to be witnessed.

The change that is witnessed in the education industry is well connected with the dynamic and evolving nature of the society, growth in science and technology, research findings and recommendations as well as need to meet global practices in education delivery. Before change is implemented, it is important to give due consideration to the readiness of those that will participate in the implementation of the change process, for results to be achieved and for sustainability. Capacity or readiness is a critical determinant of the extent to which the integration of technology in class activities can be successful and beneficial to all stakeholders. It is very likely that digitization of information will only benefit a few countries which have the capacity to harness the required resources. New technologies are constantly emerging to improve organizations' productivity, customer satisfaction and cost effectiveness (Nwogu, 2013). Emerging technologies also appear to cater for the needs of employees and they may find emerging technologies motivating. Adedeji (2015) attest that ICTs have become the prime mover of the higher education development. Research has also shown that weak ICT infrastructure limits digital engagement and access to digital resources for the users (World Bank and UNESCO in Adedeji 2015, Bamiro 2013).

As new technologies emerge, organizations expect their employees to adopt and use them for their service delivery (Igwe, 1999). Employee's adoption and utilization of emerging technologies is important because failure of its adoption and utilization means that the cost of designing and developing such technology will be wasted. Also, employees level of adoption and use of emerging

technologies will depend on the level of their technology readiness. In universities, Academic staff are required to adopt emerging technologies for their service delivery.

The rationale for focusing on readiness is in connection with the role of academic staff that are responsible for implementation of curricular programmes at the classroom level. They are to manage classroom resources so as to ensure effective implementation of the curricular programmes of their universities. Lack of utilization readiness can adversely affect the outcome of digital classroom utilization for instance, those ready for the change will be motivated and therefore embrace such innovation while on the other hand those who appear not to be ready for the use of digital classroom will not be motivated and would likely resist such innovation. The role and importance of academic staff in education delivery cannot be overemphasized. It therefore appears that they are responsible for the success or failure of the implementation of classroom activities. The advancement in educational technology offers staff modern technology frontiers to enhance effective implementation of teaching activities (Dogra, 2010).

Academics are considered to be persons trained and certified to deliver instructions in their areas of specialization. Several skill-sets are acquired by academic staff to enable them carryout effective instructional delivery (Dogra, 2010). The existing skill-set possessed may be suitable for the adoption and use of digital classroom. It may also require them to acquire additional skill-set as criteria for competence and efficiency (Erik, & Piet, 2007). Staff who do not find the use of digital classroom suitable for their present skill-set and also considers the need for additional skill-set as disturbing, are likely to lack readiness. Education is a life-long phenomenon. One of the reasons for this is that change is constant. Initiators of innovations should include training and retraining of the users of innovation as part of the plans for successful institutionalizing of an emerging technology (Omar, 2005).

New technologies are constantly emerging to improve organizations' productivity, customer satisfaction and cost effectiveness (Nwogu, 2013). Emerging technologies also appear to cater for the needs of employees and they may find emerging technologies motivating. Adedeji (2015) attest that ICTs have become the prime mover of the higher education development. Research has also shown that weak ICT infrastructure limits digital engagement and access to digital resources for the users (World Bank and UNESCO in Adedeji 2015, Bamiro 2013). Tella (2011) showed that there exist low level of ICT gadgets, non-availability of ICT equipment and sluggish use of integration of ICT. The study revealed that students do not use computers for studies at their various schools.

There are skills required as criteria for the use of digital classroom. One of such skills is technical skill. It involves the use of mechanical, information technological, mathematical or scientific procedure to perform specific task. It is the expert knowledge that can be applied towards accomplishing complex actions, tasks and processes that involve computational and physical technology. Stoner, Freeman and Gilbert (2011) define technical skill as the ability to use procedures, techniques and knowledge of a specialized nature and field of endeavour. The term technical refers to high degree of specialization. A skill on its parts refers to the ability to perform a particular task. Technical skill also refers to the ability to manipulate gadgets and equipment as well as use and diffuse technical data and information (Okorie, 2009).

The growth in science and technology innovations has created a situation where nearly every job relies on different tools, programs and processes for problem solving and goal achievement. This accounts for greater need for employees and academic staff to possess technical skills that will allow them to use specialized computer programmes and tools available for digital classroom utilization (Hassan, Maharoff, & Abiddin, (2014). The advancement in technology and the need to integrate technology in the process of instructional delivery offers a wide range of opportunities for improvement and higher productivity. Digital classrooms are not traditional classrooms where one finds only desk, table, shelves and writing board. A digital classroom is a classroom where different information and communication technology gadgets are available to enhance information sourcing, sharing and interaction between staff and students, students and students and between those physically present and online participants in the instructional delivery activities.

The information and communication system that characterize a digital classroom is meant to be utilized under the auspices of an academic staff. They therefore need to be seen as proficient and experts (Clegg, Konrad, & Tan, 2000). When students see academics as having expertise of technical mastery of harnessing software and hardware resources of a digital classroom, the self-esteem of the academics will likely increase and students will be confident to learn from them. Academics who do not possess technical knowledge towards the use of digital classroom may consciously avoid its technical aspects. They will appear not to be ready for the technical rigor of utilizing digital classrooms for instructional delivery.

The integration of technologies in the classroom has become a concern among educators. The use of technologies in the classroom appears to be new in public schools hence there is need for training and retraining of teachers. In this 21st century surmounted with education challenges, there are countries that are being celebrated as regards their education standard and pedagogy. These countries have met their Education For All (EFA) deadline, and they adopted modern approaches to teaching and learning. For Nigeria to experience better education delivery, some issues such as the use of modern technologies in classrooms must be quickly resolved. Brooklyn in Okoli (2016) notes that “the essentials of 21st century pedagogy have embedded in it technologies, information and media, developing skills, making use of project based learning, use of problem solving as a teaching tool ...” Technologies has helped developing countries control unemployment and to produce entrepreneurs.

Technical skills can be acquired through enrolment in special courses and skill acquisition programmes. Such programmes may be formal or informal. There are also online and hardcopy self-study materials that can advance their technical skills set. Human resource can also acquire technical skills through on-the-job training. This is important as it shows competence in this era of emerging technologies where traditional setting in almost all aspects of man is changing

Statement of the problem

The seeming low ranking of public universities in Nigeria remains an issue of concern amongst stakeholders such as Academic Staff Union of Universities (ASUU). There is need to revitalize to improve the quality of teaching in universities in Nigeria to compete with those of high ranking universities in the world. This has given rise to strong agitations amongst stakeholders for digital classroom to be provided in public universities in Nigeria. The writers

therefore investigated whether academic staff possess the skill to utilize digital classroom for effective delivery of instruction.

Purpose of the study

Specifically, the study sought to:

1. Find out the proportion of male and female academic staff that are ready to utilize digital classroom for instructional delivery in universities in South-South Geo-political zone, Nigeria.
2. Determine the proportion of male and female academic staff that possess technical skill to utilize digital classroom for instructional delivery in universities in South-South Geo-political zone, Nigeria.

Research Questions

The following research questions guided the study;

1. What proportion of male and female academic staff are ready to utilize digital classroom for instructional delivery in universities in South-South Geo-political zone, Nigeria?
2. What proportion of male and female academic staff possess technical skill to utilize digital classroom for instructional delivery in universities in South-South Geo-political zone, Nigeria.

Hypotheses

The following hypotheses were tested at 0.05 level of significance:

1. There is no significant difference between the proportion of male and female academic staff on their readiness to utilize digital classroom for instructional delivery in universities in South-South Geo-political zone, Nigeria.
2. There is no significant difference between the proportion of male and female academic staff on their technical skill to utilize digital classroom for instructional delivery in universities in South-South Geo-political zone, Nigeria.

Methodology

The research design adopted for the study was the analytic descriptive survey. The population of the study consisted of 13 public universities in South-South geo-political zone. The South-South zone is one of the geo-political zones of Nigeria consisting of six (6) states (Akwa Ibom, Cross Rivers, Bayelsa, Rivers, Delta, and Edo). A sample size of six (6) public universities was drawn from 6 strata using stratified random sampling technique. The universities included (6) state universities. Simple random sampling technique was used to draw a sample size of 569 academic staff as respondents from these universities. The instrument used for the collection of data was a questionnaire designed by the researchers titled 'Enablers of Digital Classroom Utilization Questionnaire' (EDCUQ). The questionnaire was divided into two parts namely, section A and section B. Section A was used to elicit demographic data of the respondents while section B was structured into 2 sub-sections developed to obtain information on utilization readiness and technical skills of academic staff to utilize digital classroom for instructional delivery. The response scale that was adapted was the modified 4-points Likert Scale of Strongly

Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD). The face and content validities of the instrument were obtained. The internal consistency reliability was calculated through Cronbach alpha statistical technique. The reliability coefficient for enablers of Digital Classroom Utilization of Academic Staff Questionnaire (EDCUQ) was 0.82. The reliability coefficients for the various clusters of Utilization Readiness and Technical Skills were 0.86, and 0.72 respectively. All the reliability coefficients were high enough and justified the use of the instruments for the study. The researchers administered 569 copies of the questionnaire to the respondents. 427 copies were completely filled and returned for data analysis. There was 75% return rate. Simple percentage was used to answer the research questions while chi-square was used to test the hypotheses at 0.05 level of significance..

Answers to Research Questions

Research Question 1: What proportion of male and female academic staff are ready to utilize digital classroom for instructional delivery in universities in South-South Geo-political Zone, Nigeria?

Table 1: Percentage responses of male and female academic staff on their readiness to utilize digital classrooms for instructional delivery in universities in South-South Geo-political Zone, Nigeria.

S/N	Digital Classroom Utilization Readiness Variables.	Male Academic Staff Sub Total		Female Academic Staff Sub Total		Grand Total and Percentage N=427		Decision
		A	D	A	D	A	D	
1.	I am well prepared to utilize digital classroom in delivering instructions.	95 22% (0.22)	170 40% (0.40)	56 13% (0.13)	106 25% (0.25)	151 35% (0.35)	276 65% (0.65)	Not Ready
2.	I possess the ability to manage digital classroom resources for instructional delivery.	75 18% (0.18)	190 44% (0.44)	52 12% (0.12)	110 26% (0.26)	127 30% (0.30)	300 70% (0.70)	Not Ready
3.	I am aware that knowledge of technology will help staff become leaders of innovation and creative problem solvers.	205 48% (0.48)	60 14% (0.14)	120 28% (0.28)	42 10% (0.10)	325 76% (0.76)	102 24% (0.24)	Ready
4.	I will not be confident to teach in a digital classroom.	136 32% (0.32)	129 30% (0.30)	91 21% (0.21)	71 17% (0.17)	227 53% (0.53)	200 47% (0.47)	Not Ready

5.	I know that the use of digital classroom will increase staff awareness on globalization and information technology.	208 49% (0.49)	57 13% (0.13)	117 27% (0.27)	45 11% (0.11)	325 76% (0.76)	102 24% (0.24)	Ready
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Data on Table 1 showed the responses of male and female academic staff on their readiness to utilize digital classroom for instructional delivery in universities in South-South Geo-political Zone of Nigeria. 22% of the male academic staff agree that they are well prepared to utilize digital classroom in delivery instructions while 40% disagree. 13% of the female academic staff accepted that they are ready to utilize digital classroom while 25% disagreed. 18% and 12% of the male and female academic staff respectively agreed that they possess the ability to manage digital classroom resources for instructional delivery, while 44% and 26% of male and female academic staff disagreed on that. 48% and 28% of male and female academic staff agree that they are aware that knowledge of technology will help them become leaders of innovation and creative problem solvers while 14% and 10% of male and female academic staff disagree. 32% and 21% of male and female academic staff respectively agreed that they will not be confident when teaching in a digital classroom while 30% and 17% of male and female academic staff disagree. 49% and 27% of male and female academic staff respectively agree that the use of digital classroom will increase staff awareness on globalization and information technology while 13% and 11% male and female academic staff respectively disagree.

Table 1 therefore revealed that majority (0.65) of academic staff disagree that they are well prepared to use digital classroom for instructional delivery. Majority of the academic staff (0.70) also disagree that they possess the ability to manage digital classroom resources for instructional delivery. 0.76 proportion of academic staff agree that they are aware that knowledge of technology will help them become leaders of innovation and creative problem solvers. 0.53 proportion of academic staff agree that they will not be confident when teaching in a digital classroom and 0.76 proportion of academic staff agree that they know that the use of digital classroom will increase staff awareness on globalization and information technology.

Therefore majority (0.61) of academic staff of universities in South-South Geo-political Zone of Nigeria are not well prepared to utilize digital classroom in instructional delivery; do not possess the ability to manage digital classroom resources for instructional delivery and will not be confident to teach in a digital classroom.

Research Question 2: What proportion of male and female academic staff possess technical skill to utilize digital classroom for instructional delivery in universities in South-South Geo-political Zone, Nigeria?

Table 2: Percentage responses of male and female academic staff on their technical skill to utilize digital classroom for instructional delivery in universities in South-South Geo-political Zone, Nigeria.

S/N	Digital Classroom Technical Skill Variables.	Male Academic Staff Sub Total		Female Academic Staff Sub Total		Grand Total and Percentage N=427		Decision
		A	D	A	D	A	D	
1.	I am proficient in solving technical problems arising from the use of digital classroom.	57 13% (0.13)	206 48% (0.48)	22 5% (0.05)	142 33% (0.33)	79 19% (0.19)	348 81% (0.81)	Do not possess skill
2.	I am proficient in diffusion of technical information using digital classroom for instructional delivery.	59 14% (0.14)	206 48% (0.48)	20 5% (0.05)	142 33% (0.33)	79 19% (0.19)	348 81% (0.81)	Do not possess skill
3.	I am creative in the manipulation of computer gadgets in digital classroom designed for instructional delivery.	59 14% (0.14)	207 48% (0.48)	21 5% (0.05)	141 33% (0.33)	79 19% (0.19)	348 81% (0.81)	Do not possess skill
4.	I can source and analyze information using technologies in the classroom.	65 15% (0.15)	200 47% (0.47)	19 4% (0.04)	143 33% (0.33)	84 20% (0.20)	343 80% (0.80)	Do not possess skill
5.	I am skilled in integrating information and communication technology and instructional delivery in digital classroom.	65 15% (0.15)	200 47% (0.47)	22 5% (0.05)	140 33% (0.33)	87 20% (0.20)	340 80% (0.40)	Do not possess skill

Table 2 indicated the response of male and female academic staff on their technical skill to utilize digital classroom for instructional delivery in universities in South-South Geo-political Zone of Nigeria. 13% and 5% of the male and female academic staff respectively agree that they are proficient in solving technical problem arising from the use of digital classroom while 48% and 33% of male and female academic staff disagree. 14% and 5% of the male and female academic staff respectively agree that they are proficient in diffusion of technical information when using digital classroom for instructional delivery while 48% and 33% of the respective academic disagree. 14% and 5% of the male and female academic staff accept that they are creative in the manipulation of computer gadgets in digital classroom designed for instructional delivery while 48% and 33% of the respective academic disagree on this. 15% and 4% of the male and female academic staff agree that they can source and analyze information using technologies in the classroom while 47% and 33% of the respective academic disagree. Item 5 showed that 15% and 5% of male and female academic staff accept that they are skilled in instructional information and communication technology and instructional delivery in digital classroom while 47% and 33% of the respective academics disagree.

Data on Table 2 revealed that 0.83 proportion of academic staff disagree with item 1; 0.81 proportion of academic staff disagree with item 2; 0.81 proportion of academic staff disagree with item 3; 0.80 proportion of academic staff disagree with item 4; and 0.80 proportion of academics also disagree with item 5.

Therefore majority (0.81) of academic staff of universities in South-South Geo-political Zone Nigeria are not proficient in solving technology problem arising from the use of digital classroom; they are not proficient in diffusion of technical information when using digital classroom for instructional delivery; they are not creative in the manipulation of computer gadgets in digital classroom designed for instructional delivery; they cannot source and analyze information using technologies in the classroom and they are not skilled in integrating information and communication technology and instructional delivery in digital classroom.

Test of Hypotheses

H₀₁: There is no significant difference between the proportion of male and female academic staff on their readiness to utilize digital classroom for instructional delivery in universities in South-South Geo-political Zone, Nigeria.

Table 3: Chi-square on male and female academic staff readiness to utilize digital classroom for instructional delivery in universities in South-South Geo-political Zone, Nigeria.

Academic Staff	N	A	D	df	Chi-Square	z-Critical	Decision
Male staff	265	144(.34)	121(.28)	1	0.03	±3.84	Ho ₁ Accept
Female staff	162	87 (.20)	75(.18)				(Not significant)

Table 3 showed that .34 proportion of male academic staff are not ready while .28 are ready to utilize digital classroom for instructional delivery in universities in South-South Geo-political Zone. Similarly, .20 proportion female staff are not ready while .18 are ready. The Chi Square (X^2) of 0.03 is less than z-critical table value of 3.84 at 1 degree of freedom $df = (R-1)(C-1)$, at 0.05 level of significance. Therefore, the null hypothesis was accepted. This implies that no significant difference exists between the proportion of male and female academic staff on their readiness to utilize digital classroom for instructional delivery in universities in South-South Geo-political Zone of Nigeria.

H₀₂: There is no significant difference between the proportion of male and female academic staff on their technical skill to utilize digital classroom for instructional delivery in universities in South-South Geo-political Zone, Nigeria.

Table 4: Chi-square on male and female academic staff technical skill to utilize digital classroom for instructional delivery in universities in South-South Geo-political Zone Nigeria.

Academic Staff	N	A	D	df	Chi-Square	z-Critical	Decision
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Male staff	265	61(.14)	204(.48)	1	7.80	± 3.84	Ho ₁ Reject (Significant)
Female staff	162	20(.05)	142(.33)				

Table 4 showed that .14 proportion of male academic staff possess technical skill to utilize digital classroom for instructional delivery in universities in South-South Geo-political Zone while .48 do not possess technical skills. Also .05 proportion of female academic staff possess technical skill while .33 do not possess technical skill. The Chi Square (X^2) of 7.80 is greater than z-critical table value of 3.84 at 1 degree of freedom $df = (R-1)(C-1)$, at 0.05 level of significance. Therefore, the null hypothesis was rejected. This implies that a significant difference exists between the proportion of male and female academic staff on their technical skill to utilize digital classroom for instructional delivery in universities in South-South Geo-political Zone, Nigeria.

Summary of Findings

The findings of this study were summarized as follows:

1. Majority (0.65) of academic staff of universities in South-South Geo-political Zone of Nigeria are; not well prepared to utilize digital classroom for instructional delivery; do not possess technical skills that will enable them utilize digital classroom for instructional delivery, will not be confident when teaching in a digital classroom.
2. 0.81 proportion of academic staff of universities in South-South Geo-political Zone of Nigeria: are not proficient in solving technical problems arising from the use of digital classrooms; are not proficient in diffusion of technical information when using digital classrooms for instructional delivery; are not creative in the manipulation of computer gadgets in digital classroom designed for instructional delivery; cannot source and analyze information using technologies in the classroom; and they are not skilled in integrating information and communication technology and instructional delivery in digital classrooms.

Discussion of findings

Digital classroom Utilization Readiness

One of the findings revealed that majority of academic staff of universities in South-South Geo-political Zone of Nigeria are not well prepared to utilize digital classrooms in instructional delivery; do not possess the ability to manage digital classroom resources for instructional delivery, will not be confident to teach in a digital classroom. On the other hand majority of academic staff of universities in the area are aware that knowledge of technology will help staff become leaders of innovation and creative problem solvers; and they accepted that they know the use of digital classroom will increase staff awareness on globalization and information technology. The results indicate that academic staff are not technologically trained and will not be confident to teach using digital classroom. This has revealed their level of preparedness. Digital classroom utilization readiness deals with the preference of academics to adopt and utilize new technologies. It shows their mental and emotional predisposition towards the application of innovations in their

teaching and learning process. It requires academics to be technologically ready in order to adopt the use of digital classrooms in instructional delivery. The findings aligns with Okoli, (2015) who observed that technological readiness implies that academics have to be trained and retrained in order to equip them with the relevant skills required for effective manipulation of digital gadgets. Academics are to be conversant with the different software and computer applications and how to apply them in the classroom setting. These skills appear to be lacking among majority of academic staff in the universities in South-South Geo-political Zone of Nigeria hence they accepted that they are not prepared to utilize digital classrooms for instructional delivery.

The respondents accepted that they are fully aware of the relevance of digital classrooms in globalization and information technology, as well as innovation and creative problem solving. The inadequacy of ICT facilities and weak infrastructures in the universities in South-South Geo-political Zone makes it difficult for the adoption of digital classrooms. This view is supported by World Bank and UNESCO in Adedeji (2015) and Bamiro (2013). These scholars in their respective studies observed that weak ICT infrastructure limits digital engagement and access to digital resources for the users. Also Tella (2011); Adewale, Akinwale and Omokanye (2008) in their different studies revealed that there is low level of ICT gadgets, low level of staff Access to ICT, non-availability of ICT equipment and sluggish integration of ICT in South Western Nigeria Colleges of Education. In support of the above, Ilogu (2010) discovered that the level of ICT illiteracy among staff of universities in south-south and south-east geopolitical zones of Nigeria was high. This situation is not different from what is obtainable in universities- in other geopolitical zones of Nigeria.

The digital classroom utilization readiness of academic staff of universities in South-South Geo-political Zone appears to be weak as most of these universities lack the infrastructures that are necessary for the adoption of digital classrooms. There is inadequate power supply, inadequate supply of ICT facilities and inadequate training programmes for academic staff on ICT utilization for the adoption of digital classrooms.

Digital Classroom Technical Skills

The study found out that majority of academic staff of universities in South-South Geo-political Zone, Nigeria are not proficient in solving technical problems arising from the use of digital classrooms; are not proficient in diffusion of technical information when using digital classrooms for instructional delivery; are not creative in the manipulation of computer gadgets in digital classroom designed for instructional delivery; cannot source and analyze information using technologies in the classroom; and they are not skilled in integrating information and communication technology and instructional delivery in digital classrooms.

The use of digital classrooms for instructional delivery involves a lot of skills which are very technical in nature. Most of the technical skills required in the utilization of digital classrooms for instructional delivery would only be acquired when academics enroll themselves in special courses and skill acquisition programmes which most of them do not have time for due to tight nature of their work schedule. This lack of technical knowledge towards the use of digital classroom may likely cause a lot of academics to consciously avoid the technical aspects of the utilization of digital classroom because they are not technically equipped to confront the rigors of utilizing digital classrooms for instructional delivery.

The English man says that “practice makes perfect”. The constant utilization of a particular technology brings about mastery of that technology, proficiency and creativity. The academic staff in the universities in South-South Geo-political Zone, Nigeria are not likely to be proficient in solving technical problems arising from the utilization of digital classrooms because they lack that capacity. They have not been technically trained to participate in digital classroom instructional delivery. This situation will also adversely affect their creativity in the manipulation of computer gadgets in digital classrooms. Therefore, there is need for upgrade of skills. Hassan, Maharroff and Abiddin, (2014) unveils that advancement in technological skills and acquiring the ability of integrating technology in the process of instructional delivery provides a wide range of opportunities for improvement and higher productivity.

Majority of academic staff in the area of study are not proficient in diffusion of technical information when using digital classrooms for instructional delivery because they lack the technical skills. Stoner, Freeman and Gilbert (2011) agree that technical skills which involves the ability to source, analyze, interpret, communicate and utilize technical information are necessary skills for effective delivery of instructions in digital classrooms. Also Okorie (2009) supports the present findings by stating that diffusing technical information is part of the technical skills necessary for effective utilization of digital classrooms for instructional delivery. Diffusing technical information, sourcing for information and integrating information and communication technology into the instructional delivery process in a digital classroom involves the understanding of computer code languages, formulas and symbols. It also requires the ability to understand and utilize specialized knowledge of different technologies, soft and hardware, computer applications and statistical packages. Majority of the academics are not vast in these skills and therefore cannot claim that they are technically competent to utilize digital classrooms for instructional delivery.

Conclusion

Based on the findings of this study, the researchers concluded that majority of academic staff(60.6%) in the universities in South-South Geo-political Zone of Nigeria are not ready to use digital classroom for instructional delivery due to lack of technical skills, infrastructure and enabling environment that will make the adoption of this technology successful and sustainable. It is therefore necessary for the management of universities in South-South Geo-political Zone to make the necessary investments in the area of human capacity building, infrastructural development and ICT facilities in order to enhance the digital classroom utilization effectiveness.

Recommendations

Based on the findings of the study, the researchers hereby recommend as follows:

1. The management of universities in South-South Geo-political Zone of Nigeria should provide training and retraining programmes for their academic staff to equip them with the technical skill needed in the utilization of digital classroom for instructional delivery.
2. Management of universities in South-South Geo-political Zone should massively provide ICT infrastructure and technology in other to encourage the adoption of digital classroom for instructional delivery.

3. Academics require relevant ICT technical skills for the utilization of digital classroom for instructional delivery. Therefore, they should enroll themselves in various ICT technical skills and enhance their competence in digital classroom utilization for instructional delivery.

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