Extent of Utilization of E-Learning Resources for Instructional Delivery by Office Technology and Management Lecturers in Polytechnics in South-East Nigeria

1Prof. Justina Ifeyinwa Ezenwafor, *2Sarah Chinomso Nwachukwu
1Department of Technology and Vocational Education, Nnamdi Azikiwe University, Awka, Nigeria
2Department of Office Technology & Management, Akanu Ibiam Federal Polytechnic, Unwana, Afikpo, Nigeria

The need to equip prospective office technology managers with competencies for sustained relevance in the era of office automation necessitated the study to determine the extent e-learning resources are utilized for instructional delivery by Office Technology and Management lecturers in polytechnics in South-East Nigeria. One research question guided the study and two null hypotheses were tested. Descriptive survey design was adopted for the study. The population of 80 lecturers in all the public polytechnics in the area was studied without sampling because the size was small. A 5-point rating scale questionnaire containing 23 items, and validated by experts was used for data collection. Pilot test was used to establish the reliability of the instrument with Cronbach Alpha and a reliability coefficient value of 0.79 was obtained. Mean and standard deviation were used to answer the research question and determine the homogeneity of the respondents’ views while the hypotheses were tested with t-test at 0.05 level of significance. Findings revealed that the lecturers rarely utilize e-learning resources for instructional delivery. Based on the findings, it was concluded that inadequate utilization of e-learning resources in the programme is a major contributory factor to the ineffective duty performance of the products in offices of the current era. Consequently, it was recommended that management of the polytechnics should sponsor their lecturers to short time courses and conferences to equip them with competencies for e-learning utilization in order to improve the quality of their products.

Keywords: Utilization, e-Learning resources, instructional delivery, OTM lecturers

INTRODUCTION

Education is a means individual attain their preferred life style. It is a tool par excellence for achieving individual, and national development. National development relies strongly on educational advancement, which in turn relies on technological advancement. Currently, global transformation in all spheres of life has ushered in new trends such as e-business, e-office and e-learning in solving diverse human problems. New patterns are utilized in the teaching and learning of different school subjects as a result of the emergence of e-learning.

Utilization refers to making use of something in a purposeful and effective way. Azi and Nwosu (2012) posited that utilization is the degree to which a given group uses a particular service in a specified period. According to Lynch (2020), utilization of e-learning for instructional delivery is becoming more popular because it helps students to learn better. In the context of this study, utilization is the employment of tools and services that will enhance practical, efficient and successful performance.

e-Learning which means electronic learning, refers to the use of electronic resources to facilitate learning. It facilitates the development and transformation of skills and concept-based knowledge to deliver and make information

*Corresponding Author: Sarah Chinomso Nwachukwu;
% Head of Department, Office Technology and Management, Akanu Ibiam Federal Polytechnic, Unwana PMB 1007 Afikpo, Afikpo North, Ebonyi State, Nigeria.
Email: nwachukwusarah343@gmail.com.
Co-Author Email: ji.ezenwafor@unizik.edu.ng
and education accessible to a larger audience easily, speedily and at less costs. As posited by Anwior in Ezenwafor and Nwaokwa (2017), e-learning consists of the use of different Information Communication Technology (ICT) resources (hardware and software) with instructional media to achieve learning at all levels and types of education. Adeoti and Adedeji (2014) asserted that e-learning is a ground-breaking approach for electronically delivering, well-designed, learner-centered and interactive learning environments in either synchronous or asynchronous form.

E-learning resources are hard and software technologies which can be used to achieve academic objectives. Carroll (2017) defined e-learning resources as a wide educational initiative mainly characterized by the utilization of electronic media and other types of communication technologies which can be used to support teaching and learning. Bupu and Ndinechi (2015) posited that e-learning resources are digital educational resources which are developed into units that are reusable, adaptive and can be repurposed to different learning styles, knowledge levels and conditions. Jackson (2013) viewed e-learning resources as technology-aided learning tools that blend both online and face-to-face learning approaches which include hard and software components like internet, video conferencing, mobile technologies, CD/DVD, electronic learning platforms and their likes. Udegbunam (2016) maintained that e-learning resources consist of electronic media and devices used as tools for ameliorating access to training, communication and interaction which adopts new ways to understand and develop learning.

In the context of this study, e-learning resources refer to essential electronic tools (hardware and software) required for the achievement of a well-designed, interactive, student-centered instruction at all levels of learning in both formal and informal education in either synchronous or asynchronous form. Instructional delivery is the interaction among the student, the teacher, the content, the knowledge, skills and dispositions students need for effective teaching/learning outcomes in order to qualify to work together with others in a diverse society and fast changing world. Dabbs (2012) explained that instructional delivery is an instructor’s personal approach to teaching based on their own professional identity which helps to create a unique classroom culture. Instructional delivery combines the complexities of teaching with institutional expectations and student demand for quality instruction.

Adequate utilization of e-learning resources according to Ojeaga and Igbinedion (2012), can enable Office Technology and Management (OTM) lecturers and students to develop manipulative skills, good communication skills and sound basis for scientific and reflective thinking. OTM lecturers belong to the family of business educators and are people who have received professional training in the programme in polytechnics, colleges of education or universities. According to Ohaegbulem (2015), a business educator (OTM lecturer) is someone whose training or preparation automatically qualifies them for different career fields such as business, office work and the teaching profession where the experiences gained in either career usually reinforce their performances. OTM lecturers deal with the dynamics and interesting subject-matter of the contemporary business world and play prominent roles in imparting relevant knowledge and practical skills in students to make them become responsible citizens, self-reliant and employers of labour on graduation. Igboke (2012) opined that OTM lecturers have the same responsibilities as all other teachers to help students develop to their maximum capacity.

However, these lecturers differ in characteristics relative to gender (male/female) and institution ownership (state/federal). These characteristics, no doubt, can have significant influence on their levels of utilization of e-learning resources in instructional delivery. For instance, Chiaha, Eze and Ezeudu (2013) discovered that gender does not affect the utilization of e-learning facilities in tertiary institutions in South-East Nigeria because all the lecturers were exposed to the same environmental learning conditions when they were students regardless of gender. Nwaokwa (2015) and Udegbunam (2016) reported that institution ownership does not influence the utilization of e-learning resources by lecturers in tertiary institutions in South-East Nigeria since government policy on integration of e-learning cuts across all tertiary institutions irrespective of ownership. Despite these findings, however, the present study seeks to ascertain the influence of gender and institution ownership on the extent of utilization of e-learning resources for instructional delivery by OTM lecturers. This is because time lapse and professional development by lecturers could have changed the narrative as against the above findings.

Furthermore, Akasi and Nwabufo (2016) condemned the under-utilization of e-learning resources by OTM lecturers in Nigeria for instructional delivery. The authors regretted that manual and technical resources still dominate the scene. Similarly, Akubueze (2012); Inije, Utoware and Kren-Ikidi (2013) reported that e-learning resources were not extensively utilized for instructional delivery in Nigerian institutions due to several challenges such as shortage of qualified staff with e-learning application competencies, lack of e-learning facilities and infrastructure among others.

Emeasoba and Nweke (2016) reported that OTM lecturers in the polytechnics utilized e-learning resources in teaching at a low extent while traditional instructional methods still dominate. The researchers concluded that the situation could be due to the lecturers’ lack of confidence and skills in utilizing the resources. These studies recommended that the lecturers, their institutions and the government should endeavour to address the challenges to enhance utilization of e-learning resources for the good of the students.
Despite the overwhelming benefits derived from the utilization of e-learning resources for instructional delivery globally, it is widely observed that OTM lecturers are still relying on traditional methods of teaching which is teacher-centered with obsolete equipment in their instructional delivery. Unfortunately, this renders their graduates incompetent to fit into the office and business environment of the current era thus keeping many of them unemployable down the line. The need to reverse this trend cannot be overemphasized, hence the imperativeness of the study to provide empirical evidence on the current status quo in the utilization of e-learning resources by OTM lecturers in polytechnics in South-East Nigeria for instructional delivery for objective remedial measures by relevant stakeholders.

Research Questions

The following research question guided the study:

1. To what extent do OTM lecturers in polytechnics in South-East Nigeria utilize e-learning resources for instructional delivery?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

1. There is no significant difference in the mean ratings of male and female OTM lecturers in polytechnics in South-East Nigeria on the extent they utilize e-learning resources for instructional delivery.
2. OTM lecturers in federal and state polytechnics in South-East Nigeria do not differ significantly in their mean ratings on the extent they utilize e-learning resources for instructional delivery.

Significance of the Study

Findings of this study when published would be of immense benefits to OTM lecturers, their students, management of polytechnics in the area of study and other areas, employers of labour, OTM curriculum developers, government, and the people of Nigeria as well as future researchers. The findings would provide comprehensive and valid information on the extent of utilization of e-learning resources by OTM lecturers in polytechnics in South-East Nigeria which will motivate the lecturers, institution management, OTM curriculum developers, government and to take necessary actions to ensure their optimal utilization.

REVIEW OF RELATED LITERATURE

Literature for the study was reviewed under types of e-learning resources and benefits of utilizing e-learning resources in instructional delivery.

Types of e-learning resources

E-learning resources that can be utilized by OTM lecturers for instructional delivery, as posited by Akubueze (2012), Bartee (2016), Ezenwafor and Nwaokwa (2017) include the following:

Computers: Computer software such as Word Processing, Powerpoint, Corel draw, Database Management, Microsoft Excel as opined by Nwaokwa (2015) are used for instructional delivery especially in the areas of speed development, accounting skills, document production, filing and record management. Techopedia (2018) established that word processing which is one of computer software can be used by both lecturers and students to type, save, retrieve, view and edit documents such as assignments, term papers, research work as well as documents attached to e-mails.

Internet: The internet facilitates quick information retrieval, dissemination and storage. One of the major advantages of the internet as disclosed by Agomuo (2014) is the availability and accessibility of vast amount of data and information on any subject matter by anyone anytime and anywhere. Akubueze (2012) affirmed that the internet improves research and helps students carry out their assignments and homework.

YouTube: This is a major online video sharing software which allows people to easily upload and share video clips across the internet through websites, mobile devices, blogs and e-mail. Lynch (2020) explained that YouTube helps students to learn new concepts better and assists in capturing the attention of the students who not only need to see but also to hear. Videos uploaded to YouTube can be easily embedded into most e-learning course content. Complicated subjects which can be hard to explain with text or images alone can be illustrated using videos from YouTube.

Computer-Assisted Instruction (CAI): This is an interactive instructional method whereby a computer is used to deliver instruction and monitor students’ learning development. According to Khan (2019), CAI can record and store all the students’ responses as well as decide what information is to be given to them next. Nwana (2008) established that CAI responses and assists in the beginning of a learning process to the end. It enhances individualization of instruction, drill and practice which enhances mastery and learning outcome. CAI is very suitable for learning Keyboarding and other skills in Word Processing and improves interactive learning.

DVD/CD-ROM: DVDs are external storage devices that can be used on any computer system with a CD-ROM drive. Nwene in Godwin-Maduike (2015) asserted that DVD/CD-ROMs can store educational materials such as textbooks, dictionaries, encyclopedia, lecture notes and
classroom instructions which can be used for effective teaching and learning.

**Interactive White Board (IWB):** This is a large electronic and interactive display board that connects to a computer, projector and internet and is usually mounted on a wall or floor stand which is used for instructional delivery. Interactive whiteboards are used in variety of settings including classrooms at all levels of education for instructional delivery, workgroups, training rooms, workshops and seminars. It is highly suitable for students' project presentations and seminars (Onwukwe, Lekwa & Aliche, 2013; Nwaokwa, 2015).

**Video conferencing Device:** Videoconferencing device is a collaborative communication device that allows individuals or groups to communicate in real time at different geographical locations where they can see and hear one another using computers and internet communications. Onwukwe et al. (2013) emphasized that videoconferencing can be particularly effective in educational applications because interaction between people is usually different when they can see and hear each other. Otunuya (2016) posited that video conferencing can be used to conduct lectures in real time face-to-face interaction. Learners can record lectures which can later be used on demand for on demand lectures.

**Interactive Radio:** Interactive radio is similar to the ordinary radio except that it is interactive in nature. Important messages which are meant to educate the learners are communicated live with the transmitter and can still be relayed through repeat broadcast (Akubueze, 2012). This technology can be used to transmit live OTMprogrammes and allow participants to make contributions live on air with the use of their mobile devices anywhere within the transmission reach of the radio station.

**PowerPoint:** This is one of the computer software according to Azuka (2016) that allows teachers and trainers to display their lessons on an overhead projector. It incorporates graphics, animation, sound effects, video, text, and charts which can be used by lecturers to facilitate instructional delivery. Russell (2018) noted that PowerPoint presentations are suitable for large classes as well as small groups for instructional delivery, training and other purposes.

**E-mail:** E-mail which means electronic mail refers to mails sent through the internet with the aid of smart phones and computers. Agomuo (2014) noted that e-mails can be read, edited, stored, printed, deleted or forwarded to same or other recipients. It is fast and reliable, covering long distances in a matter of seconds. Lecturers can use e-mail to deliver instruction, send lecture notes and educational information to students for effective instructional delivery. Students can as well submit their assignments electronically to the lecturer and receive corrections through e-mail.

**Learning Management System (LMS):** This is a software application which enables lecturers to deliver instructions to students, administer tests and other assignments, track student progress, and manage record-keeping anytime and anywhere. Pappas (2016) established that LMS can be used for delivering, tracking and managing training and education. Some LMSs help track data about attendance and identify progress towards learning. Lecturers can post announcements, grade assignments, check on course activity, and participate in class discussions with students via LMS.

**iLearn:** This is an amalgamation of several e-learning technologies designed to allow lecturers and students to interact as part of flexible teaching and learning experience. Ojeaga and Igbinedion (2012) opined that iLearnas an academic platform can allow students download learning materials such as PDF courseware, laboratory exercises, teaching slides and ISO DVDs. OTM lecturers can utilize iLearn to support their courses or teach an entire class online.

**Virtual Learning Environment (VLE):** Virtual Learning Environment (VLE) also known as virtual classroom is a web-based classroom that allows teachers and students to communicate and interact with one another online. Class information, learning materials and assignments are provided through the internet via VLE (Otunuya, 2016). VLE supports an exchange of information between a user and the learning institute he or she is currently enrolled in through digital mediums like e-mail, chat rooms, web 2.0 sites or a forum thereby helping convey information to any part of the world with just a click. In VLE, students have 24 hours of access to the learning material in a day which suits their life styles.

**Flipped classroom:** A flipped classroom is a learner-centered instructional strategy and a type of blended learning whereby students are introduced to face-to-face interaction as well as online independent study outside of the classroom. Cabi (2018) noted that flipped classroom has increased students' motivation and enhanced their learning performance. In a flipped classroom, students are introduced to content at home via technology and practice working through it at school. Students watch pre-recorded videos at home, then come to school to do the homework armed with questions and at least some background knowledge (Trach, 2020).

**Podcasts:** Podcasts are depository of audio and video materials that can be given to learners without user intervention. These audio and video files can be downloaded to portable media players that can be taken anywhere, providing the potential for anytime, anywhere learning experiences. Gray (2017) stated that podcasts afford lecturers opportunity to effortlessly engage audio
content, which students can listen to anywhere and anytime. Podcasting can equally improve teaching and learning practice. OTM students can use podcasting for effective learning of Shorthand.

WhatsApp Messenger: WhatsApp Messenger is an instant messaging and voice application that allows people to send text messages, voice calls as well as video calls, images and other media, documents and user location globally through the internet in a fast, simple and reliable way (Irfan &Dhimmar, 2019). Lecturers can use WhatsApp to communicate students on the change of timetable, send recorded audio or video lectures, questions and send lecture notes. Students can use WhatsApp to send lecture notes to fellow students who could not attend lectures, interact with one another on important or difficult topics and send useful information and recorded audio or video lectures to other students.

Video Projector: This is an image projector that receives a video signal and protects the associated image on a projection screen using a lens system. All video projectors use a very bright light to project the image and most modern ones can correct curves, obscure and generally other discrepancies through manual settings. This device is extensively used for many applications such as conference room presentations and classroom training. They are sometimes connected to an interactive whiteboard to interactively teach students (Onwukwe et al., 2013).

Webcam: Webcam is a video camera which is attached to the computer that feeds or streams its image in real time to or through a computer to an internet. Agomuo (2014) observed that lecturers can use webcam to deliver instructions and monitor students’ activities by viewing them while online. Webcams has facilitated creation of virtual classrooms and virtual learning environment. It is also used to counter plagiarism and other forms of academic dishonesty that might occur in an e-learning environment.

LearnBoost: LearnBoost is free web-based software that provides effective class management system. It consists of a group of software that can help instructors manage grade books, lesson plans, class roster, seating plan, schedules and attendance. According to Bartee (2016), students can use LearnBoost to evaluate themselves while lecturers and parents can use it to monitor and track their students’ and children’s performance on a daily basis. Its interface is easy to use and signup is completely free and can be done using a Facebook or Google account

Engrade: Engrade is an educational tool that combines online learning management system and educational assessment products which allows teachers to keep track of all their classes within one application which comprises managing grades and exporting them to Microsoft Excel. This tool can be used to monitor students’ attendance as well as performance in class. Bartee (2016) noted that one of the useful features of Engrade is that teachers can create interactive lessons using the materials they have collected online, and even make online quizzes that will prepare their students for future tests.

Top Hat: Top Hat is a student engagement software that lecturers use inside and outside of the classroom to track attendance, asks questions, features interactive slides and manages classroom discussions. Outside of the classroom, the software features an interactive text platform where lecturers can adopt, customize, or create content for their courses. Top Hat enables teachers to create interesting and interactive presentations with the goal of enhancing student activity in class as well as their knowledge retention. It allows lecturers to engage students in active learning and check their knowledge of the subject (Bartee, 2016).

Computer Managed Instruction (CMI): CMI is software that has the basic function of assessment, scoring, and grading of students’ tests, quizzes and examinations. It manages students’ academic records and enhances individualization of instruction. Adekunle, Adepoju, Suleiman and Abdullahi (2020) opined that CMI as an instructional approach is used to present learning objectives, learning resources, record keeping, progress monitoring and assessment of learner performance.

Google Classroom: Google Classroom is a free network service developed by Google for schools that desire to simplify the creation, distribution and grading of assignments in a paperless way. The main purpose of Google Classroom as revealed by Shahinaz (2017) is to modernize the practice of sharing files between teachers and students. Google Classroom combines Google Drive, Google Docs, Sheets and Slides, and Gmail together to help educational institutions migrate to electronic system. Each class created with Google Classroom creates a separate folder in the respective user’s Google Drive, where the student can submit work to be assessed by a teacher. Lecturers can monitor the progress of each student and after being graded, can return students work, with comments. It also allows instructors to create, administer and grade assignments.

Benefits of utilizing e-learning resources in instructional delivery

Authors and researchers have outlined several benefits of utilizing e-learning resources for instructional delivery. For instance, Otunuya (2016) affirmed that it improves productive learning through increased peer interaction and collaboration rather than unhealthy competitive learning. Furthermore, Arkorful and Abaidoo (2014), Nwaokwa (2015) and Ofojebe, Olibie and Chukwuma (2015) highlighted other benefits to include the following:
i. The use of e-learning resources enhances quality instructional delivery, research, knowledge creation and timely information dissemination in institutions of learning.

ii. It offers easy access to any type of information required for academic purposes and enables students and teachers to generate, explore and share knowledge in a more common form.

iii. E-learning offers a wide range of tools to enable teachers and learners to be innovative, creative and resourceful in all learning activities.

iv. It can provide an individualized learning experience for all learners, including those who are disadvantaged, disabled, exceptionally gifted, have special curriculum or learning needs.

v. E-learning is cost effective. This is because while the initial cost of developing an e-learning course can be significantly higher than that of traditional training this expense is more than compensated by the savings in implementation and delivery of the course. This is especially true when the course is to be delivered to a large and geographically diverse students.

vi. E-learning resources provide flexibility and offers improved learning environments by focusing on learning without any bounded geographical location.

vii. It promotes better teaching and learning by increasing the rate and degree of learning assimilation as well as makes the work of lecturers easy.

viii. It arouses learner’s interest by helping to inculcate in students the ability to evolve expertise in concepts presented during the learning process (Akasi & Nwabufo, 2016).

ix. E-learning facilitates enriched learning environment as it supports interactivity, flexibility and convenience as well as a shift from teacher centered to learner centered paradigm.

Method

Descriptive survey design was adopted for the study. Nworgu (2015) defined descriptive survey research design as one in which a group of people or items are studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group. The population of 80 OTM lecturers in all the six polytechnics in South-East Nigeria is made up of 16 lecturers from Abia State Polytechnic, Aba; 17 from Akanulbiam Federal Polytechnic, Unwana, Ebonyi State; 13 from Federal Polytechnic, Nekede, Imo State; 16 from Federal Polytechnic Oko, Anambra State; 9 from Imo State Polytechnic, Umuagwo, Imo State and 9 from Institute of Management and Technology, Enugu (as supplied by heads of OTM department of each institution) was studied without sampling because the size was small and manageable. Data for the study were collected using a 5-point rating scale questionnaire containing 23 items. The instrument was validated by three experts; two in Business Education from the Department of Technology and Vocational Education and one in educational measurement and evaluation from the Department of Educational Foundations all in the Faculty of Education, Nnamdi Azikiwe University, Awka. The reliability of the instrument was determined using a pilot test involving 11 OTM lecturers from Delta State Polytechnic, Ogwashiukwu which is outside the area of study but have similar features to the area of the study. The data were analysed with Cronbach Alpha using the statistical package for social sciences (SPSS) which yielded a reliability coefficient value of 0.79. This was supported by Nworgu (2015), who noted that Cronbach’s alpha tests to observe if multiple-question Likert scale surveys are consistent. Mean and standard deviation were used to answer the research question and determine the homogeneity of the respondents’ views while the hypotheses were tested using t-test at 0.05 level of significance. Decision on the research question was based on the cluster mean relative to the real limit of numbers on a five-point scale. A null hypothesis was not rejected where the p-value is greater than the alpha level of 0.05 but where the p-value is less than the alpha value, it was rejected.

Results

The results are shown on Tables 1 to 3 on page 8 below.

Table 1 shows that only two resources with mean scores of 3.65 and 3.74 are greatly utilized while the rest are moderately, rarely or not utilized. The cluster mean score of 2.16 shows that OTM lecturers in polytechnics in South-East Nigeria rarely utilize e-learning resources for instructional delivery. The standard deviation values are not homogeneous as they ranged from 0.24 – 1.27.

Table 2 shows that p-value of .908is greater than the significant level of 0.05(p .908> 0.05) at 78 degree of freedom. This shows that there is no significant difference in the mean ratings of male and female OTM lecturers in polytechnics in South-East Nigeria on the extent they utilize e-learning resources for instructional delivery. This result is in line with the findings of Chiaha, et al (2013) who discovered that no significant difference exists in gender with regards to OTM lecturers’ utilization of e-learning resources for instructional delivery. This according to them is because they were exposed to the same learning method while they were students. Therefore, the null hypothesis was not rejected.

Table 3 shows that p-value of .567is greater than the significant level of 0.05 (p .567> 0.05) at 78 degree of freedom. This reveals that there is no significant difference in the mean ratings of OTM lecturers in federal and state polytechnics in South-East Nigeria on the extent they utilize e-learning resources for instructional delivery. This finding agrees with the report of Udegbunam (2016) that institutional ownership did not influence the utilization of e-learning resources by tertiary institution lecturers. Therefore, the null hypothesis was not rejected.
Table 1: Respondents’ mean ratings on the extent OTM lecturers in polytechnic in South-East Nigeria utilize e-learning resources for instructional delivery

<table>
<thead>
<tr>
<th>S/N</th>
<th>e-Learning Resources for Instructional Delivery</th>
<th>Mean</th>
<th>SD</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Internet</td>
<td>3.11</td>
<td>1.21</td>
<td>Moderately Utilized</td>
</tr>
<tr>
<td>2</td>
<td>Computers</td>
<td>3.74</td>
<td>1.09</td>
<td>Greatly Utilized</td>
</tr>
<tr>
<td>3</td>
<td>DVD/CD-ROM</td>
<td>3.30</td>
<td>1.32</td>
<td>Moderately Utilized</td>
</tr>
<tr>
<td>4</td>
<td>Interactive Whiteboard</td>
<td>1.68</td>
<td>0.65</td>
<td>Rarely Utilized</td>
</tr>
<tr>
<td>5</td>
<td>Interactive Radio</td>
<td>1.06</td>
<td>0.24</td>
<td>Not Utilized</td>
</tr>
<tr>
<td>6</td>
<td>Videoconferencing device</td>
<td>1.38</td>
<td>0.49</td>
<td>Not Utilized</td>
</tr>
<tr>
<td>7</td>
<td>Learning Management System (LMS)</td>
<td>2.26</td>
<td>1.19</td>
<td>Rarely Utilized</td>
</tr>
<tr>
<td>8</td>
<td>YouTube</td>
<td>1.98</td>
<td>1.23</td>
<td>Rarely Utilized</td>
</tr>
<tr>
<td>9</td>
<td>Power Point</td>
<td>3.65</td>
<td>1.24</td>
<td>Greatly Utilized</td>
</tr>
<tr>
<td>10</td>
<td>Computer Assisted Instruction</td>
<td>1.63</td>
<td>0.80</td>
<td>Rarely Utilized</td>
</tr>
<tr>
<td>11</td>
<td>Computer Managed Instruction</td>
<td>1.70</td>
<td>0.97</td>
<td>Rarely Utilized</td>
</tr>
<tr>
<td>12</td>
<td>WhatsApp</td>
<td>2.88</td>
<td>1.28</td>
<td>Moderately Utilized</td>
</tr>
<tr>
<td>13</td>
<td>Virtual Learning Environment (VLE)</td>
<td>2.20</td>
<td>0.99</td>
<td>Rarely Utilized</td>
</tr>
<tr>
<td>14</td>
<td>Top Hat</td>
<td>1.13</td>
<td>0.33</td>
<td>Not Utilized</td>
</tr>
<tr>
<td>15</td>
<td>Engrade</td>
<td>1.10</td>
<td>0.30</td>
<td>Not Utilized</td>
</tr>
<tr>
<td>16</td>
<td>E-mail</td>
<td>3.13</td>
<td>1.27</td>
<td>Moderately Utilized</td>
</tr>
<tr>
<td>17</td>
<td>Projectors</td>
<td>3.48</td>
<td>1.20</td>
<td>Moderately Utilized</td>
</tr>
<tr>
<td>18</td>
<td>Podcasts</td>
<td>1.19</td>
<td>0.45</td>
<td>Not Utilized</td>
</tr>
<tr>
<td>19</td>
<td>ILearn</td>
<td>1.23</td>
<td>0.53</td>
<td>Not Utilized</td>
</tr>
<tr>
<td>20</td>
<td>Mobile Phones</td>
<td>3.35</td>
<td>1.21</td>
<td>Moderately Utilized</td>
</tr>
<tr>
<td>21</td>
<td>Google Classroom</td>
<td>1.50</td>
<td>0.75</td>
<td>Rarely Utilized</td>
</tr>
<tr>
<td>22</td>
<td>Flipped Classroom</td>
<td>1.30</td>
<td>0.66</td>
<td>Not Utilized</td>
</tr>
<tr>
<td>23</td>
<td>Webcam</td>
<td>1.66</td>
<td>0.98</td>
<td>Rarely Utilized</td>
</tr>
<tr>
<td></td>
<td>Cluster Mean</td>
<td>2.16</td>
<td></td>
<td>Rarely Utilized</td>
</tr>
</tbody>
</table>

Table 2: Summary of t-test analysis of male and female OTM lecturers in polytechnics in South-East Nigeria on the extent they utilize e-learning resources for instructional delivery

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Gender</th>
<th>N</th>
<th>x</th>
<th>SD</th>
<th>A</th>
<th>t-calctd</th>
<th>p-value</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Delivery</td>
<td>Male</td>
<td>32</td>
<td>52.34</td>
<td>18.24</td>
<td></td>
<td></td>
<td></td>
<td>Not Significant</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>48</td>
<td>52.83</td>
<td>18.54</td>
<td>0.05</td>
<td>-1.16</td>
<td>.908</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Result of t-test analysis of the mean ratings of OTM lecturers in federal and state polytechnics in South-East Nigeria on the extent they utilize e-learning resources for instructional delivery

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Institution Ownership</th>
<th>N</th>
<th>x</th>
<th>SD</th>
<th>A</th>
<th>t-cal</th>
<th>df</th>
<th>p-value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional Delivery</td>
<td>Federal</td>
<td>46</td>
<td>53.65</td>
<td>18.65</td>
<td>0.05</td>
<td>0.574</td>
<td>78</td>
<td>.567</td>
<td>Not Significant</td>
</tr>
<tr>
<td></td>
<td>State</td>
<td>34</td>
<td>51.26</td>
<td>18.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DISCUSSION

Findings of this study revealed that Office Technology and Management (OTM) lecturers in polytechnics in South-East Nigeria rarely utilize e-learning resources for instructional delivery. This finding is in agreement with the position of Akasi and Nwabufo (2016) who decried the under-utilization of e-learning resources and reliance on manual and technical resources by OTM lecturers in Nigeria. The finding also supports the report of Emeasoba and Nweke (2016) that OTM lecturers in polytechnics in South-East Nigeria utilize e-learning resources in teaching at a low extent. This is not encouraging at all considering that the computerization of functions in the present office and business environments where the products are expected to work.

Akasi and Nwabufo (2016) expressed concern on the level of utilization of e-learning resources and reliance on manual and technical resources by OTM lecturers in the entire country over 10 years ago. Then nine years later Emeasoba, et al (2016) reported that the situation was persisting in the South-East and blamed the ugly state on OTM lecturers’ continuous utilization of traditional methods of instructional delivery or limited confidence/incompetency e-learning and how to utilize the resources.
Regrettably, five years have elapsed between 2016 and the time of the current study with no remarkable changes found. This shows that the relevant stakeholders are only paying lip service to the need to improve the quality of OTM graduates by adequately equipping them with requisite technological competencies for success in employment in the current era. Also, it could be that the government is not utilizing the results of research by scholars.

It is obvious that a lot has to be done by OTM lecturers and management of their polytechnics in the area as well as their owners (federal and state governments) to remedy the ugly situation and ensure that e-learning resources are adequately provided and that OTM lecturers acquire the relevant skills to utilize them fully in order to enable them effectively impart them to their students. This will drastically reduce unemployment of the graduates as those who could not secure paid employment can become successful entrepreneurs and contribute to national development.

The findings also show that there is no significant difference in the mean ratings of male and female OTM lecturers in polytechnics in South-East Nigeria on the extent they utilize e-learning resources for instructional delivery. This finding is in agreement with Chiaha, Eze and Ezeudu (2013) who reported that gender did not affect the utilization of e-learning facilities by lecturers in tertiary institutions in South-East Nigeria because they were exposed to the same learning conditions when they were students. It is surprising that the situation has not changed but this could be alluded to the fact that all the lecturers irrespective of gender are taking steps to flow with the times to avoid becoming irrelevant in the labour market.

Furthermore, it was found that OTM lecturers in federal and state polytechnics in South-East Nigeria did not differ significantly in their mean ratings on the extent they utilize e-learning resources for instructional delivery. This finding agrees with Nwaokwaw (2015) who reported that institution ownership did not influence the utilization of e-learning resources by lecturers in tertiary institutions in South-East Nigeria. Nwaokwaw averred that the reason is that government policy on integration of e-learning cuts across all tertiary institutions in Nigeria notwithstanding ownership. This implies that all OTM lecturers irrespective of gender or institution ownership should follow the trend of the technology-driven era by continuously improving their e-learning skills for effective instructional delivery.

CONCLUSION

Based on the findings of this study, it was concluded that the level of utilization of e-learning resources by OTM lecturers in polytechnics in South-East Nigeria is grossly inadequate for equipping the products for success in employment and sustained relevance in the current technology-driven era. It shows that the lecturers are lagging behind and limiting the future opportunities of their students.

Recommendation

Based on the findings of this study, the following recommendations were made:

1. All OTM lecturers in polytechnics in the area of the study who are deficient in ICT/e-learning skills should be supported by their management to undergo training in order to acquire them for quality and effective instructional delivery.

2. Professional bodies like the Association of Business Educators of Nigeria and others should create awareness on the numerous benefits of e-learning resources for impactful instructional delivery in OTM programme through seminars and conferences.

3. Management of polytechnics in South-East Nigeria should make sure that OTM laboratories are well equipped with modern e-learning resources and power supply to enable lecturers utilize them.

4. Management of polytechnics in South-East should make possession of ICT/e-learning competencies a requirement in recruiting OTM lecturers and continue to sponsor them to seminars and conferences to remain up-to-date and upgrade their ICT/e-learning competencies.

5. Employers of labour should ensure their OTM graduate employees to undertake further training on ICTs utilization as part of the orientation programmes for optimal job performance and global competitiveness.

6. National Board for Technical Education (NBTE) should review OTM curriculum which is long overdue and specify the quantity and quality of modern e-learning resources that should be provided for effective instructional delivery in the programme.

REFERENCES


Accepted 25 September 2020


Copyright: © 2020 Ezenwafor and Nwachukwu. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are cited.