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Awareness of Innovative Educational Software Among Educators in Tertiary Institutions in Enugu State, Nigeria

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Abstract

The main purpose of the study was to ascertain the extent of awareness of innovative educational software among educators in tertiary institutions in Enugu State. A total of 68 questionnaires were administered to respondents that consists of educators from three different tertiary institutions in Enugu State. The results were presented using mean and standard deviation. While the hypothesis was tested with ANOVA at 0.05 level of significance. The findings revealed a low awareness of innovative educational software among the respondents. Despite the growing importance of educational software, most of the respondents did not know about some of the listed educational software and this may likely affect their level of usage. The study concluded by recommending that tertiary institutions should organize regular trainings for their staff to equip them with the relevant digital knowledge and skills needed to teach and compete in the 21st century.

Keywords: Educational Software, Technology, Lecturers, Tertiary Institutions, Awareness.

1. Introduction

Emerging technologies has brought tremendous transformational changes to teaching and learning across the globe (Onyema, 2019). Technology has, since the 20th century, become an integral part of the education system. This trend has continued to evolve and get better, and at every point in time, more technologies are developed and deployed to suit contemporary societal needs and situations. Computer has become of the prominent technologies which has infused significantly in education, and has over the years increased in sophistication and usefulness. Today, the use of computers in the education system has received more attention for improving the standard of learning, as well as teaching. Various resources such as computer,

internet, broadcasting technologies are being used to improve the education system (Majoka, Fazal & Khan, 2013; Onyema et al, 2019). In earlier days, teachers were not much aware of the need of bringing computers as an essential part of their day to day activities. Moreover, it was impossible to do study in foreign universities without going over there. But, today's scenario is completely changed. Computers make it possible by using various technologies such as online education, distance education, Computer Aided Courses etc in the field of education. No doubt, computers have become essential for everyone in every field. Teachers now use technologies like smart classes, LCD projectors, EDUCOM, Laptops, memory sticks in their classroom to make effective learning process (Dabas, 2018; Onyema and Deborah, 2019).

Computers were born basically out of man's need for calculations. According to Hemmendinger (2019), computer once meant a person who did computations, but now the term almost universally refers to automated electronic machinery. Although over the years, research and inventions have an era where the machine can do far more than calculations. They have become the wheels on which the world moves, as their applications are found in virtually every field of human endeavor. Wikipedia (2019) defined computer as a machine that can be instructed to carry out sequences of arithmetic or logical operations automatically via computer programming. It is also defined as a technological innovation under the control of stored programs that can perform some of the intellectual roles of man even beyond human capability. It is a power-driven machine equipped with keyboards, electronic circuits, storage compartments, and recording devices for the high speed performance of mathematical and other numerous operations (Tayo et al, 2009). The computer therefore comprises of several components which are needed to carry out different but integrated functions. The basic components of a computer system are hardware, software and networking components (Wikipedia, 2019).

Computer software, or simply software, is a collection of data or computer instructions that tell the computer how to work. This is in contrast to physical hardware, from which the system is built and actually performs the work. In computer science and software engineering, computer software is all information processed by computer systems, programs and data. Computer software includes computer programs, libraries and related non-executable data, such as online documentation or digital media. Computer hardware and software require each other and neither can be realistically used on its own (Wikipedia, 2019). There are different types of computer software. According to Wikipedia (2019), the two main types of computer software are the system software and the application software. The system software provides the platform for users to install and run application software, and it's made up of multiple programs needed to run a computer system smoothly. Application programs are designed to perform specific tasks, such as word processing, video editing, spreadsheets and web browsers.

Education software is a massive, all-encompassing term used to refer to any and all software designed for use in the education industry. The term includes everything from student

information systems and classroom management software to reference management software and language learning software (G2, 2020). According to Wikipedia (2019), educational software is a term used for any computer software which is made for an educational purpose. It encompasses different ranges from language learning software to classroom management software to reference software, etc. The purpose of all this software is to make some part of education more effective and efficient.

Some of the popular educational software include: Learning Management System (LMS), Student Information System (SIS), Classroom Management System (CMS) and Assessment Software (AS). Learning Management Systems (LMS) serve as a central hub where teachers and lecturers can upload and organize course material for students to access. Schools and universities use learning management systems to reduce the use of paper, as well as make documents available out of the classroom. Examples of LMS include Canvas, Google Classroom, Blackboard Learn, etc (G2, 2020). Student Information Systems (SIS) store and track all student information, including grades, attendance records, and more. SIS products are used by teachers, students, and parents to communicate all relevant information pertaining to a student's schooling. Examples of this software include Powerschool SIS, Gradelink, Ellucian Banner, etc.

Classroom Management software is used by teachers to add another dimension to lessons. These tools typically add an interactive element to lesson plans that better engage students. Examples include McGraw Hill Connect, Powerschool Unified, Lanschool, Edsby, etc. Assessment software provides students with a portal to take computerized tests and quizzes. Popular Assessment products used by Education professionals include Survey Anyplace, Canvas, Kahoot, McGraw Hill Connect, etc. Despite the existence of these important educational software, no study known to the researcher, has examined the extent to which lecturers are aware of them in Nigeria, especially in Enugu State. In a bid to ensure that lecturers in tertiary institutions are in situ, in terms of trends in education technology, there is the need to examine awareness gaps.

2. Purpose of the Study

The main purpose of the study was to ascertain the extent of awareness of innovative educational software among educators in tertiary institutions in Enugu State. Specifically, the study seeks to:

1. Identify available educational software.

2. ascertain the awareness level of the identified educational software among educators in tertiary institutions in Enugu State.

3. Research Question

The following research question was formulated to guide the study:

1. To what extent does educators in tertiary institutions in Enugu State aware of educational software?

2. Is there any difference in the mean scores of educators in universities, polytechnics and colleges of education on their extent of awareness of innovative educational software?

4. Hypothesis

One null hypothesis was formulated to guide the study. It was tested at 0.05 level of significance.

There is no significant difference in the mean scores of educators in universities, polytechnics and colleges of education on their extent of awareness of innovative educational software.

5. Method

The study adopted the descriptive survey design. The study was carried out in three different tertiary institutions in Enugu State consisting of one College of Education, Polytechnic and a University**.** A total of 73 structured questionnaires were administered, but only 68 was returned valid. The questionnaire was divided into two sections. Section A contained items on the bio-data of the respondents while section B was made up of items based on the research question. The response format adopted was a four point scale of Very Great Extent (VGE), Great Extent (GE), Low Extent (LE), and very Low Extent (VLE) with weighted value of 4, 3, 2, and 1 points respectively. The instrument was subjected to face validation by three experts, one from measurement and evaluation and two from computer education all from Enugu State University of Science and Technology (ESUT), Enugu. The reliability coefficient of the instrument was found to be 0.76 using cronbach Alpha reliability method. The collected data were later analyzed using mean and standard deviation. A mean score of 2.50 and above was considered Great Extent Awareness of Educational innovative software while mean score below 2.50 was considered Low Extent Awareness of Educational Innovative software. The hypothesis was tested using ANOVA at 0.05 level of significance.

6. Results

The following are the results of the data analysis.

6.1. Research Question 1: To what extent are educators in tertiary institutions in Enugu State aware of educational software?

Table 1: Extent of awareness of educational software among educators in tertiary institutions in Enugu State.

Item	University		Polytechnics		College of Education		Overall		Decision
	$\bar{x}$	**SD**	**$\bar{x}$**	**SD**	**$\bar{x}$**	**SD**	**$\bar{x}$**	**SD**	
Canvas	**1.93**	**0.73**	**2.05**	**0.79**	1.89	0.58	1.96	0.71	LE
Google classroom	1.93	0.68	1.95	0.72	1.83	0.71	1.91	0.69	LE
Blackboard learn	2.00	0.68	1.82	0.50	1.89	0.68	1.91	0.62	LE
SAP Litmos	2.15	0.72	2.00	0.69	1.83	0.71	2.01	0.71	LE
TalentLMS	2.00	0.62	2.00	0.82	1.89	0.76	1.97	0.72	LE
Moodle	2.11	0.75	1.86	0.71	1.72	0.57	1.93	0.70	LE
Powerschool	2.00	0.55	1.95	0.65	1.94	0.64	1.97	0.60	LE
Gradelink	1.74	0.71	2.09	0.61	1.72	0.75	1.85	0.70	LE
Ellucian Banner	1.74	0.71	2.14	0.71	2.11	0.58	1.97	0.70	LE
Infinite Campus	2.11	0.64	2.14	0.77	2.11	0.68	2.12	0.69	LE
Skyward Student Management	2.15	0.66	2.09	0.75	2.22	0.73	2.15	0.70	LE
Munis	2.00	0.62	1.95	0.65	2.06	0.64	2.00	0.63	LE
Dyknow	1.89	0.70	2.05	0.79	2.22	0.73	2.03	0.74	LE
ClassDojo	2.07	0.73	2.14	0.47	2.00	0.91	2.07	0.70	LE
McGraw-Hill Connect	2.15	0.77	1.82	0.59	2.44	0.51	2.12	0.69	LE
LanSchool	1.93	0.62	2.14	0.71	2.00	0.69	2.01	0.66	LE
PowerSchool Unified Classroom	1.93	0.73	1.91	0.75	1.83	0.62	1.90	0.70	LE
Edsby	2.26	0.76	1.59	0.67	2.00	0.77	1.97	0.78	LE
Kahoot	2.11	0.64	2.14	0.64	2.17	0.71	2.13	0.65	LE
Survey Anyplace	2.07	0.73	2.09	0.75	2.11	0.68	2.09	0.71	LE
Grand Mean and SD	**2.01**	**0.69**	**2.00**	**0.69**	**2.00**	**0.68**	**2.00**	**0.69**	LE

The results from Table 1 above showed the extent of Awareness of Innovative Educational Software among educators in tertiary institutions in Enugu State. From the mean ratings, all the items from 1-20 were less than the cutoff point of 2.50. This implies that the respondents disagreed with the items. This implies that the respondents had low awareness of the mentioned educational software.

6.2. Hypothesis

There is no significant difference in the mean scores of educators in universities, polytechnics and colleges of education on their extent of awareness of innovative educational software.

Table 2: Results of Analysis of variance on the mean ratings of educational software awareness among educators in universities, polytechnics and colleges of education

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.004	2	.002	.107	.899
Within Groups	1.213	64	.019		
Total	1.217	66			

The result in table 2 above showed the F value for the difference in mean ratings of educational software awareness among educators in universities, polytechnics and colleges of education in Enugu State. This is significant at .899 level of significance which is higher than 0.05 set for the study. The null hypothesis is therefore not rejected. This means that there was significant difference in the mean ratings of educational software awareness among educators in universities, polytechnics and colleges of education n Enugu State.

7. Discussion

Our findings show that the extent of Awareness of Innovative Educational software among educators of tertiary institutions in Enugu State who participated in this study was low. In other words, educators who participated in the study had low level of awareness of innovative educational software and therefore could not take advantage of its potentials to enhance their content and delivery. The test of hypothesis in table 2 further showed that the situation is not different for lecturers in universities, polytechnics and colleges of education. This finding is consistent with the submission of Nannim et al (2018) who decried the low level awareness of ICT facilities for teaching in tertiary educational institutions, and Onyema (2019b), who found that poor awareness negatively affect the integration of educational technologies in Nigeria educational system. Considering the enormous potentials of educational software and the increasing need for transitioning to digital education, relevant authorities have to put measures in place to enhance the technological knowledge of educators through professional development programmes and seminars to prepare them for the new realities in education. Educators have to

empower themselves digitally to be able to empower their students with modern skills to enhance their employability and competiveness in digital world of works.

8. Conclusion

The study revealed a low level of awareness of innovative educational software by educators in tertiary institutions in Enugu State. Consequently, there is need for more training and enlightenment among educators on emerging educational technologies to enhance their abilities to integrate them into the teaching and learning process. This would go a long way to equip educators or staff with the relevant digital skills and knowledge needed to teach and meet the need of digital millennial and indeed emerging realities in the education sector in the 21st century. More funding have to be budgeted for the education sector, particularly in developing countries to facilitate the availability and accessibility to educational technologies.

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