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ACCESSIBILITY AND UTILIZATION OF DIGITAL RESOURCES FOR EFFECTIVE TEACHING OF ECONOMICS IN SOUTH EAST, NIGERIA

By

Ede, Maxwell Okwudili (Ph.D)
maxwellokwudili@gmail.com

&

Oken, Kenechukwu
okenkenechukwu@gmail.com

College of Education
Michael Okpara University of Agriculture
Umudike, Abia State

Abstract

The study investigated the accessibility and utilization of digital resources for effective teaching of Economics in South East, Nigeria. The study adopted a descriptive survey design. Two research questions and hypotheses guided the study. Six public universities consisting of federal and state universities were purposively selected for the study. The sample for the study comprised 86 Economics education lecturers. Data were collected using a questionnaire named "Digital Resources Accessibility and Utilization for Economics Instructions Questionnaire (DRAUEIQ)". The instrument was validated, trail tested, and a reliability coefficient of 0.85 was ascertained using Cronback Alpha. Data obtained were analyzed using mean and standard deviation while hypotheses were tested using the t-test statistic. The results of the study indicated that collaboration tools, e-books, online databases, social media, multimedia, learning management system, among others were accessible to a low level. The result also revealed low utilization of digital resources for effective teaching of economics in universities in South East, Nigeria. Based on the findings, the study recommended among others, educators constantly access and utilize digital resources for effective teaching and learning of Economics.

Keywords: Accessibility, Utilization, Digital Resources, Economics, Teaching and Learning.

Introduction

Economics as a distinct field of study is very important for socio-economic development of man and society. It was introduced in Nigeria after a protracted debate on its ability to fundamentally equip graduates with the basic knowledge and requisite skills necessary for understanding the nature of economic concepts and problems of our society, and prepare them adequately to be able to navigate complex economic challenges of 21st century and beyond (Ede, Oleabhiele & Modebelu, 2016). According to Adu and Zondo (2024), the study of Economics develops in individuals, entrepreneurial and managerial skills needed for self and national consciousness as well as improving the economic well-being of individuals and society at large for the achievement of national objectives.

The study of Economics therefore improves students' interaction with their environment, and broadens their knowledge and level of involvement in economic and social activities, enhance their capacity to apply scientific knowledge on issues of personal, households, firms and governments. Ede *et al* (2016) observed that the Economics widens students' knowledge and competence such that graduates can become self-dependent so that in the event when no job opportunities exist, they can be productively and gainfully engaged in income generating activities. According to Akarowhe in Azu (2023), the study of Economics provides students with knowledge for making rational decisions, living a meaningful life in a dynamic society, managing scarce resources efficiently and having respect for the dignity of labour.

The realization of the growing importance of Economics, is largely dependent on the way and manner in which Nigerian universities (including federal and state universities) implement its course contents, particularly in this age of technological evolution. This therefore has necessitated nearly all the educational institutions to integrate digital resources into the teaching and learning process in order to enhance the effectiveness of educators and performance of students. Idika, Eneogu, Ede, Obiorah, Nji, Okolie and Tom (2021) submitted that since the world is increasingly progressing at a rapid rate towards digitization, both students and teachers are expected to adopt digital resources to enhance efficiency in the way economics is taught and learnt. Effective use of digital resources in instructional delivery can help students gain deeper knowledge of economic principles and concepts, and apply them in their daily endeavours.

Digital resources include technologies and technological applications use in instructional delivery. Therefore, Dansca, Stempelova, Takac and Annus (2023), defined digital resources

as software, applications, technologies, plug-ins, add-ons or websites that are accessible through internet connection and can enhance teachers' and learners' experiences within and beyond the classroom walls. According to Isa and Usman (2017), digital resources are technology driven resources that assist students and teachers in their educational process. Idika et al (2021) noted that digital resources for effective learning consist of a wide range of resources, materials, and technologies that improve educational experiences for both teachers and students. Floria (2016) observed that digital resources are classified into different groups, with each group serving different learning needs and preferences. These resources include online learning platforms, open educational resources, educational apps, virtual classrooms, learning management systems, e-books, multimedia resources, collaboration tools, social media, assessment tools, internets, websites, adaptive learning tools, among others (Lewis &Martin, 2018; Brown& White,2017).These resources can be used to foster teaching and learning by enhancing interaction, collaboration and sharing of information between teacher and students and among students who may sometimes be separated by distance.

The utilization of digital learning resources holds significant potential to revolutionizing the way information and knowledge are presented and acquired by educators and students. Incorporating digital technologies in education has redefined traditional teaching methodologies and created novel avenues for enhancing the learning experience (Ali, 2019; Stein & Sim Kwong, 2020; Tabira & Otieno, 2017). This paradigm shift is not only technological but also pedagogical, as it redefines the roles of educators and learners, the methodologies of instruction, and the very fabric of educational content delivery. Thus, the inclusion of digital resources into the educational and classroom practices can enable educators transcend the limitations of traditional teaching methods to offer students engaging and adaptive experiences that cater to their individual needs, fostering greater learning outcomes in education (Patel & Gupta, 2021; Nji & Idika, 2018; Anderson & Williams, 2016). This transforms how Economics education courses are taught and understood. As the digital age continues to reshape educational practices, educators, students, researchers, and policymakers alike are increasingly drawn to the potential of digital resources to revolutionize Economics pedagogy (Jackson & Adams, 2019; Carter & Clark, 2015).

The widespread adoption of digital tools and online platforms has not only revolutionized how educators design and deliver Economics courses but also how students approach their learning

activities (Floria, 2016; Lewis &Martin, 2018). The conventional lecture-driven instruction is being complemented, and in some cases supplanted, by innovative approaches that leverage technology to engage students in active learning, promote critical thinking, and foster a deeper and higher understanding of economic concepts (Onuoha & Yakubu, 2019; Nji & Idika, 2018). Digital resources and online learning have ushered in a new era of dynamic and interactive education (Peter, 2017). From interactive simulations that provide opportunities for students to explore economic models in a dynamic virtual environment to online discussion forums that enhance collaborative learning, the possibilities for improving Economics education through digital resources are diverse and promising(Jackson & Adams, 2019).

The use of digital learning resources has changed on how educational content is created, disseminated, and consumed. Therefore, digital resources and platforms have opened new avenues for teachers to deliver instructional content, facilitate interactions, and create dynamic and engaging learning experiences (Onuoha & Yakubu, 2019; Madu, 2019). Onuoha and Yakubu (2019) affirmed that the application of digital resources offers numerous benefits in teaching and learning, including enhanced engagement, personalized learning experiences, and increased flexibility. These digital resources such Artificial Intelligence (AI) tools and online platforms provide unique opportunities to create personalized, adaptive and engaging learning experiences that transcends geographical boundaries (Ali, 2019; Peter, 2017). Digital learning resources can tailor learning content and pace to individual student needs, ensuring that each student gets suitable support and challenge. Isa and Usman (2017) strongly agreed that with digital learning resources, students can progress through Economics courses at their owning speed, allowing them to delve deeper into the challenging topics or breeze through familiar ones.

By providing personalize guidance, digital tools promote self-directed learning which enables educator and students to determine what content and concepts that come next and continuously adjust the learning material to make it more challenging when student demonstrates evidence of understanding; and more supportive when student demonstrates lack of understanding (Jackson & Adams, 2019). This may enhance students' participation in teaching-learning process, lower drop-out rates and improve learning outcomes generally. In support of the above opinion, Lewis and Martin (2018) asserted that digital learning systems are designed to give learners immediate feedback about their work and academic progress, adjusts the learning material in Economics accordingly. Digital resources provide insights into the students'

performance data and learning patterns, enabling educators to identify areas where students may need additional support.

Furthermore, digital resources promote collaborative learning which enhances the instructional process. Madu (2019) maintained that in an environment where digital tools are available and accessible, students can work together to create items, solve problems, complete tasks and improve teamwork skills. It provides the opportunity for higher level instructional process as students participate actively in the learning process, listen to their peers, discuss the topics, obtain instant critiques of their point of view and create a solution together (Onwuagbaizu, 2024; Kim & Lee,2019). Igwebuike and Onoh (2022) argued that digital resources enable individual students to work together as a team virtually in an intellectual endeavour as a learning practice in order to enhance learning and deepen their understanding of the subject content. The application of digital resources creates opportunities for students to collaborate effectively with each other and their lecturers, promoting peer to peer interaction and sharing of knowledge. These resources facilitate innovative teaching-learning, increase discovery and creation of knowledge, and the distribution of information among students and their teachers who may be separated sometimes by distance.

Additionally, digital resources provide flexible learning environments and opportunities, which allows student to learn anytime and anywhere thereby breaking time and location barriers. This is supported by Onuoha and Yakubu (2019) who maintained that the use of digital resources allows students to access learning materials from anywhere, anytime, and at their own pace, making learning more flexible, inclusive, engaging, interactive and enjoyable. The ability of digital resources to overcome location and time barriers to allow students to access educational content from anywhere with an internet connection, makes it possible for lecturers to customize learning experience to fit student schedules. This enables them to balance their work, family and education more effectively.

Other crucial benefits of digital resources according to Turner and Harris (2022), is that it customizes assessments and provides accurate and timely data on student's academic growth. Digital resources contain adaptive software that gathers students' data, measures academic achievement in Economics, and provides detailed students' data to lecturers. Digital resources such assessment tools provide effective and instantaneous feedback on student performance and this spurs students to intensify their studies for improved performance in Economics. Lewis and Martin (2018) argued that artificial intelligence enables teachers to collects and analyze

valuable data relating to students' academic progress and their understanding of various Economics Education courses. Digital resources can be employed to monitor and track students' progress with a view to providing remediation or modifying the course contents or adjusting teaching methods if the performance is unsatisfactory.

However, the utilization of digital resources in promoting effective learning is dictated not just by their availability but also their accessibility for all for both lectures and students. In teaching and learning situation, accessibility of digital resources refers to the ability to access, perceive, understand, navigate, reach and interact with the digital resources effectively during the instructional process. According to Madu (2019), when digital resources are accessible, they can be readily engaged and utilized in the learning process. This means that accessibility and utilization are two inseparable forces that may influence the impact of digital resources on teaching and learning. In view of the foregoing, the transformative potential of digital resources in enhancing teaching by creating more dynamic, interactive, collaborative and personalized learning environment that caters to the diverse students' requirements may not be actualized if they are not accessible and utilized. Hence, this study investigated the level of accessibility and utilization of digital resources for effective learning of Economics in public universities situated in South East, Nigeria.

Purpose of the study

The purpose of the study was to ascertain the level of accessibility and utilization of digital resources for effective learning of Economics in South East, Nigeria. Specifically, the study sought to:

1. determine the level of accessibility of digital resources for effective learning of Economics in South East, Nigeria.
2. determine the level of utilization of digital resources for effective learning of Economics in South East, Nigeria.

Research Questions

The following research questions guided the study:

1. What is the level of accessibility of digital resources for effective learning of Economics in South East, Nigeria?

2. What is the level of utilization of digital resources for effective learning of Economics in South East, Nigeria?

Hypotheses

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

$H0_1$: There is no significant difference between the mean responses of lecturers in the Federal and State universities on the level of accessibility of digital resources for effective learning of Economics in South East, Nigeria.

$H0_2$: There is no significant difference between the mean responses of lecturers in the Federal and State universities on the level of utilization of digital resources for effective learning of Economics in South East, Nigeria.

Methods

A descriptive survey research design was used to investigate the level of accessibility and utilization of digital resources for effective learning of Economics in public universities in South East, Nigeria. The area of the study (South East) consisted of seven federal universities and five state universities, totaling 12 public universities. However, six universities that offer Economics education as a course of study were purposefully selected for the study. The population of the study comprised 86 Economics lecturers from the selected schools. Since the number of lecturers is relatively small and manageable, all the 86 lecturers were used as the sample for the study, hence census sampling technique was adopted.

The instrument for data collection was a 16-item structured questionnaire titled "Digital Resources Accessibility and Utilization for Economics Instructions Questionnaire (DRAUEIQ)". The questionnaire was structured on 4-point likert rating scale of Very High Level, High Level, Low Level and Very Low Level with a corresponding weight of 4, 3, 2, and 1 respectively. The real limit of numbers of 0.00-1.49 (Very low level, VLL), 1.50-2.49 (Low level, LL) 2.50-3.49 (High level HL) and 4.00 and above (VHL). The questionnaire consisted of two sections: section A and B. section A elicited information on the demography of the respondents while section B was sub-divided into two clusters. The first cluster sought information on the level of accessibility of digital resources for effective teaching of Economics; and the second cluster elicited information on the level of utilization of digital resources for effective teaching of Economics. The instrument was subjected to face validation by three experts, trial-tested and its coefficient for internal consistency of 0.85 was established

using Cronbach Alpha statistic. The instrument was adjudged to be highly reliable for the study. The questionnaire was distributed to and retrieved from the respondents through the help of two Research assistants. Data collected were analyzed using mean and standard deviation while the hypotheses were test using t-test at 0.05 level of significance.

Results

Question One: What is the level of accessibility of digital resources for effective learning of Economics in South East, Nigeria?

Table 1: Mean and standard deviation of responses of Lecturers on the extent accessibility of digital resources for effective teaching of Economics in South East

S/N	Item statement	Fed. Uni (N=54)		State Uni (N=32)		Overall		Decision
		X	SD	X	SD	X	SD	
1	I have access to Collaborative Tools	1.77	.42	1.71	.45	1.72	.45	LL
2	I have access to multimedia resources	1.90	.29	1.86	.34	1.87	.34	LL
3	I have access to social media	2.93	.25	2.90	.30	2.91	.29	LL
4	I have access to e-books	1.87	.34	1.82	.38	1.83	.37	LL
5	I have access to online databases	1.95	.21	1.95	.22	1.95	.22	LL
6	I have access to AI-based educational tools	1.87	.34	1.82	.38	1.83	.37	LL
7	I have access to learning management system.	1.83	.37	1.78	.42	1.79	.41	LL
8	I have assessment tools	1.97	.16	1.96	.20	1.96	.19	LL
	Cluster Mean	**1.89**	**.30**	**1.85**	**.34**	**1.86**	**.33**	**LL**

Low Level (LL)

The result presented in Table 3 showed that lecturers in federal and state universities had cluster mean responses of 1.89 and 1.85 respectively which fall within the real limit of number range of 1.50 - 2.49, indicating low level responses. The overall cluster mean of 1.86 which equally fall within the real limit of number range of 2.50 – 3.49 showed that respondents agreed that the level of accessibility of digital resources for effective learning of Economics in South East, Nigeria was to a low level. The Table also revealed a cluster standard deviation of .776 which showed that the mean responses of the lecturers were close to the mean and were not far from each other.

H0₁: There is no significant difference between the mean responses of lecturers in the Federal and State universities on the accessibility of digital resources for effective learning of Economics in South East, Nigeria.

Table 2: The t-test Analysis of the mean ratings of Economics lecturers in the federal and State on the level of accessibility of digital resources for effective learning of Economics in South East, Nigeria

Universities	N	$\bar{X}$	SD	Df	t-cal	t-tab	Remark
Federal	**54**	**1.89**	**.30**				
				84	**0.55**	**1.96**	**NS**
State	**32**	**1.85**	**.34**				

$\bar{x}$= Mean, SD = Standard deviation; Df = Degree of Freedom, t-tab = tabulated value

The data in Table 4 indicates a t-calculated value (t-cal) of 0.5495 and critical value (t-tab) of 1.96. Since the t-calculated value of 0.55 is less than the critical value of 1.96 at alpha level of 0.05, the null hypothesis was therefore upheld. This indicated that there was no significant difference between the mean ratings of Economics lecturers in the federal and State universities on the level of accessibility of digital resources for effective teaching of Economics in South East, Nigeria.

Research Question2: What is the level of utilization of digital resources for effective learning of Economics in South East, Nigeria?

Table 3: Mean and standard deviation of responses of Lecturers on the extent accessibility of digital resources for effective teaching of Economics in South East

S/N	Item statement	Fed. Uni (N=54)		State Uni (N=32)		Over all		Decision
		$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	
1	I use collaborative tool for group projects and discussion	1.69	.86	1.77	.76	1.75	.79	LL
2	I use multimedia with educational videos to explain complex topics	2.12	1.13	2.24	1.02	2.21	1.05	LL

3	I use social media to share educational content with my students and peers	1.71	.88	1.77	.78	1.76	.80	LL
4	I use E-books for research purposes	1.80	.94	1.91	.86	1.88	.88	LL
5	I use online database to access academic journals and articles for research	1.76	.87	1.85	.78	1.83	.80	LL
6	I use AI tools to write, edit and create personalize learning contents	2.03	1.08	2.12	.98	2.10	1.02	LL
7	I use learning management systems to deliver course materials and assessments to students	1.82	.93	1.90	.83	1.88	.86	LL
8	I use assessment tools to evaluate student performance	2.07	1.01	2.12	.91	2.11	.94	LL
	Cluster mean	**1.88**	**.96**	**1.96**	**.87**	**1.94**	**.89**	**LL**

Low Level (LL)

The result presented in Table 3 showed that lecturers in federal and state universities had cluster mean responses of 1.88 and 1.96 respectively in all the items (9-16), which fall within the real limit of number range of 1.50 - 2.49, indicating low level responses. The overall cluster mean of 1.94 which equally fell within the real limit of number range of 1.50 - 2.49 showed that respondents agreed that the level of utilization of digital resources for effective learning of Economics in South East, Nigeria was to a low level. The Table also revealed an overall cluster standard deviation of .889 which showed that the mean responses of the lecturers were close to the mean and were not far from each other.

$H0_2$: There is no significant difference between the mean responses of lecturers in the Federal and State universities on the utilization of digital resources for effective learning of Economics in South East, Nigeria.

Table 4: The t-test analysis on mean response of federal and state lecturers on the level of utilization of digital resources for effective learning of Economics in universities in South East

University	N	$\bar{X}$	SD	Df	t-cal.	t-tab	Remark
Federal	54	1.88	0.96	84	-0.39	1.96	NS
State	32	1.96	0.87				

$\bar{x}$= Mean, SD = Standard deviation; Df = Degree of Freedom, t-tab = tabulated value

The data in Table 4 indicates a t-calculated value (t-cal) of -0.39 and critical value (t-tab) of 1.96. Since the t-calculated value of -0.3879is lower than the critical value of 1.96 at 0.05 level of significance, the null hypothesis is therefore accepted. Hence, there is no significant difference in the mean responses of federal and State universities lecturers on the level of the utilization of digital resources for effective learning of Economics in South East, Nigeria.

Discussion of findings

The result of this study indicated low level of accessibility of digital resources for effective teaching of Economics. Specifically, the respondents agreed that collaboration tool, e-books, online databases and social media, multimedia and learning management systems were accessible to Economics educator for effective teaching of Economics to a low extent. This is aligns with the findings of Onwuagbaizu (2023) who in his study disclosed low level of accessibility of multimedia projectors, e-book and open educational resources by LIS educator for effective instructional delivery in Rivers State.

The result of the study further revealed low level of utilization of digital resources for effective teaching of Economics. The respondents agreed that collaboration tools, online databases, e-books, social media, multimedia and learning management systems, AI tools and assessment tools were used to a low level for teaching of Economics in public universities in south east. This finding is in agreement with the findings of David-West (2022), who reported that digital instructional materials were not fully utilized by LIS educators in Universities in Rivers State for effective instructional delivery. This finding however, contradicted the findings of similar studies conducted by Idika et al (2021) and Madu (2019) who in their separate studies revealed that digital tools were not adequately utilized for effective teaching and learning of Economics in university of Nigeria, Nsukka.

Conclusion

Based on the results obtained from the study, it is clear that there is low level of accessibility and utilization of digital resources digital resources for effective teaching and learning of economics in universities in South East, Nigeria. The underutilization of digital resources in the zone is due to some barriers, highlighting the need for improved access and support. Therefore, a multi-faceted approach involving investment in infrastructure, training, and education could help unlock the full potential of digital resources in enhancing educational outcomes. Moreso, in a technology-driven society, where assorted education contents have been made available in a variety of digital resources, this would guarantee unhindered access to digital resources,

enhancing their utilization for effective instructional delivery of economics in educational settings.

Recommendations

Based on the findings, this study recommended that:

1. Government and university management should increase investment in digital infrastructure, subsidize digital devices, and develop comprehensive training and support programs for educators to enhance their accessibility to digital resources for effective Economics instructional delivery.
2. Lecturers should regularly participate in relevant training as well as utilize digital resources to facilitate effective teaching of Economics.

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