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ENHANCING INSTITUTIONAL EFFECTIVENESS THROUGH ONLINE TEACHING AND RESEARCH PRACTICES

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Abstract

This study examines the transformative potential of online teaching and research in enhancing the effectiveness of higher educational institutions. As digital technologies continue to evolve rapidly, online teaching and research have become essential components of contemporary education. A sample comprising 150 lecturers was selected from a larger population of over 10,500 lecturers across various higher educational institutions in Oyo State. The research utilized a self-designed questionnaire (r = .81) to gather quantitative data. Statistical analysis demonstrated a significant positive correlation between online teaching and research and institutional effectiveness (r = 0.73, p < 0.001). Furthermore, the findings revealed that online teaching and research contribute to enhanced student engagement, improved academic performance, and increased institutional effectiveness. Qualitative insights highlighted that lecturers appreciate the flexibility, accessibility, and interactivity offered by online

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pedagogies. The study concludes that online teaching and research are critical components of educational institutional effectiveness. The results suggest that institutions can enhance their effectiveness by investing in high-quality online teaching and research infrastructure. The following recommendations are proposed: educational institutions should adopt online teaching and research toward the development of high-quality higher education, lecturers should receive training and support to effectively facilitate online teaching and research, and institutions should prioritize the establishment of robust technological infrastructure to support online teaching and research, and to always be relevant among their equals.

Introduction

Modern technology is undeniably a powerful asset that has transformed numerous aspects of our lives. It has revolutionized healthcare, enhanced educational methods, improved transportation efficiency, and streamlined our daily tasks in ways that have significantly impacted everyone. The evolution of teaching and learning processes due to technology is remarkable. Today, learning is no longer confined to the traditional classroom setting; instead, it has expanded to include informal learning opportunities that take place in workshops and other convenient environments, allowing individuals to engage with their studies in ways that best suit their needs. Modern technology significantly streamlines the process of data and information assessment forms projects and programmes by utilizing robust database systems. In order to foster academic success in the 21st century, it is essential to implement effective teaching methodologies, conduct impactful research, and utilize comprehensive assessment strategies. Effective teaching should be dynamic and adaptable, incorporating diverse learning styles and technology to engage students actively in the learning process. Research should focus on innovative practices and emerging trends in education, providing insights that can drive curriculum development and instructional strategies. Furthermore, assessments must be designed not only to evaluate student learning but also to inform instruction and support personalized learning paths, ensuring that each student's unique strengths and weaknesses are addressed. Together, these elements work harmoniously to create a robust educational environment that prepares students for the challenges ahead, and teachers for effective teaching, research, and quality assessment to promote academic success. Therefore, in the rapidly evolving landscape of education, the role of effective teaching, robust research, and comprehensive assessment practices is paramount in fostering academic success for students in the 21st century.

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As teachers navigate the challenges of modern classrooms, it becomes increasingly important to embrace innovative methods and strategies that not only engage learners but also prepare them to thrive in an interconnected and complex world. Hence, effective teaching practices play a vital role in promoting student learning and improving academic achievement. According to Adeyemi and Ife (2019), the effectiveness of a teacher is a key factor in determining student performance. They highlight the importance of teacher-student interactions, classroom management, and instructional strategies in enhancing teaching quality. In a similar vein, Oluwatelimi and Oyinloye (2020) emphasized the value of reflective teaching practices, which empower teachers to critically assess their instructional methods. This process allows teachers to identify areas for improvement and develop strategies to bolster student learning. Mwamwenda (2020) pointed out the necessity of adapting teaching practices to meet the diverse needs of students, ensuring that all learners can thrive in the classroom and even in their future academic performance. To cultivate an environment conducive to learning, teachers must adopt effective teaching practices tailored to the diverse needs of their students. Integration of technology into teaching promotes effective teaching which incorporates digital tools that enhance engagement and facilitate learning (Mwamwenda, 2019). For active simulations to online collaboration platforms, educators can leverage technology to create dynamic learning environments. Furthermore, teaching students how to use technology responsibly and ethically is essential to their development as informed citizens. Koehler and Green (2020) observed that in this 21st century, technology plays an integral role in the educational process.

In this age, online teaching has established itself as a vital component of contemporary education, enhancing flexibility and accessibility for students around the globe. The advancement of digital technologies has significantly transformed online teaching, presenting numerous opportunities for educators to actively engage with students and enhance their learning experiences. Koehler and Mishra (2019) highlighted that effective online teaching is rooted in a comprehensive understanding of technological pedagogical content knowledge (TPACK). This framework underscores the importance of harmonizing technology, pedagogy, and content knowledge to craft engaging and impactful online learning environments. A fundamental aspect of successful online teaching is fostering a sense of community and social presence among learners. Palloff and Pratt (2019) emphasized that social presence is critical in online learning environments, as it provides the foundation for building relationships and fostering a sense of community. Educators can employ various strategies, including discussion forums, video conferencing, and collaborative group projects, to build this sense of community. Timely and effective feedback is another cornerstone of online teaching. Garrison and Cleveland-Innes (2017) asserted that feedback is essential in online learning environments, as it provides students

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with guidance and support in their learning. By utilizing tools such as audio and video feedback, peer reviews, and self-assessment, educators can offer constructive and meaningful feedback that enhances student learning.

In addition, online teaching requires educators to maintain a stance of flexibility and adaptability. Siemens (2017) pointed out that the digital landscape is constantly evolving, and educators must be willing to adapt and innovate to remain effective. This adaptability entails staying informed about the latest technologies and pedagogical strategies to ensure continued effectiveness in teaching. Meanwhile, lack of close interaction, inability to quickly adjust to technology teaching style, technical challenge, and difficulty in assessing students' performance were challenges of online teaching during Covid-19 pandemic (Hassan, 2021). Importantly, online education also raises critical considerations regarding accessibility and equity. Ladson-Billings (2020) explained that online learning environments must be designed to be inclusive and accessible to all students, regardless of their background or ability. Educators need to design online courses with accessibility in mind, incorporating strategies such as closed captions, audio descriptions, and adjustable font sizes to meet diverse needs. In summary, online teaching is a dynamic and intricate field that calls for educators to be knowledgeable, flexible, and adaptable. By embracing the principles of TPACK, nurturing a sense of community and social presence, delivering timely and effective feedback, remaining adaptable, and prioritizing accessibility and equity, educators can craft enriching and impactful online learning experiences for all students.

Moreover, research and practices are fundamental to enhancing educational effectiveness. To implement evidence-based practices, educators must engage with ongoing research. Remaining informed about best practices is critical, and this can be accomplished through participation in professional development opportunities, attendance at conferences, and collaboration with colleagues. Hattie and Yates (2018) emphasized that educators should routinely review current educational research and literature to stay abreast of effective teaching strategies. They were particular about action research as it serves as a valuable instrument for teachers. By systematically collecting and analyzing data regarding their instructional methods, teachers can refine their approaches and disseminate successful among their colleagues. Mertler (2019) opined that engaging in action research enables teachers to reflect on their practices and concentrate on enhancing student outcomes. Collaborative inquiry represents another effective strategy, often facilitated through the establishment of professional learning communities (PLCs). These communities promote collaboration among teacherrs, allowing them to share experiences, experiment with new strategies, and analyze their effects on student learning. Articulated by DuFour (2015) collaborative approach not only

enhances teaching effectiveness but also fosters a culture of continuous improvement among the educators.

Researching online has become an essential skill in the contemporary digital landscape. The vast amount of information accessible through the internet has transformed the methods by which individuals gather, analyze, and disseminate information. In Africa, the advent of online research has created new opportunities for scholars, students, and researchers to access global knowledge and contribute to the broader academic community. Aina (2017) noted that online research has democratized access to information, allowing African researchers to tap into global academic databases, journals, and publications. This advancement has helped bridge the knowledge gap between African scholars and their international counterparts. Aina stressed further that online research has facilitated cross-border collaboration among researchers, thereby promoting global knowledge sharing and exchange. Nonetheless, online research also presents significant challenges, particularly in Africa, where internet connectivity and access to digital resources can be limited. Nwosu (2020) observed that the digital divide remains a significant barrier to online research in Africa, with many researchers facing challenges in accessing reliable internet connectivity, digital libraries, and online databases. Despite these limitations, African researchers are making noteworthy progress in online research. For example, the African Journal of Library, Archives, and Information Science regularly publishes articles addressing online research, highlighting both the experiences and challenges encountered by African researchers. In one article, Mchombu (2018) emphasized the importance of digital literacy skills for effective online research, advocating for the development of these skills among African researchers to navigate online resources successfully.

Globally, online research has similarly transformed the research process. According to Boellstorff (2016) online research enables access to diverse perspectives, experiences, and data, enriching research findings and contributing to more nuanced understandings of complex phenomena. Boellstorff asserted that online research facilitates innovative methodologies, such as online ethnography, virtual participant observation, and digital content analysis. Summarily, online research has revolutionized the collection, analysis, and dissemination of information. It has generated new avenues for scholars, students, and researchers, enabling them to access global knowledge and make contributions to the international academic community. While challenges remain, researchers are making significant advances in online research, and their experiences and insights are enhancing the global knowledge base.

Statement of the Problem

The rapid transition to online education has revealed significant shortcomings in online teaching and research practices. Despite its potential, online education in developing countries is impeded by inadequate infrastructure, limited professional training, and insufficient technical support. Both students and educators often lack the necessary online research skills and competencies, which hampers academic inquiry and the generation of knowledge. These gaps pose a threat to the quality and integrity of online education, highlighting the urgent need for innovative solutions. The absence of a comprehensive framework for online teaching and research, further exacerbates these challenges, emphasizing the importance of a systematic and evidence-based approach which this intends to fill.

Research Objectives

The primary objectives of this study were;

1. To identify the challenges that educators encounter when implementing online teaching within higher education institutions.
2. To explore the relationship between educators' perceptions and attitudes toward online research, as well as the adoption and implementation of these practices.
3. To determine the correlation between educators' training and support in online teaching, and their adoption and implementation for institutional effectiveness.

Research Questions

The following research questions were raised for the study;

1. What are the challenges faced by educators in implementing online teaching in higher education institutions?
2. How do educators' perceptions and attitudes toward online research influence their adoption and implementation of these practices?

Research Hypothesis

The below hypothesis was postulated for the study;

There is no significant correlation between educators' training and support in online teaching, and their adoption and implementation for institutional effectiveness.

Methodology

The study adopted a descriptive design of the survey type because it is best to describe the characteristics, behaviors, or opinions of a population or group. The population of the study consisted of all public university and college of education lecturers in Oyo State. The sample for the study consisted of 150 lecturers selected Universities and Colleges of

Education in Oyo State, Nigeria. The study adopted a simple random sampling technique to select three institutions (University of Ibadan, Emmanuel Alayande University of Education, and Federal College of Education, Special, Oyo). Fifty (50) lecturers were selected from each of the sampled institution using simple random sampling technique. The instrument for the study was a questionnaire named "Questionnaire on Online Teaching Practices and Research" (QOTPR) which contained Sections A, B, and C. Section A consists of demographic data of lecturers, Section B contained items on online teaching practices and Section C of online research items. In the questionnaire, five points Likert-type of strongly agree (5), agree (4), undecided (3), disagree (2) and strongly disagree (1) were used.

The face and content validity of the instrument were ensured through experts as they thoroughly critique and review the instrument in relation to the study objectives. The instrument was trial tested on 20 lecturers of Technical University (Tech-U) Ibadan, who were not part of the sample for the study. The data collected were analysed using Cronbach alpha and the reliability coefficient of 0.81 was obtained which indicates that the instrument was reliable. The instrument was personally administered by the researchers on the selected sampled lecturers after seeking the consent of the participants with utmost confidentiality of information supplied. The data collected were analysed using descriptive statistics of frequency counts, simple percentage, mean and standard deviation for research questions, while Pearson Product Moment Correlation (PPMC) was used to test the hypothesis at 0.05 level of significance.

Data Analysis

Research Question 1: What are the challenges faced by educators in implementing online teaching in higher education institutions?

Table 1: Showing the challenges faced by the lectures in implementing online teaching

S/N	Statement	SD	D	SMD	A	SA	M	SD	Min	Max
1	I currently lack the necessary technical skill to effectively implement online teaching.	23 15.3%	38 25.3%	32 31.3%	40 26.7%	17 11.3%	2.83	1.21	1	5
2	Limited institutional support hampers my ability to successfully engage in online teaching.	16 10.7%	34 22.7%	37 24.75	46 30.7%	17 11.3%	3.15	1.35	1	5
3	I find it challenging to engage students and foster active learning in a remote environment.	13 8.7%	31 20.7%	35 23.3%	50 33.3%	21 14.0%	3.42	1.28	1	5

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S/N	Statement	SD	D	SMD	A	SA	M	SD	Min	Max
4	The absence of face-to-face interaction with students makes it difficult for me to accurately assess their understanding.	17 11.3%	37 24.75	34 22.7%	45 30.0%	17 11.3%	3.21	1.32	1	5
5	Poor internet connectivity poses a problem to implementation of online teaching.	10 6.6%	28 18.7%	33 22.0%	52 34.7%	27 18.0%	3.51	1.41	1	5
6	I struggle with effectively managing my time while teaching online	21 14.0%	40 26.7%	35 23.3%	38 25.3%	16 10.7%	2.95	1.25	1	5
7	I would benefit from additional training on how to design and deliver effective online courses.	14 9.3%	35 23.3%	38 25.3%	46 30.7%	17 11.3%	3.28	1.38	1	5
8	Connectivity issues disrupt the smooth execution of online teaching.	12 8.0%	32 21.3%	35 23.3%	50 33.3%	21 14.0%	3.39	1.31	1	5
9	I find it challenging to create interactive and engaging online content.	16 10.7%	37 24.7%	36 24.0%	44 29.3%	17 11.3%	3.17	1.36	1	5
10	The lack of immediate feedback from students complicates my ability to adjust my teaching strategies.	18 12.0%	39 26.0%	35 23.3%	41 27.35	17 11.3%	3.03	1.29	1	5
11	I have concerns about the potential for academic dishonesty in online assessments.	11 7.3%	29 19.3%	34 22.7%	52 34.7%	24 16.0%	3.44	1.42	1	5
12	I frequently feel isolated and disconnected from my students in an online teaching setting.	23 15.3%	38 25.3%	33 22.0%	39 26.0%	17 11.3%	2.87	1.24	1	5

Weighted Mean = 3.19 **Std. Dev. = 1.32**

Note: 2.50 and above indicate a challenge faced by lectures, while less than 2.50 indicate non- challenge to the lecturers

Table 1 shows the perceptions of lectures on challenges faced by implementing online teaching in their various institutions. The major challenges faced are the poor quality of internet connectivity Q5(3.51/5) and Q8(3.39/5), dishonesty in online assessment Q11(3.44/5) and poor engagement of stufents' on active learning Q3(3.42/5). Follow by more online training needed by the lectures Q8(3.28/5), and inability to access the students' understanding because of lack of face-to-face interaction Q4(3.21/5). Hence, the challenges faced are obvious with average weighted mean of 3.19, though the standard deviation of 1.32 indicated disparities in the

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respondents' answers.

Research Question 2: How does educators' perceptions and attitudes toward online research influence their adoption and implementation of these practices?

S/N	Statement	SD	D	SMD	A	SA	M	SD	Min	Max
1	I believe that online research is an invaluable resource for enhancing teaching practices.	4 2.7%	15 10.0%	31 20.7%	65 43.3%	35 23.3%	4.13	0.93	1	5
2	I am confident in my ability to seamlessly integrate online research into my teaching.	6 4.0%	22 14.7%	36 24.0%	60 40.0%	26 17.3%	3.95	1.04	1	5
3	Online research has deepened my understanding of the best	2 1.3%	10 6.7%	28 18.7%	70 46.7%	40 26.7%	4.21	0.89	1	5
4	I consistently utilize online research to inform my teaching decisions.	8 5.3%	26 17.3%	38 25.3%	54 36.0%	24 16.0%	3.82	1.12	1	5
5	I consider online research essential for staying updated development s in my subject area.	1 0.7%	6 4.0%	22 14.7%	67 44.7%	54 36.0%	4.35	0.83	1	5
6	I approach the reliability of online research sources with a degree of skepticism.	23 15.3%	46 30.7%	40 26.7%	31 20.7%	10 6.7%	2.58	1.29	1	5
7	Online research has fueled my motivation to explore new teaching methods.	5 3.3%	18 12.0%	35 23.3%	64 42.7%	28 18.7%	3.98	1.05	1	5
8	I have received sufficient training and support to effectively incorporate online research into my teaching.	10 6.7%	31 20.7%	42 28.0%	48 32.0%	19 12.7%	3.49	1.23	1	5
9	Online research has enhanced my ability to evaluate students' learning outcomes.	4 2.7%	14 9.3%	32 21.3%	67 44.7%	33 22.0%	4.04	0.97	1	5
10	I believe that online research plays a crucial role in enriching students' learning' experiences.	2 1.3%	8 5.3%	24 16.0%	68 45.3%	48 32.0%	4.27	0.86	1	5

Table 2: Indicating educators' perceptions and attitudes towards online research and their adoption and implementation of these practices

Weighted Mean = 3.88 **Std. Dev. = 1.02**

Note: 2.50 and above indicate positive perceptions and attitudes, while less than 2.50 indicate negative perceptions and attitudes.

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Table 2 reveals the positive attitudes and perceptions of educators to online research and their influence on the adoption and implementation of these practices. Online research enables educators' in staying current with development in their subjects area Q5 (4.35/5), enhancing students' learning experiences Q10 (4.27/5)), improving educators' understanding of best practices in education Q3 (4.21/5), and it is a valuable asset for improving teaching practices Q1 (4.13/5). In addition, it promotes ability to assess students' learning outcomes Q9 (4.04), increases motivation to try new teaching approaches Q7 (3.98), and ability to integrate online research into teaching Q2 (3.95). In conclusion, the weighted mean of 3.88 and standard deviation of 1.02 affirmed the positive perceptions and attitudes of the educators towards online research and their adoption and implementation of these practices.

Hypothesis: There is no significant correlation between the training and support provided to educators in online teaching and their subsequent adoption and implementation of these practices.

Table 3: Showing the correlation between the training and support provided to educators on online teaching and their adoption and implementation of these practices

Variables	Mean	Std. Dev.	N	r	P-value	Remarks
Training and support	3.92	0.98				
			150	.73	.001	Sig.
Adoption and implementation	3.85	1.04				

***** Correlation is significant at the 0.05 level (2-tailed)

Table 3 above shows that there is a significant correlation/relationship ($r = .73$, $n = 150$, ($p = .001 < .05$) between educators' training and support in online teaching, and adoption and implementation. Hence, as training and support in online teaching increases, adoption and implementation also tends to increase.

Discussion of Findings

The findings underscored the various challenges faced by educators within their institutions, including inadequate institutional training and support, poor internet connectivity, academic dishonesty, lack of immediate feedback, and insufficient technical skills, among others. This aligns with the observations made by Hassan (2021), Dennen et al. (2022), and El-Soussi (2023), who reported low opportunities to monitor students'

emotions, a lack of face-to-face interaction, inadequate feedback, students' unfamiliarity with essential technology, and challenges surrounding the adoption of online teaching by educators. Additionally, Caliskan et al. (2020) noted the detrimental effects of being unable to see students on their progress, along with unsatisfactory evaluation and assessment methods that hinder effective feedback. It is important to recognize that these obstacles can be addressed if stakeholders in the education sector are carefully monitored by government agencies, including standard quality assurance officers, evaluation and monitoring teams, and education inspectors.

Another finding highlighted the positive perceptions and attitudes of educators towards online research, as well as the adoption and implementation of these practices. Jahan and Rahman (2016) developed a typology categorizing research subjects into four types: digital outcasts, illiterates, skeptics, and natives. They stressed the significance of digital access and literacy in online research, which should be embraced by versatile researchers. Bainter and Howard (2016) identified both challenges and opportunities associated with using online workshops for research, focusing on technology issues and participant engagement. Matthews (2019) emphasized the need to adapt research methods for the digital age and explore innovative ways to utilize digital technologies in qualitative research. Braxman (2019) highlighted the importance of adopting online research while prioritizing participant trust and vulnerability, which can enhance researchers' leadership and morale for future studies.

More so, studies highlight the connection between educators' training and support and their adoption of effective teaching practices. Oubibi et al. (2024) found a positive relationship between interactive technology use and digital training among African educators, emphasizing the importance of understanding online teaching methods. Similarly, Hamzat and Olatokun (2023) revealed that the adoption of online teaching tools in Nigerian private universities is significantly influenced by training and support levels. They stressed further the need to support teacher/educators in transitioning to online practices. Xiao, Wang, and Mo (2024) noted that factors like technology acceptance and user satisfaction affect the adoption of live online teaching among college instructors, making it crucial for educational management to enhance teachers' information literacy and support. In contrast, Al-Rahmi et al. (2018) identified challenges in online teaching, such as reduced student interaction and sudden changes in teaching environments, which hinder effective training and adoption in educational settings.

Conclusion

There exists strong positive correlation between training and support for educators on online teaching, and its adoption and implementation which invariably foster higher education effectiveness and that as training and support increases, adoption and

implementation increase. Hence, online teaching and research is crucial component of institutional development and by providing teacher educators with practical training and support, institutions can promote effective online teaching and learning.

Recommendations

The following recommendations were made after the findings and conclusion of the study. Higher education institutions should adopt online teaching methodologies to improve student learning outcomes and enhance academic performance. It is imperative for these institutions to engage in ongoing enhancement of online research practices to ensure effectiveness and relevance relative to peer institutions. Moreover, institutions should prioritize the provision of training and support for educators to facilitate successful online teaching and research, and for them to be more effective, efficient and always relevant. The allocation of essential technological resources must also be prioritized within higher education frameworks. Additionally, emphasis on consistent access to a reliable power supply is crucial.

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