

Challenges of Online Teaching and Learning Among Selected Universities in Kwara State

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Abstract

The 21st-century university is characterized by scientific e-revolutions and artificial intelligence. Thus, teaching and learning have witnessed significant changes through virtual learning with the integration of Information and Communication Technologies (ICTs) into teaching, learning, and assessment. This change in the education system can be perceived as a new dimension in the area of teaching and learning, although it came with its own challenges. Therefore, the need to reveal the challenges of online teaching as a form of innovation in selected higher educational institutions in Kwara State, Nigeria, motivated this study. The specific objectives include identifying the challenges of the online teaching approach faced by the students and examining the perception of lecturers regarding the challenges encountered during online teaching. The study was conducted among 222 students and 78 lecturers drawn from the selected universities in Kwara State. The data were analyzed using descriptive statistics. Findings revealed that students were comfortable with using online teaching if available, but lecturers were not motivated to have a positive attitude toward the sudden change in the learning approach. The study recommended that management should provide periodic training to develop the needed ICT capacity in both students and lecturers.

Keywords: Online Teaching Challenges; Virtual Learning; ICT Integration; Higher Education; Kwara State Universities

1.0 Introduction

The 21st century can be said to be the age of digital technologies and knowledge as it has emerged to spread shared knowledge with numerous benefits of portability, ease of access, reduced need for physical interaction and infrastructure, lowered costs, and greater flexibility (Haleem et al., 2022). With the introduction of digital technologies, there has been a paradigm shift in the entire education system, proving impactful with technologically assisted learning tools, virtual laboratories, and virtual classrooms for teaching and learning purposes (Haleem et al., 2022).

This dramatic change in education has therefore distinctively increased the rise in the use of online teaching and learning on digital platforms that permit remote teaching, reducing physical interactions without compromising the quality of education. Additionally, these technologies strive to decrease or eliminate pollution and waste while increasing production and efficiency (Dabija et al., 2023). Consequently, many institutions of higher learning such as universities, polytechnics, and colleges of education now see it as an option to conventional and traditional teaching methods. This is because it enables educators to either blend courses with traditional education or conduct online teaching and learning completely.

Traditional classroom instructions fall short of providing an immediate learning environment and faster evaluation, and they tend to be less engaging. In contrast, digital learning tools and technologies fill this void (Clark-Wilson et al., 2020). Some efficiencies of digital technologies are simply unmatched by traditional learning methodologies. In recent times, smartphones and other wireless technology have become popular among students and the general public. It only makes sense that schools and educational institutions make efficient use of them by integrating

technology in the classroom, thereby making learning more appealing due to the adaptability and non-intrusive character of today's technology (Morphitou, 2015).

However, despite the efficiencies of virtual teaching and learning, it still seems like a formidable technique to manage because traditional instructors are hesitant to include contemporary technology and gadgets in school, often viewing them as a distraction rather than an intelligent learning aid (Gioia, 2016). This hesitation is one reason some institutions prohibit students from having their smartphones in the classroom. Additionally, the fact that the innovative technique represents a substantial change for educational areas to switch from traditional chalk and face-to-face classroom talk to an online or virtual format has raised new contests and opportunities for students, teachers, and parents. For higher education areas, this methodology initially poses many oppositions in the classroom (Horn et al., 2014). This unforeseen transformation in teaching/learning methods due to ignorance of technology in conducting or attending live classes by faculty and students, along with the insufficiency of early preparation or support from educational technological teams, has contributed to some challenges of online teaching. However, as digital technologies advance, higher education providers are becoming more cognizant of the diverse backgrounds of their current and prospective students. Consequently, they are offering a variety of options to enhance student engagement. The growing flexibility in delivery modes for university education now provides multiple pathways and opportunities for those pursuing further education (Jenna Gillett-Swan, 2017).

Such pathways include online teaching, distance education, or virtual teaching that occurs when elements of face-to-face courses are taught online through the learning management system and other educational tools and platforms by digitally transmitting course materials to students (Nnaji & Nwabufo, 2022). Meanwhile, these technologies have shown a powerful impact on the education system. It is an innovative tool for the teaching and learning process, promoting student-centered and flexible learning (Dhawan, 2020). However, there are some inherent issues and challenges in online or virtual teaching and learning despite its proven efficiencies, such as infrastructural problems, student attitudes, accessibility, passive learners, communication issues, lack of technological knowledge, and time challenges, among others. While the integration of technology signifies a new era for traditional methods and provides innovative educational experiences for both instructors and learners, it is essential to examine the challenges that lecturers and students encounter in online teaching and learning.

The objectives of this study are therefore to:

- i. identify the challenges of the online teaching approach faced by students
- ii. examine the perception of lecturers regarding the challenges encountered during online teaching.

This study is logically structured, beginning with an introduction, followed by a literature review. The methodology is then outlined, after which the results and findings are discussed. The study concludes with a few recommendations for the improvement of online teaching and learning.

1.1 Online Teaching

Online teaching has become increasingly prevalent as it offers flexibility and accessibility to learners worldwide. The swift growth in online higher education, in terms of course aids and student enrollment, has often been celebrated as an innovative way to increase the accessibility of university education (Asunka, 2008). It is the process of educating others via the internet using various methods such as one-on-one video calls, group video calls, and webinars (Fu, 2013). Online teaching has the ability to deliver educational content, facilitate discussions, and assess students' progress through digital platforms. Online learning can be considered as guidance conveyed on an advanced device that is intended to support learning (Gupta et al., 2023). Though e-learning, a form of online teaching and learning, has long been adopted and has helped establish distance and online programs in developed countries, only a few private tertiary institutions in Nigeria carry out their academic activities through e-learning. This is due to the fact that many still find it difficult to use e-learning, and for some, it is still a nightmare because of poor and non-availability of technological infrastructure (Eze et al., 2020), as well as other challenges. In Nigerian higher institutions, adequate resources accessible to teachers and students that are adaptable to remote

learning are lacking. This has not only affected teaching and learning but has posed a significant problem in teaching technical courses (Ugochukwu-Ibe & Ibeke, 2021).

With the benefits of online teaching, including flexibility in scheduling, access to diverse resources, and the ability to reach a broader audience, there are still some challenges faced by both lecturers and students due to their different backgrounds, geographical areas, and exposure to technological devices (Jenna Gillett-Swan, 2017). Therefore, other challenges such as technology limitations, maintaining student engagement, and ensuring equitable access to resources must be addressed for effective and successful online teaching outcomes. Effective online teaching requires clear communication, interactive activities, personalized support, and continuous evaluation.

1.2 Challenges of Online Teaching

Online teaching faces several challenges especially in developing countries' higher institutions as highlighted in the research papers. These challenges include a lack of academic or institutional knowledge regarding ICT tools among students especially in the core rural areas, difficulties in providing instant feedback, diminished social interaction, connectivity issues, heavy workloads for educators, limited technology infrastructure, internet connectivity problems, and the lack of face-to-face interaction that can reduce the quality of discussion and understanding of the material. Additionally, challenges such as difficulty in receiving feedback from students, categorizing students into sub-groups for group work, and unfavorable home environments during online classes have been noted. To address these challenges, it is recommended to enhance instructors' ICT competencies, improve online course quality, and consider a blended learning approach to optimize the benefits of both online and offline teaching methodologies (Aremu et al., 2022; Gezani, 2024; Purwanty et al., 2024; Sharma, 2024; Sultana et al., 2024). However, several of these challenges of online teaching are peculiar to the Online teaching in Nigerian higher institutions. These challenges impact the effectiveness and success of the educational process. Some of the key challenges include:

- i. **Limited Access to Technology:** Many students and lecturers in Nigeria may not have access to the necessary technology, such as computers and high-speed internet, which are essential for effective online teaching.
- ii. **Inconsistent Power Supply:** Frequent power outages and inconsistent electricity supply in various parts of Nigeria can disrupt online classes, leading to a loss of valuable instructional time.
- iii. **Infrastructure Issues:** Insufficient technological infrastructures may hinder the implementation of online teaching. This includes a lack of well-equipped computer labs, insufficient bandwidth, and outdated software.
- iv. **Digital Literacy Gap:** Some students and educators may lack the necessary digital literacy skills to navigate online platforms effectively. This gap can hinder communication, collaboration, and the overall learning experience.
- v. **Financial Constraint:** The cost of acquiring and maintaining the necessary devices and internet connections can be prohibitive for many students. This financial burden may impede their participation in online classes.
- vi. **Language Barrier:** Not all students are proficient in English, which is the official language in Nigeria. This barrier can create difficulties in understanding and expressing complex academic concepts during online teaching.
- vii. **Inadequate Teacher Training:** Some educators may not have received adequate training in online teaching methods and tools. This lack of preparation can impact the quality of instruction and the ability to engage students effectively in a virtual environment.
- viii. **Assessment Challenges:** There is also a major challenge in conducting fair and secure assessments in an online setting. Issues related to cheating, plagiarism, and the validation of students' identities may arise, calling for innovative solutions.
- ix. **Social Isolation and Mental Health:** Online learning tends to contribute to social isolation as students miss out on face-to-face interactions with peers and instructors. This isolation, coupled with the stress of coping with new technology, can lead to poor mental health.

- x. Government Policy and Support: The lack of clear and consistent government policies on online education, as well as inadequate financial support, can impede the adoption and implementation of online teaching in higher institutions (Almaiah et al., 2020; Eze et al., 2013).

Therefore, addressing these challenges requires a multi-faceted approach, which involves investments in infrastructure, teacher training programs, and policies that promote equitable access to technology and support the diverse needs of students across the country. However, the study seeks to evaluate the opinions of the interviewers to unravel the perception of lecturers regarding the challenges encountered during online teaching.

2.0 Methodology

In the study, descriptive survey research design is adopted to evaluate the opinion of the respondents using researcher designed questionnaire tagged ‘Challenges of Online Teaching and Learning Questionnaire’ (COTLQ), was used as the instrument for data collection. Convenient sampling method was used to receive responses from 78 lecturers and 222 undergraduate students from three selected institutions within Kwara State, representing federal, state, and private universities: Using the convenient random sampling technique (Adeoye, 2023), 69 lecturers and 165 students were eventually recorded as valid responses which formed the basis for the analysis of this study.

A pilot study was conducted at the Faculty of Education, Kwara State University, Malete, involving 10 lecturers and 30 students. The instrument for the pilot test was validated by two lecturers from the same faculty. It is also noteworthy that the students selected for the pilot study were not involved in the actual data collection. The instrument for the pilot study was tested for reliability using the test-retest method, and Pearson Product Moment Correlation (PPMC) was employed to determine the reliability coefficient, which resulted in a reliability score of 0.74. Copies of the questionnaire were administered to the respondents via email and WhatsApp. The data collected were analyzed using descriptive and inferential statistics.

2.1 Approach to the study

The data includes responses to the various questions grouped under the perceived challenges encountered by lecturers during online teaching. The questionnaire is categorized under six themes as follows:

2.2 Categorized Themes and Questions:

- A. Engagement and Interest
 1. I am always excited to engage in online classes
 2. I am always eager to participate in online classes
 3. I have high interest in online teaching
 4. Online classes can be very engaging
 5. Assignments component in online teaching platform makes it more engaging
- B. Teaching Effectiveness and Methods
 1. Online teaching enhances learners' focus and concentration
 2. Online teaching enhances idea-sharing
 3. Online teaching requires more innovative approaches to make it engaging
 4. Success of online teaching depends largely on delivery methods
- C. Effort and Challenges
 1. Ensuring active student's participation in online teaching requires extra effort
 2. Preparing interactive online activities requires more lecturer's time
 3. Managing student's assessments and feedback in online teaching is tasking
 4. It requires extra efforts to enhance student's motivation in online teaching
- D. Technology and Resources
 1. My low skills in educational technologies like computer, tablet, video calls, learning applications hinders my teaching experience in online classes

2. Lack of access to educational technologies like computer, tablet, video calls, learning applications hinders teaching outcome in online teaching
 3. Teacher’s competence in the use of educational technologies determines success of online teaching
 4. Restricted internet access hinders my success in online teaching
- E. Interaction and Communication
1. Online teaching makes me miss physical interactions in-person
 2. Online teaching prevents personal in-person teacher-student interactions
- F. Learning Process
1. Online teaching platform eases learning process

2.3 Explanation of the theme

- i. Engagement and Interest: This category shows the lecturers' excitement, eagerness, and interest in online teaching. The majority of responses indicate a positive perception in this area.
- ii. Teaching Effectiveness and Methods: This category focuses on the effectiveness of online teaching methods. The responses here are mixed, with some lecturers seeing benefits and others noting challenges.
- iii. Effort and Challenges: This theme highlights the extra effort required to ensure student participation and manage assessments. The majority of lecturers find these aspects challenging.
- iv. Technology and Resources: This category underscores issues related to technological skills and resources. Many lecturers face challenges due to lack of access and competence in using educational technologies.
- v. Interaction and Communication: This theme addresses the lack of personal interaction in online teaching. The responses indicate that many lecturers miss in-person interactions.
- vi. Learning Process: This category looks at the overall ease of the learning process through online platforms. Lecturers' responses suggest a positive perception, indicating that online platforms can ease the learning process.

3.0 Results and discussion

The section presents the opinion of the respondents on the perceptions of lecturers and students on challenges faced in online teaching-learning process.

3.1 Perceptions of Lecturers on Challenges Faced in Online Teaching (Visualizing the Data)

To understand the perceptions of lecturers regarding the challenges faced in online teaching, distribution of responses were plotted for each theme. The summary plot (Figure 1) for each theme displays the proportion of "Yes" and "No" responses.

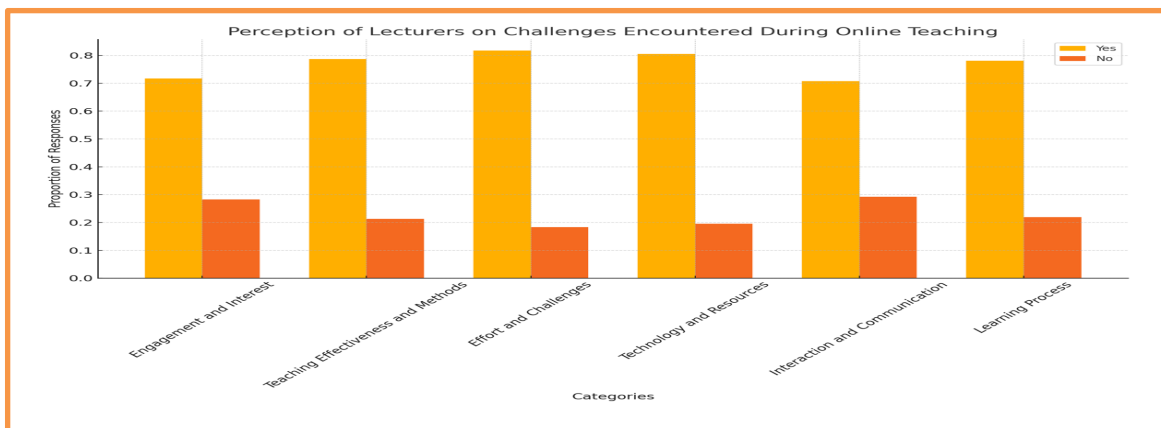


Figure 1: Perception of lecturers on challenges encountered during online teaching

The bar chart summarizing the perception of lecturers regarding the challenges encountered during online teaching. The chart shows the proportion of "Yes" and "No" responses for each theme, providing a clear visual representation of how lecturers perceive these aspects of online teaching. The chart indicated that majority of the lecturers found the theme "Effort and Challenges" challenging. It indicates extra effort is required to ensure student participation and manage assessments.

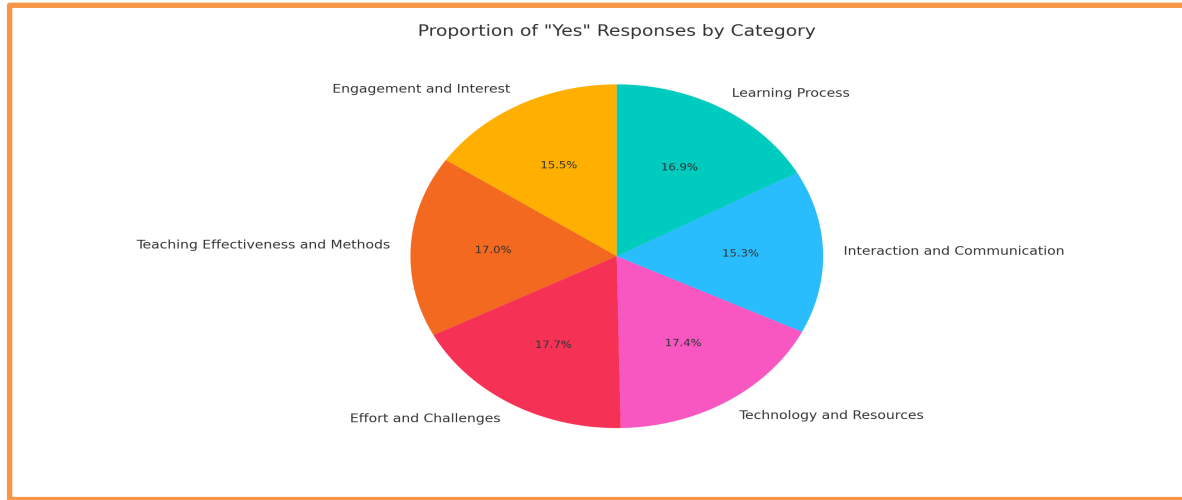


Figure 2 shows the percentage p "Yes" responses by category for clarity. While Figure 3 shows proportion of "No" responses.

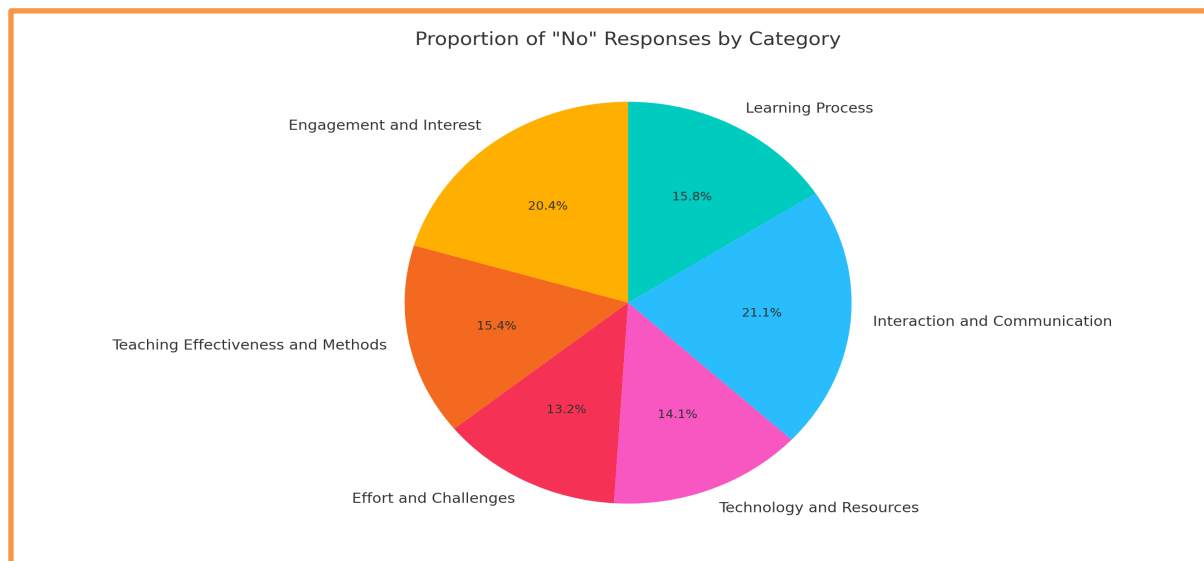


Figure 3: Proportion of "No" Responses by category

In these figures 2 and 3, the pie charts representing the proportion of "Yes" and "No" responses by category:

Proportion of "Yes" Responses by Category: This chart shows the distribution of positive responses (lecturers who agree with the statements) across different themes. Proportion of "No" Responses by Category: This chart shows

the distribution of negative responses (lecturers who disagree with the statements) across different themes. However, these visualizations help to identify which areas are perceived positively and which are perceived as more challenging by the lecturers during online teaching.

3.2 Challenges approach faced by the students during online teaching-learning process

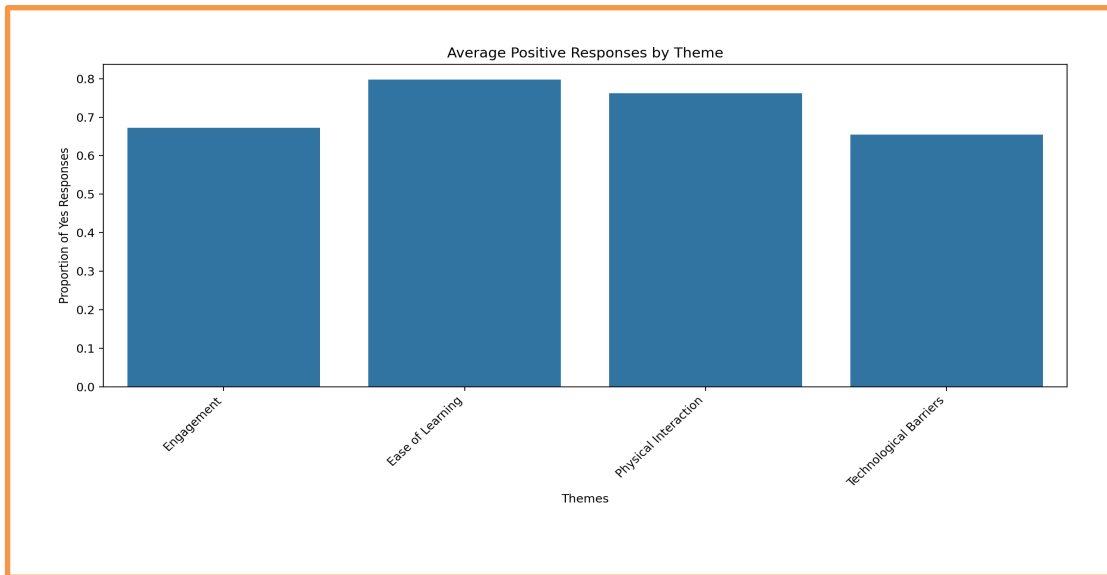


Figure 4 An average positive response

4.0 Explanation

Engagement: This theme includes questions about excitement, eagerness, idea sharing, interest, engagement, and the role of assignments in online teaching. The average positive response indicated that students generally feel engaged but there is room for improvement. The responses from our survey indicates an average positive response of 67% are engaged during the process.

Ease of learning: It focuses on whether the online teaching platform eases the learning process. The high average positive response of 80% suggests that students found online platforms helpful for learning.

Physical Interaction: This theme covers the aspect of missing physical interactions and personal in-person teacher-student interactions. The response, 76%, indicated that while students miss physical interactions, they still find value in online teaching.

Technological barriers: This theme includes questions about skills in educational technologies, internet access, and access to necessary devices. The lower average positive response of 65% highlights that technological barriers are a significant issue for some students in the online teaching learning process. This further validates the findings of Jimoh (2010) and Jimoh & Fasasi (2019).

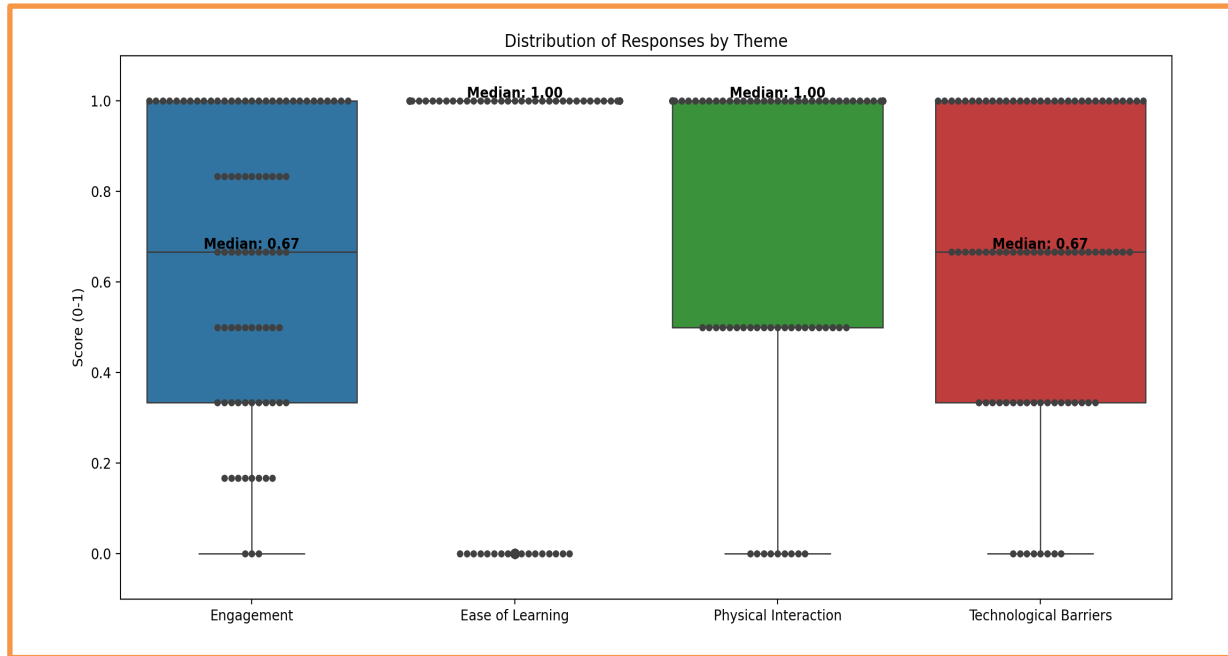


Figure 5 Distribution of responses by Theme

A boxplot, also known as a box-and-whisker plot, is a graphical representation used to describe the distribution of responses within a dataset. Boxplots remains valuable tools for visualizing the distribution of responses in data analysis (Bessler, 2023; Majaw & Ahmed, 2023). They provide a clear representation of the spread, central tendency, and presence of outliers in a dataset (Adam et al., 2018).Boxplots help in exploring data distributions, and to drawing meaningful conclusions from the analyzed data. In Figure 5 there is no data points outside the range that could be considered as outliers, this implies consistence in the opinions of the interviewers.

Therefore, the analysis of responses across different themes highlights key challenges and opportunities in online learning. The "Technological Barriers" theme shows the lowest median (0.67) with a wide spread, indicating that many students struggle with technology access and skills, which presents a significant obstacle. Similarly, the "Engagement" theme, also with a median of 0.67, underscores the difficulty in maintaining student interest and participation in online classes. In contrast, the "Physical Interaction" theme has a high median (1.00), reflecting that the absence of in-person interactions is a major drawback for most students. Interestingly, the "Ease of Learning" theme, with a high median (1.00), suggests that despite these challenges, many students find online platforms conducive to their learning. In conclusion, while technological and engagement issues pose significant barriers, online learning platforms are still perceived as effective tools for education by many students, emphasizing the need for improved technological support and innovative engagement strategies.

Conclusively, as dictate of the 21st century universities, online teaching and learning becomes sacrosanct in today's expectations of a digitally transformed university. However, as digital immigrants stakeholders in the University environment (teachers and students) need to be given adequate attention in the areas of digital skills capacity development, reorientation and buy-in to really achieve a successful integration and adoption of online teaching and learning in Nigerian universities

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