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A Quantitative Approach to Challenges Facing Online and Physical Classrooms in Higher Institution

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ABSTRACT

This study investigated the challenges facing online and physical classrooms in higher institutions. Descriptive research of the survey type was employed to achieve the purpose of this study. Students from five randomly selected faculties at the University of Ilorin, Nigeria made up the study target population. To choose the sample from each of the selected faculties, a proportionate sampling procedure was used. The actual sample size for the study was 200 Undergraduates, who were chosen using random selection techniques. Descriptive statistics of the mean score were used to analyze the information obtained from the respondents. The findings of this study show that students faced challenges while learning in both online and physical classrooms. It was concluded that despite the underlying similarities between online and physical classrooms, the two modalities are very different from one another. Online teaching is typically student-centered which necessitates active learning, in contrast to traditional classroom instruction, which has been known to be teachers-centered and calls for passive learning. It was a challenge for teachers to move from face-to-face in-class mode to virtual learning, changing their teaching methodologies, and managing their time. It was also a challenge to develop content that not only covers the curriculum but also engages the learners.

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1. INTRODUCTION

Academics have focused on the benefits of online learning over traditional classroom education and everything that it includes for a long time. Experts in education and technology have looked at the differences between online learning and classroom learning, as well as the benefits and drawbacks of each, students' attitudes toward one form or the other, their emotions, whether positive or negative and their sense of belonging, to name just a few (Yakubu & Dasuki, 2020). Online interventions have the potential to have a detrimental effect on students' knowledge, attitudes, and behaviors related to physical activity if utilized carelessly, despite the evidence to the contrary (Chambers *et al*., 2019).

The promotion of reductionist linkages between body image, physical activity, and well-being, a restricted emphasis on physical activity outcomes, and behavioristic types of physical activity engagement are all suggested to be ways that online treatments might encourage physical activity (Rich & Miah, 2017). Contrarily, it has been suggested that holistic learning experiences should be developed that emphasize physical, cognitive, social, and emotional results to encourage longer-term and lifetime involvement with physical exercise.

In assessing online treatments, it's critical to take into account pedagogical factors, as well as results about the physical, cognitive, social, and affective domains. The challenges with online learning among college students. The study revealed that the learning environment and learning tools have a significant influence on the academic performance and psychological changes of college students.

The efficiency of online learning may be affected by many factors, and there were few studies on the comparison of the difference in learning effectiveness between physical classrooms and online learning for dental education in the past. Online learning uses the internet as a delivery modality to offer thoughtfully designed, quality, student-focused learning experiences, built on proven best practices that create effective interactions between learners, peers, instructors, and content. When we look at online learning from this broader perspective we get a more comprehensive picture of the complexities that make online learning a dynamic modality.

The predominance of online learning is breaking down traditional physical boundaries and creating an online culture, unique in its own right. We are in a situation where an online presence over the Internet could be more communicative and engaging than a physical presence. In other words, the relative advantages of these two words the physical and the online are fast converging.

According to research, an online presence can sometimes be felt by the participants as much more intimate than a physical presence (Kaur *et al*., 2020). Online learning is an evolving phenomenon, and as companies and academics in universities attempt to make sense of this trend, we need to construct definitions on a common platform. The definition of online learning must seriously consider issues such as what learning is, how learning occurs through e-means, and the implications that online learning poses for flexibility, accessibility, interactivity, and collaboration.

For instance, Gherheş *et al*. (2021) note that online learning is more student-centered than classroom learning, which is more teacher-centered because it does not only rely on instructions and recommendations coming from teachers but is individually customizable to the learner. Onasanya *et al*., (2021) concluded that lecturers in the online learning environment should be encouraged to use the Class Marker as a tool for assessment because it has a significant impact on the performance of the students.

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Online learning is distinct from classroom learning in that students' evaluations can be completed using tools, they can access information from various documents uploaded onto the platforms, and the learning experience is significantly influenced by the teachers' level of digital training and their teaching approach. In contrast, instructors assess students only in a classroom context, acting as both their primary information source and a major factor in how well students learn (Onasanya *et al*., 2013; Wellington & Clarence, 2021).

This study investigated the challenges facing online and physical classrooms in higher institutions. The research questions are the following:

(i) What are the challenges facing the online classroom at the University of Ilorin?
(ii) What are the challenges facing the physical classroom at the University of Ilorin?

2. LITERATURE REVIEW

2.1. Challenges Facing Online Class in Higher Institutions

Teaching in an online environment presented many challenges in comparison with face-to-face instruction. A key question raised about online learning is its effectiveness in comparison with traditional instruction. The Organization for Economic Co-operation and Development 2020 mentioned that some of the challenges universities have to face were: keeping an equilibrium between online courses, which could affect students' health, spending many hours in front of a screen, and non-digital activities, analyzing and focusing on student's emotional health, providing them with support throughout the process of learning, taking into account the fact that not all students have access to the internet, and managing and monitoring their access to devices to effectively collaborate with them (Onasanya *et al*., 2014).

Wellington and Clarence (2021) reported that teachers who are open-minded, flexible, and interested in developing themselves become self-thought and try to improve their teaching skills. However, a certain segment of teachers still manifests resilience towards learning how to use new tools and they use during the courses only a basic function of the e-learning platform. It is also important to mention that in the higher education system, it is more difficult for teachers to mention that they do not know how to use certain tools provided by the platforms, which is why they do not ask for support, technical skills only are not enough, teachers also have to adapt their methods of teaching to the online environment, technical issues are still the issues most difficult to solve, due to the capacity of the servers owned by universities. Surely, universities have made efforts to solve these problems and improve the way the e-learning platforms work (Guo *et al*., 2020).

Students' technical problems include poor internet connections, signal loss, and lack of adequate digital devices, especially for students living in rural areas or students from families with low incomes. Universities could create programs to meet these types of needs and thus facilitate the learning process for students who find themselves in these situations. In online learning, the student is dependent upon access to an unimpeded Internet connection. If technical problems occur, online students may not be able to communicate, submit assignments, or access study material. Finally, research shows online students are more likely to quit class if they do not like the instructor, the format, or the feedback. Because they work independently, relying almost wholly upon self-motivation and self-direction, online learners may be more inclined to withdraw from the class if they do not get immediate results.

Donahue and Glodstein (2013) postulated that the main challenges that students encounter during e-learning are accessibility, connectivity, lack of appropriate devices, and social issues represented by a lack of communication and interaction with teachers and peers. Everyone has their learning style along with their cultural influences; the ones who are taught

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using their learning style and taking into consideration cultural aspects of individuals will perform better academically. To achieve the best learning outcome, it is desirable to have an understanding of students' learning styles. Online students' learning styles can be unclear, this has implications for how academics develop learning material. Some students learn through interacting, some prefer learning through visual presentation, and some by listening to instructions and using written notes. This challenge implies the learning outcomes and poses a serious issue for academics to understand the learning styles of their students in an e-learning environment (Sywelem *et al*., 2012).

A current challenge for academics in an e-learning environment is to understand the different learning styles of different students for better learning outcomes. The traditional method of learning may not be adequate in the modern-day classroom where e-learning technology is playing a major role in the delivery of education. In principle the key to understanding the student needs is to understand the diversity in the virtual class (Folley, 2010).

We have pointed out various problems when instructors use e-learning technology. Technical errors, bugs, and slowness are critical if academics are to use the system and are critical to the success of the e-learning technology, if the system does not function correctly then the technology will not be used and negativity will arise in using e-learning technology, which has a big ramification for institutions as they have invested hugely so the technology should be used effectively for the return in investment.

Online classes may present efficiency gains in the course delivery process, but it is not clear how these gains are viewed by online students. This is because, in online courses, the bulk of the burden of learning is passed on to the student. For example, in many online courses, students are required to utilize the online content, such as readings and video modules of lectures, on their own, this places a great deal of responsibility on the student who must now plan out when to gain exposure to the learning material, and to ensure attentive processing of the material to complete related assignments and assessments.

Therefore, while online classes present specific benefits, not all students may view them the same way. The amount of effort and responsibility passed on to the student may be considered high by some segments of students who may view online courses as a burdensome and demanding way to learn. However, this perspective may not necessarily be shared by all students, and current research has not explored how students view the efficiency of learning in online courses.

The assumption that growing up around technology and having greater access to technology would make one more digitally capable is erroneous as individuals may still have a preference for non-technological mediums and have varying levels of competence and capacity with digital platforms. Furthermore, external student cohorts may also consist of mature age (non-digitally native students), which further complicates the assumption of digital preference, digital competency, and digital ability for online learners.

Therefore, regardless of the demographic of the cohort, assumptions around technological preference and capacities should be sidelined at least until the necessary social and peer support mechanisms are in place. Adapting to the online environment can be a challenge for both facilitators and students alike (Kirkwood & Price, 2014).

The case of health issues working with electronic media for long periods causes some health issues like eye problems, headaches, and so on but in the case of traditional there is no stress or any problems. Motivation also only comes from monitoring, interaction, and communication. Thus, it is the obvious truth that e-learning fails in motivating higher education students by missing monitoring activities while traditional learning provides so

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much motivation from teachers. For many instructors, their attention has not yet shifted from the technological tools to the pedagogical practices and use of the tools. This has an impact not only on instructor identity but also on the effectiveness of the teaching and the perceptions and satisfaction of the learners (Ananga & Biney, 2017).

2.2. Challenges Facing Physical Class in Higher Institution

Bridget (see www.blog.youragora.com) reported that large class sizes, mixed age, and mixed ability classes, undiagnosed student learning disabilities, insufficient funding for classroom supplies and equipment, and lack of administrative support are the challenges facing the use of physical classes; Mixed ability and mixed age classes: classes that include students of varying ages and abilities can create a dynamic learning community. However, even these classes can also pose distinct challenges that can derail meaningful learning.

Advanced students in heterogeneous classes can quickly become bored or frustrated, which makes them more likely to disengage or act out. At the same time, struggling students can feel pressured to catch up. And, although a small amount of anxiety can motivate students to try their best, too much anxiety and cripple attention, information processing, and knowledge retrieval. Teachers often struggle to find lesson plans that are developmentally appropriate for a wide range of student abilities or ages.

How the course material is presented to the students is an important aspect of student learning (Al Nashash & Gun, 2013). Students learn through what they experience and how they are taught the materials. If the course is not designed appropriately students may face difficulty with how the material is taught and may not follow the course work. This issue can become amplified in large classes due to high enrolment which could confuse the students due to the limited access to faculty and teaching assistants (Adrian, 2010).

Effective course delivery is critical for student learning and large classes usually rely heavily on presentations or lectures for course delivery. Typically, in traditionally taught large classes, the faculty becomes responsible for the material and concepts taught. Monks and Schmidt's (2011) article concluded that large classes are troublesome for the faculty to teach, have a negative effect on the academic performance of students, and cause poor student learning. They correlated large classes with reduced effectiveness in invigorating students' interest and slower return of assignments. This is another challenge faced in physical class.

Challenges faced during physical class includes population explosion, insufficient desks, overcrowded classroom, inadequate learning materials, the preponderance of unqualified teachers, and poorly educated and ill-motivated teachers characterized the system (Ajayi, 2009). The negative impact of the traditional class is, that it is considered costly, students rely on teachers, negative groups, as well as time, and so on. In the case of traditional learning, students' whole actions depend on the teacher's instruction. Thus, students cannot approach themselves to account for a real-world problem. They will rely on someone else all the time. It is also if there is any involvement of the negative group in the classroom that destroys the student's future.

2.3. The Relationship Between Online and Physical Class on Student Academic Performance

Babalola and Onasanya (2024) concluded that physical and online education have many things in common. Students must still turn in assignments, participate in class, understand the content, and finish group projects. Teachers still need to create lesson plans, improve the quality of their education, respond to students' queries in class, encourage learning, and grade assignments. The two modalities differ greatly from one another despite their

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fundamental commonalities. In the past, classroom education has been known to be student-centered and require passive learning, but online teaching is frequently student-centered and demands active learning.

Salcedo (2010) explained that in teacher-centered, or passive learning, the instructor usually controls classroom dynamics. The teacher lectures and comments, while students listen, take notes, and ask questions. In student-centered, or active learning, the students usually determine classroom dynamics as they independently analyze the information, construct questions, and ask the instructor for clarification. In this scenario, the teacher, not the student, is listening, formulating, and responding.

The similarities between online learning and traditional learning environments are; that both online learning and traditional learning require a great amount of work: giving and receiving feedback is important in both environments: assignments are a huge part of the learning experience: the challenges and rewards are the same in each environment: online learning and traditional learning require that student manage their time wisely.

3. METHOD

The study adopted descriptive research of the survey type. It had been considered appropriate because the descriptive research method entails the systematic collection and analysis of information obtained from a large population that aids in explaining population or event characteristics as they appear to support the phenomenon under consideration for this study without engaging in external manipulation. A questionnaire titled “Challenges Facing Online and Physical Classroom in Higher Institutions” was used for this study, the questionnaire contained three sections. Section A had demographic information about the respondents such as students’ faculty and gender, Section B contained items seeking information on the challenges facing online classes in higher institutions, and Section C contained items seeking information on the challenges facing physical classes in higher institutions. The questionnaire items were rated on the responses made by SA (Strongly agree), A (Agree), D (disagree), and SD (strongly disagree).

Ethical consideration was maintained throughout data collection. We ensured that respondents were not coerced to fill out the questionnaire and respondents were allowed to participate voluntarily. Also, the utmost confidentiality and secrecy of the respondents were maintained during the administration, collation, and report of research findings.

4. RESULTS AND DISCUSSION

4.1. Demography

According to **Table 1**, 200 students took part in the study as a whole. 107 (53.5%) of the 200 students were male, and 93 (46.5%) were female. This table's outcome reveals that male students participated in the study at a higher rate than female students. The distribution of responders among the faculties included in the sample is shown in **Table 2**. 200 undergraduates took part in the study overall, of whom 43 (21.5%) were in agriculture, 9 (4.5%) were in the environment, 90 (45.0%) were in education, 28 (14.0%) were in engineering, and 30 (15.0%) were in life sciences.

Table 1. Distribution of the participants based on gender.

Gender	Frequency	Percentage	Cumulative
Male	107	53.5	53.5
Female	93	46.5	100.0
Total	**200**	**100.0**	

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Table 2. Distribution of the participants based on area of specialization.

Specialization	Frequency	Percentage	Cumulative
Agriculture	43	21.5	21.5
Environmental	9	4.5	26.0
Education	90	45.0	71.0
Engineering	28	14.0	85.0
Life Science	30	15.0	100.0
Total	200	100.0	

4.2. Research Question One: What are The Challenges Facing the Online Classroom at the University of Ilorin?

The difficulties that the University of Ilorin's online classes face are illustrated in **Table 3**. Table 3 shows that all of the items received a mean score that is higher than the benchmark of 2.45, with the highest score for "Lack of internet connectivity is a major problem of online class" being 3.57 and the lowest score for "I lack comprehension in online class, unlike physical class due to lack of immediate feedback" being 2.89. Grand Mean (3.06 out of the possible maximum of 4.00), which is within the decision value for positive, suggests that University of Ilorin students are dealing with a variety of difficulties when learning online.

Table 3. Mean score showing the challenges facing the online classroom at the University of Ilorin.

S/N	Item	Mean
1.	One of the main issues with online classes is a lack of internet access.	3.57
2.	Due to the absence of instant feedback in online classes, I find it difficult to understand the material.	2.89
3.	In an online class, there is little interaction between the instructors and the students.	3.04
4.	I find it easier to drift off during online classes than in person.	2.91
5.	It is quite difficult for me to explain myself and communicate during an online lesson.	2.62
6.	I did not obtain prompt feedback from my instructors during an online lesson.	3.01
7.	I never understood the directions given to me during online classes.	3.20
8.	Technology knowledge was required for the online course.	2.99
9.	While taking an online course, it is challenging to communicate with the professor and other students.	3.16
10.	I often get the impression that online classes are teacher-centered.	3.17
	Grand Mean (X)	**3.06**

Key: SD = Strongly Disagree, **D=** Disagree, **A =** Agree, **SA =** Strongly Agree
Decision Value: ***Negative*****=**0.00-2.44, ***Positive* =** 2.45-4.00

4.3. Research Question Two: What are the Challenges Facing the Physical Classroom at the University of Ilorin?

The difficulties that the University of Ilorin's physical classrooms face are shown in **Table 4**. **Table 4** shows that all of the items received a mean score above the benchmark of 2.45, with "It is stressful and tedious when learning in physical class" receiving the highest score (x = 3.74) and "There is not enough time to complete the assignment or classwork given in physical class" receiving the lowest (x = 2.67). The Grand Mean (3.16 out of the possible maximum of 4.00), which is within the decision value for positive, suggests that the University of Ilorin students face a variety of difficulties when learning in a physical classroom.

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Table 4. Mean score showing the challenges facing physical classroom at the university of Ilorin.

S/N	Item	Mean
1.	While in a physical education class, learning is difficult and boring.	3.74
2.	The resources utilized in physical classes are difficult to get.	3.36
3.	My performance in class is being impacted by too much peer pressure in physical education.	3.69
4.	I struggled to pay attention in class because of the number of people in physical education.	3.15
5.	The amount of time spent on technological learning tools has decreased due to physical classes.	2.89
6.	Because of the high attendance during each class session, physical classes are too expensive.	3.32
7.	Physical ability is rigid. I must consistently show up for class to hear lectures.	2.98
8.	There is not enough space in the classroom where physical education is being held.	2.97
9.	There is not enough time to finish the homework or classwork assigned in physical education.	2.67
10.	Due to a lack of academic resources, there is ineffective course delivery in traditional classroom settings.	2.82
	Grand Mean (X)	**3.16**

Key: SD = Strongly Disagree, **D=** Disagree, **A =** Agree, **SA =** Strongly Agree
Decision Value: ***Negative*****=**0.00-2.44, ***Positive* =** 2.45-4.00

4.4. Discussion

Students at the University of Ilorin face a variety of difficulties when learning online, according to this research. According to Gherheş *et al*. (2021), the primary difficulties students face when studying online are accessibility, connectivity, a lack of suitable gadgets, and social concerns, which are represented by a lack of communication and engagement with peers and professors. According to research, online learners are more likely to drop out of a course if they dislike the teacher, the structure, or the feedback. Online students may be more likely to leave the class if they do not see rapid results since they work alone, relying nearly entirely on self-motivation and self-direction.

The results of this study showed that University of Ilorin students have a variety of difficulties when learning physically. The challenges facing the use of physical classes, according to Bridget (see www.blog.youragora.com), include large class sizes, mixed age and ability classes, undiagnosed student learning disabilities, insufficient funding for classroom supplies and equipment, and a lack of administrative support. Mixed ability and mixed age classes: Classes with students of different ages and abilities can create a dynamic learning community. However, these classrooms can also present unique difficulties that might impede effective learning. Moving from conventional classroom and face-to-face learning to computer-based training in a virtual classroom makes the learning process radically different. Virtual learning tends to be more affordable; it is more cost-effective than traditional education. Nonetheless, many arguments are associated with Virtual learning. Accessibility, affordability, flexibility, learning pedagogy, lifelong learning, and policy are some of the issues related to online instruction (Dhawan, 2020).

5. CONCLUSION

Having examined the challenges facing online and physical classrooms in higher institutions. It was revealed that there are numerous similarities between traditional and

online learning. Assignments must be submitted, class participation is required, content must be understood, and group projects must be completed. Lesson plans must still be developed, teaching standards must be raised, questions from students must still be answered in class, learning must still be encouraged, and assignments must be graded in both learning approaches. Despite the underlying similarities between online and physical classrooms, the two modalities are very different from one another. Online teaching is typically student-centered which necessitates active learning, in contrast to traditional classroom instruction, which has been known to be teachers-centered and calls for passive learning. It was a challenge for teachers to move from face-to-face in-class mode to virtual learning, changing their teaching methodologies, and managing their time. It was also a challenge to develop content that not only covers the curriculum but also engages the learners.

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