EXPLORING STUDENTS' INTEREST, PERCEPTION, AND CHALLENGES IN ONLINE CLASSES: A CASE STUDY IN NIGERIA

Shodeinde, A. O.,[1] Olatoye, A. O.,[2] Yisa, M. A.,[3] Fadairo, O. O., [4] Wahab, N. O.[5]
College of Vocational and Technology Education
Tai Solarin University of Education, Ijagun, Ogun State, Nigeria

ABSTRACT

The COVID-19 pandemic prompted a significant shift towards online education worldwide, including Nigeria. This study explored students' level of interest in online classes, their perceptions of the quality of online instruction, and the challenges they encountered during participation. Additionally, the study examined potential gender-based differences in these aspects. A survey research design was employed, and data were collected with a structured questionnaire from 100 students across technical schools in Ogun State, Nigeria. The instrument was validated by three experts. Cronbach Alpha was used to estimate the reliability of the instrument, and it yielded a reliability coefficient of 0.83. The study found that students displayed a high level of interest in online classes. However, their perception of online class quality was rated as average, indicating room for improvement in design and engagement strategies. Challenges faced by students included network instability, technical issues, and limited social interaction. Importantly, the study did not identify significant gender-based differences in interest, perception, or challenges encountered during online classes. The study recommended the need for comprehensive support systems in online education, including technical assistance and strategies to promote interaction. Educators should focus on enhancing online course design, utilizing multimedia elements, and encouraging collaboration. Schools must also invest in reliable internet connectivity and hardware for students. Furthermore, training teachers in online pedagogy is also crucial for effective online teaching. The study

also recommends the continuation of online education as a permanent part of the curriculum, to be supported by research collaborations among institutions, policymakers, and researchers.
Keywords: *Online Classes; Students' Interest; Perception of Quality; Challenges; Gender Differences*

INTRODUCTION

Before the covid-19 outbreak, a large number of schools in Nigeria do not use online or virtual modes for classes. Face to face learning were mostly prevalent (Egielewa, Idogho, & Cirella, 2021). During the pandemic, schools at all levels around the world were forced to adapt quickly to remote learning solutions as a means of ensuring the safety of students and educators (Tadesse & Muluye, 2020). Online classes and blended learning, which were once considered supplementary options, became the primary mode of education delivery (Cheung, Wang, & Kwok, 2023). Schools continue to run via online classes through software applications like Zoom, WhatsApp, Telegram, Google Meet, Microsoft Teams, among others. As the world gradually emerges from the pandemic, schools in Nigeria have continued to utilize these digital approaches even after the crisis has abated. It now appears as though online classes has been integrated into mainstream education and gradually the norm.

Online classes and blended learning models have showcased their potential to revolutionize the way education is delivered (Tong, Uyen, & Ngan, 2022). Online classes are being facilitated through digital platforms like WhatsApp, Zoom, Google Meet, and Microsoft Teams. For instance, WhatsApp has extended its capabilities to support education through group chats and file sharing. Educators can create dedicated groups for each class, allowing them to share announcements, assignments, study materials, and even conduct discussions. WhatsApp's familiar interface makes it accessible to a wide range of users, and its multimedia capabilities enable educators to share images, audio clips, and videos to enhance the learning experience (Dangara & Bukar, 2022). Similarly, Zoom has grown to be associated with virtual meetings and classes. Its

intuitive interface supports live video lectures, breakout rooms for group activities, screen sharing, and real-time engagement through chats and polls (Karl, Peluchette, & Aghakhani, 2022). Features like whiteboards and annotation tools replicate the classroom experience in a digital format, allowing educators to deliver dynamic and interactive lessons to students (Hernandez, 2022). The current generation of students, often referred to as digital natives, has grown up in a digital environment (Prensky, 2001). They are very familiar with smartphones, laptops, and high-speed internet connections. This familiarity with technology may contribute to a heightened interest in online classes. The digital realm may offer learners a sense of comfort, and enable them to explore new horizons without the constraints of physical spaces. Also, the flexibility of online classes which allow learners to access course materials and lectures at their convenience may enhance students' interest in online classes.

Online classes are likely to involve students from diverse backgrounds and geographical locations who navigate virtual classrooms to attain knowledge and skills. However, according to Grayand DiLoreto (2016), how students perceive the quality of these online classes influences their engagement, motivation, and overall learning outcomes. Factors that influence students' perception of the quality of online classes includes the flexibility they offer, the degree of personalization in their learning experiences, and the level of interaction and engagement within virtual learning environments (Hollister, Nair, Hill-Lindsay, & Chukoskie, 2022). Students are more likely to value active participation, discussions, and collaborative activities that mirror the interactions they would have in a physical classroom. As much as online classes are now becoming the norm, there are potential challenges that can hinder a more supportive and effective online learning environments. According to Zulaikha, Azlin, Khairul, and Bity (2021), students may face a range of obstacles that includes technical glitches, connectivity issues, accessibility, lack of engagement, and self-discipline. Considering the widespread integration of online classes into mainstream education in Nigeria, even as the pandemic recedes, this study was carried out to determine the level of interests of students in online classes, the perception of students about the quality of online classes, and the challenges faced by students during

participation in online classes in Nigeria. Investigating student perceptions of the quality of online classes will highlights the impact of pedagogical delivery on engagement, motivation, and learning outcomes. This insight will contribute to enhancing the design and implementation of online courses for maximum effectiveness. Furthermore, identifying challenges faced by students during online classes will highlight the need for strategies to mitigate these barriers. Addressing these challenges will ensure a more supportive and effective online learning environment.

Objectives of the Study

Specifically, the study determined:

1. The level of students' interest in online classes.
2. The perception of students about the quality of online classes.
3. The challenges faced by students during participation in online classes.

Research Questions

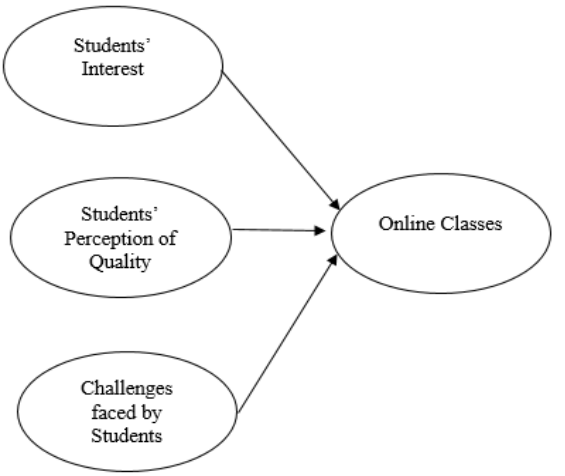
The following research questions guided the study:

1. What is the level of students' interest in online classes?
2. What is the perception of students about the quality of online classes?
3. What are the challenges faced by students during participation in online classes?

Hypotheses

1. There is no significant difference in the level of interest of male and female students in online classes.
2. There is no significant difference in the perception of male and female students on the quality of online classes.
3. There is no significant difference in the challenges faced by male and female students during participation in online classes?

Figure 1. Model on exploring students' interest, perception, and challenges in online classes



Methodology

Survey research design was adopted for the study. Students from all the eight technical schools in Ogun State, Nigeria, constituted the population for the study. Simple random sampling was used to select five (5) technical schools among the eight (8) technical schools in Ogun State. Also, twenty (20) students were selected from each of the technical schools using random sampling technique, making a total of 100 students (87 males and 13 females) that participated in the study. A self-designed questionnaire was used for data collection. The questionnaire was completed anonymously. The confidentiality of information was guaranteed by asking participants not to include their names on the completed questionnaires. The questionnaire was divided into four sections. Section A deals with general information about personal data of the respondents. This section consisted of options and blank spaces to enable the respondents check or fill as appropriate. Section B deals with research question one. It contains 10 items which was used to determine the level of interests of students in online classes. Section C deals with research question two. It contains 10 items which was used to investigate the perception of students on the quality of online instructional delivery. Section D deals with research question three. It contains 10 items which was used to determine the challenges faced by students during

participation in online classes. The response scale is as follows: strongly agree (4), agree (3), disagree (2) and strongly disagree (1).

The instrument was validated by three experts in the field of vocational and technical education. Cronbach Alpha was used to estimate the reliability of the instrument, and it yielded a reliability coefficients of 0.83. Permission was requested from the school management of all concerned technical schools in order to administer the questionnaires to the sampled students. The questionnaires were collected immediately after administration. Data collected for the study were analyzed using mean and standard deviation to answer the research questions, while the hypotheses were tested using t-test at 0.05 level of significance. The research questions was interpreted using the real limit of mean values. The statistical real limit of the mean values is as follows: Very High/Above Average/Strongly Agreed (3.50 – 4.00), High/ Average/Agreed (2.50 – 3.49), Moderate/ Below Average/Disagreed (1.50 – 2.49), Low/ Very Poor/Strongly Disagreed (0.50 – 1.49). The null hypothesis with probability (p) value less than or equal 0.05 alpha value was rejected, while those with probability value greater than 0.05 alpha value were accepted.

Results

Research Question 1

What is the level of students' interest in online classes?

Table 1: Mean and standard deviation on the level of students' interest in online classes

S/N	Students' interest in online classes	□	S.D	Remark
1	Online Classes can enable me to study irrespective of where I am in the world	3.28	0.45	Agreed
2	Virtual classes require less work and effort than regular learning methods	2.73	0.72	Agreed
3	I enjoy virtual classes because of its convenience	3.45	0.55	Agreed
4	Virtual learning gives me opportunity for my privacy	3.25	0.67	Agreed
5	I prefer online classes more than physical classes	3.00	0.55	Agreed
6	Virtual classes motivate me to think creatively and be independent	2.73	0.82	Agreed
7	Online learning makes learning interesting.	3.36	0.31	Agreed
	Average Mean	**3.11**		

Data presented in Table 1 revealed the level of students' interest in online classes. All the 7 items have their mean values ranged from 2.73 to 3.45. This implies that the respondents agreed on all the 7 items. Therefore, with an average mean of 3.11, it can be concluded that respondents have a high level of interest in online classes.

Research Question 2
What is the perception of students on the quality of online classes?

Table 2: Mean and standard deviation of the perception of students on the quality of online classes

S/N	Perception of students on the quality of online teaching	□	S.D	Remark
1	The set-up of the online classes is compatible with the way I learn	3.38	0.49	Agreed
2	Virtual classes help me in understanding the main concepts	3.18	0.38	Agreed
3	I learn better through online classes	3.40	0.50	Agreed
4	Online classes simplify my learning process	3.33	0.47	Agreed
5	Virtual classes reduces my learning difficulties	3.45	0.55	Agreed
6	I can easily access the material for the lecture after the class	3.38	0.49	Agreed
7	The learning platform is user friendly	3.17	0.32	Agreed
8	In my opinion, online classes are effective	3.41	0.40	Agreed
	Average Mean	**3.34**		

Data presented in Table 2 shows the perception of students on the quality of online classes. All the 8 items have their mean values ranged from 3.17 to 3.45. This implies that the respondents agreed on all the items. Therefore, with an average mean of 3.34, it can be concluded that students perceived the quality of online classes to be average.

Research Question 3
What are the challenges faced by students during participation in online classes in Ogun state, Nigeria?

Table 3: Mean and standard deviation on the challenges faced by students during participation in online classes

S/N	Challenges faced by students during participation in online classes		S.D	Remark
1	Managing time	3.20	0.41	Agreed
2	Distraction from other activities e.g. pop-up messages	3.43	0.50	Agreed
3	Network instability	3.44	0.48	Agreed
4	High volume of internet data consumption	3.38	0.54	Agreed
5	Video and audio glitches while communicating with instructor	3.28	0.55	Agreed
6	Lack of clarity in understanding the instructor immediately	3.40	0.59	Agreed
7	Lack of adequate social interaction	3.43	0.50	Agreed
8	Feelings of isolation	3.33	0.57	Agreed
9	Poor computer speed	3.28	0.60	Agreed
10	Difficulty in collaborating and relating effectively with peers	3.48	0.50	Agreed
	Average Mean	**3.37**		

Data presented in Table 3 revealed the challenges faced by students during participation in online classes. All the 10 items have their mean values ranged from 3.20 to 3.48. This implies that the respondents agreed on all the items as challenges they face when participating in online classes.

Hypothesis 1

There is no significant difference in the level of interest of male and female students in online classes.

Table 4: t-test comparison of the level of interest of male and female students in online classes

	N	$\bar{X}$	***S.D***	***t***	***p***	**Remark**
Male	87	3.13	0.61	1.96	.250	Not
Female	13	3.08	0.54			Significant

Table 4 shows that male students were not significantly different from females in their level of interest in online classes, (p=0.250). Inspection of the two group means also indicates that the average level of interest of male students (3.13) is not significantly higher than that of female students (3.08). The null hypothesis was not rejected at 0.05 level of significance. Therefore, there is no significant difference in the level of interest of male and female students in online classes.

Hypothesis 2

There is no significant difference in the perception of male and female students on the quality of online classes.

Table 5: t-test comparison of perception of male and female students on the quality of online classes

	N	$\bar{X}$	*S.D*	*t*	*p*	**Remark**
Male	87	3.37	0.47	1.91	.55	Not
Female	13	3.31	0.43		9	Significant

Table 5 shows that male students were not significantly different from females on their perception of the quality of online classes, (p=0.559). Inspection of the two group means also indicates that the perception of male students (3.37) is not significantly higher than that of female students (3.31). The null hypothesis was not rejected at 0.05 level of significance. Therefore, there is no significant difference in the perception of male and female students on the quality of online classes.

Hypothesis 3

There is no significant difference in the challenges faced by male and female students during participation in online classes?

Table 6: t-test comparison of the challenges faced by male and female students during participation in online classes

	N	$\bar{X}$	*S.D*	*t*	*p*	**Remark**
Male	87	3.39	0.55	1.78	.340	Not
Female	13	3.35	0.50			Significant

Table 6 shows that male students were not significantly different from females in the challenges they face during participation in online classes, (p=0.340). Inspection of the two group means also indicates that the challenges faced by male students (3.39) is not significantly higher than that of female students (3.35). The null hypothesis was not rejected at 0.05 level of significance. Therefore, there is no significant difference in the challenges faced by male and female students during participation in online classes.

Findings of the Study

1. Students have a high level of interest in online classes.
2. Students perceived the quality of online classes to be average.
3. Challenges faced by students during participation in online classes includes network instability, high volume of internet data

consumption, video and audio glitches while communicating with instructor, lack of adequate social interaction, feelings of isolation, poor computer speed, and difficulties in collaborating and relating effectively with peers.

4. Male students were not significantly different from females in their level of interest in online classes.
5. Male students were not significantly different from females on their perception of the quality of online classes.
6. Male students were not significantly different from females in the challenges they face during participation in online classes.

Discussion

The study aimed to investigate the level of students' interest in online classes, their perception of the quality of online classes, and the challenges they face during participation in online classes. The study found that students displayed a high level of interest in online classes. The respondents agreed on various aspects related to online classes, such as the ability to study from anywhere, the convenience of virtual classes, and the motivation for creative and independent thinking. The average mean score of 3.11 indicated that students have a strong interest in online classes. This findings corresponds with the findings of Hollister, Nair, Hill-Lindsay, and Chukoskie (2022) who carried out a study titled engagement in online learning: student attitudes and behavior during COVID-19. The study reported that students showed high interest in online classes.

Also, students' perception of the quality of online classes was determined to be average. The participants agreed on several aspects, including the compatibility of the online class setup with their learning preferences, the effectiveness of virtual classes in understanding main concepts, and the user-friendliness of the learning platforms. The average mean score of 3.34 indicated that students perceived the quality of online classes to be satisfactory. The perceptions of students regarding the quality of online classes hold the key to shaping the future of education. As institutions and educators continue to fine-tune their virtual offerings, understanding what resonates positively with students is essential. Flexibility, personalization,

interaction, and engagement emerge as pivotal aspects in influencing how students perceive the quality of online classes (Hollister, Nair, Hill-Lindsay, & Chukoskie, 2022). By addressing challenges and leveraging opportunities, educators can craft enriching online learning experiences that empower students to embrace the digital educational journey with confidence and enthusiasm.

Furthermore, the study identified various challenges faced by students during participation in online classes. These challenges included network instability, high consumption of internet data, technical issues such as video and audio glitches, lack of social interaction, feelings of isolation, poor computer speed, and difficulties in collaborating effectively with peers. Students expressed agreement with these challenges, with an average mean score of 3.37 indicating their recognition of these obstacles. While online learning offers numerous advantages, acknowledging and addressing the challenges faced by students is crucial for creating a successful virtual learning environment. Institutions and educators must prioritize strategies to bridge the digital divide, provide technical support, maintain engagement, foster time management skills, and promote interactions among students. By doing so, they can ensure that students receive a well-rounded and effective education that harnesses the potential of online learning while mitigating its inherent challenges.

Regarding the gender differences, findings from the study indicated that there were no significant differences between male and female students in terms of their interest in online classes, their perception of the quality of online classes, or the challenges they faced during online participation. The p-values for the t-tests were greater than the significance level of 0.05, suggesting that gender did not play a significant role in these aspects. In conclusion, the study's findings suggest that students in Ogun State, Nigeria, have a strong interest in online classes. While they perceive the quality of online classes to be average, they also acknowledge several challenges related to technical issues, connectivity, and social interaction. Importantly, the study highlights the absence of gender-based differences in these aspects, implying that both male and female students share similar experiences and perceptions when it comes to online education. These

findings have implications for the design and implementation of online courses, aiming to address challenges and enhance the overall quality of the online learning experience.

Implication of Findings

The findings of this study have several implications for the field of education, particularly in the context of Nigeria. The study highlights that students in Nigeria have a high level of interest in online classes. This indicates that online education has become an accepted and embraced mode of learning among students. As a result, educators and institutions should continue to integrate online education into their teaching methods, even as the pandemic recedes. Also, while students perceive the quality of online classes to be average, there is room for improvement. Educators and institutions should focus on enhancing the quality of online instructional delivery. This can involve ensuring that the online learning platforms are user-friendly, the content is well-organized, and the teaching methods effectively engage students. Furthermore, the challenges faced by students during participation in online classes, such as network instability, technical issues, and lack of social interaction, need to be addressed. Institutions should provide technical support to students, ensure stable internet connectivity, and implement strategies to foster social interaction and engagement within virtual learning environments.

The study found that there were no significant gender-based differences in students' interest in online classes, perception of the quality of online classes, or the challenges they faced. This suggests that both male and female students have similar experiences and perceptions regarding online education. Educators and institutions should ensure that online learning experiences are inclusive and cater to the needs of all students, regardless of gender. As online education continues to evolve, educators should continuously assess the effectiveness of their online courses and make improvements based on feedback from students. Regular evaluations can help identify areas that need enhancement and ensure that the quality of online education remains high.

CONCLUSION

The study revealed that students in Nigeria exhibit a significant level of interest in online classes. This interest is driven by the convenience, flexibility, and accessibility that online education offers. The digital familiarity of the current generation of students, combined with the benefits of studying from anywhere, has contributed to this positive attitude towards virtual learning. Despite the challenges encountered, students have demonstrated a willingness to embrace online education as a viable mode of learning. The research also unveiled that students perceive the quality of online classes as average. This suggests that while online education has gained acceptance, there remains room for enhancement in terms of instructional design, engagement strategies, and technical support.

The challenges faced by students during online classes highlight the importance of comprehensive support systems. Technical issues, network instability, and a lack of social interaction emerged as notable obstacles. Gender-based differences were not found to be significant in terms of interest in online classes, perception of online class quality, and challenges faced. This emphasizes the universality of the online learning experience and underscores the need for inclusive educational approaches that cater to the diverse needs of all students.

In essence, the study's findings underscore the need for a holistic approach to online education in Nigeria. While the rapid adoption of online classes was driven by necessity, the long-term success of this mode of education hinges on addressing challenges and optimizing the learning experience. As technology continues to evolve and reshape the educational landscape, the lessons learned from this study will be invaluable in guiding the future of education in Nigeria and beyond.

RECOMMENDATIONS

1. Educators should focus on optimizing the design of online courses to ensure engaging and effective learning experiences. This includes structuring content logically, integrating multimedia elements, and providing opportunities for interactive engagement.

2. Schools should provide adequate technical support to students, addressing issues related to network instability, computer speed, and video/audio glitches. Additionally, investments in reliable internet connectivity and hardware are essential to create a conducive online learning environment.
3. To combat feelings of isolation and promote peer interaction, educators should implement strategies that encourage virtual collaboration, group activities, and discussions. This can be achieved through breakout rooms, online forums, and group projects.
4. Regular assessments of online courses are crucial to identify areas for improvement. Educators should solicit feedback from students and use it to refine their teaching methods, content delivery, and engagement strategies.
5. Teachers should receive training in online pedagogy and instructional technology to ensure they are equipped with the skills needed to effectively facilitate online learning. This training can empower educators to navigate challenges and create engaging virtual classrooms.
6. Since gender-based differences were not significant, schools should maintain inclusive practices that cater for the diverse needs of all students. Efforts to improve online education should focus on benefiting all learners, regardless of gender.
7. Online education should be considered a permanent facet of the educational landscape. Schools and policymakers should develop long-term strategies for integrating online learning into the curriculum, which includes investment in digital resources and continuous teacher training.
8. Continued research on online education's impact and effectiveness in Nigeria is essential. Collaboration between educational institutions, policymakers, and researchers can foster the development of evidence-based strategies for enhancing online learning experiences.

REFERENCES

Cheung, S., Wang, F.L. & Kwok, L.F. (2023). Online learning and blended learning: new practices derived from the pandemic-driven disruption. *Journal of Computing in Higher Education*, 35, 1–5. https://doi.org/10.1007/s12528-023-09350-9

Dangara, Y., and Bukar, A. (2022). Students' Usage of WhatsApp Instant Messenger as a Supporting Tool for Learning in Kaduna State, Nigeria. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 18(3), 147-158.

Egielewa, P., Idogho, P. O. and Cirella, G. T. (2021). COVID-19 and digitized education: Analysis of online learning in Nigerian higher education. *E-Learning and Digital Media*, 19(1), https://doi.org/10.1177/20427530211022808

Gray, J. A. and DiLoreto, M. (2016). The Effects of Student Engagement, Student Satisfaction, and Perceived Learning in Online Learning Environments. *NCPEA International Journal of Educational Leadership Preparation*, 11(1), 1-20.

Hernandez, M. (2022). Using Zoom's New Whiteboards in Your Online Teaching. The University of Chicago Academic Technology Solutions. Retrieved from https://academictech.uchicago.edu/2022/07/19/using-zooms-new-whiteboards-in-your-online-teaching/

Hollister, B., Nair, P., Hill-Lindsay, S. & Chukoskie, L. (2022). Engagement in Online Learning: Student Attitudes and Behavior During COVID-19. *Front. Educ*. 7:851019. doi: 10.3389/feduc.2022.851019
Karl, K. A., Peluchette, J. V., and Aghakhani, N. (2022). Virtual Work Meetings During the COVID-19 Pandemic: The Good, Bad, and Ugly. *Small Group Res*, 53(3), 343–365. doi: 0.1177/10464964211015286
Prensky, M. (2001). Digital Natives, Digital Immigrants Part 1. *On the Horizon*. 9. 1-6. 10.1108/10748120110424816.

Tadesse, S. and Muluye, W. (2020) The Impact of COVID-19 Pandemic on Education System in Developing Countries: A Review. *Open Journal of Social Sciences*, 8, 159-170. doi: 10.4236/jss.2020.810011.

Tong, D. H., Uyen, B. P., & Ngan, L. K. (2022). The effectiveness of blended learning on students' academic achievement, self-study skills and learning attitudes: A quasi-experiment study in teaching the conventions for coordinates in the plane, *Heliyon*, 8(12), https://doi.org/10.1016/j.heliyon.2022.e12657.

Zulaikha, M. B., Azlin, N. M., Khairul, A. J., & Bity, S. A. (2021). The Effectiveness and Challenges of Online Learning for Secondary School Students – A Case Study. Asian Journal of University Education (AJUE), 17(3), 1-11.