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Utilization of Teaching Platforms for Instructional Delivery Among Lecturers in Federal Universities South- South, Nigeria

Unyime Asuquo Udo; Prof. Nseabasi P. Essien; Peace Asuquo Frank

Department of Computer and Robotics Education, University of Uyo, Uyo, Akwa Ibom State Nigeria

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***Corresponding author:** Unyime Asuquo Udo

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Abstract **Original Research Article**

This study investigated the extent of utilization of teaching platforms for instructional delivery among lecturers in federal universities south-south, Nigeria. Two specific objectives, two research questions and two hypotheses were postulated to guide the study. The study adopted descriptive survey research design. 280 computing and non-computing lecturers were drawn from a population of 980 lecturers from the eight (8) accredited federal universities in south – south Zone of Nigeria using a proportionate sampling technique. A researcher made instrument title "Teaching Platforms for Instructional Delivery among Lecturers' Questionnaire" (TPFIDAL-Q)" was used to elicit data for the study. The instrument was subjected to face validation by three experts; subsequently, a reliability of 0.99 was obtained using the Alpha's Cronbach technique. The instruments were administered by the researcher with the help of research assistants who were among the computing and non-computing lecturers in all the eight federal Universities in the zone. Mean statistics was used to answer the research questions, while Independent t-test was used to test the null hypotheses at 0.05 level of significance. The findings of the study revealed that computing and non-computing lecturers utilize teaching platform such as Google classroom to a great extent and moderate extent for instructional delivery respectively. For platform like WIZIQ is to very great extent and very little extent but there was a significant difference between computing and non-computing lecturers on the extent to which they utilize Teaching Platforms for instructional delivery. It is concluded that though non computing lecturers utilize Teaching platforms, the computing lecturers also utilize it to a great extent for instructional purposes than the non-computing lecturers. The researcher recommended among others that University lecturers should be encouraged by the university management to use Teaching Platforms for instructional delivery for effective learning and teaching.

Keywords: Teaching platforms, instructional delivery, federal universities, lecturer utilization.

Introduction

Technology has cut across every sector of human endeavours. Teaching is an activity of imparting knowledge or skill from an expert to a less experience person or learners. This can only be enhanced through teaching means that makes the facilitation easy and for the learner to be actively involved in communication, interaction, collaboration among the teacher and the learner. Smith and Williams (2020) opined that, teaching

platform is the strategies employed by educators to present content and facilitate teaching.

Patel *et al*. (2021) note that with the rapid advancement of technology in education, requirements for teaching platforms become increasingly complicated. Accordingly, teachers must adapt teaching platforms to the individual needs of students. Anderson and Dron (2020) describe how teaching platforms should integrate both onsite and online visits simultaneously. Allowing students multiple ways to experience the content being taught determines the best means to meet students' individual needs. Including technology, such as multimedia/simple collaboration and online tools, along with various ways to assess and enhance a taught lesson, creating multiple formats for teachers to deliver instruction. The advent of digital development and tools, novel teaching pathways have also been opened for instruction (Patel *et al.*, 2021).

Teaching platforms are digital tools designed to facilitate the process of education by providing instructors with the resources needed to deliver content, assess student performance, foster communication. These platforms serve as virtual classrooms where both synchronous and asynchronous learning can take place. With the rise of digital education, teaching platforms have gained significant traction across various educational sectors, from primary schools to universities and corporate training environments. Teaching platforms are essential in addressing the growing need for flexible, accessible learning environments, the evolution reflects advances in educational technology (Adams and O'Connor, 2020).

Teaching platforms have a profound impact on teaching methodologies and student engagement. The primary benefit of these platforms is the ability to support diverse teaching strategies, including flipped classrooms, blended learning, and project-based learning. By incorporating multimedia content such as videos, podcasts, interactive simulations, teaching platforms cater to a wide variety of learning styles, making lessons more engaging and accessible (Martin *et al.*, 2021). Teaching platforms provide instructors with the ability to monitor student participation, track progress, provide real-time feedback, which has been linked to improved student outcomes (Wang *et al.*, 2021). When students actively engage with the learning process through these platforms, the ability to retain information and develop critical thinking skills will occur (Hughes, 2020).

Teaching platforms can be broadly categorized into two types: Learning Management Systems (LMS) and virtual classroom tools. LMS platforms such as Wizard Interactive Quiz (WIZIQ) is primarily used to manage course content, assignments, grades, communication between teachers and students. The system is particularly well suited for traditional educational institutions often equipped with features like discussion forums, quizzes, and multimedia content integration (Allen and Seaman, 2019). In contrast, classroom software like Google Classroom provide live video conferencing and collaboration capabilities, making them well-suited for synchronous learning. The integration of both types of platforms offers a comprehensive teaching environment that supports various pedagogical approaches (Jaggars and Bailey, 2019).

Wizard Interactive Quiz (WIZIQ) is an engaging educational tool designed to test users' knowledge through interactive questions and challenges, often themed around fantasy or magical elements. This type of quiz provides an immersive experience by combining learning with entertainment, making it a popular choice for enhancing user engagement in various educational settings. The quizzes usually consist of multiple-choice questions, timed challenges, and real-time feedback, offering users an opportunity to measure progress and improve knowledge. Interactive quizzes can enhance cognitive retention and promote active learning by stimulating user involvement (Smith, 2020). Furthermore, the gamified nature of these quizzes increases motivation and fosters a fun learning environment (Johnson and Thompson, 2019).

Google Classroom was introduced in 2014 by Google and has transformed online education especially during the COVID-19 pandemic. Due to the simplicity of the design and integration with other Google Suite products, Google Classroom has become the optimal online

teaching and learning platform vertical scaling/capacity scaling allows Google Classroom to improve student engagement. (Sheelavant, 2020) His study indicated that Google Classroom was employed by teachers and was an efficient application. Along with assisting students with their online education, it allows them flexibility with 'anytime, anywhere' access, and quick turnaround feedback. (Shaharanee, *et al.*, 2016) Google Classroom has the unique feature of being highly adaptive for learning, as it can be employed by the students and teachers in different physical situations.

Instructional delivery refers to the method, approach used by educators to convey content and engage learners in the learning process. The term encompasses not only the selection of content but also the strategies or tools used to facilitate learning. In the context of modern education, instructional delivery is becoming increasingly intertwined with technology, particularly through the use of teaching platforms. The platforms serve as digital spaces where teachers, students can interact, access resources, and collaborate in real time or asynchronously (Wang *et al.*, 2021). Emphasizes are made on the importance of selecting appropriate platforms to maximize learning outcomes (Wang *et al.,* 2021). Effective instructional delivery via these platforms requires educators to be proficient in both pedagogy and technology integration.

Adds in the visuals of the slides/presentations with the description of the Interactive simulations/animations to make the whole process of instructional delivery more effective. Based on Mayer's Cognitive Theory of Multimedia Learning, if an explanation is given in both visuals and in words, the learners will have a greater understanding (and retention) of the information (Mayer, 2009). Because of the potential of instructional delivery to involve numerous modalities, it can result in improved learning outcomes as long as there is a variety of learners in a particular audience. This is especially true of the more abstract subjects of mathematics and science, where more of the learning can happen if the learners are able to visualize the information.

The effectiveness of instructional delivery through these platforms depends largely on the pedagogical strategies employed by instructors. Instructional delivery has remains relevant as needed. The role of the teacher in instructional delivery is also evolving with the increased use of teaching platforms. Teachers must adapt their teaching styles to leverage these digital tools effectively. According to Darling-Hammond *et al.* (2020), educators must undergo training on how to use technology appropriately in order to integrate technology systematically in their curricula. Teachers need to understand how to design and deliver content that is interactive and engaging in the online environment. Additionally, they must develop the skills to monitor and manage virtual classrooms, address challenges such as student distractions, and provide effective feedback in a digital context.

Platforms like Google classroom, Wizard Interactive Quiz (WIZIQ) allow synchronous interactions between students and educators from around the world. Such interactions foster global awareness, cultural exchange, enriching the learning experience. Online collaborative projects encourage teamwork among students who might never meet in person. Instructional delivery can provide more inclusive and diverse educational experience, which is increasingly important in a globalized world (Luckin *et al.*, 2016).

Incorporating digital teaching aids into teaching models creates an interactive, flexible, and fully personalized teaching-learning environment, and helps to enhance learner and instructor collaboration. An appropriate balance of technological and pedagogical component along with instructional delivery model is crucial. Teaching professionals need flexibility and creativity in employing instructional models. According to Al-Fraihat *et al.* (2020), digital pedagogy platforms help to enhance accessibility and engagement ease in learning in blended and fully online learning. Teaching online addresses the issues of rigid and inflexible face-to-face learning, and challenges adult learners and those that require special assistance. Consequently, the researcher is motivated to the study the digital pedagogical teaching platforms in instructional

delivery of Federal Universities in the South-South Region of Nigeria.

Statement of the Problem

Education is subject to dynamic change primarily due to the emerging instructional delivery applications. Computing is the most rapidly changing subject, and therefore, versant use of such applications by the Lecturers is a requirement for better learning. However, most alternatives such as Google Classroom, Wizard Interactive Quiz (WIZIQ) are not being utilized. Additionally, Udo (2021) believes that, among the Federal Universities of Nigeria, the use of these applications is still limited, and lecturers are not able to do much concerning these applications due to different barriers, such as gender, lack of exposure to the available resources, and or lack of good knowledge to use these alternatives appropriately. This situation is the main reason the researcher intends to study the level of application of instructional delivery methods among lecturers in Federal Universities of South-South Nigeria.

Purpose of the Study

The aim of the study was to evaluate the level of use of Teaching Platforms for lecture delivery for computing and non-computing lecturers in the Federal Universities in South-South Nigeria. The study also aimed to:

i. Assess the level of use of Google Classroom for lecture delivery for computing and non-computing lecturers at Federal Universities in South-South Nigeria.
ii. Assess the level of use of Wizard Interactive Quiz (WIZIQ) for lecture delivery for computing and non-computing lecturers at a Federal University in South-South Nigeria.

Research Questions

i. How prevalent is Google Classroom use for teaching among computing and non-computing instructors in Federal Universities across the South-South region of Nigeria?
ii. How prevalent is the use of Wizard Interactive Quiz (WIZIQ) for teaching among computing and non-computing instructors in Federal Universities in South –South, Nigeria?

Research Hypotheses

H0 (1) There are no statistically significant differences in the responses of computing vs non-computing academics on the extent of adopting the Google Classroom.

H0 (2) There are no statistically significant differences in the responses of computing vs non-computing academics on the extent of adopting Wizard Interactive Quiz (WIZIQ)

Research Method

A descriptive survey was used as the research design in this study. This design was adopted based on the theory of Nworgu (2015) who stated that descriptive survey research design offers answers to questions regarding the nature of people, their beliefs, opinions, attitudes and behaviours. Survey research focuses on collecting information and systematically describing the features/characteristics or facts about a defined population using a questionnaire. This design is the most suitable to use for the purposes of this study since it provides the opportunity to collect the opinions of the respondents. This study was conducted in the South-South geopolitical zone of Nigeria. The study involved nine hundred and eighty (980) computing and non-computing lecturers from each of the eight Federal Universities in the South-South region of Nigeria.

The study included 280 respondents comprising 63 computing lecturers and 217 non-computing lecturers. Taro Yamane's formula was applied to determine the sample size. Proportional simple random sampling technique was utilized to determine sample size to 28% of the total population, consisting of 980 computing and non-computing lecturers in the eight Federal Universities in the South-South, Nigeria.

A research instrument with 135 items, named "Teaching Platform for Instructional Delivery among Lecturers' Questionnaire" (TPFIDAL-Q) was developed and employed to collect data. The instrument was structured in two sections: Section A focused on gaining general personal data on respondents, and Section B consisted of Teaching Platform questionnaire items with 15 items in each clusters A to I. Three experts reviewed the tool: two from the Faculty of Vocational Education Library and Information Science and one from the Department of Computer and Robotics Education. Each evaluator assessed the relevance of specific questions in the tool against their study questions and corresponding null hypotheses. Cronbach Alpha statistics measuring instrument of the tool's internal consistency yielded reliability co-efficient of 0.99. The researcher secured approval from each Department Head of eight Federal Universities in South-South Nigeria prior to the distribution of the instrument to the lecturers. The process of administering the questionnaire was carried out by the researcher, with assistance from volunteers, who were computing lecturers in the eight Federal Universities in the zone. Mean was used to answer the research questions, while the Independent T-test was used to test the null hypotheses at the 0.05 level of significance.

Real limit was used to determine how much the teaching platforms are used to deliver instructions by the computing lecturers in the Federal Universities in the South-South zone of Nigeria. The null hypothesis was rejected if the probability was less than a 0.05 level of significance and the plotted probability was assumed significant, and vice versa.

Response Options	Values	Real Limit
Very Great Extent (VGE)	5	4.50-5.00
Great Extent (GE)	4	3.50-4.49
Moderate (ME)	3	2.50-3.49
Little Extent (LT)	2	1.50-2.49
Very Little Extent (VLE)	1	0.50-1.49

Results

Research Question 1

What is the extent of utilization of Google classroom for instructional delivery among computing and non- computing lecturers in Federal Universities in South –South, Nigeria?

Table 1: The extent of utilization of Google classroom among computing and non-computing lecturers for instructional delivery (n = 263)

S/N	Items on Google Classroom Platform	Groups	N	Mean	Extent of Utilization	Remarks
1	I use Google Classroom to Organizes folders	Computing	63	4.10		Great Extent (GE)

		Non Computing	200	2.91	**1.19**	Moderate Extent (ME)
2	I use Google Classroom Planning class materials	Computing	63	3.92		Great Extent (GE)
		Non Computing	200	2.73	**1.19**	Moderate Extent (ME)
3	I use Google Classroom for Gathering feedback on students' progress faster	Computing	63	3.86		Great Extent (GE)
		Non Computing	200	2.82	**1.04**	Moderate Extent (ME)
4	I use Google Classroom to Create a digital class	Computing	63	4.05		Great Extent (GE)
		Non Computing	200	2.55	**1.50**	Moderate Extent (ME)
5	I use Google Classroom for Posting of assignments	Computing	63	3.92		Great Extent (GE)
		Non Computing	200	2.66	1.26	Moderate Extent (ME)
6	I use Google classroom for Assessing students in need of extra help	Computing	63	3.83		Great Extent (GE)
		Non Computing	200	2.88	0.95	Moderate Extent (ME)
7	I use Google classroom for customizing assignments for small groups	Computing	63	3.94		Great Extent (GE)
		Non Computing	200	2.85	1.09	Moderate Extent (ME)
8	I use Google classroom for Viewing all posted works in real time	Computing	63	4.08		Great Extent (GE)
		Non Computing	200	3.06	1.02	Moderate Extent (ME)
9	I use Google classroom for Sharing class materials to students in a paperless form	Computing	63	3.98		Great Extent (GE)

		Non Computing	200	2.97	**1.01**	Moderate Extent (ME)
10	I use Google classroom for posting research items	Computing	63	3.75		Great Extent (GE)
		Non Computing	200	3.03	**0.72**	Moderate Extent (ME)
11	I use Google classroom for updating students' grades	Computing	63	3.87		Great Extent (GE)
		Non Computing	200	3.08	**0.79**	Moderate Extent (ME)
12	I use Google classroom for conference Mit	Computing	63	3.70		Great Extent (GE)
		Non Computing	200	2.85	**0.85**	Moderate Extent (ME)
13	I use Google classroom to develop instructional materials	Computing	63	4.03		Great Extent (GE)
		Non Computing	200	2.95	**1.08**	Moderate Extent (ME)
14	I use Google classroom to watch stimulated lecture without physical students	Computing	63	3.86		Great Extent (GE)
		Non Computing	200	2.84	**1.02**	Moderate Extent (ME)
15	I use Google classroom to check students attendance	Computing	63	3.70		Great Extent (GE)
		Non Computing	200	3.04	**0.66**	Moderate Extent (ME)
	Cluster Mean				**15.37/15 =1.02**	

The information in Table 1 points to an imbalance in the amount of Google Classroom usage among computing and non-computing instructors. The average scores for the computing instructors fell in the great extent (GE) range at 3.70 to 4.10 for all fifteen items, suggesting a great extent (GE) of utilization for activities such as organizing folders and even

attendance monitoring. The average scores of the non-computing instructors fell in the range of moderate extent (ME) for all items at averages of 2.55 to 3.08. The average utilization gap of 0.94 and 1.89 indicates computing instructors are likely to have greater levels of digital literacy and more effective integration of the platform. Both instructor types demonstrated greater Google Classroom usage for real-time viewing of work and sharing work, though the computing instructors vastly dominated. The average cluster mean gap of 1.02 suggests that computing instructors use Google Classroom a great deal more than non-computing instructors. As a whole, we see that computing instructors had greater utilization of technology and instructional delivery as compared to non-computing instructors. As such, in order to get non-computing instructors more effective at using instructional delivery, we may see them participate in focused digital skills instructional design.

Research Question 2

What is the extent of utilization of WIZIQ for instructional delivery among computing and non-computing lecturers in Federal Universities in South –South, Nigeria?

Table 2: The extent of utilization of WIZIQ for instructional delivery among computing and non-computing lecturers (n = 263)

S/N	Items on WIZIQ Platform	Groups	N	Mean	Extent of Utilization	Remarks
1	I use WIZIQ polling tool to ask students questions	Computing	63	4.89		Very Great Extent (VGE)
		Non Computing	200	1.00	**3.89**	Very Little Extent (VLE)
2	I use WIZIQ real-time communication to interact with students	Computing	63	4.81		Very Great Extent (VGE)
		Non Computing	200	1.00	**3.81**	Very Little Extent (VLE)
3	I use WIZIQ interactive whiteboard to write notes	Computing	63	4.90		Very Great Extent (VGE)
		Non Computing	200	1.00	**3.90**	Very Little Extent (VLE)
4	I use WIZIQ polling tool to receive answers instantly during class	Computing	63	4.89		Very Great Extent (VGE)
		Non Computing	200	1.00	**3.89**	Very Little Extent (VLE)
5	I use breakout rooms to create groups with the classroom for personalized instruction	Computing	63	5.00		Very Great Extent (VGE)

		Non Computing	200	1.36	**3.64**	Very Little Extent (VLE)
6	I use secure record capabilities to capture live sessions of instructional delivery and reuse when necessary	Computing	63	4.73		Very Great Extent (VGE)
		Non Computing	200	1.01	**3.72**	Very Little Extent (VLE)
7	I use text chatting to text chat with students individually or in groups	Computing	63	4.56		Very Great Extent (VGE)
		Non Computing	200	1.00	**3.56**	Very Little Extent (VLE)
8	I use attendance reporting to notify students for upcoming classes	Computing	63	4.62		Very Great Extent (VGE)
		Non Computing	200	1.00	**3.62**	Very Little Extent (VLE)
9	I use attendance reporting to send reminders to students' emails	Computing	63	4.78		Great Extent (GE)
		Non Computing	200	1.05	**3.73**	Very Little Extent (VLE)
10	I use attendance reporting to generate class attendance	Computing	63	4.60		Great Extent (GE)
		Non Computing	200	1.11	**3.49**	Very Little Extent (VLE)
11	I use notification reference to notify students for upcoming classes	Computing	63	4.65		Very Great Extent (VGE)
		Non Computing	200	1.22	**3.43**	Very Little Extent (VLE)
12	I use teacher-managed control options to retain control in the online classroom m	Computing	63	4.57		Very Great Extent (VGE)
		Non Computing	200	1.23	**3.34**	Very Little Extent (VLE)
13	I use WIZIQ virtual classroom plugins to integrate with other platforms like MOODLE	Computing	63	4.70		Very Great Extent (VGE)

		Non Computing	200	1.21	**3.49**	Very Little Extent (VLE)
14	I use WIZIQ interactive whiteboard to solve math problems and draw diagrams	Computing	63	4.73		Very Great Extent (VGE)
		Non Computing	200	1.22	**3.51**	Very Little Extent (VLE)
15	I use WIZIQ interactive whiteboard to draw diagrams	Computing	63	4.71		Very Great Extent (VGE)
		Non Computing	200	1.07	**3.64**	Very Little Extent (VLE)
	Cluster Mean				**54.66/15=3.64**	

The results displayed in Table 2 show an outstanding difference in the extent of WIZIQ platform use among computing vs. non-computing instructors. Just like non-computing instructors, computing instructors' reported mean scores for the 15 items were very high (4.56 to 5.00), which showed a very high extent of use of most of the key features of a virtual classroom (i.e. polling, real-time interaction, the interactive whiteboard, and the breakout room, along with the recording, attendance, and control and integration features). Non-Computing instructors, in some cases, showed very low mean scores (1.00 to 1.36), which showed very low extent of use of the same features. The mean scores were reported to be high in both cases, and the difference in mean scores among the tools was reported to be very high, at 3.34 to 3.90, signifying high level differences in the use of technologies of online, synchronous instruction. The interactive tools and features use the highest levels of differences at mean scores, signifying that the computing instructors were quite skilled and adept at use of the tools of the advanced technologies of a real-time virtual classroom. The strong mean score of 3.64 likely shows an overall high extent of use, and the non - instructors showed a very low extent of use of synchronous features combined. The difference in results shows the strong influence of a computing instructional background on the proper use of the synchronous tools, along with a greater digital capability and a high extent of interactive online instruction management, than un-computing instructors.

Testing of Research Hypotheses

Research Hypothesis I

Ho_1 There is no significant difference between the mean responses of computing and non- computing lecturers on the extent of utilization of Google classroom

Table 3: t-test analysis of the mean responses of computing and non-computing lecturers on the extent of utilization of Google classroom for instructional delivery (n = 263)

S/N	Items on Google Classroom Platform	Groups	N	Mean	t-value	p-value	Decision
1	I use Google Classroom to Organizes folders	Computing	63	4.10	27.98	.000	S
		Non Computing	200	2.91			
2	I use Google Classroom Planning class materials	Computing	63	3.92	20.07	.000	S
		Non Computing	200	2.73			
3	I use Google Classroom for Gathering feedback on students' progress faster	Computing	63	3.86	17.64	.000	S
		Non Computing	200	2.82			
4	I use Google Classroom to Create a digital class	Computing	63	4.05	18.28	.000	S
		Non Computing	200	2.55			
5	I use Google Classroom for Posting of assignments	Computing	63	3.92	11.31	.000	S
		Non Computing	200	2.66			
6	I use Google classroom for Assessing students in need of extra help	Computing	63	3.83	14.60	.000	S
		Non Computing	200	2.88			
7	I use Google classroom for customizing	Computing	63	3.94	12.45	.000	S

	assignments for small groups						
		Non Computing	200	2.85			
8	I use Google classroom for Viewing all posted works in real time	Computing	63	4.08	9.65	.000	S
		Non Computing	200	3.06			
9	I use Google classroom for Sharing class materials to students in a paperless form	Computing	63	3.98	14.50	.000	S
		Non Computing	200	2.97			
10	I use Google classroom for posting research items	Computing	63	3.75	8.65	.000	S
		Non Computing	200	3.03			
11	I use Google classroom for updating students' grades	Computing	63	3.87	8.55	.000	S
		Non Computing	200	3.08			
12	I use Google classroom for conference Mit	Computing	63	3.70	7.06	.000	S
		Non Computing	200	2.85			
13	I use Google classroom to develop instructional materials	Computing	63	4.03	12.01	.000	S
		Non Computing	200	2.95			
14	I use Google classroom to watch stimulated lecture without physical students	Computing	63	3.86	11.34	.000	S
		Non Computing	200	2.84			

15	I use Google classroom to check students attendance	Computing	63	3.70	6.87	.000	S
		Non Computing	200	3.04			

S = Significant at 0.05 level of Significance, NS = Not Significant at 0.05 level of Significance, df = 261 Source: Field Work (2025)

Table 3 displays the t-test findings of the mean responses of computing and non-computing lecturers concerning the use of Google Classroom for instructional purposes. It was discovered that all the responses had very high t-values from 6.87 to 27.98 with corresponding p-values of .000, all of which are below the .05 level of significance in regards to the mean responses of lecturers from both computing and non-computing departments, hence, the evidence of the significant differences in all functionalities of Google Classroom including the use for instructional delivery, assignment posting and student assessment, task personalization, resource dissemination, grading, and instructional delivery Google Classroom activities. This suggests the significant extent of Google Classroom utilization among computing lecturers compared to their non-computing counterparts. Therefore, the longitudinal null hypothesis is supported and thus, rejected.

Research Hypothesis 2

Ho_2 There is no significant difference between the mean responses of computing and non-computing lecturers on the extent of utilization of WIZIQ in Federal Universities South-South, Nigeria

Table 4: t-test analysis of the mean responses of computing and non-computing lecturers on the extent of utilization of WIZIQ for instructional delivery (n = 263)

S/N	Items on WIZIQ Platform	Groups	N	Mean	t-value	p-value	Decision
1	I use WIZIQ polling tool to ask students questions	Computing	63	4.89	136.01	.000	**S**
	.	Non Computing	200	1.00			
2	I use WIZIQ real-time communication to interact with students	Computing	63	4.81	136.68	.000	**S**
		Non Computing	200	1.00			
3	I use WIZIQ interactive whiteboard to write notes	Computing	63	4.90	160.20	.000	**S**
		Non Computing	200	1.00		.	

4	I use WIZIQ polling tool to receive answers instantly during class	Computing	63	4.89	174.33	.000	**S**
		Non Computing	200	1.00			
5	I use breakout rooms to create groups with the classroom for personalized instruction	Computing	63	5.00	25.49	.000	**S**
		Non Computing	200	1.36			
6	I use secure record capabilities to capture live sessions of instructional delivery and reuse when necessary	Computing	63	4.73	102.75	.000	**S**
		Non Computing	200	1.01			
7	I use text chatting to text chat with students individually or in groups	Computing	63	4.56	85.64	.000	**S**
		Non Computing	200	1.00			
8	I use attendance reporting to notify students for upcoming classes	Computing	63	4.62	104.99	.000	**S**
		Non Computing	200	1.00			
9	I use attendance reporting to send reminders to students' emails	Computing	63	4.78	94.56	.000	**S**
		Non Computing	200	1.05			
10	I use attendance reporting to generate class attendance	Computing	63	4.60	67.21	.000	**S**
		Non Computing	200	1.11			
11	I use notification reference to notify students for upcoming classes	Computing	63	4.65	45.01	.000	**S**
		Non Computing	200	1.22			
12	I use teacher-managed control options to retain control in the online classroom m	Computing	63	4.57	39.82	.000	**S**
		Non Computing	200	1.23			
13	I use WIZIQ virtual classroom plugins to	Computing	63	4.70	51.91	.000	**S**

	integrate with other platforms like MOODLE						
		Non Computing	200	1.21			
14	I use WIZIQ interactive whiteboard to solve math problems and draw diagrams	Computing	63	4.73	48.79	.000	**S**
		Non Computing	200	1.22			
15	I use WIZIQ interactive whiteboard to draw diagrams	Computing	63	4.71	66.21	.000	**S**
		Non Computing	200	1.07			

S = Significant at 0.05 level of Significance, NS = Not Significant at 0.05 level of Significance, df = 261 Source: Field Work (2025)

The t-test results from Table 4 examine the responses of each computing and non-computing lecturer on the extent to which WIZIQ is utilized as a tool for instructional delivery. The analysis shows little variance in responses from the 15 participant groups, with t-values from 25.49 to 174.33, and p-values of 0.00, which is less than the 0.05 set as the statistical significance threshold. This disparity falls between the responses of computing and non-computing lecturers on the use of WIZIQ for instructional delivery. Of the WIZIQ tools listed, computing lecturers utilize all the tools more than non-computing lecturers. In practice, computing lecturers utilize all the tools in WIZIQ more than non-computing lecturers. This is more than the 0.05 statistical significance threshold. The null hypothesis stating these conditions hold, is, therefore, supported, and it is stated, lecturers' disciplinary background is a significant influencer on the adoption and application of WIZIQ in the instructional delivery method.

Discussion of Findings

The findings of the study are hereby discussed under appropriate sub-headings

Extent of Utilization of Google Classroom by Computing and Non-Computing

Lecturers for Instructional Delivery in Federal Universities South-South, Nigeria

Prior studies reveal that computing faculty are in a Google Classroom group that has a high Google Classroom usage rate, and conversely, other faculty are in a Google Classroom group with a moderate usage rate. This phenomenon can, among other things, represent that computing faculty are more at ease because of technology-driven curriculum, hence, teaching is mandatory. Conversely, other faculty (non-computing) use technology very little, hence Google Classroom is only used for the simple function of making classroom posts and assignments. One of the current study's results relates, to some extent, to that of Candilas *et al.* (2023) who focused on the use of Google Classroom and attitude that both the learners and teachers have on Google Classroom as a Learning Management System (LMS). This study finds that there is a disparity in teaching and management Google Classroom function usage and suggests that Google Classroom from Noe and Keenan (2015) for interactive and

communication function gaps was utilized (with no serious disruption to the teaching) and has motivated the learners to improve their heutagogy. The findings also support, to some extent, the work of Essien and Udo (2024) that focused on the utilization of Google Classroom and its impact on the Computer Education students in the Colleges of Education in the South-South zone of Nigeria. The study noted a significant difference in the test score of those students who were exposed to the teachings on resource allocation and memory management via Google Classroom compared to the traditional classroom. The Google Classroom students performed better.

Extent of Utilization of WIZIQ for Instructional Delivery by Computing and Non computing Lecturers in Federal Universities in South-South, Nigeria

The extent of utilization of WIZIQ for instructional delivery by computing lecturers is at a very great extent while the extent of utilization of WIZIQ by non - computing lecturers is very little. The survey showed a significant difference between computing and non - computing lecturers in the use of WIZIQ for instruction. The computing lecturers' reported usage level was very high for use of the different tools such as polling, real time communication, an interactive whiteboard, breakout rooms, and the attendance report. Computing lecturers on the negative side also active using WIZIQ polling for control in his or her online classroom. Non computing lecturers reported a minimal or very little use of WIZIQ the majority fell under the "very little extent" of use. It may be suggested that the non-computing lecturers have little or no knowledge of the applications of WIZIQ. It can also be concluded that the difference between the two groups is that the computing lecturers have a greater inclination to use WIZIQ in instructional practice delivery while the non-computing lecturers have either a greater instructional practice delivery required willingness to use WIZIQ. The evidence also suggests very high use of WIZIQ by computing lecturers. Non computing lecturers have very little use of this technology in instructional practice. The finding also concords with Falode *et al* (2018) who researched the level of adoption of WIZIQ by lecturers. The study used a descriptive survey and was informed by two research questions. The population of the study included education lecturers at tertiary institutions in the study area, and 66 lecturers were sampled. Researchers-structured questionnaire which was validated and tested for reliability, and interviews, were used to collect data. The answers to research questions were analyzed and presented using Mean, Standard Deviation, and Report Method. The findings from the study indicated a low level of awareness of WIZIQ related to lecturers. In a separate finding, lecturers were willing to adopt the platform after being informed of its instructional value. It was thus, recommended that reaching out training be conducted so that lecturers understand the advantages of the platform and the procedures for the proper adoption and use of the WIZIQ platform for teaching in Institutions of Higher Learning.

5.2 Conclusion

The study demonstrates that computing lecturers utilized teaching platforms to a great extent compared to non-computing lecturers whose teaching platform utilization was reported as moderate and minimal to a lesser extent. This indicates that computing lecturers have greater teaching platform participation to more teaching activities compared to non-computing lecturers. It can be interpreted that using teaching platform tools non computing lecturers ascribing to teaching platforms for instructional delivery has been rather poor. This can also be seen as integration of teaching platforms into instructional delivery is rather poor. As computing lecturers have greater utilization of teaching platforms for more aspects of instructional delivery non computing lecturers have minimal interaction with teaching

platforms. Hence the study illustrates that computing lecturers have stronger teaching platform engagement when compared to with non-computing lecturers.

Contribution to Knowledge

This study makes a number of notable contributions to the field:

1. This study highlighted the importance of intentionally integrating a multitude of technological resources for instruction.
2. This study demonstrated examples of instructional platforms that both computing and non-computing lecturers used in university instruction.
3. The study posits that computing lecturers in South-South Nigeria's Federal Universities rely on an array of digital instructional platforms for teaching that include Google Classroom and WIZIQ. This hypothesis suggests the significance of academic discipline in embracing the technology.
4. The study suggests the use of the Google Classroom and WIZIQ platforms illustrates learners' specific behaviors associated with the blooming of e-learning.
5. The study argues that the pronounced gaps in the use of Google Classroom and WIZIQ point to a need for more tailored professional development initiatives.

Recommendations

From the outcomes, the following areas of improvement may be considered:

1. There should be allowance for many teaching platform integrations by school regulations in teaching delivery. Higher institution of learning should be at the forefront in supporting lecturers to integrate teaching platform in each of their core classes.
2. There should be establishment of school resources to integrate teaching platforms in the learning process for provision of classes with internet. School regulations should provide support to many teaching delivery integrations.
3. Higher Learning institution should encourage the many teaching platforms be used by handling of many classes in various fields teaching. Lecturers and the many users in the network of teaching should be adequately trained in the teaching platforms like Google Classrooms and WIZIQ

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