
Teachers' Utilization of 21st Century E-Teaching Platforms for Effective Instructional Service Delivery in Public Senior Secondary Schools in Rivers State

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Abstract

The study investigated teachers' utilization of 21st century E-teaching platforms for effective instructional service delivery in public senior secondary schools in Rivers State. Three research questions and three corresponding null hypotheses were formulated to guide the study. This study adopted descriptive survey research design. The population of the study comprised all 6,893 teachers in the public senior secondary schools in the 23 Local Government Areas of Rivers State. The sample for this study was 345 teachers; the teachers were stratified into male and female teachers. It was determined using 5% of the total population of the study. The instrument that was used for data collection was a self-constructed questionnaire titled Teachers' utilization of E-teaching platforms Questionnaire (TUETFQ). The Cronbach Alpha statistics was used to determine the reliability which indicated the index of 0.83 which showed that the responses were consistent and the instrument considered reliable and adopted for the study. The research questions were answered using mean and standard deviation method, while the null hypotheses were tested using z-test at 0.05 level of significance. The result of the study indicated that the various e-teaching platforms such as Zoom application and WhatsApp messenger enhance effective instructional service delivery in public senior secondary schools in Rivers State. It further indicated that zoom cloud application as 21st century e-teaching platform is utilized for effective instructional service delivery in public senior secondary schools in Rivers State. It concluded that E-teaching platforms have great influence on teaching especially for those who have access to electronic tools/media that are used for the teaching/learning process. It was recommended among others that State Government should provide training on the utilization of E-teaching platforms and provide other facilities for effective usage.

Keywords: Teachers' utilization, E-teaching platforms, Zoom cloud application, WhatsApp messenger

INTRODUCTION

The 21st century is an era of global use of E-teaching in schools for effective Instructional service delivery in order to have a reasonable advantage (Amie-Ogan & Osuji 2016). Thus, there is a gradual paradigm shift around the globe, from the drudgery of outdated traditional formats of teaching to 21st century E-teaching methods of effective job facilitation and efficient achievement of educational goals with new technologies that excite employees due to their characteristic trio-dimensional structure (visual, hearing and touch). It has been claimed that education is the cornerstone of all societies and a tool for establishing nations. As a result, in order for a country to advance and become

generally respectable enough to compete favourably in the confederacy of nations, that country must ensure that they have and maintain high quality education through efficient administration. This, no doubt has made it imperative for the adoption of E-teaching in our education system to guarantee effective teaching and learning. In line with the above assertion, society cannot develop more than the level of her education.

The nature of the learning environment has undergone significant changes in recent years as a result of the introduction and proliferation of 21st century E-teaching platforms in educational settings. This has brought a paradigm shift in the method of learning from traditional to modern where the teacher is seen as a facilitator of learning with the learners participating actively. E-teaching can occur in or out of the classroom. It can be self-paced, or may be instructor-led and synchronous learning. 21st century E-teaching is suited to distance learning and flexible learning, but it can also be used in conjunction with blended learning approach where the teacher only guides or direct the learners during teaching and learning hours. A great deal of routine academic work in public secondary schools is still done manually. Teachers' still go through the analogue exercise of registering students manually, maintaining records of students' performance, e.t.c (Nwuke & Vulasi, 2020).

For teachers to be more competent in their instructional service delivery, their knowledge of various applications of E-teaching platforms in 21st Century is very pertinent. Some of the E-teaching platforms as used by the researcher in this study are; zoom cloud application and whatsapp messenger.

Zoom cloud-based learning platform is an online teaching tool that can be used to hold online classrooms and even participate in online presentations. The free version of Zoom offers a number of helpful features for instructors, such as the ability to conduct meetings with up to 100 people and to allow learners to silently indicate their questions to the teacher.

A cross-platform smart phone messenger called WhatsApp uses the user's current internet data plan to enable real-time social networking. Users of WhatsApp may share and receive a range of material, including photographs, videos, and audio messages. This E-teaching tool helps in the transmission of information from one person to another and can be utilized for teaching and learning.

With the use of whatsapp, teachers' can send online lectures and students can as well use it as at when convenient for classroom purposes. In achieving this state government need to equip the school environment by providing training and supplying teachers with necessary online tools and the corresponding skills needed for teaching and learning and usage of this E-teaching platforms. This involves giving teachers clear guidelines and supervision on how to create online content and access online environment for teaching and learning.

This is very important because quality instruction improves the quality of manpower that can help in the development of the school and the wider society, the need to investigate teacher's utilization of 21st century E-teaching platforms for effective instructional service delivery in public senior secondary schools in Rivers State is therefore necessary which this work sought to achieve.

Due to a rise in enrolment and the number of programs being offered as against the 1:40 ratio, managing teaching and learning for successful instructional service delivery has grown increasingly difficult. Due to this complexity, managing schools in a meaningful and efficient manner can occasionally be difficult for school administrators. In most public schools in Rivers state, teachers cannot access the internet more or less make use of E-teaching platforms in 21st

Century to teach effectively. Over the years, E-teaching platforms in 21st Century have metamorphosed from few-user-based platforms into phenomena that have become niches for billions of users where students, teachers, principals and different parastatals now have the knowledge on how to use it. The utilization of E-teaching platforms in 21st Century in public senior secondary schools in Rivers State are lacking in some schools.

The researcher perceived that E-teaching platforms are not effectively utilized or scarcely utilized by the users. Most teachers are also novice when it comes to E-teaching platforms in 21st Century. Innovative use of E-teaching for effective instructional service delivery in some public senior secondary schools in Rivers State seems not to be widespread. This appears to be made difficult by several constraints which include lack of funds for subscriptions, buying of android phone, able to maintain good account so that hackers will not have access to ones accounts, the inability of secondary school administrators to keep up with the pace of development in E-teaching, lack of teachers with appropriate skills to manage E-teaching page both at the strategic and operational levels, epileptic power supply or complete absence of it in schools affect institutional policies to support and guide the utilization of E-teaching in schools.

These identified problems have caused teachers not being able to be updated with the current technological trend in teaching and students of public schools are not properly updated like their counterparts in the private schools. Students' suffer this setback because of lapses created by not utilizing these E-teaching platforms in 21st Century have brought about a decline where students cannot access the internet, write both internal and external examinations using these E-teaching platforms in 21st Century thereby leading to some of them failing. The situation is exacerbated when teachers show lukewarm attitude towards teachers' utilization of 21st century E-teaching platforms for effective instructional service delivery and these have informed the need to conduct this study. The crux of the matter is that poor utilization of 21st century E-teaching platforms is a threat to effective instructional service delivery in public senior secondary schools in Rivers State.

AIM AND OBJECTIVES OF THE STUDY

The aim of this study was to investigate teachers' utilization of 21st century E-teaching platforms for effective instructional service delivery in public senior secondary schools in Rivers State.

Specifically, the study sought to ascertain the following:

1. identify the various 21st century e-teaching platforms that enhance effective instructional service delivery in public senior secondary schools in Rivers State.
2. examine the extent zoom cloud application as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State.
3. ascertain the extent whatsapp messenger as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State.

Research Questions

The following research questions were posed to guide the study:

1. What are the various 21st century e-teaching platforms that enhance effective instructional service delivery in public senior secondary schools in Rivers State?

2. To what extent is Zoom cloud application as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State?
3. To what extent is whatsapp messenger as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State?

Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance.

- H₀₁:** There is no significant difference between the mean ratings of male and female teachers on the various 21st century e-teaching platforms that enhance effective instructional service delivery in public senior secondary schools in Rivers State.
- H₀₂:** There is no significant difference between the mean ratings of male and female teachers on the extent zoom cloud application as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State
- H₀₃:** There is no significant difference between the mean ratings of male and female teachers on the extent whatsapp messenger as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State.

METHODOLOGY

The study adopted a descriptive research design. The population of this study was 6893 teachers in the (286) public senior secondary schools in Rivers State. These include 3490 male teachers and 3403 female teachers in Rivers State. The sample for this study was 345 teachers; the teachers were stratified into male and female teachers. It was determined using the total population of the study. To achieve this, simple random sampling technique was used to select 43 schools representing 15% of the total population of (286) schools in Rivers State while the 345 teachers selected represented 5% of the total population of teachers' (6893) of public senior secondary schools of Rivers state. To determine the internal consistency of the instrument, the Cronbach Alpha statistics was used which indicated the index of 0.83 which showed that the responses were consistent and the instrument considered reliable and adopted for the study. Mean (\bar{X}) and standard deviation (SD) statistics were used in answering the research questions while the null hypotheses were tested using the z-test statistical tool at 0.05 level of significance.

Results

The results were presented in line with research questions and null hypotheses that guided the study as showed in the table below;

Answers to Research Questions

Research Question 1: What are the various 21st century e-teaching platforms that enhance effective instructional service delivery in public senior secondary schools in Rivers State?

Table 1: Mean Ratings and Standard Deviation of Male and Female Teachers on the Various 21st Century E-Teaching Platforms for Effective Instructional Service Delivery in Public Senior Secondary Schools in Rivers State

S/N	Various 21 st century E-teaching Platforms that enhance effective instructional service delivery	Male Teachers 190		Female Teachers 155		Mean set ($\bar{x}_1 \times \bar{x}_2$)	Remarks
		\bar{X}_1	SD ₁	\bar{X}_2	SD ₂		
1	Projectors are used to display various objects or concepts in a clear and bold for easy understanding.	2.76	1.03	2.77	1.08	2.77	Agreed
2	The use of zoom helps to accommodate learners' interest during teaching.	2.74	0.83	3.06	0.72	2.90	Agreed
3	Computers are used to in the classroom to arouse the interest of the students and to also teach them effectively.	2.53	0.69	2.62	0.78	2.58	Agreed
4	Google classroom enables the teachers and students to hold virtual classroom, especially in periods of pandemic or crises.	2.71	1.16	2.82	0.94	2.77	Agreed
5	Electronic library encourages and helps the teachers and students to have access to countless books for study and for research purposes.	2.54	1.32	2.76	0.76	2.65	Agreed
6	WhatsApp make class more interactive and interesting	3.01	0.89	2.83	0.89	2.92	Agreed
Average Mean/Standard Deviation		2.72	0.99	2.81	0.86	2.77	Agreed

Source: Survey Data 2022

Legends:

\bar{X} : Mean

S.D: Standard Deviation

Scales:

1.00 - 2.49: Disagree

2.50 - 4.00: Agree

Data on Table 1 show the mean ratings of male and female teachers on the various 21st century e-teaching platforms that enhance effective instructional service delivery in public senior secondary schools in Rivers State. The data shows that majority of the respondents agreed that projectors are used to display various objects or concepts in a clear and bold for easy understanding, the use of zoom helps to accommodate learners interest during teaching, computers are used to in the classroom to arouse the interest of the students and to also teach them effectively, google classroom enables the teachers and students to hold virtual classroom, especially in periods of pandemic or crises, Electronic library encourages and helps the teachers and students to have access to countless books for study and for research purposes and WhatsApp make class more interactive and interesting as seen on items 1,2, 3, 4, 5 and 6, having weighted mean values of 2.77, 2.90 , 2.58, 2.77, 2.65 and 2.92 respectively which are above the criterion mean of 2.50. The grand mean of 2.77 indicates that the answer to research question one is that projectors, Zoom application, Computers, Google classroom, Electronic library and Whatsapp messenger are the various E-teaching platforms that enhance effective instructional service delivery in public senior secondary schools in Rivers State.

Research Question 2: To what extent does Zoom cloud application as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State?

Table 2: Mean Ratings and Standard Deviation of Male and Female Teachers on the Extent does Zoom Cloud Application as 21st Century E-Teaching Platform Utilized for Effective Instructional Service Delivery in Public Senior Secondary Schools in Rivers State

S/N	Extent Zoom cloud application as 21 st century e-teaching platform utilized for effective instructional service delivery	Male Teachers		Female Teachers		Mean set (x_1x_2)	Remarks
		\bar{X}_1	SD ₁	\bar{X}_2	SD ₂		
		190		155			
7	Zoom Application is used for transmission of information among students and teachers.	2.86	1.03	2.72	1.08	2.79	Utilized
8	Teachers used Zoom application to hold a virtual class for the students.	2.54	1.13	2.50	1.12	2.52	Utilized
9	Zoom application helps to develop the speaking skills of the students.	2.63	1.09	2.72	0.78	2.68	Utilized
10	Teachers make use of zoom to improve the language skills of the students under their watch.	2.71	1.16	3.01	0.94	2.86	Utilized
11	Teachers make use of zoom to encourage collaborative learning among students.	2.73	1.32	2.61	0.76	2.67	Utilized
12	Teachers make use of zoom to develop the cognitive ability of students for better performances.	2.53	1.19	2.61	0.89	2.57	Utilized
Average Mean/Standard Deviation		2.66	0.99	2.70	0.86	2.68	Utilized

Source: Researcher's Field Result, 2022

Data on Table 2 show the mean ratings of male and female teachers on the extent zoom cloud application as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State. The data shows that the respondents agreed that Zoom Application is used for transmission of information among students and teachers, Teachers used Zoom application to hold a virtual class for the students, Zoom application helps to develop the speaking skills of the students, Teachers make use of zoom to improve the language skills of the students under their watch, Teachers make use of zoom to encourage collaborative learning among students and Teachers make use of zoom to develop the cognitive ability of students for better performances are utilized as seen on all the items having weighted mean values of 2.79, 2.52, 2.68, 2.86, 2.67 and 2.57 respectively which are above the criterion mean of 2.50. The grand mean of **2.68** indicates that the answer to research question two is that zoom cloud application as 21st century e-teaching platform is utilized for effective instructional service delivery in public senior secondary schools in Rivers State.

Research Question 3: To what extent does whatsapp messenger as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State?

Table 3: Mean Ratings and Standard Deviation of Male and Female Teachers on the Extent WhatsApp Messenger as 21st Century E-Teaching Platform Utilized for Effective Instructional Service Delivery in Public Senior Secondary Schools in Rivers State

S/N	Extent whatsapp messenger as 21 st century e-teaching platform utilized for effective instructional service delivery	Male Teachers 190		Female Teachers 155		Mean set (x ₁ x ₂)	Remarks
		\bar{X}_1	SD ₁	\bar{X}_2	SD ₂		
13	Teachers' employ the use of Whatsapp to send and receive a variety of information from students.	2.67	1.03	2.71	1.18	2.69	Utilized
14	WhatsApp is used to provide mutual virtual interaction between students and their instructors	2.89	0.83	2.61	1.72	2.76	Utilized
15	The use of Whatsapp enhances effective way of transmitting data to students through voice note recording	2.85	0.69	2.62	1.78	2.74	Utilized
16	The use of whatsapp increases motivation of the students to learn effectively.	2.64	1.16	2.52	0.94	2.58	Utilized
17	The use of WhatsApp helps to clear some doubts or confusion	2.14	1.02	2.16	1.76	2.15	Less Utilized
18	The images used to support the text in whatsapp helps for better understanding of various topics learnt.	2.93	1.19	2.63	1.09	2.78	Utilized
Average Mean/Standard Deviation		2.69	1.19	2.54	1.41	2.62	Utilized

Source: Researcher's Field Result, 2022

Data on table 3 show the mean ratings of male and female teachers on the extent Whatsapp messenger as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State. The data shows that majority of the respondents agreed that teachers' employ the use of whatsapp to send and receive a variety of information from students, whatsapp is used to provide mutual virtual interaction between students and their instructors, the use of whatsapp enhances effective way of transmitting data to students through voice note recording, the use of whatsapp increases motivation of the students to learn effectively and the images used to support the text in whatsapp helps for better understanding of various topics learnt as seen on 13, 14, 15, 16 and 18 having weighted mean values of 2.69, 2.76, 2.74, 2.58 and 2.78 respectively which are above the criterion mean of 2.50 while the respondents disagreed that the use of whatsapp helps to clear some doubts or confusion as seen on item 17 with the weighted mean value of 2.15 which is below the criterion mean of 2.50.

The grand mean of **2.62** indicates that the answer to research question three is that whatsapp messenger as 21st century e-teaching platform is utilized for effective instructional service delivery in public senior secondary schools in Rivers State.

Test of Hypotheses

H₀₁: There is no significant difference between the mean ratings of male and female teachers on the various 21st century e-teaching platforms for effective instructional service delivery in public senior secondary schools in Rivers State.

Table 4: Summary of Z-Test Analysis of Mean Ratings of the Opinions of the Respondents on The Various 21st Century E-Teaching Platforms for Effective Instructional Service Delivery in Public Senior Secondary Schools in Rivers State.

Groups	N	\bar{x}	S.D	df	Level of Sig.	z-cal.	z-crit.	Decision
Female	155	3.00	0.98	343	0.05	1.24	± 1.96	H01 Accepted
Male	190	3.13	1.12					
N=	345							Not Significant

Level of significance = 0.05

Legends:

- n : Number of respondents
- \bar{x} : Mean
- S.D : Standard Deviation
- 0.05 : Level of significance
- df : Degrees of freedom

From the result of the hypothesis testing shown in table 4 on the various 21st century e-teaching platforms for effective instructional service delivery in public senior secondary schools in Rivers State, it was revealed that the calculated z-value used in testing the hypothesis stood at 1.24 while the z-critical value stood at ± 1.96 using 343 degrees of freedom at 0.05 level of significance, the calculated z-test of 1.24 is less than z-critical value of ± 1.96 , hence there is no significant difference between the mean ratings of male and female teachers on the available 21st century e-teaching platforms for effective instructional service delivery in public senior secondary schools in Rivers State. Based on the foregoing, the researcher accepted the null hypothesis, and confirmed that there is no significant difference between the mean ratings of male and female teachers on the various 21st century e-teaching platforms for effective instructional service delivery in public senior secondary schools in Rivers State.

H₀₂: There is no significant difference between the mean ratings of male and female teachers on the extent zoom cloud application as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State

Table 5: Summary of Z-Test Analysis of Mean Ratings of the Opinions of the Respondents on the Extent Zoom Cloud Application as 21st Century E-Teaching Platform Utilized for Effective Instructional Service Delivery in Public Senior Secondary Schools in Rivers State

Groups	N	\bar{x}	S.D	df	Level of Sig.	z-cal.	z-crit.	Decision
Female	155	3.12	0.78	343	0.05	2.04	± 1.96	H02 Rejected
Male	190	3.18	0.79					
N=	345							Significant

From the result of the hypothesis testing shown in table 5 on the extent zoom cloud application as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State, it was revealed that the calculated z-value used in testing the hypothesis stood at 2.04 while the z-critical value stood at ± 1.96 using 343 degrees of freedom at 0.05 level of significance, the calculated z-test of 2.04 is greater than z-critical value of ± 1.96 , hence there is a significant difference between the mean ratings of male and female teachers on the extent zoom cloud application as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State. Based on the foregoing, the researcher rejected the null hypothesis, and confirmed that there is a significant difference between the mean ratings of male and female teachers on the extent zoom cloud application as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State.

H₀₃: There is no significant difference between the mean ratings of male and female teachers on the extent whatsapp messenger as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State

Table 6: Summary of Z-Test Analysis of Mean Ratings of the Opinions of the Respondents on The Extent Whatsapp Messenger as 21st Century E-Teaching Platform Utilized for Effective Instructional Service Delivery in Public Senior Secondary Schools in Rivers State

Groups	N	\bar{x}	S.D	df	Level of Sig.	z-cal.	z-crit.	Decision
Female	155	2.65	0.78	343	0.05	2.31	± 1.96	H₀₃ Rejected
Male	190	2.76	0.79					
N=	345							Significant

From the result of the hypothesis testing shown in table 6 on the extent whatsapp messenger as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State, it was revealed that the calculated z-value used in testing the hypothesis stood at 2.31 while the z-critical value stood at ± 1.96 using 343 degrees of freedom at 0.05 level of significance, the calculated z-test of 2.31 is greater than z-critical value of ± 1.96 , hence there is a significant difference between the mean ratings of male and female teachers on the extent whatsapp messenger as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State. Based on the foregoing, the researcher rejected the null hypothesis, and confirmed that there is a significant difference between the mean ratings of male and female teachers on the extent whatsapp messenger as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State

DISCUSSIONS OF FINDINGS

Various 21st Century E-Teaching Platforms for Effective Instructional Service Delivery

The findings from result of analysis showed that majority of the respondents agreed that projectors are used to display various objects or concepts in a clear and bold for easy understanding, the use of zoom helps to accommodate learners interest during teaching, computers are used to in the classroom to arouse the interest of the students and to also teach them effectively, google classroom enables the

teachers and students to hold virtual classroom, especially in periods of pandemic or crises, Electronic library encourages and helps the teachers and students to have access to countless books for study and for research purposes and through the use of computers, teaching is made easy, assessment of students is also made easy. The finding from this study is in line with Atsumbe (2012) and Gabadeen et. al., Alabi and Akinnubi (2015) which revealed that e-teaching are relatively available to the teachers and students in Nigerian universities. This is also similar to Osuafor and Emeji (2015) discovery that some listed e- learning facilities that include computer, printer, computer laboratory and public address system were moderately available for science educators in teaching pre-service teachers in South-East Nigerian Colleges of Education. Emesi and Yellowe, (2018) also revealed that information and communication technology gadgets are moderately available for teaching and learning in faculties of education in Rivers State Universities.

This result is similar with Egomo et al., (2012) which found that there is a very high availability of ICT tools for efficient instruction service delivery. This study concurred with that of Ubulom et al. (2011), Ugwu and Oboegbulem (2011), Jude and Dankaro (2012), Akuegwu, Ntukidem, Ntukidem, and Jaja (2014), who found that although schools have E-teaching capabilities, they are not being effectively used by classroom instructors. However, Achimugu et al. (2010) dissented and found that Nigerian schools lack suitable E-learning resources to take advantage of online opportunities and for the regular operation of the institutions. The study went further to state that there was no significant difference between the mean ratings of male and female teachers on the various 21st century e-teaching platforms for effective instructional service delivery in public senior secondary schools in Rivers State.

Zoom Cloud Application as 21st Century E-Teaching Platform utilized for Effective Instructional Service Delivery

The findings from result of analysis showed that the respondents agreed that that Zoom Application is used for transmission of information among students and teachers, Teachers used Zoom application to hold a virtual class for the students, Zoom application helps to develop the speaking skills of the students, Teachers make use of zoom to improve the language skills of the students under their watch, Teachers make use of zoom to encourage collaborative learning among students and Teachers make use of zoom to develop the cognitive ability of students for better performances. The finding is in line with (Hrastinski, 2007), who believed that a variety of characteristics, including a technological device connected to a network, appropriate timing for both teachers and students, various locations, real-time communication, online participants, and instantaneous feedback through video, voice, or text chat interaction between participants, define zoom. Since many schools are teaching instructors to utilize zoom along with other technologies to close the learning gap between students and teachers who are separated by distance, the use of zoom is continually growing. It went further to state that there was a significant difference between the mean ratings of male and female teachers on the extent Zoom cloud application as 21st century e-teaching platform utilized for effective instructional service delivery in public senior secondary schools in Rivers State.

WhatsApp Messenger as 21st Century E-Teaching Platform utilized for Effective Instructional Service Delivery

The findings from result of analysis showed that majority of the respondents agreed that teachers' employ the use of whatsapp to send and receive a variety of information from students, whatsapp provides a mutual virtual interaction between students and their teachers/instructors, the whatsapp platform is used for effective way of transmitting data to students, the use of whatsapp by teachers increases the motivation of the students to learn for effective performances and the images used to

support the text in whatsapp helps for better understanding of various topics learnt while the respondents disagreed to a low extent that the use of whatsapp by teachers increases learning interest among students. Church and de Oliveira (2013) It is acknowledged that the WhatsApp platform gives teachers a way to communicate with their students when they cannot meet in person, has the potential to foster cooperation, boost social interaction, motivation, and sense of belonging, promote academic success, support learning anytime and anywhere, provide peer support and feedback, and enable the sharing of information in education. In addition to studies highlighting the benefits of using them in education, the results of the studies have also revealed concerns about privacy and security, attention loss, pushing the boundaries of personal relationships, the use of slang language, and detrimental effects on academic life brought on by excessive use. This finding is in line with Plana et al., (2013), who found that the instant messaging application like using WhatsApp increase children's motivation and willingness to study in immersion programmes. Another important factor that influences student's willingness for similar implementation in their other courses, is the realization of learning. In his study, according to Smit (2012), WhatsApp and other instant messaging services have the potential to improve learning. Students' comments throughout the research that learning may occur both consciously and subconsciously are noteworthy. A cross-platform smartphone messenger called WhatsApp uses customers' existing Internet data plans to enable real-time social networking. The results also showed that there was a substantial difference in the mean ratings of male and female instructors on the use of WhatsApp Messenger as a 21st-century e-teaching platform for efficient delivery of educational services in public senior secondary schools in Rivers State.

CONCLUSION

E-teaching platforms have great influence on teaching especially for those who have access to electronic tools/media that are used for the teaching/learning process. The study showed that projectors are used to display various objects or concepts in a clear, bold for easy understanding, the use of zoom helps to accommodate learners interest during teaching, computers are used to in the classroom to arouse the interest of the students and to also teach them effectively

RECOMMENDATIONS

Based on the findings of this study, the researcher itemized the following recommendations.

1. State Government should provide in-service training on the utilization of E-teaching platforms and provide other platforms for effective usage.
2. School principals should encourage teachers to use zoom cloud E-teaching platform to continue their lessons or build better on what was taught in class.
3. Teachers should be encourage to use whatsapp messenger E-teaching platform to continue their lessons or build better on what was taught in class

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