

Classroom Instructional Delivery Technological Tools as Correlate of Students' Academic Performance in Unity Secondary Schools in South East Nigeria

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Abstract

This study adopted a correlation survey design to determine the relationship between classroom instructional delivery technological tools and students' academic performance in unity secondary schools in South East Nigeria. The sample comprised 280 students drawn from Unity Schools in South East Nigeria. Classroom Technological Interventions Questionnaire (CTIQ) and Students' Academic Performance Record were used for data collection. The CTIQ was validated by three experts. Cronbach Alpha statistic was used to determine the reliability of the instrument which yielded reliability index of 0.71. Out of the 312 copies of the questionnaires administered, 267 copies representing 85.6 percent were returned and were used for data analysis. Pearson product moment correlation and linear regression analysis were used for data analysis. The findings indicated, among others, that classroom instructional delivery technological tools significantly, and to a positive and very high extent, relate to students' academic performance in unity secondary schools. Based on the findings of the study, the researchers recommended, among others, that government should improve the general academic performance of students by exposing teachers to regular workshops and seminars on the effective use of technological interventions such as Google classroom, for effective instructional delivery.

Keywords: secondary school, classroom, technology, classroom technological instructional delivery, students' academic performance

Introduction

Secondary education is that form of education that is provided for children after nine years of Universal Basic Education which also prepares them for tertiary education. Chukwu

and Obunadike (2018) defined secondary school education as an educational stage that prepares the individuals for useful living in the society and for higher education. It means that secondary school education is very essential in every society as it prepares and equips its participants for better opportunities to survive in any given environment. Similarly, education can be owned by government (State or Federal), individuals (private), missionary (faith-based) or community. Unity secondary schools remain an educational system established by the federal government of Nigeria to improve inclusiveness and equality in accessing education round the federation.

Unity secondary schools also known as federal government colleges were established by the federal government of Nigeria in the 36 states of the nation with the sole aim of ensuring national unity and integration in the country. Archibong et al. (2019) posited that federal government colleges also known as federal unity colleges in Nigeria are 104 in number and possess ultra-modern edifices such as classrooms, laboratories, e-libraries, workshops, dormitories, among others, which enhance quality education. More so, each state has two federal government colleges, one is gender school (Federal Government Girls College) and mixed school (Federal Government College). Unity schools are financed and managed by the federal government of Nigeria through Federal Ministry of Education with the workforce under the control of the Ministry of Education. Infrastructural development and maintenance of the school facilities remain the responsibilities of the federal government through its agency, the Federal Ministry of Education.

Classroom management refers to the process that is adopted by a teacher to ensure classroom instruction, order, effectiveness, arrangement of time and space amongst other factors that help in facilitating quality educational outcome. In essence, classroom management looks extensively on instructional activities, management activities and organizational activities of students' learning outcome. Ogbonnaya (2017) defined classroom management as the integration and the effective use of the instructors' three basic qualities, which are: knowing the subject matter, how to deliver the lesson, and knowing the method of getting to know the learner. Globally, the educational system in this present age is known by the use of technology in carrying out classroom activities and instructional programmes. Sazali et al. in Ogedi (2021) defined technology as comprising the basic knowledge of sub-system, technical support system (software) and the capital-embodied technology (hardware). This makes technology an inevitable element in sourcing information and enhancing productivity with limited manpower in a production circle. Volti in Ekeledo (2021) defined technology as a system created by humans that uses knowledge and organization to produce objects and techniques for attainment of specific

goals. Technology, therefore, could be defined as the human intelligence in form of software, hardware and electronic chips used for fast and convenient productivity in human society. In the light of technological presence in the school system, classroom instructional delivery technological tools remain resilient for globalization of education as well as to contribute meaningfully to students' academic performance.

Classroom instructional delivery technological tools deals with technological integration in the educational system which geared towards achieving effective delivery of instruction. Hafifah and Gunadi (2020) argued that technology has been integrated in classroom teaching in meaningful and transformative ways. Aydin (2017) noted that generally, technological integration into teaching has been acknowledged as one of the classroom mechanisms that improve quality teaching and learning. Kaukab and Nayab (2018) opine that teachers perceived the use of Goggle classroom as just a tool that can be used for documentation management and essential classroom management without significantly impacting teaching methodologies. Classroom technological tools are innovative and transformative approaches which project instructional activities to be learner-centred as well as project realism into the course content. It has also contributed immensely to promoting problem-solving learning as well as collaborative learning amongst learners. In essence, the adoption and use of appropriate classroom supported technologies and teaching practices would enhance teachers' capacity, competence, skill, value and knowledge of technology for quality instructional outcome. Microsoft teams thus emerge as an instructional delivery technological tool for discourse.

Prior to the global COVID-19 pandemic, a lot of technological trends were incorporated into the educational system in order to enhance instructional activities for optimal realization of educational goals. Hodges et al. (2020) noted that the emergence of COVID-19 introduced embracement of remote instruction using digital technologies which invariably include virtual learning platforms for teaching and learning process. Aligning to this view, Dhawan (2020) observed that there is a need for paradigm shift in the educational system, in order to integrate virtual learning platforms such as Microsoft team that emphasize collaborative learning, real-time interactions and discussions between educators and learners, online lectures (live and recorded) accessible via mobile devices, and immediate feedback. Buchal and Songsore (2018) suggested that Microsoft Teams is useful as it provides features like chat rooms, collaborative discussion, content sharing, and video conferencing. Allison and Hudson (2020) claimed that the integration of Microsoft Teams can facilitate learning and effective communication, providing an excellent platform to create and manage assignments, send and receive feedback remotely.

In a bid to technologize and globalize education as well as make its availability accessible to the learners, institutions of learning should ensure that transformative and effective collaborative instructional approaches using classroom technological gadgets should be employed in their instructional programmes. Taghizadeh and Hajhosseini (2020) stated that Microsoft Teams appeared to have played a key role in the students' routines with regards to interacting with learning materials and lecturers. They maintained that Microsoft teams enables student-content interaction as a means of motivating students to use technological interventions and innovations for their academic activities. Shahinaz (2018), in a study, found among others that students taught using Goggle classroom had significant academic result over their counterpart taught using lecture method. Abdullah et al. (2023), in their research, noted that pre-service teachers observed that Microsoft Teams was appropriate and an essential learning platform within the domain of the teacher training programme. The participants considered functionality or usability as a combination of expediency and utility.

Microsoft teams remains an audio-visual platform that connects people with the help of internet to carry out informative transactions such as meetings, lectures, conferences, seminars and workshops amongst others. Nemec et al. (2020) averred that Microsoft Teams is an interactive tool because of its features, for instance audio, video, chat and content sharing, which allow students to do their homework assignments, quizzes, group projects, and record lectures with ease. Taghizadeh and Hajhosseini (2020) in their empirical evidence suggested that student-content interaction can influence learner satisfaction with the virtual learning environment. This is in line with the view of Janes and Carter (2020) that Microsoft Teams facilitates interactive learning, effective discussions and fosters interaction between students and instructors, and that it has created a peer learning culture.

Google classroom is a popular Web 2.0 tool that provides the users with different interesting facilities and applications that supports their information needs. Ogedi (2021) noted that Google Classroom is a mobile technological application introduced in Google Apps for Education activities in 2014. This innovative classroom facilitates the lecturers and other instructors in the educational sector to create and organize assignments quickly, provide feedback efficiently, and communicate with their classes in a speed and ease approach.

On the context of integration of Google classroom into education for data mining and related application concepts, the users (lecturers or students) must possess good perception

and control ability that Google classroom is useful in facilitating instructional process. Izwan et al. (2016) assert that the instructor of goggle classroom's uphill tasks is to make students aware of its use in future workplace, as well as to ensure students' confidence, that it is easy to use. Google classroom can be presumed to become a 21st century pedagogical/cognitive tool to help in changing the focus of the classroom activities from one that is lecturers-centred and controlled to student-centred, which is open to inquiry, dialogue, and creative thinking on the part of students as active participants.

Academic performance of students remains the primary focus of education system globally. Therefore, it is expected that the school system has an influence on the students learning, socialization and vocational and instructional preparedness. Academic performance of student therefore remains a focal interest of every educational institution. It implies that students who were not able to complete their education is as a result of their poor academic performance. Cogently, parents are the most immediate relation of a child, which their educational soundness to a certain extent influence the academic performance of their ward. Azad et al. (2020) opined that educated parents help their children in their early education which affects their proficiency in their relative area of knowledge. This implies that parent's academic background contributes greatly to the academic life of the children.

This study was anchored on the Belief Modification Theory. The belief theory is a humanistic learning theory propounded by Author Comb in 1981. The theory states that individual's field perception had a significant contribution to the way and manner the person behaves. In other words, to help a learner learn, it is quite necessary to modify their beliefs and perceptions so as to help them perceive things differently and consequently behave differently from their original pattern of behaviour. This reveals that an individual's behaviour is driven by their field of perception at the moment the behaviour occurs. Consequently, a teacher's ability to shape a learner's beliefs forms the foundation for guiding the learner's overall development. The use of mobile apps can help modify the learners' perception and beliefs in using emergent technologies for educational purposes. Comb suggested that teachers should endeavour to modify the belief and perception of the learner so as to make them see things from a different perspective and then behave better. In this regard, the learner would find it easier to learn if proper orientation and guide are given on the relevance of classroom technological intervention in facilitating instructional objectives for the purpose of achieving sustainable academic performance by the students. It connotes that when the learners' perception is well and clearly understood, the next step remains to modify the perception or belief of the learner through assistance. Comb strongly

believed that the learner could be assisted and not forced to learn. This shows that for a teacher or instructor to be successful in assisting the learner, the teacher must be sensitive of the learners' needs and situation thus ensures that conducive classroom environment is created. It is therefore imperative that in a successful modification of the learners' belief, there is complete change in behaviour that brings about learning.

The teachers should also ensure that the perception of the learner on the issue of not finding classroom technologies feasible for learning should be changed, as well as make them understand that the use of these technologies for classroom activities remain an easy and fast means of effective educational communication as such facilitates delivery of instruction effectively. If the relevance of theoretical framework could be felt in this study, empirical evidence related to the sub-variables of this study become surrogate in filling-gap in knowledge.

Statement of the problem

The school principal requires a skilled administrative competence in order to achieve stipulated organizational responsibilities and task. Administrative effectiveness thus deals with the ability of the school administrator to harmoniously and judiciously control, manage and utilized all available resources for the purpose of achieving stated organizational goals.

Quality in education is achieved when students' academic performance correlates with educational goals. Microsoft teams and google classroom remain technological tools that is fast gaining its pace into the education system for quality instructional delivery. This technology, when utilized in executing instructional activities, tends to improve students' performance as well as to make teaching and learning very simple. Some of these technological applications provide virtual learning platforms like chatrooms, collaborative discussion, content sharing and audio conferencing which facilitate learning and effective communication between teacher and learners, provide excellent platform to create and manage assignment, and send and receive feedback remotely. Classroom instructional delivery technologies, as a preparatory and exploratory device that supports effective instructional delivery by teachers, permit the learner to contribute ideas through deliberate interactions between the teachers and learners. The quality of these learners is very important in the transformation because the quality of what is produced determines the quality of societal sustainability. Hence, the use of game software and Instagram application for instructional delivery in secondary schools is to enhance students' academic performance and to achieve educational goals.

In recent times however, it was observed that most secondary school students in South East, Nigeria could not achieve the goals of education due to poor academic performance. This poor academic performance is commonly found among physics and chemistry students as a result of their perception on the difficulty of these subject areas. Microsoft teams and google classroom have been acknowledged as some of the emerging educational technologies that improve quality instructional process and so enhance students' academic performance. Again, the present-day educational system globally is marked by integration classroom technological software that supports teaching and learning as a result of the societal innovations. These technological tools became obvious in the educational circle during the outbreak of the global Covid 19 pandemic. This results to the use of Microsoft teams, google classroom, blogs, facebook, edmodo and zoom amongst other technological apps for instructional activities.

More so, it seems that there is decrease in students' engagement and motivation which would have paved way for greater academic performance. This problem could be attributed to teachers' incompetence in using technological tools for instructional activities as well as poor students' engagement in instructional processes using technological software. The classroom activities have decayed to the extent that student's academic performance is at a decreasing point and this has failed to achieve the purpose of the school, individual and society. The question that needs to be addressed is, could students' poor academic performance be attributed to poor practical simulation of classroom technological tool for instructional delivery, that would have likely yielded a positive result that would enhance students' academic performance? It is against this backdrop that this study seeks to determine the relationship between classroom instructional delivery technological tools and students' academic performance in unity secondary schools in South East, Nigeria.

Purpose of the study

The purpose of this study is to determine the relationship between classroom instructional delivery technological tools and students' academic performance in unity secondary schools in South East, Nigeria. Specifically, the study seeks to:

1. Find out the extent to which the use of Microsoft teams relates to students' academic performance in physics and chemistry in unity secondary schools in South East Nigeria.
2. Ascertain the extent of relationship between the use of Goggle classroom and students' academic performance in physics and chemistry in unity secondary schools in South East Nigeria.

3. Determine the extent to which the use of classroom instructional delivery technological tools jointly relate to students' academic performance in physics and chemistry in unity secondary schools in South East, Nigeria.

Research questions

The following research questions guided the study. They are:

1. To what extent does the use of Microsoft teams relate to students' academic performance in physics and chemistry in unity secondary schools in South East Nigeria?
2. To what extent does the use of Goggle classroom relate to students' academic performance in physics and chemistry in unity secondary schools in South East Nigeria?
3. To what extent does the use of classroom instructional delivery technological tools jointly relate to students' academic performance in physics and chemistry in unity secondary schools in South East, Nigeria?

Hypotheses

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

Ho1: There is no significant relationship between the use of Microsoft teams and students' academic performance in physics and chemistry in unity secondary schools in South East Nigeria.

Ho2: There is no significant relationship between the use of Goggle classroom and students' academic performance in physics and chemistry in unity secondary schools in South East Nigeria.

Ho3: There is no significant joint relationship between the use of classroom instructional delivery technological tools and students' academic performance in physics and chemistry in unity secondary schools in South East, Nigeria.

Methodology

Correlational design was used for this study. The study was carried out in South East, Nigeria. South East has five states namely Abia, Anambra, Ebonyi, Enugu and Imo. The population of this study is 312 chemistry and physics teachers in the 10 Federal Government Colleges in South East, Nigeria; of which five were Federal Government Colleges and five Federal Government Girls Colleges. The sample of this study was 312 chemistry and physic teachers from the 10 Federal Government Colleges in South East, Nigeria. The researchers used census sampling techniques to select all the population since the population is manageable and controllable by the researchers.

Classroom Instructional Delivery Technological Tools Questionnaire (CIDTTQ) and Students Academic Performance Record (SAPR) were used for data collection. CIDTTQ was validated by two experts from the Department of Educational Management and one expert from Measurement and Evaluation, all from Michael Okpara University of Agriculture, Umudike. To determine the internal consistency of the instruments, 30 copies of the questionnaire were administered to 30 teachers in Government College Umuahia, Abia State which shares same similarity in their academic programmes with unity secondary school. The coefficient of the relationship was obtained using Cronbach alpha method to determine the internal consistency of the cluster items for reliability index. The instrument yielded an index of .89, which was considered reliable.

The researchers used teachers to respond to the instruments with regards to classroom technological intervention questionnaire and paired this with students' academic performance records. 312 respondents (teachers) were used for the study which comprised of 180 physics teachers and 132 chemistry teachers from the 10 unity secondary schools. A total of 312 copies of the questionnaire were distributed to physics and chemistry teachers in unity secondary schools in South East, Nigeria. 267 copies of the questionnaire were completed and retrieved from the respondents, which gave 85.6% return rate while 45 copies of the questionnaire experience mortality resulting 14.4% unreturned rate of the questionnaire from the respondents. The figure 267 therefore served the basis for the study analysis.

The data were analyzed using Pearson Product Moment Correlation Coefficient statistic to answer the research questions while linear regression analysis was used to test the hypothesis at 0.05 level of significance. The strength of the relationship was established using Creswell (2008) correlation coefficient scale thus; ± 0.70 to 1.00 as strong/high extent relationship, ± 0.40 to 0.69 as moderate/medium extent relationship and ± 0.00 to 0.39 as no correlation/ weak/low extent relationship

Presentation of results

Research question 1: To what extent does Microsoft teams relate to students' academic performance in physics and chemistry in unity secondary schools in South East Nigeria?

Table 1: Correlation matrix between Microsoft Teams and students' academic performance in unity secondary schools in South East, Nigeria

		MTA	SAP
MTA	Pearson	1	.689
	Sig (2-tailed)		.001
	N	267	267
	R ²	(0.474) 47.4%	
SAP	Pearson	.689	1
	Sig. (2-tailed)	.001	
	N	267	267

MTA= Microsoft Teams Application, SAP= Students' Academic Performance

Results on table 1 reveal a correlation coefficient (r) of .689 which is positive and within the coefficient limit of $\pm 0.60-0.80$ indicating strong, positive and a high extent relationship. This implies that Microsoft teams Application has strong, positive and a high extent relationship with the students' academic performance in physics and chemistry in unity secondary schools in South East. The coefficient of determination (R²) of 0.474 indicates that 47.4% of the variance observed in the students' academic performance in unity secondary schools in South East was attributed to Microsoft teams Application.

Ho1: There is no significant relationship between Microsoft teams and students' academic performance in physics and chemistry in unity secondary schools in South East Nigeria.

Table 2: Linear regression analysis of the relationship between Microsoft Teams Application and students' academic performance in unity secondary schools in South East, Nigeria

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	3884.087	1	3884.087		
Residual	9922.218	266	37.302	104.125	.001 ^b
Total	13806.305	267			

Df= degree of freedom, F = F-calculated

The results on table 2 revealed a P- value of 0.001 which is less than the alpha value of 0.05. Since the P-value is less than 0.05 alpha value, the hypothesis of no significant relationship was rejected and the alternate upheld. Therefore, there is a significant relationship between Microsoft teams and students' academic performance in physics and chemistry in unity secondary schools in South East, Nigeria.

Research question 2: To what extent does Goggle classroom relate to students' academic performance in physics and chemistry in unity secondary schools in South East Nigeria?

Table 3: Correlation matrix between Google Classroom Application and students' academic performance in unity secondary schools in South East, Nigeria

		GCA	SAP
GCA	Pearson	1	.868
	Sig (2-tailed)		.000
	N	267	267
	R ²	(0.753)	
SAP		75.3%	
	Pearson	.868	1
	Sig. (2-tailed)	.000	
	N	267	267

GCA= Google Classroom Application, SAP= Students' Academic Performance

Result on table 3 shows a correlation coefficient (r) of .868 which is positive and within the coefficient limit of ± 0.80 indicating strong, positive and a very high extent relationship. This implies that Google Classroom Application has strong, positive and very high extent relationship with the students' academic performance in unity secondary schools in South East. The coefficient of determination (R²) of 0.750 indicates that 75% of the variance observed in the students' academic performance in unity secondary schools in South East was attributed to Google Classroom Application.

Ho2: There is no significant relationship between Goggle classroom and students' academic performance in physics and chemistry in unity secondary schools in South East Nigeria.

Table 4: Linear regression analysis of the relationship between Google Classroom application and students' academic performance in unity secondary schools in South East, Nigeria

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	3724.885	1	3724.885		
Residual	9330.210	266	35.076	106.195	.000 ^b
Total	13055.095	267			

Df= degree of freedom, F = F-calculated

The results on table 4 showed a P- value of 0.000 which is less than the alpha value of 0.05. Since the P-value is less than 0.05 alpha value, the hypothesis of no significant relationship was rejected. Therefore, there is a significant relationship between Google Classroom Application and students' academic performance in unity secondary schools in Southeast, Nigeria.

Research question 3: To what extent does classroom instructional delivery technological tools jointly relate with students' academic performance in physics and chemistry in unity secondary schools in South East, Nigeria?

Results on table 5 indicate a correlation coefficient (r) of .689 which is positive and within the coefficient limit of ± 0.60 -0.80 indicating strong, positive and a high extent relationship. This implies that Microsoft teams Application has strong, positive and a high extent relationship with the students' academic performance in unity secondary schools in South East. It also shows a correlation coefficient (r) of .868 which is positive and within the coefficient limit of ± 0.80 indicating strong, positive and a very high extent relationship. This implies that Google Classroom Application has strong, positive and very high extent relationship with the students' academic performance in unity secondary schools in South East. Finally, the table also revealed a correlation coefficient (r) of .894 which is positive and within the coefficient limit of range of 0.80 and above indicating very high extent relationship. This indicates that classroom instructional delivery technological tools to a very high positive extent, predict students' academic performance in unity secondary schools in South East.

Table 5: Correlation matrix between classroom technological interventions and students' academic performance in unity secondary schools in South East, Nigeria

		MTA	GCA	Joint	SAP
MTA	Pearson	1			
	Correlation				.689
	Sig. (2-tailed)				.001
	N				267
GCA	Pearson		1		
	Correlation				.868
	Sig. (2-tailed)				.000
	N				267
Joint	Pearson			1	
	Correlation				.894
	Sig. (2-tailed)				.003
	N				267

MTA= Microsoft Teams Application, GCA= Google Classroom Application, SAP= Students' Academic Performance

To determine the comparative contributions of classroom instructional delivery technological tools (Microsoft Teams Application, and Google Classroom Application) on students' academic performance in unity secondary schools in South East, a Scheffe test was carried out and the predictive indices of classroom instructional delivery technological tools are presented as shown on table 6.

Table 6 shows that the predictive indices of classroom instructional delivery technological tools of Microsoft Teams Application and Google Classroom Application are .689, and .868, respectively. This shows Google Classroom Application had the highest percentage with relative contribution of 54.22% while Microsoft Teams Application has a relative contribution of 45.78 percentage on students' academic performance.

Table 6: Scheffe test on relative contributions of classroom instructional delivery technological tools on students' academic performance in unity secondary schools in South East, Nigeria

		MTA	GCA	Joint	SAP
MTA	Pearson Correlation	1			.689(45.778)
	Sig. (2-tailed)				.001
	N	267			267
GCA	Pearson Correlation		1		.868(54.222)
	Sig. (2-tailed)				.000
	N	267			267
Joint	Pearson Correlation			1	.894(71.109)
	Sig. (2-tailed)				.003
	N	267			267

Ho3: There is no significant joint relationship between classroom instructional delivery technological tools and students' academic performance in physics and chemistry in unity secondary schools in South East, Nigeria.

Table 7: Multiple regression analysis of classroom instructional delivery technological tools and students' academic performance in unity secondary schools in South East, Nigeria

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	4907.873	1	4907.873	130.751	.003 ^b
Residual	9884.671	266	37.536		
Total	14.792.544	267			

Df= degree of freedom, F = F-calculated, Correlation is significant at the 0.05 level (2-tailed)

The results on table 7 revealed a joint relationship between classroom instructional delivery technological tools and students' academic performance in unity secondary schools in South East, Nigeria. This is shown by a P- value of 0.003 which is less than the alpha value of 0.05. Since the P-value is less than 0.05 alpha value, it indicates that the null hypothesis stated was rejected. Therefore, there is a significant relationship between classroom instructional delivery technological tools and students' academic performance in unity secondary schools in South East, Nigeria.

Discussion of the findings

The findings of the study on tables 1 and 2 revealed that Microsoft teams' application, significantly and to a positive high extent, relates to students' academic performance in unity secondary schools, using Microsoft teams, in Southeast Nigeria. The results specifically showed that using Microsoft teams application significantly helps students in doing assignments, improves their attitudes in learning and as well improves quality instructional practices among students. It implies that the use of Microsoft teams' application in teaching and learning greatly enhances students' academic performances. The result corroborated with Janes and Carter (2020), who opined that the use of Microsoft teams application in teaching and learning has significantly improved not only teachers' effectiveness in instructional delivery but also the learners' performance. Nemec et al. (2020) noted that the application is an interactive tool with features for instant audio, video, chat and content sharing which allow students to do their home assignments, quizzes, group projects, among others.

The results on tables 3 and 4 indicated that Goggle Classroom application, significantly and to a positive very high extent, relate to students' academic performance in unity secondary schools in South East, Nigeria. The result specifically showed that teachers' use of Goggle classroom application enhances students' academic performance to a very high extent. The result equally revealed that teachers' use of Goggle classroom application to a very high extent assist students to source relevant academic information which support their academic performance. The results agreed with Shahinaz (2018) who in a similar study found, among others, that students taught using Goggle classroom had significant academic result over their counterpart taught using lecture method. However, the present results disagreed with the results from the earlier study by Kaukab and Nayab (2018) which showed, among others, that teachers perceived the use of Goggle classroom as just a tool that can be used for documentation management and essential classroom management without significantly impacting teaching methodologies. The difference in the two studies could be because the present study is carried out at the present days where the awareness, acceptability and the use of technologies in teaching are on the increase when compared with the past when only few rich countries and institutions were able to provide same to their schools for effective instructional delivery.

Conclusion

The study concludes that technological tools used for classroom instruction have a significant impact on students' academic performance in unity secondary schools in South East, Nigeria. More specifically, the findings show that using the Microsoft Teams

Application is closely linked to a notable improvement in students' academic performance. This suggests that when teachers incorporate and use Microsoft Teams into their teaching methods, it really helps boost learning outcomes. Additionally, the results indicate that the Google Classroom Application also has a strong and positive relationship with students' academic performance. This entails that teachers who utilize Google Classroom see a very high enhancement in their students' academic performance. This points to the idea that Google Classroom, with its features for managing assignments, providing feedback, and fostering collaborative learning, has a greater impact on students' performance than other tools that were looked at. Considering these findings, it's clear that adopting and effectively using classroom instructional technology, especially Microsoft Teams and Google Classroom, plays a crucial role in shaping students' academic success in unity secondary schools in South East, Nigeria. Therefore, it's vital to encourage teachers to make the most of these digital platforms to improve educational quality and help students thrive in the 21st century.

Recommendations

1. Principals and other school authorities should provide adequate technological intervention tools with Microsoft teams applications and as well ensure teachers' easy access to them for effective instructional delivery.
2. Government should improve the general academic performance of students by exposing teachers to regular workshops and seminars on the effective use of technological interventions such as Google classroom for effective instructional delivery.
3. Government, educational policymakers and other investors in education sector should endeavour to enact, implement and support the use of classroom instructional technological tools for instructional activities at all levels of education.

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