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Effectiveness of Google Classroom as a Digital Tool in Teaching and Learning: Students' Perceptions

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Abstract: - **The aim of this study is to evaluate Students' perceptions on the effectiveness of Google Classroom as a Digital tool in Teaching and Learning. The study was conducted through a Survey Research Design to investigate the Students' Perceptions. The population of study consists of all UG II Undergraduate Students, Faculty of Education, Kebbi State University of Science and Technology Aliero (KSUSTA). Data analysis was conducted using Descriptive Statistics. The results of the study indicated that Google Classroom is effective in improving Students access and attentiveness towards learning, knowledge and skills gained through Google Classroom makes Students to be active learners, as a Digital Tool, it provides meaningful feedback to both Students and Parents. However, Poor network hinders students from effective utilization of Google Classroom; thus, submitting their work late. Therefore, teachers should integrate the conventional teaching with Google Classroom to improve Students' Performance. Google Classroom should also be a form of assessing Students' Assessment through online Assignments and Quizzes; hence making Students to participate actively in Educational Technology Classes. The University should also provide a standard network to enable Students join Google Classroom and submit their assignments on time.**

Keywords: **Students' Perceptions, Digital Tool &Google classroom**

I. INTRODUCTION

Google Classroom Google Classroom is a free application designed to assist students and teachers connect, work together, organize and create assignments, it enables learning to be paperless. As a Digital Tool, Google Classroom is accessible only to users with Google Apps for Education (GAFE). This is a free collaborative set of tools, these tools includes web tools like Google Docs, Google Drive, Gmail, and more. All users will GAFE account, have access to these web tools. Google Classroom can be used at any grade (basic, post basic and tertiary) levels, but this depends on the teachers' and students' competence (Bell, 2015). Therefore, Google Classroom can be defined as a Digital Tool that enable students to attend classes online. Teachers work together with their students without meeting face to face. Teachers can post materials for their students through this medium, they can also make announcements and create assignments and quizzes for students to complete, submit and save online either in a web browser or on Google Classroom App. Digital Tools stresses on learners continuing learning activities through digital tools,

which include desktop computers, notebook computers, tablet computers, and smart phones(Keane, 2012). These tools allows learning to take place without teachers and students meeting face to face.

1.1 Benefits of Google Classroom

i. Allows teachers post lecture notes, create assignments, make announcements, set due dates for assignments

ii. Teachers can create different groups in one classroom, then give each group a different assignment, thus making the class to be active and interesting.

iii. Teachers can easily identify students that miss class assignments and students that submit their assignments late

iv. It is flexible, enabling teachers to extend due dates so that all students can submit their assignments, similarly it allows teachers to update or review students' grades

v. Previous posts made by teachers can be reused and then posted to the same group or to a different group

vi. Teachers can also be added in the classroom, they can as well grade students' assignments

1.2 Objectives of the Study

The following are the objectives of this study:

1. To examine how effective is Google Classroom in Teaching and Learning
2. To examine the effectiveness of knowledge and skills gained through Google Classroom.
3. To identify how Google classroom provide meaningful feedback to both Students and Parents.
4. To ascertain the students' limitation towards using Google classroom

1.3 Research Questions

1. Is Google classroom effective in improving students' access and attentiveness towards learning?
2. How effective is knowledge and skills gained through Google Classroom?
3. Does Google Classroom provide meaningful feedback to both Students and Parents?

4. Does Google Classroom make communication with both Students/Parents easy to accomplish?
5. What are the Students limitations towards using Google Classroom?

II. LITERATURE REVIEW

According to teachers participating in Salavati's (2013) study, digital technologies supporting teachers and students to engage actively in leaning, hence making it to become more real. Digital technologies also allow students to explore extensively about what they are learning by taking the learning and teaching outside the classroom walls. Teachers' application of digital technologies in their teaching depends upon the teaching objectives and nature of subject matter(Geertsema, 2014). Therefore, for teachers to use digital tolls effectively, they must consider the size of the class they are teaching, availability of the equipment's to be used and they should have the skills required in applying the tools.

In a study conducted by Salavati, (2016) on the use of digital technologies in education, he stated that digital technologies are applied to complement the traditional approach of teaching. Supplying these tools in schools cannot solve all the problems associated with learning, he further mentioned that the outcome of the licentiate research has shown that there must be a deeper understanding of the different worldviews recognized, particularly teachers and their attitudes with regards to teaching and learning, it is also required to have a deeper knowledge of existing pedagogical models and potential new models and strategies that are beneficial to teachers' daily work.

Several studies (Mafa, 2018; Nizal, Shaharanee, Jamil, Syamimi, & Rodzi, 2016)found out that Google classroom is fascinating in educating and learning, students' taught indicated satisfaction towards the learning activities in Google classroom. Furthermore, Fahrurrozi, U. Hasanah, R S. Dewi, (2019) conducted a study to determine the requirements for the development of learning that is exciting, active, autonomous and effective. The results of the study show that integrated learning design based on Google classroom is needed to improve student digital literacy.

All the reviewed literatures indicated that Google classroom is an effective tool in improving teaching and learning. However, no empirical study was conducted in Kebbi State to explore how Google classroom can be applied at tertiary level. Considering Educational Technology as a compulsory course for all the UG II students at the Faculty of Education in Kebbi State University of Science and Technology Aliero (KSUSTA), this research was conducted to utilize the activities and benefits of Google classroom, hence to find out how efficient will teaching and learning be with Google classroom.

III. RESESRACH METHODOLOGY

The population of study consists of all year two Undergraduate Students, Faculty of Education, Kebbi State University of Science and Technology Aliero (KSUSTA). A total population sampling is the type of sampling technique used in the study. All the students were expose to the integration of technology in teaching and learning using Google Classroom, thus, it is necessary to take the whole population as the sample of the study. Self-designed questionnaire is the main research instrument used in the study.

IV. FINDINGS and DISCUSSIONS

Five research questions were generated in this research study. Thus, the findings will be discussed according to the research questions.

4.1 RQ1: Is Google Classroom effective in improving Students access and attentiveness towards learning?

A total of 198 students of UGII Kebbi State University of Science and Technology Aliero were involved in the study. To determine their opinion relating to the effectiveness of Google classroom in improving students access and attentiveness towards learning. Their responses are presented in Table 1:

Table 1; Mean and standard deviation on the students' opinion on the effect of Google classroom in improving students' access and attentiveness towards learning

Items	Mean	Std. Dev
I have adequate training on how to operate Google classroom	4.59	.669
Google Classroom enhances my critical thinking ability	4.59	.637
Google Classroom improved my attention towards class attendance	4.59	.653
I have easy access to class notes when shared in Google classroom	4.55	.716

The results regarding participants' perceived attentiveness and access to learning ability through Google Classrooms are presented in the Table 1. Most of the participants reported having "easy" or "very easy" access and attentiveness towards learning through Google classroom. Thus, Google Classroom is an effective tool that enhances students' thoughtfulness and easy access to lecture materials.

4.2RQ2: How effective is knowledge and skills gained through Google Classroom?

A total of 198 students of UGII Kebbi State University of Science and Technology Aliero were involved in the study. To determine perception on how effective knowledge and skills gained through Google classroom. Their responses are presented in Table 2.

Table 2: Mean and standard deviation on the students' perception on how effective is knowledge and skills gained through Google classroom

Items	Mean	Std. Dev
Classwork/assignment is easily viewed and can be conducted In Google classroom	4.62	.678
Google Classroom makes learning to be collaborative	4.64	.644
As a digital tool, it is innovative and very educational	4.60	.644
It helps me to become an independent learner	4.58	.669

Table 2 shows that out of the respondents on their perception on how effective knowledge and skill is gained through Google classroom, some participant in the study are of the opinion that Google classroom enhance student's interest towards learning, while student's level of participation in the class activities is also believed to be improved by this approach. Also the Participants are of the opinion that Google classroom should be applied in teaching and learning. This will help towards improving students' academic achievement. Therefore, Google Classroom has a positive effect on students' knowledge and skills.

4.3RQ3: Does Google Classroom provide meaningful feedback to both students/parents?

A total of 198 students of UGII Kebbi State University of Science and Technology Aliero were involved in the study. To determine their views regarding how Google classroom provide meaningful feedback to both Students and Parents.

Table 3 mean and standard deviation on students view regarding how GC provides meaningful feedback to both student and teachers

Items	Mean	Std.Dev
Teachers can add guardians to track their children's performance, thus students are always serious	4.51	.779
Easy and effective record keeping since all the records are online	2.54	.847
Due dates in Google classroom helps to identify students that submits their work late	4.64	.637
Students can view their score online	4.71	.592
Students can track their progress regularly	4.56	.743
Editing and Resubmitting assignment after submitting helps students to make necessary changes	4.44	.858

Table 3 shows the view of students regarding how GC provides meaningful feedback to both student and teachers. From the table, it could be observed that average number of students believes that with GC student can view their score online. The general indication here is that, most of the students have positive impact views about GC in providing meaningful feedback to both Students and their Parents.

4.4RQ4: Does Google Classroom make communication with both students/parents easy to accomplish?

A total of 198 students of UGII Kebbi State University of Science And Technology Aliero, were involved in the study. To determine studentviews on whether Google classroom make communication easy to accomplish or not.

Table 4 mean and standard deviation of students view on how Google Classroom makes communication easy

Items	Mean	Std. Dev
Information regarding the class is always passed online, therefore, students are always up to date	4.57	.715
I score higher marks when tests are conducted through Google classroom than in a normal classroom	4.55	.744
With Google classroom, learning can take place everywhere and anytime (24/7)	4.70	.587

The findings in the students view on how Google classroom provide meaningful feedback, participants indicated that, Google Classroom make communication with both students/parents easy to accomplish.

4.5RQ5: What are the Students limitations towards using Google Classroom?

A total of 198 students of UGII Kebbi State University of Science and Technology Aliero were involved in the study. To determine student perspective on the limitation towards using Google.

Table 5 mean and standard deviation on Student limitation towards using Google classroom

Items	Mean	Std.Dev
Poor network hinders students from submitting their work on time	4.61	.709
Lack of money to buy data affects my active participation in the class activities and no free functional Wi-Fi in the school	4.28	.982
I don't have Personal Computer or a Smart Phone to use and join the Google classroom	3.09	1.254

Students indicated that there is poor network in the University, thus, they find it difficult submitting their assignments on time. No free functional Wi-Fi in the school and due to their economic status, most of the Students cannot afford to subscribe to any data bundle, this affects their participation in the class. Some students challenge is due to lack Personal Computer or a Smart Phone to use and join the Google classroom. They depend on their friends. All these factors defy Students to effectively and conveniently use Google Classroom as a digital tool.

V. CONCLUSION AND RECOMMENDATIONS

The findings of this study proved that Google Classroom enhances the teaching and learning process. It is also reliable, effective and efficient in improving students' access and attentiveness towards learning, activities conducted in Google classroom changes students from passive to active learners. Students can easily track their progress with online assessments in Google classroom, parents can check and monitor the performances and progress of their children easily and at their convenient time. This result corroborate with the findings of (Mafa, 2018; Nizal et al., 2016), they all found out that Google classroom improves teaching and learning. However, Poor network hampers students from effective application of Google Classroom; thus, submitting their work late.

Therefore, with the current situation of global Covid-19 pandemic, restricted movement and social distancing, it is recommended that applying Google classroom will assist both students and teachers to connect, work together, create assignments, grade students and post lecture notes. Students can also ask questions about the areas they don't understand. Additionally, due to the growing number of undergraduates, especially in Faculty of Education, managing students records is easy with google classroom, students records about their assessments conducted online is easily accessed and can always be retrieved, issues of missing grades can be sorted easily by referring to the students account. With online quizzes and assignments, students are not limited to what they are taught, they can explore other resources about the particular topic through online mediums, hence having a deeper understanding of the topic discussed in the class. Google classroom easily track students that miss assessments or students that submit their assessments late, so teachers can explore using Google classroom as an additional means of communicating with their students to complement the face to face teaching and learning. With regards to bad network hindering students' participation, the University should ensure the network is upgraded to cater for all the students across the University.

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