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# INFLUENCE OF STUDENTS' AWARENESS ON TECHNOLOGY ACCEPTANCE OF GOOGLE CLASSROOM AMONG COLLEGES OF EDUCATION STUDENTS IN SOUTHWESTERN NIGERIA

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## **Abstract**

*The study assessed colleges of education students' level of awareness of google classroom for instructional purposes. It determined the students' acceptance of google classroom, the influence of the students' awareness on the acceptance of google classroom for instructions and also the interaction effects of sex, proprietorship of the colleges and exposure to the use of computer on the influence of level of students' awareness on acceptance of google classroom in colleges of education, southwestern Nigeria. The study adopted descriptive survey research design. Six hundred and thirty students were selected across six colleges of education in three States across southwestern, Nigeria using multistage sampling procedure. Students' Acceptance of Google Classroom Questionnaire (SAGCQ) was used for data gathering. Analysis of data showed that the students' level of awareness of the use of google classroom for instructional purposes is high (93.20%). The extent of students' acceptance of google classroom is excellent (mean=62.99; 78.74%). The students' awareness has significant influence on acceptance of google classroom for instructions ( $F_{(1,628)}=425.127$ ;  $p < 0.01$ ;  $R^2=0.403$ ). Sex has significant interaction effect on the influence of students' awareness on acceptance of google classroom for instructions ( $F_{(1,586)}=7.392$ ;  $p=0.007$ ) while ownership of institutions ( $F_{(1,586)}=0.158$ ;  $p=0.691$ ) and students' exposure to use of computer do not ( $F_{(2,586)}=0.088$ ;  $p=0.916$ ). The study concluded that increasing students' awareness of google classroom will promote its acceptance for instructional purposes in colleges of education.*

**Keywords:** Acceptance, Awareness, Colleges of Education, Google Classroom, Instructional Purposes

## **Introduction**

The global increase in access to computers and other internet-driven information technology has created a new frontier on students' access to education. In developing nation like Nigeria, the use of cost-effective and economical platforms for instructional delivery has been the focus of higher institutions of learning particularly in southwestern Nigeria. Mobile phones and other paraphernalia are used for providing internet access which has been enhancing applications of internet-driven information technology tools for teaching and learning (Owiny, Mehta & Maretzki, 2014).

In terms of promoting innovation in education, the application of

Information Technology and other internet driven instructional platforms have been found very appropriate. Information Technology is also effective in supporting traditional lecture. Information Technology is an internet driven strategy that is applied in blended learning, cooperative learning, intelligent tutoring and so on (Oteyola, 2015; Oteyola, Ojediran & Adeyanju, 2016). Therefore, Information Technology has great potentials for facilitating more innovative educational methods. Simultaneously, these patterns in educational methods not only help subject content learning, but also facilitate the development of communication, problem-solving, creativity, and other high-level skills among students (Setyosari, Kuswandi, & Ulfa, 2023; Wang, & Wu, 2022; Gunawan, Liliarsari, Kaniawati & Setiawan, 2020).

The use of technology in instructional delivery suffered low patronage from all the stakeholders in education at all level of education in Nigeria. Despite the provisions made in the “Use IT Policy” (2006) as cited in Oteyola (2015) that appropriate information technology should be integrated into instructional deliveries, the level of adoption of such is very minimal. Some of the reasons attributed to the low patronage were lack of experience in information and communications technology usage, inadequate infrastructure to support e-learning, cost of data, security, technical know-how by lecturers and students among others (Eli-Chukwu, Igbokwe, Ifebude, Nmadu, Iguodala, Uma, & Akudo, 2023). The Covid-19 protocols served as catalyst to the adoption of online learning in the country. The restrictions imposed on movements and the introduction of social distancing in gathering involving more than two people stimulated the need for alternative methods of instructions that minimized face to face or traditional method of instruction in the country. Online learning and e-learning were the adopted strategies during this period.

Different modes of instructions were adopted during the Covid-19 lockdown and immediately after the lockdown. These modes involved the use of Radio, Television, web-based learning, different shades of online learning (Oteyola, Oyeniran, Awopetu, & Bello, 2021). Social media such as WhatsApp, Telegram, Facebook, Instagram were also employed in classroom activities. This dovetailed into the use of learning management systems like Edmodo, Webct, Moodle and so on. The use of learning management systems was found most appropriate but could not be adopted as a result of paucity of funds, ease of use, perceived usefulness, internet access and mostly as a result of the perceived relative advantage (Kraleva, Sabani, & Kraleva, 2019; Yakubu, Dasuki, Abubakar, & Kah, 2020). Higher institutions in the southwestern Nigeria preferred google classroom because of the perceived cost effectiveness and user-friendly opportunities provided for the end users. For example, Obafemi Awolowo University, Ile Ife adopted the use of google classroom for teaching both graduate and undergraduate students when the need arises. The same can be observed across all the public universities in southwestern Nigeria.

Google classroom according to Tarteer, Badah and Khlaif (2022) is a free

web service, developed by Google for schools, with the aim of aiding teachers in their teaching as well as sharing documents among them, instead of paper-based feedback. Google classroom is one of the available platforms through which teachers and students can create, distribute and grade assignments paperless. The primary purpose of Google classroom as stated in Gupta and Pathania (2021) is to streamline the process of sharing files between teacher and students. Google Classroom is an education application suite offering productivity tools such as email, document and storage for students and teachers. The tools offer opportunities for collaboration in real time and the ability to work remotely, among many other features (Omotoye, 2022).

Google classroom is a platform for teachers to create a digital classroom for students to communicate with their teachers and peers (Phan, 2015). It is a free application that integrates e-mails and documents to save into storages. Teachers can upload files, videos, links, announcements and assignments for students to retrieve. Document files can be edited in class and shared with peers to learn collaboratively. When students complete an assignment, they can submit by posting on the teacher's board or on the classroom board. This program can be accessed using any device at any place and any time. This unrestricted access makes Google classroom convenient for both teachers and students. Gupta and Pathania (2021) explained that google platform allows learners to chat and discuss topics learned in class. Teachers have the opportunity to view students' discussion and comments. Different assignments such as video segments, PowerPoint presentations, documents and Web Quest can be posted on google classroom.

The use of google classroom persisted in the university in the post-covid era but students and lecturers in colleges of education are still limited in integrating the platform for classroom instructions. Despite the abundance of large classes for general courses at the colleges of education, lecturers still employed the traditional lecture method of teaching. Colleges of education in Nigeria is not a degree awarding institution (Salihu, Shaibu, Musa, Idris. & Umar, 2023). They are established to produced trained and qualified teachers in various fields of learning through quality teacher education programmes leading to the award of Nigerian Certificate in Education (NCE) (Anyim, 2020).

The traditional lecture method of teaching is not only is obsolete but has been found deficient in optimally improving students' learning outcomes. The use of google classroom as been found suitable and effective in improving students' learning outcomes and also in ameliorating some of the challenges associated with classroom management and instructions. Lecturers in colleges of education as observed usually send materials through created WhatsApp groups to students.

These materials are later discussed in face-to-face class as a form of blended-learning. These classes are usually large with classroom management and students' engagement very poor. This method of teaching as observed cannot provide the required learning opportunities for the students in all the domains of learning. While the students have access to large volume of information, classroom engagement and

students' attitude to learning are negatively affected. Not only that, learning at the affective and psychomotor domains cannot be optimally achieved.

Technological innovations are bringing about application of new pedagogies and andragogies in the education sector. The use of google classroom appears not to be adequately embraced by both the students and lecturers at the colleges of education. It is expected that since the lecturers and students have access to smart devices, and also because large-scale one-to-one computing programmes have been initiated in the country, that the acceptance of google classroom for instructional purposes would be high.

The poor usage of google classroom is arguably due to the students' awareness of google classroom. It is hypothesized that if the students are aware of the potentials of google classroom in instructional delivery, its acceptance will be high despite the various challenges associated with its adoption by the institutions of learning. The first factor in diffusion of innovation is Knowledge (Rogers, 1995). Rogers (1995) defined knowledge as the process by which an innovation is communicated through certain channels over time among the members of a social system. Sahin (2006) defined knowledge as the process by which person becomes aware of an innovation and how it functions. These definitions suggested that knowledge which is the first factor in diffusion of innovation is premised on awareness. Other factors as identified by Rogers (1995) which include Persuasion, Decision, Implementation and Confirmation all have their roots in level of awareness. The level of awareness determined to greater extent the degree of persuasion, decision for or against, implementation and confirmation of any innovation. In the light of this, awareness of google classroom is opined will have positive correlation with colleges of education students' acceptance of google classroom for instructional purposes. This is expected to help in identifying the right strategies to be adopted in introducing relevant and appropriate technologies and innovations for classroom activities at colleges of education in southwestern Nigeria. Not only that, some educational wastages which can be incurred as a result of indiscriminate adoption of technology and innovations can be prevented.

In reviewing research articles, few studies have been found on the applications of online learning in colleges of education in Nigeria. Studies on the use of learning management systems and other internet driven information technology platform for teaching and learning in the colleges were also limited (Oguguo, Nannim, Agah, Ugwuanyi, Ene, & Nzeadibe, 2021). The fact that products of these institutions are expected to acquire 21st century pedagogies so as to effectively teach the digital natives genZ students aroused the curiosity to identified the strategies to be adopted in exposing colleges of education students to application of online learning to instructional delivery. This study therefore assessed the influence of students' awareness of google classroom on its acceptance in colleges of education in southwestern Nigeria.

Sex, school ownership and length of time students had been exposed to the use of personal computer could have effects on the students' acceptance of google

classroom for instructions. Male students are usually adventurous while females are reserved. Students that attend colleges of education that are managed by private individuals or institutions (Private institutions) have access to better facilities than those in government institutions (Public institutions) because Private institutions are more expensive than Public institutions. Not only that, it is observed that parents of students who patronized private institutions in the average are in higher strata than those in the public institutions. This is applicable to colleges of education in southwestern Nigeria. Students' exposure to computer can also be a factor in the acceptance google classroom for learning. The study therefore determined the influence of all these intervening variables on the influence of the students' awareness or acceptance of google classroom in the colleges of education.

### **Objectives of the study**

The objectives of the study are to

- (i) determine the influence of students' awareness on the acceptance of google classroom for instructions at colleges of education in southwestern Nigeria
- (ii) assess the interaction effect of students' demography on the influence of their awareness on acceptance of google classroom among the students.

### **Research Questions**

- (i) what is the level of awareness of google classroom among students in colleges of education in southwestern Nigeria?
- (ii) what is the extent of students' acceptance of google classroom in the colleges of education?

### **Hypothesis**

- H<sub>0</sub>1: Students' awareness has no significant influence on their acceptance of google classroom in colleges of education in southwestern Nigeria
- H<sub>0</sub>2: Students' demographic variables have no interaction effects on the influence of awareness on acceptance of google classroom in colleges of education in southwestern Nigeria.

### **Theoretical Framework**

This study is premised on The Unified Theory of Acceptance and Use of Technology (UTAUT). UTAUT was formed by combining Technology Acceptance Model (TAM) and the Theory of Planned Behaviour (TPB) (Venkatesh, Thong & Xu, 2016). According to Oteyola, Akande, Oyeniran & Awopetu (2020), the UTAUT is based on eight distinct theories and models of technology acceptance. These theories are Theory of Reasoned Action, the Technology Acceptance Model, the Motivation Model, the Innovation and Diffusion Theory, and the Model of Personal Computer Use. UTAUT suggests using eight variables (performance expectation, social influence, effort expectation, facilitating conditions, and experience as moderators) to predict behavioural intention to use a technology and actual use of the

technology in organisational contexts. These variables are performance expectation, effort expectation, social influence, facilitating conditions, and experience. The central component of the UTAUT model is an individual's behavioural intention in relation to their use of technology (Oteyola, et al, 2020). Performance expectations, effort expectations, and social influence all play a role in shaping a person's intent to use a technology, but it is the enabling circumstances that ultimately determine whether or not that technology is used (Venkatesh et al., 2016). Age, gender, and the interaction between performance expectations and effort expectations were also found to affect technology adoption and use (Oteyola et al., 2020). In contrast to TAM's 30% accuracy, Meister and Compeau (2002) in Omotoye (2022) premised that UTAUT could predict technology acceptance and use with 70% accuracy. Based on this, UTAUT has emerged as a potential overarching theory for the research. Venkatesh et al. (2016) found that UTAUT explained 77% of the variance in users' plans to adopt new technologies and 52% of the variance in users' actual adoption and use of those technologies. For this reason, it was appropriate to use UTAUT as the theoretical framework for this study.

### **Methodology:**

The study adopted the descriptive survey research design. Students' awareness of google classroom for online learning and the acceptance of the application of google classroom for online learning were the independent and dependent variables while the students' demographic variables such as sex, school ownership and length of usage of computer were the intervening variables.

The population of the study consisted all the students in colleges of education in southwestern Nigeria that are running the Nigeria Certificate of Education (NCE) programme at colleges of education in southwestern Nigeria. Six hundred and thirty students were selected across all colleges of education in southwestern, Nigeria. Multistage sampling procedure was adopted in selecting 630 students across the colleges: purposive sampling technique was adopted in selecting two colleges of education across three States in southwestern Nigeria based on proprietorship (Public or Private). The states were categorized based on cultural homogeneity and one State was selected from each of the homogeneous States. The six States in southwestern Nigeria were clustered into three based on cultural homogeneity (Lagos and Ogun; Oyo and Osun; and Ondo and Ekiti). From each cluster, one State was randomly selected through balloting. Two colleges of education one Public and one Private were selected across each of the selected State. A total of six colleges were therefore selected across the region. Three schools were randomly selected from each of the selected colleges. Thus, eighteen Schools were selected in all. Two Departments were also randomly selected in all the selected schools. Six hundred and thirty students were selected across the Departments using proportionate stratification based on the total population of students in the selected Department. Convenient sampling technique was employed in administering the questionnaire on expected numbers of students from each Departments. Two hundred and thirty

(37.0%) of the respondents were males, 391 (63.0%) were females; 355 (56.4%) were students in government owned colleges of education while 274 (43.6%) were from individuals or cooperate institutions owned (Private) colleges of education. One hundred and sixty-two (27.2%) had below 2 years exposure to computer, 253 (42.5%) had 3 – 5 years of exposure while 180 (30.3%) had over 5 years of exposure to the use of computer.

Students Acceptance of Google Classroom Questionnaire (SAGCQ) was used for data gathering. The instrument was adopted from Buabeng-Andoh (2017) and Hussaini, Ibrahim, Wali, Libata & Musa (2020). SAGCQ is a likert-type questionnaire on a scale of strongly agree, agree, disagree and strongly disagree. It is made up of three sections. The items in section A gathered information on students' demographic variables. Section B which consisted 9 items elicited information on awareness of google classroom for online learning while Section C elicited information on students' acceptance of google classroom for online instruction. The section is made up of 20 items. SAGCQ was validated by lecturers in the department of Educational Technology and Library studies, Obafemi Awolowo University, Ile Ife. The lecturers appraised the suitability of the instrument in terms of content, clarity and measuring what it was intended to measure. The instrument was also scrutinized and appraised by lecturers who are test expert in the department of Educational Foundations and Counselling at the University. The content validity Ratio of the instrument was determined and  $\alpha = 1$  was obtained. Twenty copies of the final draft of the instrument were administered on 20 students at Osun State College of Education, Ilesha. These students were not involved in the research. The split half method was adopted in determining the reliability of the instrument and  $r = 0.95$  was obtained. The instrument was therefore considered reliable. The researcher visited the selected colleges of education and secured permission to administer the questionnaire on the students.

Three trained research assistants were engaged in administering the questionnaire. The researcher and the research assistants administered the instrument on the students on one-on-one basis. The purpose of the research was explained to each of the respondents and their consent was sought before the administration of the instrument. Copies of the questionnaire were distributed to the respondents as the researcher and the research assistants come in contact with them. The copies were retrieved from the respondents immediately they have responded to the items in the questionnaire. The return rate of the questionnaire was 93%. Strongly agree on the instrument was scored 4, agree was 3, disagree was 2 and strongly disagree was scored 1. Items not responded to was scored 0. The total score of each of the respondents on awareness as well as acceptance was determined. Data were analysed using mean, standard deviation, percentage, regression analysis and multivariate analysis of variance (MANOVA). Posthoc analysis was conducted where necessary using Scheffe test. The hypotheses were tested at 95% level of significance.

## Results

Research Question 1: what is the level of awareness of google classroom among students in colleges of education in southwestern Nigeria?

The students' level of awareness of google classroom for instruction was determined by collapsing all the nine items that elicited information on the students' awareness of google classroom for instructions. The maximum score obtainable was 36. The students' scores were categorized such that scores below 12.00 were categorized as low level of awareness, score above 24.00 were categorized as high level of awareness while other scores were categorized as average.

**Table 1: Students' level of awareness of google classroom for instructions in colleges of education in southwestern Nigeria**

| N = 629 |                                 |              |                    |             |             |
|---------|---------------------------------|--------------|--------------------|-------------|-------------|
| S/N     | Demography                      | Unit         | Level of Awareness |             |             |
|         |                                 |              | Low (%)            | Average (%) | High (%)    |
| 1       | Ownership of Institutions       | Public       | 1 (0.16)           | 38 (6.04)   | 316 (50.24) |
|         |                                 | Private      | 1 (0.16)           | 19 (3.02)   | 254 (40.38) |
|         |                                 | Male         | 0 (0.00)           | 15 (2.42)   | 215 (34.62) |
| 2       | Sex                             | Female       | 2 (0.32)           | 41 (6.60)   | 348 (56.04) |
|         |                                 | 0 - 2 years  | 0 (0.00)           | 13 (2.19)   | 149 (25.04) |
| 3       | Exposure to the use of computer | 3 - 5 years  | 1 (0.16)           | 27 (4.54)   | 225 (37.82) |
|         |                                 | Over 5 years | 0 (0.00)           | 15 (2.52)   | 165 (27.73) |

Table I presents the colleges of education students' level of awareness of google classroom. One lecturer (0.16) each from Public and Private colleges of education level of awareness is low, 38 (6.04%) and 19 (3.02%) from Public and Private colleges of education respectively level of awareness is categorized as average while 316 (50.24%) and 254 (40.38%) from Public and Private colleges of education respectively had high level of awareness of using google classroom for instructional purposes. Two (0.32%) of the female respondents had low level of awareness, 15 (2.42%) males and 41 (6.60%) female respondents had average level of awareness while 215 (34.62%) males and 348 (56.04%) female respondents had high level of awareness of the use of google classroom for instruction. One (0.16%) with 3 – 5 years of exposure to the use of computer had low level of awareness of the use of google classroom for instruction, 13 (2.19%) with 0 – 2 years of exposure to the use of computer, 27 (4.54%) with 3 – 5 years of exposure and 15 (2.52) with over 5 years of exposure to the use of computer had average level of acceptance while 149 (25.04%), with 0 – 2 years of exposure, 225 (37.82%) with 3 – 5 years of exposure and 165 (27.73%) with over 5 years exposure to the use of computer's level of awareness of the use of google classroom for instruction was high. In overall, two (0.30%) of the students' level of awareness is low, 41 (6.50%) level of awareness is

average while 586 (93.20%) level of awareness is high. Using majority rule, it can be inferred that the students' level of awareness of the use of google classroom for teaching and learning is high. The result showed that the students' level of awareness is high across the various demography.

Research Question 2: what is the extent of the colleges of education students' acceptance of google classroom for instructional purposes?

The 20 items in the section C of the questionnaire that gathered information on the students' acceptance were collapsed. Scores of each of the respondents was determined by the summation of the scores in each of the items. The maximum score obtainable was 80. The mean of the respondents scores was determined and expressed as percentage of the maximum score obtainable. Mean of less than 40% were considered poor, 40% - 49% were fair, 50% - 60% were considered good, 61% - 74% were considered very good while mean score of 75% and above was considered excellent.

**Table 2: Mean, standard deviation, mean expressed as percentage of students' acceptance of google classroom for instructional purposes in colleges of education in southwestern Nigeria**

| N = 629    |         |         |       |                   |         |           |
|------------|---------|---------|-------|-------------------|---------|-----------|
|            | Minimum | Maximum | Mean  | Std.<br>Deviation | Percent | Remark    |
| Acceptance | 33.00   | 80.00   | 62.99 | 9.33              | 78.74   | Excellent |

Table 2 showed the students' acceptance of google classroom for instructional purposes. The minimum score obtained by the students and the maximum score obtained by the students were 33.00 (41.25%) and 80.00 (100.00%). The mean of the respondents score was 62.99 (78.74%). This value is equivalent to excellent of categorization. Thus, it can be inferred that the acceptance of google classroom for instructional purposes by students in colleges of education in Nigeria is excellent.

### **Hypotheses:**

H<sub>0</sub>1: Students' awareness has no significant influence on their acceptance of google classroom in colleges of education in southwestern Nigeria

This hypothesis was tested at  $p < 0.05$  using regression analysis and the corresponding F – statistics

**Table 3: Analysis of Variance (ANOVA) and regression analysis of the influence of students' awareness on acceptance of google classroom in colleges of education in southwestern, Nigeria**

| Model |            | Sum of Squares | df  | Mean Square | F       | Sig.              | R     | Adjusted R <sup>2</sup> |
|-------|------------|----------------|-----|-------------|---------|-------------------|-------|-------------------------|
| 1     | Regression | 22094.636      | 1   | 22094.636   | 425.127 | .000 <sup>b</sup> | 0.636 | 0.403                   |
|       | Residual   | 32586.324      | 627 | 51.972      |         |                   |       |                         |
|       | Total      | 54680.960      | 628 |             |         |                   |       |                         |

a. Dependent Variable: Acceptance

b. Predictors: (Constant), Awareness

Table 3 presents the result of the analysis of variance and the regression analysis of the influence of students' awareness on acceptance of google classroom instruction. Results showed that there is significant influence ( $F_{(1,628)} = 425.127$ ;  $p < 0.01$ ;  $R^2 = 0.403$ ). The Table showed that the regression model predicts the students' acceptance significantly well. The result also showed that 40.3% of the influence can be explained. The analysis also gave the equation for prediction as:  $A = 18.84 + 1.50X$  where A = Acceptance and X = Awareness. The hypothesis which state that students' awareness has no significant influence on their acceptance of google classroom in colleges of education in southwestern Nigeria is therefore rejected. These findings agree with Rogers (1995) innovation and diffusion theory.

H<sub>02</sub>: sex, ownership of institutions and exposure to usage of computer have no significant interaction effects on the influence of students' awareness on acceptance of google classroom in colleges of education in southwestern Nigeria.

**Table 4: 2-way Analysis of Variance (2-way ANOVA) of the interaction effects of sex, ownership of institutions and exposure to use of computer on the influence of students' awareness on acceptance of google classroom for instructions.**

Dependent Variable: Acceptance

| Source                      | Type III Sum of square | df | Mean Square | F        | Sig. |
|-----------------------------|------------------------|----|-------------|----------|------|
| Corrected Model             | 13303.952 <sup>a</sup> | 24 | 554.331     | 8.341    | .000 |
| Intercept                   | 127488.316             | 1  | 127488.316  | 1918.234 | .000 |
| Level of Awareness          | 3242.914               | 2  | 1621.457    | 24.397   | .000 |
| Ownership of Institution    | 366.772                | 1  | 366.772     | 5.519    | .019 |
| Sex                         | 72.162                 | 1  | 72.162      | 1.086    | .298 |
| Exposure to use of computer | 103.717                | 2  | 51.858      | .780     | .459 |
| Level of Awareness *        | 10.506                 | 1  | 10.506      | .158     | .691 |
| Ownership of Institution    |                        |    |             |          |      |
| Level of Awareness *        | 491.249                | 1  | 491.249     | 7.392    | .007 |
| Sex                         |                        |    |             |          |      |

| Source                      | Type III Sum of square | df  | Mean Square | F    | Sig. |
|-----------------------------|------------------------|-----|-------------|------|------|
| Level of Awareness *        | 11.715                 | 2   | 5.857       | .088 | .916 |
| Exposure to use of computer |                        |     |             |      |      |
| Error                       | 37351.257              | 562 | 66.461      |      |      |
| Total                       | 2396867.000            | 587 |             |      |      |
| Corrected Total             | 50655.210              | 586 |             |      |      |

a. R Squared = .263 (Adjusted R Squared = .231)

Table 4 showed the results of the interaction effects of sex, ownership of institutions and exposure to use of computer on the influence of students' level of awareness on the acceptance of google classroom for instructional purposes. The results showed that ownership of institution has no significant interaction effect ( $F_{(1,586)} = 0.158$ ;  $p = 0.691$ ). Exposure to use of computer also has no significant interaction ( $F_{(2,586)} = 0.088$ ;  $p = 0.916$ ) while sex has significant interaction ( $F_{(1,586)} = 7.392$ ;  $p = 0.007$ ). Since sex has interaction effect, the hypothesis which state that sex, ownership of institutions and exposure to usage of computer have no significant interaction effects on the influence of students' awareness on acceptance of google classroom in colleges of education in southwestern Nigeria is not rejected. These results showed that neither school ownerships nor exposure to the use of computer had effects on the influence of students' awareness on acceptance of google classroom for teaching and learning. Sex has interaction effect. Male students are more technologically savvy than their female counterpart. Male students are more positive in using internet driven information technology platforms for instructions. While perceived ease of use influence females' acceptance of technology, it has no influence on the males' acceptance of technology (Assaker, 2020).

### Discussion of findings

The reason for the high level of acceptance can be traced to the students' high level of internet access (Anyim, 2020). Students engaged google to search for information when given assignments. The fact that google is one of the most popular search engines among students in Nigeria and almost that all the students in higher institutions of learning have google mail account (gmail) (Anyira & Njoeteni, 2020); Akande, (2019); Anyim, 2020; Okocha & Owolabi, 2020) would have accounted for the excellent acceptance of google classroom for instructional purposes. This could have also contributed to the high level of awareness of the platform. Google platforms are cost effective and users friendly. All that is required to make use of google classroom is a gmail account which is free and easy to create by the students. The more the students are aware of the use of google classroom for instructional purposes the higher the acceptance. This is also in accord with Baabdullah (2020) who concluded that awareness has significant effect on adoption of Mobile Social Network Games (M-SNGs). The low patronage in the use of google classroom for instructions in the colleges of education could therefore be traced to the lecturers'

attitude and acceptance.

### **Conclusion**

Adoption of blended learning and internet driven information technology platforms for classroom instructions has been advocated in providing access to education at all level of education in Nigeria. Universities are leveraging on the opportunities provide by these platforms in providing quality education to the students without the constraint of time and space. With increasing in the awareness of the use of google classroom to provide cost effective and user-friendly platforms for online instructions, integration of such performance to instructional delivery at the colleges of education will be made easy. The challenges of traditional lecture method of instructions, ineffective classroom management and issues of rote learning can be ameliorated.

### **Recommendations**

The study recommended that more awareness on the use of google classroom for instructional purposes should be created among students in colleges of education in southwestern Nigeria. This should be done particularly among the female students. Lecturers in colleges of education should leverage on the students' acceptance of google classroom for instructional purposes to integrate the use of e-learning or other online modes of instructions in teaching the students. This will help in providing quality education to the students even outside the four-walled classroom. Since google classroom is cost effective and user friendly, conscious efforts should be taken by all stakeholders in removing all identified hindrances to its adoption for classroom instructions in colleges of education in Nigeria. Administrators of colleges of education should explore the opportunity of linking the students' institution electronic mail to google accounts so as to be able to customize classroom activities for each of the colleges.

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