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Barriers Limiting the Use of Google Classroom for Learning Vocational and Entrepreneurship Courses

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ABSTRACTS

The dream of every undergraduate is to get a fascinated well-paid Job after school. One of the courses that could aid students' employment is the vocational and entrepreneurship courses. Due to the high number of students who partake in this course, some technologies were employed for the instructional process. One of such is the Google classroom. However, there are some complains from students on these learning technological platforms. This study therefore investigates the barriers limiting the use of google classroom for learning vocational and entrepreneurship courses. This study employs the survey method, and 250 undergraduates were purposively sampled. The findings established that Poor power supply, loss of class control, High cost of purchasing relevant materials, Lack of adequate support system and laziness encouragement are barriers that hinder students' use of google classroom for learning vocational and entrepreneurship courses. The study concluded that some barriers which hinders students from using Google classroom for learning should be resolved. It was however recommended that the use of google classroom should be encouraged in schools, not only for learning vocational and entrepreneurship courses but for other courses.

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1. INTRODUCTION

Since the advent of Information and communication technologies (ICTs), it has been a major driving forces of knowledge-based and globalized societies of a new world era. It has accelerated rapidly since its adoption and its use has resulted in the globalization of knowledge and information resources (Islam & Islam, 2017). ICTs are playing an integral role in organizations and all other sectors they've been utilized including the education sector. The adoption and use of ICTs in education is highly expected as the 21st century students are digital natives; therefore, it is only natural to adapt it into their learning. This innovation brought about new methods and approaches to teaching and learning. It has caused a shift in learning patterns from face to face towards more open education, these including utilizing information and communication technology as learning resources and meeting their needs for almost unlimited information (Rahmad et al., 2019).

Information and Communication Technology (ICT) have become and taken a key role in the field of education, it has led to the development and modification in educational methodology and curriculum delivery globally. Ever since its adoption It has become an indispensable instrument for the development of quality teaching and learning and it has dramatically reshaped the teaching and learning process in the education system. ICT offers powerful learning environments that can transform the learning and teaching process so that students can deal with knowledge in an active, self-directed and constructive way (Atsumbe et al., 2012). The application of ICT to education has given rise to a new set of vocabularies used to describe new approaches to learning and curriculum delivery. Such terms include e-teaching, e-learning, and so on which are facilitated via the internet.

Google Classroom is a free web service developed by Google for schools that aims to simplify creating, distributing, and grading assignments (Okmawati, 2020). Google Classroom education is one of the features provided by Google Apps for Education (GAPE) which was released to the public on August 12, 2014. It is an application that allows the creation of classrooms in cyberspace. It is used as a means of communication between students and lecturers, in organizing classes, especially when students and lecturers cannot do face-to-face learning (Izenstark & Leahy, 2015). The primary purpose of Google Classroom is to streamline the process of sharing files between teachers and students.

Over the years, a stereotypical view concerning technology use and gender has been developed, which is, relative to men and boys, women and girls might have more negative attitude towards technology and technology use, and they would be less actively engaged in technology-related activities and behaviors (Islahi, 2019). However, the research findings from various individual studies about gender difference in the attitude toward technology use have been inconsistent, making it difficult to draw any firm conclusion. Literature suggests that gender represents critical part in realizing the variation in perceptions towards technology skills and attitudes on e-learning which includes using google classroom for learning; Results gotten from similar studies will be reviewed and related to the study.

One of the reasons that has caused the Nigeria educational system to be greatly faulted by most people is the inability of the system to provide a structural employment plan for Universities graduates after the completion of their Bachelor degrees and these has led to increase in the number of dependent population of the nation and has in turn affected the economic growth of the country. Unemployment often becomes the stock of all those individuals who are not engaged in any productive activity and who are either unable to find work on the prevailing real wage rate or who are in the process of switching to a new job.

Most of the graduates been produced are for export purpose since Nigeria labor market is shrinking and not expanding to the extent that smaller organization who cannot afford to pay more are downsizing, right sizing or even outsourcing their employment agencies (Olanipekun *et al.*, 2015). Therefore, it has led to the continuous loss of good size of our human capital to other nations, where they contribute in no small measure to the development of the host economies, while those who cannot go abroad remain frustrated, unemployed and underemployed (Brimah *et al.*, 2014).

1.1. Statement of the problem

It is no more news that technology can greatly enhance teaching and learning and help in achieving educational objectives. The integration of technology in the classroom can help teachers to present their lesson in a better way, it also helps the teacher in the explanation of difficult concepts, so students are able to easily understand those concepts. Its rapid advancement in recent years has brought about new methods and approaches in which learning can be delivered. Education has moved on from the past time where classes are held directly (face to face) in a teacher centered environment to a more enhanced and virtual environment where learning can take place without the teacher and students having to be in the same geographical location. The teacher or instructor can simply send learning contents, the students then access it and give feedback to the teacher on the learning contents.

Educators worldwide had no choice but to leverage online education technologies and applications to further teaching and learning. There are various mediums to be used including Microsoft Teams, Facebook Live, Google Classroom, Webex, Zoom and other chat applications like Whatsapp and Telegram. One of the platforms used which is now very popular is the google classroom, it allows teacher and students to share, edit and comment on learning materials thereby leading to continuity in passage of knowledge. Even though google classroom has been used by Unilorin students before the pandemic, there could however be several challenges against the use of google classroom especially for learning vocational and entrepreneurship courses, which is why this study investigated the barriers limiting the utilization of google classroom by undergraduates in learning vocational and entrepreneurship courses.

1.2. Purpose of the study

1. Examined the barriers against the use of google classroom for learning vocational and entrepreneurship courses.
2. Investigated the influence of undergraduates' gender on the barriers limiting the utilization of google classroom for learning vocational and entrepreneurship courses.
3. Investigated the influence of undergraduates' academic level on the barriers limiting the utilization of google classroom for learning vocational and entrepreneurship courses.

1.3. Research questions

1. What are the barriers against the use of google classroom for learning vocational and entrepreneurship courses?
2. What influence does undergraduates' gender have on the barriers limiting the utilization of google classroom for learning vocational and entrepreneurship courses?
3. What influence does undergraduates' academic level have on the barriers limiting the utilization of google classroom for learning vocational and entrepreneurship courses?

1.4. Research hypotheses

The following null hypotheses were tested in the study:

Ho1: There is no significant difference between the barriers limiting male and female undergraduate on the utilization of google classroom for learning vocational and entrepreneurship courses.

Ho2: There is no significant difference among barriers limiting undergraduate students' utilization of google classroom for learning vocational and entrepreneurship courses based on their Academic level.

1.5. Literature review on barriers limiting the use of google classroom for learning by undergraduates

It has been stated and confirmed from different studies reviewed above that google classroom has what it takes to improve teaching and learning, however there are factors that limits the effectiveness of using google classroom for learning. Studies, (Nwana, 2012), have shown that there are constraints to the successful utilization of google classroom (Ezeugbo & Asiegbu, 2011) and e-learning facilities for curriculum implementation in schools. Otuka (2021) expressed that computer literacy in Nigeria was still at its lowest ebb mainly in the last decade because e-learning which is the umbrella term for the use of google classroom is faced with a lot of challenges some of which include inadequate e-learning facilities, lack of skilled manpower to manage the available resources, inadequate funding of higher education and reluctance/inability on the part of the lecturers to fully integrate new technologies in their pedagogical practices.

Entrepreneurship education in the same vein is a learning process that requires from learners/students' self-direction and self-management, unlike the traditional stereotype teaching. Entrepreneurship education seeks to provide students with the knowledgeable, skills and motivation to encourage entrepreneurial success in a variety of schooling from primary or secondary schools through graduate university programmes (Olanipekun et al., 2015; Chuang, 2014). Akinola, (2012) defined entrepreneurship education as the willingness and ability of an individual to acquire educational skills to explore and exploit investment opportunities, establish and manage a successful business enterprise. Entrepreneurship education has also been described as a formal or informal structured learning that inculcates in students/trainees the ability to identify, screen and seize available opportunities in the environment in addition to skill acquisition.

Ezeugbo & Asiegbu (2012) identified major e-learning challenges as inadequate funding, lack of technical background and inadequate facilities and noted that the application of e-learning in teaching will thrive only if these challenges or constraints were properly addressed. Nwana (2012) was of the opinion that dearth of trained teachers for e-learning, lack of facilities, infrastructures and equipment were among the factors that militate against effective utilization of google classroom. These challenges may be part of reasons why most teachers, including science teacher educators appear to still stick to the old traditional method of lecture in delivering their lessons.

E-learning is the electronic support of learning, whereby, in terms of implementation, it particularly focus lies on the specific didactic preparation and production of learning content for delivery through electronic media, as well as the underlying (up-to-date) software and technical platforms (Sitzmann, 2015). Belaya, (2018) stated that the definition of e learning can be divided into two groups. The first group of definitions covers e-learning as a generic term for computer-aided learning in the broad sense. All possible forms of teaching and

learning are implied: computer-aided, multimedia, tele-medial, net-based. According to the literal meaning of the term “electronic media”, not only the computer but also the television, the radio and the CD/DVD player could be included. The second group of definitions includes the concept of e-learning in the narrower sense. Similar to using the prefix “e” in other words, such as e-commerce or e-business, the term e-learning stands for Internet-based applications. Only the Internet-based transmission of learning programs or content is implied here (Kerres, 2012). In her dissertation, Lenz, (2009) points to a third possible definition of the term e-learning: learning just-in-time, that is, it is independent of time and place. It is not of importance whether the process is online or offline, the learner can always access the materials shared.

The poor accessibility to internets and other ICT resources is also a major stumbling in the utilization of google classroom for learning by undergraduates. In a study conducted by Mathipa & Mukhari (2014) poor accessibility to internet and computer resources is one of the main problems most developing countries are facing in the implementation of technology in education. The scholars asserted that the lack of access to internet and instructional materials are the main causes of the non-productive nature of Nigerian school system and poor academic performances of students in Nigerian schools. They went further to state that poor internet connectivity hampers the use of internet resources. Also, the browsing speed in Nigeria is relatively low compared to the amount paid for the bandwidth which in turn discourages lecturer and students, most parent also consider computers and mobile phones luxury instead of necessity thereby refusing to equip their children with such provisions (Osuafor & Emeji, 2015).

Certainly, the most basic step toward effective technology integration is widespread access to equipment necessary to run educational computer programs. If computer lab time is limited to one hour per week, persistent use of educational technology is not viable. While many schools across the country are making the transition to one-to-one (1:1) computing (Warschauer *et al.*, 2014), many students do not have regular and reliable access to a computer. Inconsistent computer access makes it extremely difficult for instructors to integrate technology into existing lesson plans. Routine access to hardware (i.e., laptops or tablets), software (e.g., reading and writing software, internet browsers), and internet connection is a fundamental requirement.

Another factor limiting the use of google classroom is the high Cost of Ownership of mobile phones and laptops; there is a realization in Nigeria that the government alone cannot adequately shoulder the high cost of quality education in the 21st century. Partnership between government, industry and stakeholders appears to be the preferred option. In Nigeria a number of organizations for example, Education Trust Fund (ETF), TETFUND, etc donate ICT laboratories equipped with 20-50 computers to some tertiary institutions. In addition, they pay for one year of two years internet subscription and mandate the recipient institution to sustain the facility. Most of these laudable efforts have failed because the recipients were unable to pay for the high cost of equipment renewal, maintenance and bandwidth. This is because network costs in Nigeria consist of not only capital cost but also high operating cost (Osuafor & Emeji, 2015).

Lack of constant power supply is another major stumbling block facing the use of google classroom by undergraduates; the irregular supply of electrical power has crippled the Nigerian economy and hindered the progress of research carried out by institutes, groups and individuals in the country. It is maddening for any establishment to start off new projects

without addressing the almighty power supply problem. It is even worse to embark on extensive technological project within an educational institution, without solving power problems first. Frequent power breakdowns and power cuts, has increased the cost of owning ICT infrastructure (mobile phones, computer lab), institutions have to purchase powerful generators and other alternative means of electricity supply to power up devices to be used for learning online through google classroom, And even off campus students might experience breakdown in their learning as the electricity supply might be off for days and even weeks.

Another potential factor is teachers' attitudes and beliefs, these are crucial factors in determining the role and effectiveness of technology in classrooms. Attitudes and beliefs about both educational technology and pedagogy in general will ultimately influence how teachers implement technology. Now that google classroom is being widely used in schools due to the pandemic, perhaps the most important question is how to best implement technology, rather than whether the technology will be used (Ertmer et al., 2012). A study conducted by Mwila (2018) show that there is a positive correlation between the frequency of a technology use and teachers' attitude towards ICT integration.

Besides, another study reveals that there is positive correlation between the frequency of ICT use and teachers' computer literacy (Mahdum et al., 2019). Relating this to the study it shows that the use of google classroom by teacher and their attitude towards it are closely related. Understanding the relationship between the frequency or intensity of ICT use and teachers' perceptions might help in more effective decision-making in terms of ICT integration in education (Mahdum et al., 2019). Consequently, teachers' expertise and lack of knowledge to evaluate the use and role of ICT in teaching (or technophobia in teachers and teacher trainers) are prominent factors hindering teacher's readiness and confidence in using ICT support (Mahdum et al., 2019).

And lastly, lack of Technical expertise and support; in most schools, technical difficulties sought to become a major problem and a source of frustration for students and teachers and cause interruptions in teaching and learning process. According to Ertmer et al., (2012) the most commonly cited reason for lack of technology implementation in the classroom is inadequate professional development and training. If there is lack of technical assistance and no repair on it, teachers are not able to use the classroom technology for temporarily (Jamieson-Proctor et al., 2013). The effect is that teachers will be discouraged from using computers because of fear of equipment failure since they are not given any assistance on the issue. Turel and Johnson, (2012) revealed that technical problems become a major barrier for teachers. These problems include low connectivity, virus attack and printer not functioning. However, there are a few exceptions. Schools in the countries like Netherland, United Kingdom and Malta have recognized the importance of technical support to assist teachers to use technology in the classroom (Yang & Wang, 2012). In the same vein adequate technical assistance is needed for both the students and the teachers when using the google classroom, this will help solve any difficulty they might encounter while using the app for learning.

Suri & Sharma, (2013) clearly expressed that no gender variations about the utilization of e-learning by students for learning. These result fit with several new studies which exposed that the gap between male and female in this issue is narrowing Bhattacharjee, (2008). Yacob et al., (2012) examined the familiarity of university students in e learning, discussion of analysis were carried out on the students' perceptions regarding to gender, technology usage and the knowledge about e-learning implementation. Results shows that gender have a

significant effect on attitudes towards e-learning (Zabadi & Al-Alawi, 2016), 46% of males from first-year students prefer replacing “traditional learning” by using computer in learning, while only 22% of women support this result. Relating this report to the present study, it means males have tendency to use google classroom for their learning compared to their female counterparts.

2. METHODS

This section deals with the method that was used in the conduct of this research work. This is a descriptive research designed to examine the barriers limiting the use of Google classroom for learning Vocational and Entrepreneurship in University of Ilorin. The research employed the use questionnaire to elicit information from respondents. Survey research employs questionnaire in this regard to gather necessary and meaningful information from the respondents. The population for this study will comprise all students at University of Ilorin, Kwara state. The total number of students in University of Ilorin is 45,885 and simple random sampling technique were used to select 250 respondents. Some of the populations were purposively selected based on gender.

The research instrument for this study was researchers-developed. The questionnaire consists of two sections that is, A and B. Section A consist of various questions on the respondents’ demographic data that include faculty, gender, and level. Section B will comprise of structured questions which is in scale response mode. The questionnaire was based on using four point acting scale. The formats of response are: Strongly Agree (SA), Agree (A), Strongly Disagree (SD), and Disagree (D).

The instrument was validated by four experts in educational technology and business education for face and content validity. Their comments observation and corrections were used to produce the final draft of the questionnaire. Letter of introduction were produced and taken to the Dean of each faculty to seek permission to conduct in their faculties. Ethical considerations were considered as student were not forced to attest to the questionnaire. Also, their data were only used for the benefits of this research as their anonymity were kept confidential. The data collected for the study were analysed using frequency counts, percentages, mean scores. All hypotheses were tested at 0.05 level of significance. t test was used in testing Hypothesis one and hypothesis two was tested with Analysis of Variance (ANOVA).

2.1. Data analysis and results

This section presents the analysis on the undergraduates’ barriers limiting the use of Google classroom for learning Vocational and Entrepreneurship in University of Ilorin, Nigeria and the interpretation of the data through the analysis of the questionnaire items after the administration of the research instrument were done. The section presents the description of the research subjects, statistical analyses and results based on research questions and research hypotheses stated earlier in chapter one. The demographic information of the respondents and the results of the analyses are also presented both in tables and figures.

A total of 250 undergraduate students from University of Ilorin, Ilorin, Nigeria, comprising of 120 male students and 130 female students made up the sample for this study. The 250 respondents were given the research instrument with the items, and eventually were available and responses from 250 undergraduate students were properly filled and returned

amounting to 100% response rate. The sample size for this research was sufficient and representative.

2.2. Demographic data

The respondents’ demographic data are presented in **Tables 1-5**. **Table 1** shows that male and the female respondents formed the study of the total sampled respondents with 120 (48.0%) are male while 130 (52.0%) females formed different percentage of the total sampled respondents respectively. This is also shown graphically in **Figure 1**. The pie chart revealed that female undergraduate students were more than their female counterparts.

Table 2 shows that respondents from first to fourth year in the university formed the study of the total sampled respondents with 19 (7.6%) are in 100 level, 25 (10.0%) are in 200 level, 85 (34.0%) are in 300 level while 121 in 400 level formed a percentage 48.4% of the total sampled respondents respectively. This is also shown graphically in **Figure 2**. The chart in figure indicated that majority of the respondents were in their fourth year of their academic level, others are in first year, second year and third year respectively.

Table 1. Respondents’ data based on their gender.

Gender	Frequency	Percent	Cumulative Percent
Male	120	48.0	48.0
Female	130	52.0	100.0
Total	250	100.0	

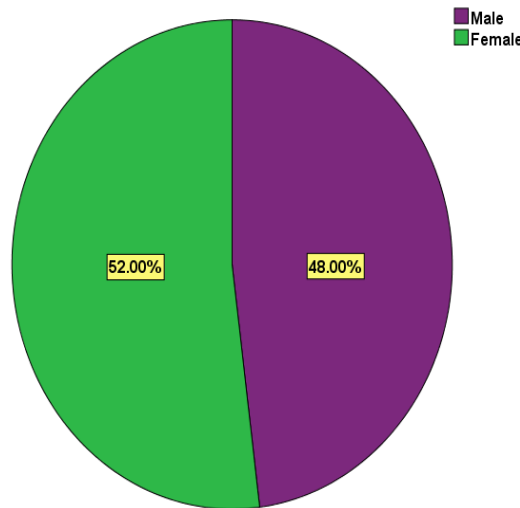


Figure 1. Graphical illustration of respondents' gender.

Table 2. Respondent’s data based on their academic level.

Level	Frequency	Percent	Cumulative Percent
100	19	7.6	7.6
200	25	10.0	17.6
300	85	34.0	51.6
400	121	48.4	100.0
Total	250	100.0	

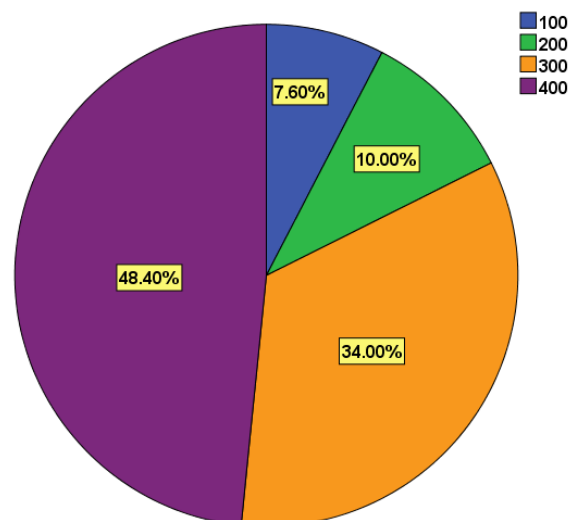


Figure 2. Graphical illustration of respondents' academic level.

3. RESULTS AND DISCUSSION

3.1. Research question one

What are the barriers against the use of google classroom for learning vocational and entrepreneurship courses?

The mean and Standard deviation was employed to ground the barriers against the use of google classroom for learning m of google classroom for learning vocational and entrepreneurship courses was presented in table 3. Poor power supply, loss of class control, High cost of purchasing relevant materials, Lack of adequate support system and laziness encouragement are barriers that hinder students' use of google classroom for learning vocational and entrepreneurship courses.

Table 3. Barriers against the use of GC for vocational and entrepreneurship courses.

S/N	Items	Mean	SD
1.	Poor power supply affects the use of electronic Devices for teaching and learning	3.56	.607
2.	Lecturers may lose class control if the use of google classroom is encouraged	3.17	.738
3.	Lecturers prefer the 'talk and chalk' method of teaching	3.16	.807
4.	High cost of purchasing relevant materials online discourages the use of google classroom	3.18	.751
5.	Lack of adequate support system discourage undergraduates to use of google classroom for learning.	3.44	.652
6.	High cost is a factor that deter the use of the internet by students and lecturers	3.18	.663
7.	Use of google classroom encourages laziness in students	3.12	.832
Grand Mean on Barriers Limiting the Use of Google Classroom for Learning Vocational and Entrepreneurship Courses		3.2600	.43028

3.2. Research questions two

What influence does undergraduates' gender have on the barriers limiting the utilization of google classroom for learning vocational and entrepreneurship courses.

3.2.1. Hypothesis one

There is no significant difference between the barriers limiting male and female undergraduate on the utilization of google classroom for learning vocational and entrepreneurship courses

T-test was conducted to determine if there is any significant difference between the barriers limiting male and female undergraduate on the utilization of google classroom for learning vocational and entrepreneurship courses. The result is shown in **Table 4**.

Table 4 indicates that $t(248) = 0.27$, $p = 0.79$. This means that the stated null hypothesis was not rejected. This was as a result of the t-value of 0.268 resulting in 0.79 significance value which was greater than 0.05 alpha value. By implication, the stated null hypothesis was established thus: There was no significant difference between the barriers limiting male and female undergraduate on the utilization of google classroom for learning vocational and entrepreneurship courses in **Table 4**.

3.3. Research question three

What influence does undergraduates' academic level have on the barriers limiting the utilization of google classroom for learning vocational and entrepreneurship courses.

3.3.1. Hypothesis two

There is no significant difference among barriers limiting undergraduate students' utilization of google classroom for learning vocational and entrepreneurship courses based on their Academic level.

The analysis for testing this hypothesis as shown in **Table 5** was ANOVA statistical tool on students' utilization of GC based on their Level. The analysis on significant difference among barriers limiting the undergraduate students use of Google classroom for learning Vocational and Entrepreneurship based on their Academic level is displayed in **Table 5**. The null hypothesis was rejected as $F(3, 249) = 0.56$ and $p = 0.00 > 0.05$. Since the p-value was greater than the significance value of 0.05, the hypothesis was not rejected. Thus, there was no significant difference among barriers limiting the undergraduate students use of Google classroom for learning Vocational and Entrepreneurship based on their Academic level.

Table 4. Undergraduates' utilization of google classroom based on gender.

Gender	N	Mean	Std. Deviation	Df	t	Sig. (2-tailed)
Male	120	3.252	.473	248	-0.268	0.79
Female	130	3.267	.388			

Table 5. ANOVA on barriers of utilization of Google classroom by academic level

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	.315 ^a	3	.105	.563	.640
Intercept	1502.091	1	1502.091	8070.560	.000
Level	.315	3	.105	.563	.640
Error	45.785	246	.186		
Total	2703.000	250			
Corrected Total	46.100	249			

a. R Squared = .007 (Adjusted R Squared = -.005)

This study investigated the barriers limiting the undergraduates' utilization of google classroom in learning vocational and entrepreneurship courses in university of Ilorin, Nigeria. The result from the study indicated that Undergraduate students identified poor power supply, loss of class control, high cost of purchasing relevant materials, lack of adequate support system and laziness encouragement as barriers that hinder students' use of google classroom for learning vocational and entrepreneurship courses. This goes in accordance with the study conducted by [Mathipa & Mukhari \(2014\)](#) who stated that poor accessibility to internet and computer resources are the main causes of the non-productive nature of Nigerian school system and poor academic performances of students in Nigerian schools. Also, there are constraints to the successful utilization of google classroom ([Ezeugbo & Asiegbu, 2011](#)) and e-learning facilities for curriculum implementation in schools. In addition, network costs in Nigeria consist of not only capital cost but also high operating cost ([Osuafor & Emeji, 2015](#)).

4. CONCLUSION

The results gathered at the end of this research work shows that when there are some barriers against the use of google classroom for learning vocational and entrepreneurship courses. If solutions can be provided in resolving these barriers, it will attract and encourage students in using the technologies. This will not only reduce the time used in learning lesson contents, but it will also foster collaboration and interactivity among lecturers-students and even between the students.

5. RECOMMENDATIONS

Based on the results drawn from this research, the recommendations below have been made:

1. The use of google classroom should be encouraged in schools, not only for learning vocational and entrepreneurship courses but for other courses.
2. Lecturers should encourage the use of google classroom among the students and within themselves and see it not as their replacement but as a tool to further enhance and improve the quality of their teaching towards achieving instructional objectives.

6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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