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Extent of Awareness and Utilization of Google Classroom in Teaching and Learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Nigeria

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Abstract:
The study investigated the awareness and utilization of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria. Four research objectives with a corresponding four research questions guided the study. A descriptive survey research design was used. The population of the study comprised of total number of 337 undergraduate students and a total of 18 lecturers in the Department of Agricultural Education of Joseph Sarwuan Tarka University, Makurdi. All members of the population (355) were used as samples for the study as they were all accessible and manageable. A structured questionnaire was used as an instrument for the study. The instrument was found valid for collecting data by an expert in the department. Data collected from the study were subjected to statistical analysis through the use of mean and standard deviation. The findings revealed that to a very high extent, the students and lecturers are not aware of and also do not utilize Google Classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State. However, the study indicated that despite the importance of Google Classroom in the teaching and learning of Agricultural Education, the effective use of Google Classroom is faced with several factors. Also, possible ways of enhancing the use of google classroom in teaching and learning of Agricultural Education at Joseph Sarwuan Tarka University, Makurdi, Benue State were proffered. It was however recommended that universities should encourage their lecturers to start using Google Classroom as a medium of teaching their students and that universities should organize a seminar and workshops for their lecturers to train them on the use of Google Classroom as a medium of teaching.

INTRODUCTION

Background of the Study

The integration of technology is not a necessarily new trend in the field of education. For decades, schools around the world have attempted to implement technology plans which aim to supply more frequent use of technology to their students. The assumption is that, technology cannot only improve day-to-day classroom instructions but also, its interactive nature and necessity for life after school have lasting effects on students (Iftakhar, 2016; Keppler, Weiler & Maas, 2014). Many schools began with simple computer labs stationed within the school building for periodic use scheduled by the teachers (Bebell & Kay, 2010; Sell, Cornelius-White, Chang, McLean, & Roworth, 2012).Then, as the personal computing trend continued to grow and as an effort to stay abreast of the 21st century skills, schools began purchasing more computers and other

technology devices with the goal of having much more available devices for student usage (Bebell & Kay, 2010; Bebell & O'Dwyer, 2010; Keppler et al., 2014).

In recent years, there have been drastic changes in the classroom that affected the delivery of instruction and how students are being taught, their classroom experience and how they learn. For instance, most American educators have made the switch from writing with chalk on a chalkboard to writing with dry-erase marker on a dry-erase board or by writing using a touch screen on a Smart Board.

Globally, many school districts introduced a one-to-one technology initiative such that all students have access to a device such as a chrome book, laptop, iPad, etc. Some educators have gone fully digital and paperless, moving toward a greener classroom as well as preparing students for the technological advances of the future. Conversely, some educators have technology-free classrooms and all student assignments are carried out on paper. Most educators at this point use a balance between technology use and paper use when it comes to the medium in which they educate their students. Recently, Learning Management Systems (LMS) such as Blackboard, Canvas, Google Classroom, and Moodle have become increasingly popular at middle school, high school, and higher education levels.

Digital tools stress learners continuing learning activities through technology devices such as desktop computers, notebooks, tablets, and smartphones (Keane, 2012). These devices allow learning to take place without teachers and students meeting face-to-face. Google Classroom is a free application designed to assist students and teachers in connecting, working together, organize and creating 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 include web tools like Google Docs, Google Drive, Gmail, etc. All users with GAFE accounts, have access to these web tools (Keppler et al., 2014). Google Classroom can be used at any level of education (basic, post-basic and tertiary), but this depends on the teachers' and students' competence (Bell, 2015). 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.

It also has some benefits such as being paperless, which can be accessed anywhere and everywhere as long as there is an internet connection and from any devices to communicate between teachers and students, to give feedback to students, and personalized learning. It has a learning feature that makes teachers create and handle assignments actively and also provide feedback to students. Google Classroom can be a tool that makes learners become active participants. Google Classroom makes it easier for teachers to handle students' work. It is beneficial for both teachers and students because it is easy and simple to use (Nagele, 2017).

Lots of activities can be done with Google Classroom when the class is ongoing. The activities include; firstly, making announcements: The teacher can give announcements about the update of the class in this section. They can attach files and class materials as well. Secondly, for creating assignments: this is the most substantial feature in Google Classroom. Teachers can upload assignments for students within due time to submit. Students also can download materials that have been uploaded by the teacher to enable them to finish up their assignments. Thirdly, it gives room for the re-use of previous posts: important posts can be re-used by the teacher in this

section, such as announcements, assignment, and questions. And finally, its use in asking questions: in this section, students can create or ask questions to be discussed with the teacher or other students if allowed by the teacher.

Awareness is the state of being conscious of something. More specifically, it is the ability to directly know and perceive, to feel, or to be cognizant of events (Bell, 2015). The development of information and communication technology continues to increase along with the increasing human needs, without exception in the field of education (Husain (2014). Google Classroom can make it easier for teachers to carry out the learning process because it can save time Google Classroom can be accessed anywhere and anytime using an internet network connection. Google Classroom can be accessed using a PC or via mobile phones and tablets based on Android and iOS. With this Google Classroom, teachers and students can connect digitally, this can make it easier for teachers to provide materials and assignments to students and vice versa. One of the advantages of Google Classroom is that students can have online discussions with teachers or other students using the application.

Agricultural education is the teaching of agriculture, natural resources, and land management (Mathews, 2021). At higher levels, agricultural education is primarily undertaken to prepare students for employment in the agricultural sector (Phipps, 2018). Classes taught in an agricultural education curriculum may include horticulture, land management, turf grass management, agricultural science, small animal care, machine and shop classes, health and nutrition, livestock management, and biology. The objectives of agricultural education at this level of education can only be attainable through effective instruction by teachers of agricultural science. Effective instruction is therefore the type of quality teaching and learning that brings about the desired results in the learners, for any instruction to be effective, the teacher has to have a good knowledge of the subject content, adopt the right methodology, select and use appropriate instructional strategies and skills or proficiency in delivering the instruction. Effective instruction is a general term that means systematically providing knowledge.

Teaching refers to the process of imparting knowledge and skills by a teacher to a learner. It encompasses the activities of educating or instructing. It is an act or experience that has a formative effect on the mind, character, or physical ability of an individual (Ayeni, 2011). Ambrose and Flanders (2010) defined learning as a change in knowledge, beliefs, behavior, or attitudes. This change requires time, particularly when one is dealing with changes in beliefs, behaviors, and attitudes.

The teaching and learning processes are effective when relevant instructional strategies are adopted. It is against this background that this study was conducted to determine the awareness and utilization of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State.

Statement of the Problem

Google Classroom act as a classroom facilitator but is unable to replace the role of the teacher. The human aspect of teaching is not something that a system such as Google Classroom can replace or rival at this point, however, the system is something that can be used to enhance and supplement the role of the teacher.

In the present education setting, a problem that many educators report is that students often lack awareness and utilization of Google Classroom evidenced by students losing assignments, forgetting to write names on the assignments, missing deadlines, missing work due to absenteeism, and forgetting to turn in work that has been completed. This present study is therefore conducted to ascertain the awareness and utilization of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State.

Purpose of the Study

The main purpose of this study is to investigate the extent of awareness and utilization of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State.

Specifically, the study seeks to;

1. Determine the extent of awareness of Google Classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State.
2. Find out the extent of utilization of Google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State
3. Identify perceived factors that could militate against the proper use of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State
4. Identify the ways to enhance the use of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State.

Research Questions

The research study will seek to answer the following research questions;

1. What is the extent of awareness of Google Classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State?
2. What is the extent of utilization of Google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State?
3. What are the perceived factors that could militate against the proper use of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State?
4. What are the ways to enhance the use of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State?

Significance of the Study

The findings of the study would be of immense benefit to all educational stakeholders, particularly lecturers, researchers, students, curriculum planners, government and the public. The findings of this study would be of benefit to the lecturers as it will enlighten them on the awareness of students on the use of Google Classroom. It will be useful to the government and its agencies as the government would provide easy access to social network by students and these could lead to government subsidizing the cost and also making sure internets connection is required before schools can be established. It would also be useful to curriculum planners at it would enable them to carryout thorough assessment on the implementation, effectiveness and impact of Google Classroom in teaching and learning.

The students themselves would also benefit from this study as they will be exposed to the use Google Classroom as a medium of learning. The study would also be useful to researchers as a

source of literature or related literature that adds to the available materials for present and future research study. The beneficiaries of this study would gain easy access to this article through libraries and online publications.

Scope of the Study

The content scope if this study covers the awareness and utilization of google classroom in teaching and learning of Agricultural Education, while the geographical scope is the Department of Agricultural Education, Joseph Sarwuan Tarka University Makurdi, Benue State.

Operational Definitions

***LMS**:*

Learning Management System: a software application for the administration, documentation, tracking, reporting and delivery of educational courses or training programs.

***Google Classroom**:*

Free web service developed by Google for schools that aim to simplify creating, distributing and grading assignments in a paperless way. The primary purpose is to streamline the process of sharing files between teachers and students.

***Technology Integration**:*

The international use of various types of technology in a setting such as schools and Classrooms (Bakia et al., 2009).

***Google Chrome Book**:*

A laptop computer that relies on internet access, allowing users to share and run cloud-based applications (google.com, 2016)

GAFE: (Google apps for education):

Google for Education is a service from Google that provides independently customizable versions of several Google products using a domain name provided by the customer.

Smartphone:

A mobile phone that performs many functions of a computer, typically having a touchscreen interface, internet access, and an operating system capable of running downloaded apps.

***Canvas**:*

A strong, coarse unbleached cloth made from hemp, flax, or a similar yarn, used to make items such as sails and tents and as a surface for oil painting.

Digital Tools:

are programs, websites or online resources that can make tasks easier to complete. A lot of these can be accessed in web browsers without needing to be downloaded, and you can access them both at home and at work.

LITERATURE REVIEW

The chapter is organized and presented under the following sub-headings; Conceptual Framework, theoretical framework, Empirical Studies, and Summary of Literature Review

Theoretical Framework

Piaget's Constructivism Theory of Knowledge:

Piaget's constructivist theory of knowledge was propounded in 1986. His theory states that humans generate knowledge and meaning from an interaction between their experiences and ideas. Piaget also called such a system of knowledge schemata where knowledge is gained through experiential learning. Piaget maintained that humans (i.e., learners in this context) can construct their information in the process of interacting. Piaget recognized that human beings are born as active exploratory information-processing organisms and actively construct their ways of thinking about things based on their current level of maturation, and actual experiences with objects, people, and ideas. To Piaget true learning/knowledge is not something handed down by the teacher alone, but something that comes from the child through the process of spontaneous invention and discovery.

Therefore, by relating this theory to the present study, one can say if a lecturer teaching Agriculture Education allows the learners or students to make deep and further findings/inquiries through the use of Google Classroom, this would lead to relevant questioning about the lesson taught in class to enhance their level of understanding in the subject. This benefit or achievement of more ideas and experience is constructed by them as a result of their research through the medium of Google Classroom, interaction in class; exchanging of ideas, etc. Piaget theory of constructivism may be a credible explanation for students' academic achievement in Agricultural Education using Google Classroom in teaching. The use of Google Classroom in teaching enables learners or students to gain skills and knowledge by making them think critically for a long period asking relevant questions about what they are ignorant of and responding to complex questions, problems, or challenges as a result of the fascinating nature of Google Classroom. Google Classroom in teaching and learning is based on applying specific knowledge or skills and on improving student involvement and motivation to promote independent thinking, self-confidence and social responsibility. Google classroom in teaching and learning may be more effective in the positive development of the learner's academic achievement. Students taught with google classroom in teaching may be more successful if aware of its importance in teaching and learning as the present researcher seeks to find out.

John Dewey's cognitive Theory:

John Dewey's cognitive theory was propounded 1998. Dewey states that 'knowledge emerges only from situations in which learners have to draw them out of meaningful experience'. Dewey argued that education and learning are social and interactive processes and that the school as a social institution provides an environment in which social reforms can and should take place. He sees the classroom as a social context where students can take part in manipulating materials and thus form a community of learners who construct their knowledge together. Dewey believed in one permanent frame of references; namely the organic connection between education and personal experience. He maintained that every experience enacted modifies further experience and results in a positive attitude and growth of understanding. Another vital issue raised by Dewey is that, he believed that students thrive in an environment where they are allowed to experience and interact with the curriculum, as such Dewey emphasized that all students should have the opportunity to take part in their learning. Dewey encouraged hands-on learning and stated that it is impossible to procure knowledge without the use of objects (Google Classroom) that impress the mind. As a constructivist, Dewey believed that teachers/instructors are partners in the learning process whose guidance and assistance help learners to construct their learning and independently discover meaning within the subject area. The obvious implication of Dewey's

theory to this study is that in the learning process, students must be engaged in meaningful activities that induce them to apply the concepts they are trying to learn. The researcher therefore seeks to ascertain the awareness and utilization of a more relevant and effective teaching and learning approach for higher performance in agricultural education.

Conceptual Frame Work

Teaching and Learning in Agricultural Education:

There are various definitions of teaching as well as many activities that are involved in the teaching and learning process. Nzeribe (2012) defined teaching as 'the conscious and deliberate effort by a mature or experienced person to impart information, knowledge, skills and so on to an immature or less experienced person, with the intention that the latter will learn or come to believe what is taught '. On the other hand, Mandore (2011) explained teaching to mean the various types of principles and methods of educating or instruction that are used to impact the knowledge and skills of students by an instructor. Tharp and Gallimor (2004) defined teaching as assisted performance beyond the zone of proximal development (assisting learners to perform beyond their current capacity). Sequeira (2012) also stated that teaching is a set of events that are designed to support the internal process of learning. Teaching (Instruction) is outside the learner. Learning is internal to learners. You cannot motivate others if you are not self-motivated. Motives are not seen, but Behaviors are seen. Learning is both a motive and behavior but only behavior is seen, learning is internal, and performance is external.

Learning is the process of acquiring new or modifying existing knowledge, behaviors, skills, values, or preferences. Evidence that learning has occurred may be seen in changes in behavior from simple to complex, from moving a finger to skill in synthesizing information, or a change in attitude (Richard, 2006). The ability to learn is possessed by humans, animals, and some machines. Learning may occur consciously or without conscious awareness (Daniel, Costa, Pita, & Costa, 2011). Sequeira (2012) stated that learning is about a change: the change brought about by developing a new skill, understanding a scientific law, and changing an attitude. The change is not merely incidental or natural in the way that our appearance changes as we get older. Learning is a relatively permanent change, usually brought about intentionally.

Teachers are in charge of the teaching-learning relationship, they have the primary responsibility of imparting knowledge. A good teaching should be an academic process by which students are motivated towards their zone of proximal development (Holt and Willard-Holt, 2000). Vigotsky (2010) identified the developmental level of a child by what the child can do alone, while what the child can do with the assistance of another is what is taught. The zone of proximal development awakens and rouses to life the mental capacities of learners of all ages (Tharps, 2004). When learners are motivated towards their zone of proximal development, learning is sustained and when learning is sustained, learners are positively influenced on how to think, act and feel, a process that elevates students to learn remarkably. Teaching is an academic process that involves two groups of people: the teacher/instructor and students/learners and information which include knowledge and like that are transmitted. Due to these activities involved in teaching, the concept of teaching is preferably discussed as teaching and learning. According to Sawa (2005) teaching and learning are considered as two sides of a coin, because teaching is meaningless without learning. Hence, teaching without learning is considered mere talking, for teaching to be meaningful it must be effective in promoting knowledge skills, and values. Given this, a document by Shawnee State University (2001) stated that the accepted criterion for measuring good teaching is the number of learning outcomes demonstrated by the learners and also through the

perspective of learners 'engagement in the teaching and learning process. Shawnee State University (2001) therefore characterized effective teaching as: (a) teaching for understanding in ways that help learners understand ideas and perform proficiently and (b) diversified teaching in ways that would help diverse learners to find productive paths to knowledge and constructively.

Also, Borich (2008) stated that effective teaching and learning should;

1. Be inquiry-based: teachers should build the subject program around the inquiry process by (a) selecting content and adapting curricula to address students' learning needs, interests, and prior knowledge. (b) Developing activities and assessments that promote students' depth of understanding (c) working together as colleagues across disciplines and class levels
2. Facilitate learning: Teachers should guide and facilitate learning with a variety of strategies such as (a) Helping students focus their inquiries and ideas (b) orchestrating student discuss (c) requiring students to share responsibility for their learning (d) modeling curiosity, skepticism and the skills of inquiry.
3. Provide learning environment: Teachers should create and manage learning environments that (a) provide enough time for extended inquiries (b) are safe but flexible and supportive of students' activities and actions (c) feature materials and tools for doing and use of resources outside school.
4. Create classroom community: Teachers should develop communities of learners in which all members (a) respect the ideas and diverse experiences of others (b) collaborate and make decisions about the contents and context of their work (c) adopt the intellectual rigor and attitudes that make learning possible (d) engage in on-going formal and informal discussion.
5. Be ongoing assessment: Teachers should engage in ongoing, assessment of instruction and learning by (a) using multiple methods to determine students' understandings (b) guiding students in self-assessment (c) using assessment information to guide their teaching and improve their practice. From the above assertions an effective pedagogy is that which engages students actively in the teaching and learning process and guides students successfully through exploration to become creative and critical thinkers as well as problem solvers. Effective teaching encourages students to grapple with the ideas that they need to develop their understandings and construct meaningful knowledge. Pedagogy with these inherent qualities includes inquiry methods of teaching among the innovative teaching methods.

Concept of E-Learning:

E-learning is being introduced at the beginning of third millennium. E-learning allows user can access course material everywhere via the internet. Using e-learning can encourage and improve learner's interaction in the class. Based on Agarwal and Pandey (2012), e-learning focuses on the use of technology in learning and education. E-learning refers to the use of information and communication technology in the learning process which consists of electronic media. According to Guri-Rosenblit (2005) "E-learning is the use of electronic media for a variety of learning purposes that range from add-on functions in conventional classrooms to full substitution for the face-to-face meetings by online encounters". Stockley (2017) stated that e-learning implies the use of electronic devices such as computers or mobile phones) in ways to provide educational training or learning purposes. Sangrà, Vlachopoulos & Cabrera (2012) also stated that e-learning can be defined as a natural evolution of distance learning which utilizes the newest tool in the technological context for arrangement in education.

From those definitions, it can be concluded that e-learning is learning that utilizes electronic technologies to access educational curricula outside the traditional classroom and it refers to learning that is delivered online. E-learning makes the learning process easier, such as sharing material or files, submitting tasks, and doing quizzes. E-learning also has been applied in many institutions (e.g., schools and universities). Through e-learning, both teachers and students can easily communicate. Also, the teacher can give feedback on the assignment via an online class platform. A very clear and modern tool for actualizing e-learning is Google Classroom which is used by instructors/lecturers in higher institutions to connect digitally and as well make teaching and learning easier for teachers to provide materials and assignments to students and vice versa.

Google Classroom:

Google Classroom is a tool which facilitates students and teacher collaboration; also, teacher can create and distribute assignments for students in an online classroom for free (Beal, 2017). It makes teachers simply build groups to share assignments and announcements. Google Classroom can be a tool that makes learners become active participants. Nagele (2017) said, teachers can create active lessons which are student-centered, collaborative, and unforgettable just through Google Classroom, because it provides easy-to-use learning features with students of all categories able to cooperate. Google Classroom is helpful to all of learner categories and including adult learners. It also has some benefits such as paperless, can be accessed anywhere and everywhere as long as there is internet connection and from any devices, to communicate between teachers and students, to give feedback to students, and personalized learning. It has a learning feature that makes teachers create and handle assignments actively and also provide feedback to students. Google Classroom makes it easier for teachers to handle students work. It is really beneficial for both teachers and students, because it is easy and simple to use. Several activities can be achieved with Google Classroom among students (Janzen, 2014). First of which can be used to create announcement (Nagele, 2017). With google classroom, teachers can give announcements about the update of the class in this section. The teachers can as well attach files and class materials to be downloaded / viewed by the students. Secondly, it could also be used to create assignment. This is the most substantial feature of Google Classroom. Teacher can upload assignments for student within due time to submit. Student also can download materials that have been uploaded by teacher to finish their task. Thirdly, google classroom is also used to create questions. In this section, student can create question to be discussed with teacher or other students if allowed by teacher. Fourthly, google classroom is used to re-use post. Important post can be used by teacher in this section, such as, announcement, assignments, and questions (Nagele, 2017).

Awareness of Google Classroom:

Google classroom was reported to have been introduced in May, 2014 and subsequently released in August, 2014 as a tool for teachers that functions as an interface layered on top of the Google Application for Education (GAFE) that establishes a collaborative environment for students – teachers' interaction (Brown & Hocutt, 2015). The system encompasses of several tools that when optimized efficiently, the learning environment is observed which leads to proper teaching and learning process. Google Classroom being a universal tool for teaching and learning allows teachers across several disciplines to customize their classroom for effective online collaboration. It is a suit for education that comes along with other associated tools such as Google Drive, Google Docs, Google Sheets, and Slides, sign up through the use of a Gmail account altogether to establish a conducive learning platform called a classroom existing in a virtual space (Madhavi, Mohan, & Nalla, 2018). Since the emergence of this great tool for blended and complete online

teaching, multitude a number of teachers were recorded finding their way to it (Madhavi et al., 2018) just as recorded in a similar study by Iftikhar (2016) who noted that, in Daffodil International University around September 2014, more than 30 teachers were already aware of google classroom and are recorded to have started using Google Classroom. Similar to the statement of Xanthoula (2015) that many organizations have recently embraced live class mode of e-learning to produced up to the task students besides cutting transportation time and cost; likewise associated cost engaged in face-face tutoring.

Educational institute's management or administration has a major role to play in integrating technology in classrooms as they have to finance or manage the process and ultimately decide to what extent they plan to use technology. Öznacar and Dericioğlu (2017) conducted research in high schools on the role of administrators in the use of technology in which they discovered that the administrators held positive beliefs regarding integrating technology in the classroom. One of the many reasons for the failure of not successfully integrating technology was that the administrators believed that 80% of their teachers were not technologically aware to use it effectively; hence, the project failed.

Utilization of Google Classroom:

Google Classroom has copious facilities which are beneficial for its users. A few of them are user friendly, cost free, cell phone friendly, and time saving. Using Google Classroom is really easy. Based on Janzen (2014), "Google Classroom's design purposefully simplifies the instructional interface and options used for delivering and tracking assignments; communication with the entire course or individuals is also simplified through announcements, email, and push notifications". Using Google Classroom does not need any cost. It is free for anyone. Although users have institutional Google Account, they still can use it for free. Anyone can use Google classroom on any mobile device as long as there is internet connection, because it designs to be fast respond. Janzen (2014) also states that "mobile access to learning materials that are attractive and easy to interact with is critical in today's web connected learning environments". By using Google Classroom both teacher and student can save their time. According to Iftakhar (2016), it integrates other Google apps, like, Docs, Slides, Drive and Spreadsheets. Nevertheless, the whole process of administering assignments, grading, formative assessment, and feedback is simplified and streamlined.

In a study by Muslimah (2018), where he applied measurable examination technique to answer four research question which are categorized into four parts; easiness of availability, supposed helpfulness, interaction and communication, learners' gratification. The people used as object to carry the experiment were 190 students in English Language Education Department batch 2014, 2015, 2016, and 2017. The contents of questionnaire were Easiness of accessibility (6 questions), Perceived Usefulness (7 questions), Communication and Interaction (6 questions), and Students' Satisfaction (4 questions). The answers to each item used a 5-points Likert scale. The questionnaire contained 23 items. The raw piece information was examined by using frequency and means. The mean score shows $\bar{X}$ = 3.82. The result indicated that students feel Google Classroom is useful and they were satisfied with Google Classroom as an online learning tool. Also, the study was repeated and carried out with 400 level 2019/2020 session of undergraduate student in Four Departments, University of Port Harcourt. They were taught using the Google classroom to access their level of Perceived ease of use, perceived usefulness towards the use of Google classroom as a learning tool. Descriptive analytic survey research method and proportionate stratified sampling technique for collection of data from 175 students registered.

Questionnaire was distributed during one of their lecture periods in physical classroom. The questions were on a four-point scale using SPSS to analyze the data. The study reported similar outcome of teachers and students' usefulness and acceptance of google classroom as an innovative and motivating learning approach. Several studies were conducted about the students' attitude towards and acceptance of the Learning Management System (LMS) by using the Technology Acceptance Model (TAM) of Davis (1989). The research study of Al-Maroof and Al-Emran (2018) conducted at Al Buraimi University College (BUC) in Oman proved that both the perception of ease of use and usefulness in TAM positively affects the behavioral intention, which in turn affects Google classroom usage. This was supported by the research study of Trayek and Hassan (2013) conducted to both full-time and online learning students at the International Islamic University in Malaysia (IIUM) which proved that perceived ease of use and usefulness towards the use of LMS. A parallel study conducted by Kumar and Bervell (2019) investigated students' attitudes on Google Classroom as a mobile learning platform. The findings revealed significant non-linear relationships between motivation and habit. Students' intentions were positive to accept that Google Classrooms were related to habit, motivation, and performance expectancy. The research study of Munasinghe and Percy (2016) conducted among the students of Rajarata University of Sri Lanka also supported the previous research. The study indicated that perceived usefulness and ease of use have significant effects on the attitude towards the use of LMS. It confirmed that students have positive attitudes toward Google Classroom. It was similar to the research study of Indahyanti and Sukarjadi (2015), revealing that the factors influencing students' acceptance of an LMS at Politeknik SAKTI Surabaya are perceived usefulness, perceived ease of use, and attitudes towards use, affecting the intention to use and significantly affecting the actual use of LMS. Furthermore, in the study of Alshorman & Bawaneh (2018) the students' attitudes towards using learning management systems in Teaching and learning were positive.

Factors Militating Against the Proper Use of Google Classroom:

Despite various benefits of Google Classroom, Google Classroom also has some limitations. Some of them as mentioned by Pappas (2015) are limited integration options, to Google, no automated updates, and difficult learner-sharing and editing problems. It is difficult for teachers to manage teaching materials and to set deadlines for assignments because Google Classroom is not synchronized with Google Calendar or any other calendar. Some of Google Classrooms' buttons are only familiar to Google users. It can make new users feel confused or need more time to deal with it. That is why Pappas defines Google Classroom as too "googlish". There is no auto-update feature in Google Classroom; it makes learners miss an important announcement because they should refresh it regularly. Also, students cannot share their documents with others without permission from the teacher. Learners can only edit assignments after they create and distribute to Google Classroom. They can keep and delete any part of the assignments. Below are identified potential obstacles facing the students and teachers for quality online learning at present;

Quality and Standard of the Learning Process:

More often than not, when there is a typical class involved, class efficiency is easier to calculate. There is a system that protects the consistency of face-to-face transitional courses. The interactions among students will stimulate their motivation to study better. Students will follow the arranged schedule and become more focus during the stipulated time. Teachers can monitor their students closely and give timely feedbacks. On the other hand, class activities can happen at any time of the day in online learning. When everything is at your fingertips, coming back to the classroom or for work becomes meaningless. The rethinking of the so-called standards of practice and quality will be necessary and can require a paradigm shift in our thinking (Setiadi,

2020). In order to make the session efficient, both teachers and students must have coherent interaction on google classroom.

Heavy Dependence on the Internet Connection:
Google Classroom requires high and stable speed of internet connection. It also requires either a computer, smartphone or tablet with minimum specifications to support the running of google classroom smoothly. If a student does not have one of these, he/she will have some problem to learn properly especially when they have to sit for tests or quizzes which are usually timed and cannot be repeated. In a previous study by Safford and Stinton (2016), students' learning and online activities are troubled by the low internet connectivity and speed. Thus, a stable internet connection and also a suitable gadget are critical in realizing the virtual class through google classroom (Ula, Lilis & Syahrizal, 2019).

Difficulty in Self-Regulation:
Due to the generous flexibility of Google Classroom, students depend heavily on their self-regulation; time management, discipline and readiness. Students exert more autonomy power and more often than not, this leads to procrastination (Safford and Stinton, 2016). In the traditional classroom, students' procrastination could be noticed and addressed directly by the teachers. It is different when it comes to google classroom as students have reduced seat time with their teachers. They also could not capture the teacher's physical presence which contributes negatively to their learning process on google classroom. However, this could be overcome by the teachers themselves.

Ways to Enhance the Use of Google Classroom in Teaching and Learning:
In spite of some drawbacks, we can conclude that Google Classroom is a good thing for students and teachers because it is easy to use, efficient, effective, better for the environment, and enable collaboration between teacher and student becomes easier. With Google Classroom, learning process can be effective and efficient because students and teachers can access Google Classroom anytime and anywhere in electronic devices with internet network.

Adequate Funding:
According to Acharu and Solomon (2014), adequate infrastructural (instructional) facilities are evidently linked to adequate funding by Governments. This situation is usually in response to conditionality's imposed by International Financial Institutions (IFIs). Despite the foregoing, Nigeria still remains a major defaulter in complying with the UNESCO recommendations that at least 26% of the National Budget must be committed to education. However, adequate funding of schools will go a long way in improving access to basic facilities required for google classroom utilization.

Good Policy Formulation and Implementation:
A well-articulated educational policy by the Nigerian government will improve utilization of google classroom. If more attention is given to education than other sectors will help the Nigeria education. This is evidence in the provision and appropriate use of instructional facilities especially Agricultural Education teaching and learning materials (Goshit, 2006).

Appropriate Maintenance:
According to Udin and Uwaifo (2005), most equipment and infrastructure in Nigeria are in despair/poor use and decay due to poor maintenance culture. Presence of maintenance culture in

our school systems will enhance utilization of trending technology other than caused major setbacks. Instructional facilities that break down in public secondary schools are sometimes difficult to repair. In such a case damaged equipment continue to depreciate till it finally become dead. Miller and Akume (2009) however noted in their work that all stakeholders in the educational sectors are expected to be partners in the maintenance of school equipment while parents and government are to provide finance for maintenance activities. In the same way, school authorities are to detect fault and utilize fully the available equipment.

Corruption in Education System Should Be Put to Check:
The Nigeria education system has witnessed unprecedented anomalies in terms of fund diversion, bribery and falsification of unverifiable projects to the personal gains of individuals and to the detriment of education in Nigeria. Corruption has crippled the provision of educational materials to a sorry level that some government owned institutions do not have the necessary materials for effective teaching and learning. However, with appropriate avoidance of corruption and knowing to do what is right in our society at large, these abnormalities could be erased. Priye (2016) lamented that corruption began to have its serious and negative effects on education in the middle and late 1980s as the psychosocial beast beclouded the minds of those who ruled Nigeria. According to him, the scrambled to loot as much as possible by those in position of power resulted in the neglect of the educational sector.

Good Students' Attitudes Toward Educational Facilities:
The belief that government property is nobody's property sometimes affects the availability, maintenance and continuity of instructional equipment in our tertiary institutions. The syndrome of "It is government property" has become a canker worm eating deep into the very fabric of our educational system as students mishandle equipment and go scot-free. However, with good and appropriate students and teachers attitudes to these facilities can help enhance the use and effectiveness of google classroom in our schools (Acharu & Solomon, 2014).

Non-Compromise by the Supervisory Body:
Essen (2012) in Robert (2014) reported that the Federal Republic of Nigeria set up the National Board by Decree (Act) No. 9 of 11th January, 1977 as the higher education supervisory parastatal in charge of secondary education to coordinate activities of the subject to ensure that courses offered and methods used reflect national needs, interest and aspirations of the society. This body accredits and reaccredits programmes of study in the secondary school. Many a times the people send to accredit programmes compromise their authority by taking gratification to accredit programmes without adequate facilities. Avoidance of these acts would in a long way improve utilization of appropriate teaching facilities.

Empirical Review
Shaharanee, Jamil, and Rod (2016) conducted research about the effectiveness of Google Classroom's active learning activities for data mining subject under the decision sciences program. Technology Acceptance Model (TAM) has been employed to measure the effectiveness of the learning activities. The target populations for this research were 1050 students who enrolled in data mining subject where the class was taught in a computer lab. In order to have random selection method, simple random sampling had been applied when choosing the sample to randomly select 100 sample sizes. The survey included questions on demographics, five predictor variables, and student satisfaction. Demographic questions covered gender, marital status, course, and the average on internet accessed. In order to develop the questionnaire, the

Internet self-efficacy scale was developed by Eastin and LaRose and used as reference. A total of 100 valid unduplicated responses from students who enrolled in data mining subject were used in this study. The results indicated that the majority of students felt satisfy with Google Classroom's tools that were introduced in the class. Results of data analysis showed that all ratios are above averages. In particular, comparative performance is good in the areas of ease of access, perceived usefulness, communication and interaction, instruction delivery and students' satisfaction towards Google Classroom's active learning activities.

This study relates with the present study as it dealt with the effectiveness of google classroom but however differed with the present study in its geographical and content scope. The present study seeks to go further in ascertaining the awareness and usefulness of this google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University of Agriculture, Makurdi.

Iftakhar (2016) evaluated what and how Google Classroom works. The purpose of this study was to report the overall view of Google Classroom from different class. This research presents brief features of Google Classroom. In addition, some adoption factors (such as organizational, social, personal and technological) have been reassessed for the research purpose. The research questions are: What factors influence teacher to use Google Classroom, how does teacher use Google Classroom in their teaching, what are the barriers to use Google Classroom, what are students' responses to the Google Classroom? The analysis of the results of the questionnaire indicate that this study can be effective in understanding and evaluating teachers' and learners' perceptive to ensure quality teaching and learning through Google classroom. This study also presents some new evidence on the potential of Google classrooms in teaching. This study used interview and observations to collect the data. The participants were teachers and students of Daffodil International University. The interviews were conducted with seven teachers: four males and three females. Three teachers are from BBA Department, one teacher is from LLB, two teachers are from English Department and one from CSE. 35 students also selected from English Department. The total respondents were 42. The result of the study shows that from teachers' perspective, they agree that Google Classroom is very useful. From students' perspective, some said that Google Classroom is also helpful, while others stated that they are scared when using Google Classroom. The third study is from Wijaya (2016). The study is about analysis of factors affecting on the use of Google Classroom to support lecturers. The study was developed by adopting the model of TAM to see from both the perception in the TAM that affect the use of Google Classroom by some students STT Musi. Population of this research is the students who are already using Google Classroom in the lecture. Data obtained as much as 90 questionnaires distributed by using purposive sampling technique to all students active in the odd academic year 2014-2015. Results from this study showed that the perceived ease of use and individual's perception of usefulness positively affect the use of Google Classroom.

While this study has related how google classroom operates and functions in a class setting but has however failed to reveal factors that may contribute to the usefulness of this google classroom. The present study aside providing information on the utilization of google classroom will as well provide vital information regarding factors that could militate against the proper use of google classroom in teaching and learning of Agricultural Education and also Identify various ways of enhancing the use of google classroom in teaching and learning of Agricultural Education. Similarly, Rossytawati (2018) investigated the challenges in using Google Classroom. The purpose of the research is to identify the challenges of using Google Classroom as a learning tool for

students of English Language Department Islamic University of Indonesia. The method of the research is quantitative research. The research involved 126 students of English Language Department in Islamic University of Indonesia, consist of 3 batches there are 2014, 2015 and 2016. The result of the research can be interpreted as the students feel that most challenging aspect in using Google Classroom is not very helpful for them to minimize their time and effort in doing and collecting the assignment. The differences between these researches and my research are on the variable, subjects of the study, participants, and methodology used. In this study, the researcher adopts the Shaharanee et al (2016) questionnaire because the questionnaire is reliable with value above 0.90. This research aims to identify students' responses on using Google Classroom. The participants were students of English Language Education Department batch 2014-2017 because students in English Language Education Department already used Google Classroom. This research used quantitative method. Those researches are relevant with this study because those researches also examining about Google Classroom; thus, they can be used as references.

Summary of Literature Review

Over the years use of ineffective teaching approach in teaching Agricultural Education has hampered harnessing of the potentials of students of Agricultural Education. In view of this, researchers have continued to search for an effective teaching approach that could facilitate learning and enhance students' achievement and interest in sciences. The utilization of google classroom in teaching and learning is identified among other innovative teaching approach as one of the trending approaches that have not been determined. Google Classroom is an application that allows the creation of classrooms in cyberspace. In addition, Google Classroom has also become a means of distributing tasks, submitting assignments and even assessing assigned tasks collected. The review is based on constructivism hence the theories by some constructivists like John Dewey and Jean Piaget among others formed the theoretical base for the study. The general views of these cognitive theorists were reviewed all indicating that learners are possessors of their knowledge and construct knowledge through fascinating experience.

The empirical studies were revealed under the following subheadings. Studies on the effectiveness of Google Classroom's active learning activities for data mining subject under the decision sciences program, study on what and how Google Classroom works, study on analysis of factors affecting on the use of Google Classroom to support lecturers and the challenges in using Google Classroom were reviewed. From the review, it has been seen that google classroom improves students' performance and interest in so many subjects. Therefore, there is need to ascertain the awareness and usefulness of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State.

In view of the above, the researcher intends to investigate the awareness and usefulness of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria.

METHODOLOGY

This chapter dealt with the methods used to collect data for the study. It was organized into the following sections: research design, Area of the Study, population, sampling procedure and sampling size, research instruments, validation of the instrument, reliability of the instrument, methods of data collection and data analysis techniques.

Research Design

The research design used in this study is a descriptive survey research design. It sought the opinion of students through questionnaire in order to establish the extent of awareness and utilization of Google Classroom in Agricultural education. The reason behind choosing this design was because this study focused on measuring the opinion of students and teachers towards their extent of awareness and utilization of Google Classroom in teaching Agricultural Education.

Area of the Study

The study was conducted in Joseph Sarwuan Tarka University, Makurdi. Joseph Sarwuan Tarka University, formerly known as the University of Agriculture, Makurdi (UAM) is a higher education institution in Makurdi, Benue State, Nigeria (Nexus Strategic Partnerships, 2007). The university was established in 1988, following the recommendations of a 1987 federal government White Paper on Higher Education curriculum and development in Nigeria (Anyanwu, 2011). It succeeded the Makurdi Campus of the University of Jos (Established in 1984), which in turn had succeeded the former University of Technology, Makurdi (established in 1980). The University was set up to pioneer new institutional approaches to the generation and dissemination of new agricultural technologies. The vice-chancellor is Professor Anande Richard Kimbir, and the chancellor is the Emir of Ilorin, Alhaji Ibrahim Sulu Gambari CFR (Editor, 2019). On 14 July 2019, President Muhammadu Buhari approved a bill renaming it the Joseph Sarwuan Tarka University (Premium Times, 2019). The university is sited on the bank of River Benue, and located about 300km South of the Federal Capital, Abuja and 800km North of the commercial city of Lagos; Joseph Sarwuan Tarka University, Makurdi occupies an arable land area of 8,048 hectares thus making it the largest holder of agricultural land mass amongst institutions of its kind.

Population of the Study

The research population for this study was 355, drawn from the Department of Agricultural Education, Joseph Sarwuan Tarka University, Makurdi. The target population consisted of 337 undergraduate students (Examination Officer, Department of Agricultural Education, 2023) and 18 lecturers in the Department of Agricultural Education of Joseph Sarwuan Tarka University, Makurdi.

Sample and Sampling Techniques

All members of the population were used as they were all accessible and manageable. Therefore, the entire 337 students and 18 lecturers of the Agricultural Education Department were used for the study.

Instrument of Data Collection

The questionnaire was used as an instrument for the study. The questionnaire was used because they are considered economical and easy to formulate and analyze. In addition, the questionnaire elicits a lot of data and gives a greater depth of response. The questionnaire will be sectioned into two (part A, made up of the bio-data section, and Part B- made up of 4 sections) and have both closed and open-ended items. The scale will be rated as strongly agree = 4, agree = 3, disagree = 2, strongly disagree = 1 respectively. The instrument will be used to collect data from undergraduate students and lecturers in the Agricultural Education Department using the constructed Awareness and Usefulness of Google Classroom in Teaching and Learning of Agricultural Education Questionnaire (AUGCTLAEQ). A mean benchmark of 2.50 will be established in deciding on the criteria for answering the research questions.

Validation of Instrument

The research instrument was face-validated by an expert from the Department of Agricultural Education. The validates, corrections, and suggestions were used in the final draft of the instrument. The instrument items were validated in terms of clarity of language, appropriateness, and adequacy of the items in measuring what they were supposed to measure.

Reliability of the Study

The researcher carried out a pre-test of the questionnaire by issuing a set of questionnaires to 20 selected undergraduate students from Benue State University (BSU) which are outside the original respondents chosen for the study. The reliability of the instrument was estimated using the Cronbach's Alpha method. The reliability coefficient of the instrument was 0.95. The instrument was deemed reliable as the coefficient was above the 0.70.

Method of Data Collection

The researcher administered the instruments to the respondents with the help of two research assistants. Out of the 355 copies of the instrument distributed, 344 copies representing 96% were retrieved and analyzed while 11 copies were lost.

Analysis of Data

Data from the questionnaires were analyzed using mean and Standard Deviation to answer the research question for research questions 3 and 4. A Mean bench mark of 2.5 was established using the mean method formula.

$$\frac{4+3+2+1}{4} = 2.5$$

Generally, any item with a mean value of 2.50 or above was regarded as being acceptable while any item with mean value less than 2.50 was regarded as not being acceptable. For research 1 and 2 dealing with level of awareness and utilization respectively. Real limit of numbers was used for interpretation of data as shown below

Scale	Scale point	Lower limit	Upper limit
Very high (VH)	4	3.50	4
High (H)	3	2.50	3.49
Low (L)	2	1.50	2.49
Very Low (VL)	1	1.00	1.49

RESULTS AND DISCUSSION

This chapter presents results of the data analysis and discussion of findings based on data collected for the study. The descriptive statistics of mean score and standard deviation were used to answer the research questions.

Research Question 1: What is the extent of awareness of Google Classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State.

Table 1: Mean Responses on the extent of awareness of Google Classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State. N=344

S/N	To what extent:	VH (4)	H (3)	L (2)	VL (1)	Mean	S	Remark
1.	have you observed the use of Google classroom in the teaching and learning?	50	70	110	114	2.20	0.48	Low
2.	have you heard about the use of Google classroom in teaching and learning?	55	65	120	104	2.21	0.49	Low
3.	are you aware that Google Classroom is an excellent medium for social interaction (lecturer vs students and student vs student)?	49	79	100	120	2.20	0.48	Low
4.	are you aware that Google Classroom is user friendly?	55	69	100	120	2.20	0.48	Low
5	are you aware that Google Classroom helps in submitting assignment on time?	50	71	100	120	2.10	0.48	Low
6	are you aware that Google Classroom is cost free?	40	70	110	124	2.10	0.45	Low
7	are you aware that Google Classroom is smart phone friendly?	50	60	100	134	2.10	0.45	Low
8	are you aware that Google Classroom is time saving?	50	54	100	200	2.10	0.45	Low
	Pooled mean					2.20		Low

Table 1 reveals that items 1-8 have mean values ranging from 2.10 to 2.21 which is within low level in the real limit of numbers. The pooled mean of 2.20 means that there is low extent of awareness of Google Classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State.

Research Question 2:

What is the extent of utilization of Google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State?

Table 2: Mean Responses on the extent of utilization of Google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State. N=344

S/N	To what extent:	VH (4)	H (3)	L (2)	VL (1)	Mean	S	Remark
1.	Do you use mobile devices to create Google account for illustration to the students?	4	20	40	280	1.27	0.13	Very low
2.	Have you used Google Classroom as a grading system in monitoring the performance and understanding of the students?	4	10	40	290	1.21	0.10	Very low
3.	Is Google Classroom easy to use?	0	14	40	290	1.20	0.10	Very low
4.	Can Google Classroom be used to motivate students and enhance learning initiative	3	14	37	290	1.23	0.11	Very low
5	do you use mobile devices to sign on the Google Classroom account	8	9	30	297	1.21	0.10	Very low
6	are you good with the creation of class on Google Classroom?	0	0	54	290	1.20	0.10	Very low

7	do you use Google to create assignment to be answered by the students	1	1	2	340	1.02	0.01	Very low
8	do you receive or send answers to assignment questions on Google Classroom?	0	1	2	341	1.01	0.00	Very low
9	do students find it easy accessing Google drive folder for Classroom materials on Google Classroom	0	0	1	343	1.00	0.00	Very low
10	are you familiar with attaching outline courses and lesson plan on Google Classroom?	1	2	1	340	1.02	0.01	Very low
	Pooled mean					1.26		Very low

Table 2 reveals that items 1-10 have mean values ranging from 1.00 to 1.27 which is within very low level in the real limit of numbers. The pooled mean of 1.26 means that there is a very low extent of utilization of Google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State.

Research Question 3:
What are the perceived factors that could militate against the proper use of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State?

Table 3: Mean responses on the perceived factors that could militate against the proper use of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State. N=344

S/N	Factors	SA (4)	A (3)	D (2)	SD (1)	Mean	S	Remark
1.	Shortage of science and technological based teachers and personnel	300	40	4	0	3.86	0.96	Accepted
2.	Cost and access to the Internet	320	20	3	1	3.91	0.98	Accepted
3.	A lot of the students sometimes encounter technical problems	300	43	1	0	3.86	0.96	Accepted
4.	Learners' difficulties in sharing and editing problems	304	40	0	0	3.88	0.97	Accepted
5	Lack of technical-know-how on the part of the students who had no experience in trending technology.	320	20	4	0	3.91	0.98	Accepted
6	Use of Google classroom makes new user feeling confused or needing more time to deal with it	310	30	3	1	3.88	0.97	Accepted
7	Lack of governmental intervention towards provision of basic technological facilities in the tertiary institutions	290	50	3	1	3.82	0.95	Accepted

Table 3 reveals that items 1-7 have mean values of 3.86, 3.91, 3.86, 3.88, 3.91, 3.88 and 3.82 respectively which are all above the benchmark of 2.50. It can thus be concluded that based on the perceived factors that could militate against the proper use of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State, the following were observed: shortage of science and technological based teachers and personnel, cost and access to the Internet, a lot of the students sometimes encounter technical

problems, learners difficulties in sharing and editing problems, lack of technical-know-how on the part of the students who had no experience in trending technology, use of Google classroom makes new user feeling confused or needing more time to deal with it and lack of governmental intervention towards provision of basic technological facilities in the tertiary institutions as perceived factors militating against the proper use of Google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State.

Research Question 4:
What are the ways to enhance the use of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State?

Table 4: Mean responses on the ways to enhance the use of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State. N=344

S/N	ITEM	SA (4)	A (3)	D (2)	SD (1)	Mean	S	Remark
1.	Adequate funding of the Federal tertiary institution in Nigeria	340	4	0	0	3.98	0.99	Accepted
2.	Provision of basic technological facilities needed by lecturers in carrying out their duties	250	50	40	4	3.58	0.89	Accepted
3.	Good policy formulation and implementation in the tertiary institutions	260	50	31	3	3.64	0.91	Accepted
4.	Ensure safety of available e- learning facilities	304	38	2	0	3.87	0.97	Accepted
5	Encouraging good students' attitudes toward these facilities	200	140	3	1	3.56	0.89	Accepted
6	Conducting special training program to improve lecturers' knowledge of trending technologies	200	140	4	0	3.56	0.89	Accepted
7	Appropriate orientation of students on the need to develop their knowledge of Google classroom	300	39	4	1	3.85	0.96	Accepted

Table 4 shows that respondents agreed on all the items as items 1 to 7 all had mean values of 3.98, 3.58, 3.64, 3.87, 3.56, 3.56 and 3.85 respectively which are all above the benchmark of 2.50. This is an indication that the ways to enhance the use of Google classroom in teaching and learning of Agricultural Education include: adequate funding of the Federal tertiary institution in Nigeria, provision of basic technological facilities needed by lecturers in carrying out their duties, good policy formulation and implementation in the tertiary institutions, ensure safety of available e-learning facilities, encouraging good students' attitudes toward these facilities, Conducting special training program to improve lecturers knowledge of trending technologies and appropriate orientation of students on the need to develop their knowledge of Google classroom

Discussion of Findings
This section dealt with the discussion of findings arrived at by this study and was discussed in line with the findings from research questions formulated for the study as follows:

Research Question 1 sought to find out the extent of awareness of Google Classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State. This was analyzed in Table 1 which shows that the respondents to a low extent are awareness of Google Classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State. This is in disagreement with Iftakhar (2016); Shaharanee et al.

(2016), who found in their study that the respondents have very high awareness of the use of Google Classroom as an excellent medium for social interaction between lecturer and students and between student to student.

Research question 2 was on the extent of utilization of Google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State. This was answered in Table 2 which reveals that the respondents agreed that there is very low extent of utilization of Google Classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State.

This finding is contrary to reports by Iftakhar (2016); Shaharanee et.al (2016); Rossytawati (2018) where utilization of google classroom was greatly indicated. The contradiction may be due to the fact that the respondents used for this study in first place were not aware of google classroom. Moreover, the geographical scope of this study may have also contributed to the very low utilization of google classroom.

Research Question 3 was asked to investigate the perceived factors that could militate against the proper use of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State. This was analyzed in Table 3, it reveals that factors such as shortage of science and technological based teachers and personnel, cost and access to the Internet, a lot of the students sometimes encounter technical problems, learners difficulties in sharing and editing problems, lack of technical-know-how on the part of the students who had no experience in trending technology, use of Google classroom makes new user feeling confused or needing more time to deal with it and lack of governmental intervention towards provision of basic technological facilities in the tertiary institutions were the identified perceived factors militating against the proper use of Google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State. This finding is in cognizance with that of Rossytawati (2018); Shaharanee et.al (2016) who also reported similar factors militating against the proper use of Google classroom.

Finally, research question 4 sought to find out the ways to enhance the use of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State, Nigeria. This was analyzed in Table 4 which shows that there are possible ways of enhancing the use of Google classroom in teaching and learning of Agricultural Education. The possible ways cut across; adequate funding of the Federal tertiary institution in Nigeria, provision of basic technological facilities needed by lecturers in carrying out their duties, good policy formulation and implementation in the tertiary institutions, ensure safety of available e- learning facilities, encouraging good students' attitudes toward these facilities, Conducting special training program to improve lecturers knowledge of trending technologies and appropriate orientation of students on the need to develop their knowledge of Google classroom.

This is in agreement with Banful et al. (2010); Iftakhar (2016); Rossytawati (2018); Shaharanee et.al (2016) , the authors in their various studies also reported that the primary ways to enhance the use of google classroom in teaching and learning are appropriate orientation of students on the need to develop their knowledge of Google classroom and that provision of basic technological facilities needed by lecturers in carrying out their duties will in a long way enhance the use of google classroom in teaching and learning.

SUMMARY, CONCLUSION, RECOMMENDATIONS AND SUGGESTION FOR FURTHER STUDIES

Summary

This study investigated the awareness and usefulness of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State. The study adopted descriptive survey research method. The target population for the study was 337 undergraduate students and 18 lecturers in the Department of Agricultural Education of Joseph Sarwuan Tarka University, Makurdi. All members of the population (355) were used as sample for the study as they were all accessible and manageable. Three hundred and fifty-five (355) copies of the instrument were distributed, 344 copies representing 96% were retrieved and analyzed while 11 copies were lost. The instrument was constructed and given to an expert in the Department of Agricultural Education, some of the inadequacies of the instrument were reviewed based on the criticism received. As a result of this, a modified question was prepared. The analysis of result revealed that the respondents agreed to a great extent they are not aware of Google Classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State. The respondents also disagreed to a high extent that Google Classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State is highly utilized. The study also revealed that use of google classroom is faced with factors such as shortage of science and technological based teachers and personnel, cost and access to the Internet, a lot of the students sometimes encounter technical problems, learners' difficulties in sharing and editing problems, lack of technical-know-how on the part of the students who had no experience in trending technology, among others.

Ways to enhance the use of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State are numerous. These possible ways are related to adequate funding of the Federal tertiary institution in Nigeria, provision of basic technological facilities needed by lecturers in carrying out their duties, good policy formulation and implementation in the tertiary institutions, ensure safety of available e- learning facilities, encouraging good students' attitudes toward these facilities, among others.

Conclusions

Based on the findings of the study, the researcher concluded that there is need for sufficient availability of instructional materials needed for google classroom utilization in the teaching and learning Agricultural Education. The study reported that to a very high extent, the students and lectures are not aware of and also do not utilize Google Classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State. However, the study indicated that despite the importance of google classroom in the teaching and learning of Agricultural Education, the use of it is faced with a number of factors such as shortage of science and technological based teachers and personnel, cost and access to the Internet, and that a lot of the students sometimes encounter technical problems. Furthermore, the study reported adequate funding of the Federal tertiary institution in Nigeria, provision of basic technological facilities needed by lecturers in carrying out their duties, good policy formulation and implementation in the tertiary institutions, among others as possible ways to enhance the use of google classroom in teaching and learning of Agricultural Education in Joseph Sarwuan Tarka University, Makurdi, Benue State.

Recommendations

The following recommendations are made from the findings;

1. Universities should encourage their lecturers to start using Google Classroom as a medium of teaching their students.
2. Universities should organize a seminar and workshops for their lecturers to train them on the use of Google Classroom as a medium of teaching
3. Universities should however advice their students on Google Classroom maximization; students are expected to use Google Classroom properly and creatively; because the way students use a tool is what makes the difference. The way students properly use Google Classroom can make learning better; more engaging, and more student-centered.

Suggestions for Further Studies

This study can be replicated in other geopolitical zones within the country; further research should be conducted in evaluating perceived negative influence of the utilization of google classroom in the teaching and learning of science subjects in senior secondary schools in the country.

REFERENCES

Acharu, F. T., and Solomon, E. (2014). Influence of infrastructure on the teaching and learning of office education in polytechnics. In *ABEN Conference Proceedings* (Vol. 1, No. 1, pp. 78-82).

Agarwal, H. and Pandey, G. N. (2012). Impact of E-Learning in Education. *International Journal of Science and Research (IJSR).*

Al-Maroof, R. A. S., and Al-Emran, M. (2018). Students' acceptance of Google Classroom: An exploratory study using PLS-SEM approach. *International Journal of Emerging Technologies in Learning (Online)*, *13*(6), 112.

Alshorman, B. A., and Bawaneh, A. K. (2018). Attitudes of Faculty Members and Students towards the Use of the Learning Management System in Teaching and Learning. *Turkish Online Journal of Educational Technology-TOJET*, *17*(3), 1-15.

Arisandhy, N. S. (2010). Asynchronus vs Synchronous. Retrieved from sites.google.com: https://sites.google.com/site/elearningtp2010/pengembangan-elearning/asynronus-e-learning/asynchronus-vs-synchronous

Ayeni, A. J. (2011). Teachers' Professional Development and Quality Assurance in Nigerian Secondary Schools. *World journal of Education*, *1*(1), 143-149.

Bakia, M., Means, B., Gallagher, L., Chen, E. and Jones, K. (2009). Evaluation of the Enhancing Education Through Technology Program Final Report. Washington, DC: Department of Education, Office of Planning, Evaluation, and Policy Development.

Bakia, M., Means, B., Gallagher, L., Chen, E., and Jones, K. (2009). *Evaluation of the enhancing education through technology program*. US Department of Education. Office of Planning, Evaluation and Policy Development. Policy and Program Studies Service.

Beal, V. (2017). Google Classroom. Retrieved April 25, 2017, from Webopedia: http://www.webopedia.com/TERM/G/google-classroom.html

Bebell, D. and Kay, R. (2010). One to One Computing: A Summary of the Quantitative Results of the Berkshire Wireless Learning Initiative. *The Journal of Technology, Learning, and Assessment,* **9**(2), 1-60.

Bebell, D. and O'Dwyer, L. M. (2010). Educational outcomes and reserach from 1:1 computing settings. *The Journal of Technology, Learning, and Assessment,* **9**(1), 1-16.

Bell, K. (2015). The Teacher's Guide to Google Classroom

Borich, M. A. (2008). Driven chirped vorticity holes. *Physics of Fluids*, *20*(8), 086602.

Brown, M. E., and Hocutt, D. L. (2015). Learning to use, useful for learning: a usability study of Google apps for education. *Journal of Usability Studies*, *10*(4), 160.

Creswell, J. W. (2009). Research Design: Qualitative, quantitative, and mixed methods approach. Los Angeles: SAGE Publications. Inc.

Daniel, A. D., Costa, R. A., Pita, M., and Costa, C. (2012). Tourism Education: What about entrepreneurial skills? *Journal of Hospitality and Tourism Management*, *30*, 65-72.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.

Foresty, R. A. (2017). Media Pembelajaran. Diambil kembali dari Chemistry: https://civitas.uns.ac.id/risdhyaaf/2017/05/03/mediapembelajaran/

Gallimore, R., and Tharp, R. (2004). What a coach can teach a teacher, 1975-2004: Reflections and reanalysis of John Wooden's teaching practices. *The Sport Psychologist*, *18*(2), 119-137.

Google. (2018). How do I sign in to Classroom? Diambil kembali dari Google: https://support.google.com/edu/classroom/answer/6072460?co=GENIE.Platform%3DDesktopandhl=en

Goshit, T. (2006). Nigeria's need for ICT: SP. 259 technology and policy in Africa. *Retrieved November*, *23*, 2006.

Guri-Rosenblit, S. (2005). 'Distance education' and 'e-learning': Not the same thing. Springer, 467–493.

Guri-Rosenblit, S. (2005). 'Distance education' and 'e-learning': Not the same thing. Springer, 467–493.

Holt, D. G., and Willard-Holt, C. (2000). Let's get real: Students finding authentic corporate problems. *Educational Technology Research and Development*, *45*(1), 65-94.

Iftakhar, S. (2016). Google classroom: What works and how? *Journal of Education and Social Sciences,* 3, pp. 12-18.

Indahyanti, U., and Sukarjadi, S. (2015). Applying the technology acceptance model to measure the learning management system acceptance by students of Politeknik Sakti Surabaya. *Jurnal Teknologi*, *72*(4).

Janzen, M. (2014). Hot team: Google Classroom. Retrieved from The Pennsylvania State University: http://tlt.psu.edu/2021/5/04/hotteam-google-classroom/

Keane, D. T. (2012). Leading with Technology. *The Australian Educational Leader,* **34**(2), 44

Keppler, M., Weiler, S. C. and Maas, D. (2014). Focused ubiquity: A purposeful approach to providing students with laptops. *Educational Technology and Society,* **17**(4), 278-288.

Kumar, J. A., and Bervell, B. (2019). Google Classroom for mobile learning in higher education: Modelling the initial perceptions of students. *Education and Information Technologies*, *24*, 1793-1817.

Madhavi, B. K., Mohan, V., and Nalla, D. (2018). Improving attainment of graduate attributes using google classroom. *Journal of Engineering Education Transformations*, *31*(3).

Mandore, E. U. (2011). Effect of Place-Based Learning Methods on Students' achievement and Interest in Basic Science and Technology in Minna, Niger State. *International Journal of Vocational Education and Training*, *26*(2).

Mateer, G. D., Ghent, L. S., Porter, T. and Purdom, R. (2018). Using Media to Enhance Teaching and Learning. Diambil Kembali Dari Pedagogy in Action the SERC Portal for Educators: https://serc.carleton.edu/sp/library/media/index.html

Mathew, I. (2021). Genotype-by-environment interaction and stability analyses of grain yield in pigeonpea [*Cajanus cajan* (L.) Millspaugh]. *Acta Agriculturae Scandinavica, Section B—Soil and Plant Science*, *71*(3), 145-155.

Miller, O., and Akume, B. C. (2009). The State of equipment provision and maintenance for the teaching of business studies at the Junior secondary school level in Delta State. *Business Education Journal*, *7*(1), 175-182.

Munasinghe, P. G., and Percy, W. W. (2016). Attitudes of students when using learning management systems. In *Munasinghe, PG and Wijewardana, WP (2016). Attitudes of Students When Using Learning Management Systems. The Academy for Global Business Advancement (AGBA), 13th Annual World Congress, The first Sebelas Maret Conference on Entrepreneurship, Innovation and Community Development (SMARTCEIC), Ins*.

Muslimah, A. (2018). i A Survey on The Use of Google Classroom in English Language Education Department of Islamic University of Indonesia.

Nagele, N. (2017). Udemy. Retrieved November 7, 2017, from Udemy.com: https://www.udemy.com/googleclassroom/

Nzeribe, A. C. B. (2012). Social studies curriculum for primary education studies. *Onitsha: West and Solomon Publishing Coy Ltd*.

Owen, A., Farsaii, S., Knezek, G. and Christensen, R. (2006). Teaching in the one-to-one classroom: It's not about laptops, it's about empowerment! *Learning and Leading with Technology,* **33**(4), 12-16.

Öznacar, B., and Dericioğlu, S. (2017). The role of school administrators in the use of technology. *Eurasia Journal of Mathematics, Science and Technology Education*, *13*(1), 253-268.

Pappas, C. (2015). Google Classroom Review: Pros and Cons of Using Google Classroom In eLearning. Retrieved from elearning industry: https://elearningindustry.com/google-classroom-review-pros-and-cons-of using-google-classroom-in-elearning

Pedagogy in Action. (2018). Why Use Media to Enhance Teaching and Learning. Diambil kembali dari Pedagogy in Action the SERC Portal for Educators: https://serc.carleton.edu/sp/library/media/why.html

Penuel, W. R. (2006). Implementation and Effects of one-to-one computing intiatives: A research synthesis. *Journal of Research on Technology in Education,* **38**(3), 329-348.

Perez, P. (2015). Secured Networks. Retrieved from secure dge networks https://www.securedgenetworks.com/blog/how-google-classroom-is making-interactive-learning-more-productive

Phipps, H. (2018). Groundwater contaminants and contaminant sources. *Watersheds, groundwater and drinking water: A practical guide*, *3497*, 73-82.

Priye, S. T. (2016). The Corrosive Effect of Corruption on Nigeria Educational system – Retrieved from www.gamji.comarticle6000/news7987.html

Richard, F. (2006). Implementing a university e-learning strategy: levers for change within academic schools. *ALT-J*, *14*(2), 135-151.

Rossytawati, R. 2018. A Survey Study of Students' Perception in Using Google Classroom in English Language Education Department of Islamic University of Indonesia. Pendidikan Bahasa Inggris. Fakultas Psikologi dan Ilmu Sosial Budaya. Universitas Islam Indonesia

Rouse, M. (2007-2018). ICT (information and communications technology, or technologies). Retrieved from techtarget.com: https://searchcio.techtarget.com/definition/ICT-information-and communications-technology-or-technologies

Safford, K., and Stinton, J. (2016). Barriers to blended digital distance vocational learning for non-traditional students. *British Journal of Educational Technology*, *47*(1), 135-150.

Sangrà, A., Vlachopoulos, D. and Cabrera, N. (2012). Building an inclusive definition of e-learning: An approach to the conceptual framework. Retrieved from http://www.irrodl.org: http://www.irrodl.org/index.php/irrodl/article/view/1161

Sariffudin, H. (2013). Education Centre. Diambil Kembali Dari Education of Saint: http://educationofsaint.blogspot.com/2013/06/definitionof-learning-media.html

Sawa, G., (2005). The Biotope model: an open-source cyberlearning model and its impact on social evolution. In *2005 International Conference on Cyberworlds (CW'05)* (pp. 5-pp). IEEE.

Sell, G. R., Cornelius-White, J., Chang, C., McLean, A., and Roworth, W. R. (2012). A meta-synthesis of research on 1: 1 technology initiatives in K-12 education. *Ozarks Educational Research Initiative*, 1-57.

Sequeira, A. H. (2012). Introduction to concepts of teaching and learning. *Social sciences education e-journal*.
Setiadi, M. A. (2020). Students' PERCEPTION on the Use of Google Classroom in Language Learning. *Research Gate*.

Shahabadia, M. M. and Uplane, M. (2015). Synchronous and Asynchronous e-Learning Styles and Academic Performance of e-Learners. Procedia - *Social and Behavioral Sciences,* 129-138.

Shaharanee, I. N., Jamil, J. M. and Rod, S. S. (2016). Google Classroom as a Tool for Active Learning. AIP Conference Proceedings.

Simpson, J. (2002). Computer-mediated communication. *Oxford Journals,* 414-415.

Stockley, D. (2017). E-learning Definition and Explanation (Elearning, Online Training, Online Learning. Retrieved from www.derekstockley.com.au:http://www.derekstockley.com.au/elearning definition.html

Surendran, P. (2012). Technology Acceptance Model: A Survey of Literature. *Journal of business,* 175-178.

Tharp, R. R. (2004). *An exploration of the ways in which different types of written texts contribute to elementary students' acquisition of knowledge in the social studies classroom*. Auburn University.

Tileston. (2003). The Importance of Media in the Classroom. SAGE Publishing, 1-7

Trayek, F. A., and Hassan, S. S. S. (2013). Attitude towards the use of learning management system among university students: A case study. *Turkish Online Journal of Distance Education*, *14*(3), 91-103.

Udin, P. S. O. and Uwaifo, V. O. (2005). Principles and practice if vocational and technical education in Nigeria. Benin City: Ever Blessed Publishers.

Vigotsky, L. (2010). Thought in schizophrenia. *Archives of Neurology and Psychiatry*, *31*(5), 1063-1077.

Wijaya, A. (2016). Anlysis of Factors Affecting the Use of Google Classroom to Support Lecturers. The 5th ICIBA 2016,

Xanthoula, A. (2015). Collaborative Virtual Classroom: A perspective view of a Collabortaive Virtual Classrooom via Google App Engine. *TEL-Crete Dept. App. Inf. and Multimedia ppt.*