ASSESSING THE IMPACT OF SELECTED EDUCATIONAL APPS ON THE ACADEMIC PERFORMANCE OF UNIBEN STUDENTS. (A Case Study of University of Benin Undergraduates)

BY

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A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF MASS COMMUNICATION, FACULTY OF ARTS, UNIVERSITY OF BENIN, BENIN CITY. IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF ART (B.A) DEGREE IN MASS COMMUNICATION

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DECLARATION

I declare that this project is based on a study undertaken by me in the Department of Mass Communication, Faculty of Arts, University of Benin under the supervision of Dr Nonso Nnabuife.

All Ideas and views are products of my personal research and where the works of others have been used and expressed; they were duly acknowledged.

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CERTIFICATION

This is to certify that this research work was solely carried out by **Otasowie Omoruyi Godfrey** in the Department of Mass Communication, University of Benin, under my supervision.

_____	_____
Dr. Nonso Nnabuife	**Dr. Daniel .O. Ekhareafo**
Project supervisor	**Head of Department**
_____	_____
Date	**Date**

DEDICATION

To Christ from who I found my identity. My father who thought me that being a man has nothing to do with age but ability to take on responsibility and my mother for whom mere words cannot explain the angel she is. Thanks mum!

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I am most grateful to my parents who encouraged me to finish school, all the wonderful teachers who taught and inspired me. I also appreciate my SSV and CUNIFES friends and family, Temple Okosun in particular is a big part of my story he inspired me into making a decision to study Mass Communication for my degree. I do not believe in coincidence and I'm obliged to say thank you to a friend I met recently, Oscar Obiora, he made me grow a keen interest in research and now I love it. My thanks also goes to my project supervisor Dr. Nonso Nnabuife for being so kind in directing me from start to finish. He is an amazing person and only God can bless her enough for her time, corrections and continuous encouragement throughout this research project.

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ABSTRACT

This study was made to find out how certain training apps affect how well uniben students do in school. Google Apps for Education is a free set of tools for conversation and working together, like email, calendar, and documents. Google Apps for Education is used in schools all over the world by more than 30 million kids, teachers, and school administrators. Many kids will use these tools when they go to college and when they start working. A simple random sampling method was used to choose 220 students from all 11 schools at the University of Benin to take part in the study. For this study, a poll was used as the method of research, and a questionnaire was used to gather data. The following was found when the collected data was looked at: That having access to the internet is the most important factor in whether or not students use Google Apps for Education. The learning setting, the teacher, the students themselves, and their gender were the next most important factors. So, it was suggested that the institution pay more attention to making sure that students have access to the internet, and that this should be the top priority. After that, the learning environment should be set up to encourage the use of technological devices, and power outlets and electricity should be installed. Teachers should also be trained and encouraged to change the way they teach to use Google Apps for Education, and students should be shown how to use the tool.

CHAPTER ONE

INTRODUCTION

Background of the Study

People used to educate themselves by conversing with one another and listening to what they had to say. Teachers engaged in conversation with students, and students paid attention to what their teachers had to say. There were moments when teachers took the time to listen to students. In the course of the last 150 years, advances in communication have made it possible to access previously inaccessible avenues. People were able to acquire knowledge through the mail since it was inexpensive, quick, and readily available. After then, there was the advent of educational television. eLearning, educational technology, information and communication technology (ICT), open learning, online education, computer-based learning, and many more terminology have emerged as a direct result of the proliferation of computer use in educational settings in recent decades. These phrases are notoriously difficult to comprehend.

In the past few years, the field of education has seen the emergence of a new subfield known as Educational Technology. According to Teaching with Technology for the 21st Century Learner (2011), the most significant contribution to this field was made by B.F. Skinner in 1950, when he proposed the concept of programmed learning. In 1950, Brynmor School was the first institution in England to use Educational Technology initiatives. In the year 1960, other nations also started making strides forward in the field of Educational Technology. It was in this manner that the term "educational technology" made its way from the United States of America and the Soviet Union in the year 1950 to England, Europe, and

India. Because "Education" encompasses "teaching," "learning," "instruction," and "training," the term "Educational Technology" also refers to a diverse array of pursuits. It covers topics such as behavioural psychology, instructional technology, instructional design and technology, training psychology, system analysis and cybernetics psychology, and a lot of other related topics. In the field of education, a wide variety of technological tools, such as radios, tape recorders, computer televisions, closed-circuit televisions, electronic video tapes, and audiovisual aids, are utilised. The production of these instruments has had the impact of assisting with the teaching of technology, models, and designs. There have been several innovations in educational technology that have made it possible for a single skilled instructor to instruct multiple pupils at once using a single system. There is little doubt that the introduction of computers into educational settings was the impetus behind the conception of Educational Technology.

(Anandan & Raja, 2010) Nevertheless, the lightning-fast and steady advancement in innovation in technology offers colleges and universities with possibilities alongside constraints. Opportunities consist of increased access to rich, multi-media content; an increase in the number of students taking classes online; the availability of mobile computers that are capable of connecting to the Internet; and the possibility to offer classes that would not otherwise be available. The use of tools that facilitate social networking is also becoming increasingly significant for educational and career advancement. At the same time, the rapidity of change creates significant challenges for educational institutions. To begin, when it comes to technological advancement, schools are consistently attempting to play catch-up. As new digital breakthroughs become available, educational institutions are required to modernise their information technology systems and implement new

programmes for staff training. According to Technology in Education (2011), while some educational institutions have been able to adapt to these changes rather well, a significant number of others are lagging significantly behind.

Students at the University of Benin, who have had access to e-Learning from the program's inception in 2004, have lauded it as an excellent method for acquiring knowledge at a distance and an innovative approach to addressing academic challenges. However, there have been a few stakeholders who have voiced their opposition to this plan. Even though this project provides online course registration, admission and result checking, student profiles, hostel assignments, form distribution, and a solution to the problem of overcrowding, it hasn't met its main goal, which is to make teaching and learning easier using electronic devices like computers and cell phones (Lawani, 2011). Even though this project provides online course registration, admission and result checking, student profiles, hostel assignments, form distribution, and a solution to the problem of overcrowding.

In September 2011, all of the public schools that are affiliated with the University of Benin made the decision to use Google Apps for Education. If this technology is implemented, approximately 60,000 students, staff members, and managers at the university will have access to a unified email and chat system, cloud-based collaboration tools, and a robust multimedia streaming service (Abikwi, 2013).

Google programmes for Education, also known as GAFE, is a collection of Google's most popular productivity programmes that are offered free of charge to educational organisations such as schools. People are able to communicate with one another and collaborate more effectively because to collaborative apps such as Classroom, Gmail, Drive,

Calendar, Vault, Docs, Sheets, and Sites. (Source: Google Apps for Education; date unknown).

Because of the speed with which technology evolves and the dynamic nature of it, it is essential for educational institutions to sign up for teaching technologies that will be around for a long time and are able to adjust to the rate at which technology evolves in general. Because of this, as well as the fact that the researcher believes that students ought to have a role in the selection and improvement of educational technology, he or she made the decision to conduct this study to investigate the impact that particular educational apps have on the academic performance of UNIBEN students.

Statement of Problem

Google Apps for Education and other forms of educational technology can make substantial strides towards the aim of better adapting teaching tactics to the specific needs and abilities of each individual student, which is an important aspect of the goal.

In spite of the fact that it has been implemented at the University of Benin, the usual undergraduate student utilisation figures for Google Apps for Education are notably low and significantly lower than average.

Because of this, the primary purpose of the research is to investigate the impact that utilising specific educational applications has on the overall academic performance of UNIBEN students. All of these applications are available at no cost, and they each provide varying degrees of privacy, ranging from sharing only with specific contacts to making one's content totally public on the internet. Not only are the applications free to download, but they also have a very low learning curve and are quite simple to use. The extensive

selection of goods is vital for helping users and educators centrally manage all of the components of their learning and teaching, making it one of the company's primary selling points.

Objectives of the study:

The study seeks to:

1. Find out the exposure of UNIBEN students to Google Apps for Education.

2. Ascertain if Google Apps for Education be used to meet Educational Goals.

3. Find out the readiness of Undergraduates in using Google Apps for Education.

4. Ascertain the degree if selected factors affect students' use of Google Apps for Education.

Research Question

The following inquiries will be the primary emphasis of our survey as we seek and provide answers to them:

1. How much do students at UNIBEN use Google Apps for Education?

2. Is it possible to use Google Apps for Education to achieve certain educational goals?

3. Are college students ready to use Google Apps for Education?

4. How much do certain things affect how students use Google Apps for Education?

Purposes of Study

The primary objective of this research is to analyse the impact that utilising specific educational applications has on the overall academic performance of UNIBEN students.

To be more specific, it will establish whether or whether students' usage of Google Apps for Education is influenced by qualities such as technical proficiency, teachers' use of the internet, tools, and other features. It will also determine the amount to which such an influence exists. In addition to that, the project wants to accomplish the following:

1. Demonstrate how Google Apps for Education may be utilised in the classroom setting.

2. To convince those responsible for designing educational programmes to incorporate instruction in Google Apps at all levels of study, with an emphasis on first-year students.

3. To inform administrators and students about Google Apps for Education and to educate users on the best practises for using Google Apps for Education.

4. To encourage the use of Google Apps for Education as a means of assisting students in the development of their technological expertise and knowledge.

5. To provide students with the skills they will require to become productive workers, responsible citizens, and lifelong learners.

Significance of the Study

It is impossible to overstate the significance of efficient education, in particular when educational technology (in this case, Google Apps for Education) is utilised. The significance of the research can be broken down into the following categories:

1. It will assist the management of the University of Benin in comprehending and acknowledging the benefits that come with the use of Google Apps.

2. Educational planners and administrators would benefit from having a comprehensive understanding of the prerequisites for successfully deploying Google Apps for Education in order to accomplish educational objectives.

3. The research helps to boost students' feelings of self-worth and nurtures the ability of undergraduate students to make a difference in the educational system.

4. It will improve students' attitudes towards learning and encourage them to take responsibility for their own personal development.

5. It will also promote awareness about the ways in which this technology may be used to assist students and teachers in achieving their educational goals.

6. In addition, pupils will have a better understanding and appreciation of how well instructional technology functions thanks to the research.

Definition of Terms:

Computer-based learning: The use of computers in education to convey instruction by means of programmes, to promote contact between students and teachers, or to provide students with access to information from a variety of remote sources is what is referred to as computer-based learning (or CBL for short).

Educational Technology: The rigorous process of teaching, planning, and learning that evaluates the suitability of various teaching methods for the achievement of specific educational goals is known as educational technology (often abbreviated as edtech).

GAFE: An abbreviation for "Google Apps for Education," GAFE stands for "Google Apps for Education."

Gmail: Gmail is a web-based email service that is known for being user-friendly, fast, and helpful. It also has a web-based interface. 15 GB of storage space, a decrease in spam, and access by mobile device are some of the features included.

Google Apps: Google Apps is a service that Google provides to its users that enables them to receive independently customizable versions of numerous Google products under their own distinctive domain name. This service is known as Google Apps. It gives users access to a range of web services such as Gmail, Google Groups, Google Calendar, Talk, Docs, and Sites, all of which offer functionality that is comparable to that of traditional office suites.

Google Apps for Education: is a suite of free web-based applications developed specifically for educational institutions. These applications allow users to collaborate on group projects by sharing calendars, documents, and e-mails.

Google Calendar: With Google Calendar, you can effortlessly monitor everything that is significant in a one location.

Google Classroom: Anyone who has Google Apps for Education, which is a free collection of tools for getting work done and includes Gmail, Drive, and Docs, is able to utilise Google Classroom. Google Classroom is a web-based educational platform that was developed by Google. Google Classroom was developed to assist educators in rapidly and conveniently creating and collecting assignments. It provides time-saving features such as the capability to automatically make a copy of a Google Document for each assignment and for each

student, which assists in maintaining everyone's organisation and helps everyone get their work done faster.

Google Hangout: With Google Hangout, users can contribute photographs, emoticons, and even participate in free group video chats without leaving their devices. This brings talks to life.

Google Plus: is a service that helps users manage their online identities and social networks. Assists in maintaining relationships with family and friends, allowing you to pursue your interests, and gives you the opportunity to learn how everything is interconnected.

Google Sites: Google Sites is a free platform that makes it easy to create and share websites in a brisk and uncomplicated manner.

Internet: The Internet, also known simply as "the Internet," is a global system of interconnected computer networks.

Information and Communication Technologies: There are several synonyms for the field of study known as telematics. Some of these synonyms include information and communication technologies.

An educational activity known as "Open Learning" is one in which the usage of instructional resources is both planned for and the primary focus of the activity. When it comes to access, time and location, speed, and manner of study, as well as any combination of these factors, the constraints that come with this sort of education are kept to a minimum.

Telematics: The utilisation of both computer technology and telecommunication technologies together is what is referred to as telematics.

YouTube: YouTube is a website that hosts videos that were created by users. Including content produced by experts in addition to those produced by networks.

URL: The phrase "Uniform Resource Locator," which can be abbreviated to "URL," is an abbreviation for this concept, which explains the global address of documents and other resources that can be discovered on the World Wide Web.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This Chapter talks about the following

- Meaning of Educational Technology
- Understanding the 21st Century Learner
- Need for Educational Technology
- Google Apps for Education?
- Considerations Regarding the Students' Utilisation of Google Apps for Academic Purposes

Meaning of Educational Technology

Learners that are well-suited to the 21st century are adept at multitasking, have extensive knowledge and expertise, and have strong visual spatial abilities. They are also well-versed in the use of various digital technologies. Teachers have a responsibility to mentally stimulate their students by utilising technology. This is because new tools made possible by improvements in technology can make it simpler to accommodate a range of educational styles. This research does not propose that just because there are eight different types of intelligences, we should teach things in a way that caters specifically to each of those intelligences. Instead, it makes an effort to demonstrate the best approach to interact with each specific learner, and it does so in a manner that is both plain and uncomplicated.

Understanding the 21st Century Learner

Learners who are well-suited for the 21st century are skilled at multitasking, have a broad knowledge base and a wide range of experience, and have good visual spatial abilities. In addition to this, they are proficient in the use of a variety of digital technologies. Utilising various forms of modern technology in the classroom is part of a teacher's ethical obligation to intellectually challenge their charges. This is due to the fact that new tools made possible by developments in technology might make it simpler to cater to a variety of educational pedagogical approaches. This research does not suggest that just because there are eight different types of intelligences, we should teach things in a way that caters especially to each of those intelligences. Instead, the research suggests that we should teach things in a way that caters generally to all of those intelligences. In its place, it makes an attempt to explain the most effective way to communicate with each individual student, and it does it in a way that is both straightforward and basic.

Need for Educational Technology

The development of new educational technologies has made it feasible to control aspects of a classroom such as its atmosphere, its content, and its methods of instruction. It is of the utmost importance for the effective realisation of the goals in the field of education that it be done. According to Anandan and Raja (2010), Educational Technology lays a strong emphasis on the design and measurement of instruments for measuring learning outcomes. Additionally, Educational Technology places a strong emphasis on the creation of strategies and procedures for efficient learning.

Google Apps for Education

It is possible for organisations to use their very own domain name in conjunction with the Google Apps service and to personalise the interface in such a way that it mirrors the branding of the organisation in question. This is a feature that is available to organisations. By doing so, a college or university is able to give the capabilities of Google Apps to its constituents in a package (and with a URL) that is already well-known to them and to which they are familiar. Additionally, this allows the constituents to remain comfortable with the experience.

The software known as Google Docs and Drive offers users access to a variety of programmes that may be used for tasks such as word processing, the development of spreadsheets, and the production of presentations (Han, 2010). It is a collection of online-based programmes and file storage that users may access through a web browser. Users can access the collection of web-based programmes and file storage. Users are not required to purchase any software in order to utilise the collection, nor are they required to install any programme. It is comprised of the Google Apps suite, which consists of Google Mail, Google Docs and Drive, Google Calendar, and Google Sites, amongst other Google products. These are all helpful and appealing solutions for customers who are looking for cost-free or low-cost, simple to operate, and flexible means of controlling their electronic communication services and resources (Hartnett, 2012). Customers who are looking for these characteristics in a solution are likely to find them interesting. With the help of the collaboration capabilities that are provided by Google Apps, the academic staff has the ability to expand their communication by exchanging documents at any time and from any location. This is made possible by Google Apps. Figure 1 provides an overview of Google's free services that are available to users.

FIGURE 1: GOOGLE APPS FOR EDUCATION SUITE

CLASSROOM:

Easy generation and organisation of tasks, timely provision of constructive critique, and ongoing communication with classes are also included. Increase the amount of time you spend teaching while simultaneously reducing the amount of time you spend on technical tasks (GAFE one sheet, 2014).

EMAIL:

Google's free email service, Gmail, has two highly helpful tools—anti-virus protection and filters for junk mail—and is available to everyone with an internet connection. Users are able to label their emails rather than filing them away in folders, and each email can have more than one label attached to it. (Sviridova, 2011) All of the emails that have been exchanged as a part of the same conversation will be consolidated into a single email line.

DRIVE:

Synchronisation, storage, and previewing are all options available for files, films, and photographs. (You have the ability to share individual files as well as entire folders with certain students, other teachers, or the entire school, as stated in the one sheet for GAFE that was published in 2014).

CALENDAR:

Calendar is a free web-based time management programme that lets the user to store his events online and can be seen from any place provided that internet connectivity is available. Calendar also enables the user to view other people's events online. Google is responsible for creating and maintaining the online calendar that is accessible via the internet. It is possible for the user to create and share many calendars, each of which may have a different level of permissions assigned to it. Because of this, it is feasible for groups to work together on their own schedules and share them with one another (Sviridova, 2011).

DOCS:

You are not restricted in any way in terms of where you choose to write, edit, or collaborate. Through the use of comments, you are able to provide feedback to students in real time. Plan a lesson with the help of several other educators by working together. Look through the revision history to gain a sense of how the students' writing has progressed over the course of the course (GAFE one sheet, 2014).

SHEETS:

Students can learn how to leverage the potential that exists inside data by using built-in formulas, pivot tables, and conditional formatting choices that simplify standard

spreadsheet processes. This can be done by teaching students how to use a spreadsheet programme. It should be required of the entire class that the outcomes of a scientific investigation be recorded. (A brief introduction to GAFE from the year 2014)

SLIDES:

You may make your presentations stand out from the crowd by selecting from among a variety of slide themes and layouts. Include instructional videos in your lessons to help students better comprehend the material, and don't forget to spice things up with animations and creative transitions to keep their attention. (A brief introduction of GAFE from the year 2014).

GOOGLE SITES:

The importance of Google Sites to Google Apps cannot be overstated. It is possible for a member of the academic staff to establish a website with Google Sites and incorporate files such as documents, forms, presentation documents, photographs, and calendars, etc., by employing straightforward page templates and doing so without requiring web design skills (Wang, 2010). The creation of a website on which several users can work together is the primary purpose of the Sites feature in Google Apps. On the Google Apps website, many users are able to work on files and share them with one another. (A one-pager on GAFE from 2014)

FORMS:

Forms should be used for data collection and analysis purposes. They are perfect for testing purposes such as examinations, polls, and quizzes. Export results for simple evaluation.

Distribute questionnaires to families in order to obtain their comments. (A one-pager on GAFE from 2014)

Factors Affecting Students' Use of Google Apps for Education

The Teacher

There is no shadow of a doubt that the teachers have a vital influence in the activities that take place in the classroom. Teachers are extremely important due to the fact that they play a leadership and directing role in the atmosphere in which teaching and learning takes place. For example, instructors are the ones ultimately accountable for establishing and maintaining the atmosphere in their classrooms. They are the ones who, in a way, decide the ethos of the classroom as well as the criterion for accomplishing this goal. According to Mukherjee (2002), Kurt Lewin and his colleagues were among the first people to explore the effects of various leadership roles on the psychology of diverse individuals inside organisations. Following is a discussion on some aspects that are relevant to educators.

THE TEACHERS' PERSONALITY

Numerous studies have shown that a teacher's demeanour and attitude are two of the most important factors that contribute to the development of pupils' perspectives. The exchange of information that occurs between instructors and pupils covers a wide variety of subjects pertaining to both the students' personalities and the lessons themselves. Another crucial aspect of education that is frequently disregarded is the instructors' frame of mind. It is imperative that teachers to keep up a cheerful attitude, as their dispositions are inadvertently communicated to the pupils under their care. These attitudes are advantageous

to pupils and may, for example, boost the interest, enjoyment, and fun that is had in the classroom.

It is imperative that educators acknowledge that no two kids have the same skills, passions, or psychological make-up. Therefore, preparations ought to be established in order to maximise the potential of each and every student who is under their supervision. As a result, the success of students may be dependent on the character and sensitivity of the instructors who guide them.

According to Walter (2002), fundamental components of a teacher's temperament and virtues include quantitative attributes like determination, purposefulness, topic and class mastery, and so on. As a direct result of the instructor's demeanour, students develop a greater level of interest in their work and become more excited about it. In addition to that, he claimed that a teacher should have empathy and kindness, have enthusiasm that is audible and visible to the entire class, be a good showman, which means they should have a dramatic sense, be conscientious, and change their approach.

TEACHING METHODS

The idea that educators need to take into account their own personal characteristics, educational philosophies, educational psychology, and basic learning principles is one of the most significant takeaways from this text. They also need to be able to adapt to the myriad of different pedagogical approaches that can be carried out with the support of current technologies. Anderson (1999) believes that educators should be enthusiastic about the work that they do and make use of indirect methods of instruction. Students whose professors were well-organized, achievement-oriented, and passionate about their work tended to have more positive views, according to research conducted by Fennema and Sherman (1995).

THE STUDENT

Research has found that a number of characteristics connected to students' attitudes and perceptions are significant explanatory variables for their educational achievement. These include Anderson 1991, Wood 1995, Abulud 2009, Goody Kontz 2010, Douglas, and Christiana 2010. We have covered some of these considerations in previous conversations, but let's move on to the rest today.

STUDENT'S ATTITUDE

In most cases, an individual will choose activities based on what they enjoy doing and what they believe will be beneficial to them. According to Ocho (1997), different people place varied importance on various things. This is owing to the fact that an individual's values drive his or her behaviour, which may include attachment to a specific topic. According to Yara (2009), an instructor's attitude as well as the method he uses to teach might have an effect on the attitudes of his or her students. In most cases, having a negative attitude towards a subject will result in a lack of interest in the subject, as well as the avoidance of the subject when choosing subjects. In addition, Simpson and Oliver (1990) found that having a favourable attitude towards science and technology leads to a favourable commitment to science and technology; it also promotes an ongoing interest in and want to learn more about science and technology.

STUDENT'S LEARNING STYLE AND MOTIVATION

Students who acquire content through meaningful activities had greater overall performance and a more hopeful outlook than students who obtained the same information through rote memory. This is because students who learn content through meaningful activities are more engaged in the material. Every individual has their own one-of-a-kind way of viewing the world and how it functions, and their innate capabilities and learning styles are both dictated in part by how they view the setting of the classroom in which they are learning. Teachers should employ a variety of instructional strategies in order to establish a connection with each of their students on an individual level, and they should maintain a healthy dosage of positive motivation in order to foster learning attitudes that are productive. Rosen and Weil (1995) found that if a teacher had a negative attitude towards the use of technology, it had a negative effect on the attitude that the students had towards the use of technology. This was found to be true even if the instructor did not express their negative attitude directly to the students. According to Young (2000), the degree to which a teacher's attitude towards computers is positive has a significant bearing on the degree to which male students are able to use computers. They are inspired not only by their own fundamental needs and ambitions, but also by the activity of their contemporaries, who serve as an additional source of inspiration for them. Children are stimulated both by their own fundamental needs and goals, as well as by the action of their contemporaries.

STUDENTS SELF CONFIDENCE

To maximize the effectiveness of any educational experience, it is essential that students and teachers maintain trustworthy relationships. Without rapport in the classroom, respect and trust are never experienced by pupils, according to research on the learning

process. Students develop substantial levels of self-confidence, however, in an environment where respect and trust are abundant.

STUDENTS ENJOYMENT OF TECHNOLOGY

Students will be interested, inspired, and motivated to the relevance of science and technology to modern life if Science and Technology syllabuses are divided into sections, focusing on key modern applied science (Kasongo Kalanda 2009.) The findings of the study by Butcher revealed that apart from a pupil's ability and personality, career goals were found to account for the variance in pupil's attitude and their choice of science. The anticipation of a more successful career in technology may contribute to a person's enjoyment of such a topic.

When students have an interest in a topic, they have a greater propensity to learn more about it by participating in a variety of related activities, resources, and methods. Computer experience has been proven to have a beneficial effect on computer attitudes (Todman 2000, McElroy, Bunting et al. 2000), according to research conducted in the field of end-user computing (Harrison & Rainer 1992). This finding was based on the observation that people who had more computer experience also possessed better levels of computer proficiency.

The Learning Environment

A great deal of time, children are able to pick up new abilities either at their homes or at their schools. According to Fraser et al. (1999), the degree to which students thrive in the field of science is significantly influenced by the way in which they communicate with one another, both within and outside of the classroom. This is the case regardless of whether or not they are taking part in a formal educational setting. According to Bandura (1986), people would have a better model for learning if they had a pleasant atmosphere in their homes. This is one of his theories. If a teacher wants to get to know his students, he needs to look beyond the four walls of the classroom and make an effort to become familiar with the other locations in which the kids spend their time, such as the youngsters' homes and their favourite hangouts. Only then will the instructor be able to get to know his students. The key contributors to the overall quality of an educational institution are the personnel who teach, the physical places in which courses are held, and the other students who attend that institution. When it comes to the process of developing a community with a strong religious orientation, these characteristics are crucial components that must be present.

THE CLASSROOM LEARNING ENVIRONMENT

A "classroom-learning environment" is a space or location where students and teachers work together to study and make use of a variety of tools and sources of information. The term "classroom-learning environment" refers to this area or place. Students have a variety of opportunities to learn and accomplish what they set out to do based on how the classroom is organised and how the students interact with one another. (Entwistle and Entwistle, 1991; Entwistle and Entwistle, 2003) It has been demonstrated that

the atmosphere of the classroom has a direct bearing on how well students learn as well as how they feel about the process of learning.

Students performed better academically when they worked in an atmosphere that they enjoyed (Martins Fabunmi, Peter Brai-Abu, et al., 2007). This was discovered by researchers who investigated the significance of the classroom setting to the teaching and learning process. Researchers have also discovered that classroom time plays a significant role in both the intellectual and social development of students. Research conducted in schools can help people estimate how well children will learn.

THE TECHNOLOGY CLASSROOM AND STUDENTS' OUTCOME

Research conducted in 1981 by Huertel, Walberg, and Huertel revealed that how students perceive the environment of their classroom is an important component in determining how motivated, successful, and pleased they are. In the end, they demonstrated that there was a significant connection between how well students learnt and what they believed about the social and psychological aspects of their classes by asking them to complete a series of surveys. The authors reached to the conclusion that classrooms were always associated to gains in the cognitive and emotional learning results of students.

Additionally, the greatest environment for children to learn in and experience a change in their mood is one in which they are encouraged to be open and honest with both their professors and their peers. However, many studies believe that students do not have much of a voice in the manner in which scientific concepts are conveyed to them in the classroom. It is very clear that if we want things to change, we need to pay attention to how students perceive and feel about their learning environment, and how how they feel about

their learning environment affects how they feel about technology. This is a problem that affects the environment.

Gender Issues

According to White et al. (2000), the most influential factor on students' attitudes towards science and technology is likely sexual orientation. in 2000. Numerous studies are being conducted in this area, as numerous educators are concerned about gender issues in science and technology.

The majority of educators do not openly discriminate against students or groups. Most likely to introduce discrimination or prejudice into the classroom and school are the pupils themselves. According to Branne and Ross (1991), children as young as 3 years old are aware of what they use and have a distinct mental image of which activities are for boys and which are for girls. Toys were separated by gender and distributed to the children. Girls preferred dolls, felt pens and paper toys, while males favoured building toys. Another study by Durndell and Thompson (1997) compared the use of computers, IT knowledge, and reasons for not pursuing computing among 16–18-year-olds in 1995 to similar groups in 1992, 1989, and 1986. According to the study, school computer usage has attained a high level regardless of gender. It was discovered, however, that there is still a substantial gender gap in residential computer use, with males dominating.

1995 research by Newman, Cooper, and rubble revealed that girls are significantly less likely than males to claim computers for their own groups. According to Klein (1992), women are typically sceptical of their own technological prowess, but believe they can use computers as well as males.

According to Weil, Rosen, and other academics, "Experience" fuels persistently negative views. They discovered that males had significantly more computer experience at home and in school than girls. Religion is just one of several factors that contribute to the marginalisation of women, according to Uhumuavbi et al. (2003). This was demonstrated, for instance, in Nigeria: Islam and Christianity highlight the inferior status of women in society. Due to these factors, men are more likely than women to pursue technological endeavours.

According to Fenema and Peters (1985), males had more opportunities than females, particularly in terms of pursuing technological courses. Males had more practise outside of the classroom, and their school experiences increased their likelihood of engaging in independent activities. In addition, other studies have examined how confidence, computer experience, and computer perception vary between the sexes and concluded that these are male-dominated domains.

Positive discrimination is frequently employed to advance the cause of equal opportunity for all. The purpose of providing additional resources to the disadvantaged group is to combat known discrimination. In addition, it is widely believed that role models of the same gender induce the most positive responses from individuals. To encourage girls to acquire IT skills, it may be necessary to employ a female educator. Perceptions of an ineffective female instructor chosen as a role model exacerbate the situation.

Teachers must also believe that every student is capable of acquiring technical skills and knowledge. Otherwise, they could inadvertently discourage certain groups while encouraging others.

Due to the pervasiveness of technology in daily life and women's perception of computers as a communication instrument, it has been argued that the gender gap in attitudes towards information technology and their level of anxiety is now negligible (King, Bond, et al., 2002). However, the literature demonstrates unequivocally that the majority of research findings favour males over women.

Internet

As more people gain access to the tools of the digital age, the Internet will become increasingly integrated into daily life. In addition, people in emergent and developing nations assert that the Internet's increasing use has had positive effects on the economy, interpersonal relationships, and education. Despite all the benefits of these new technologies, the majority of individuals believe that the internet has a muddled effect on politics and are more likely to assert that it has a negative than a positive effect on morality.

64% of people in 32 emerging and developing nations believe the internet has a positive impact on education. At least half also believe it positively affects personal relationships (53%) and the economy (52%). 36% of individuals believe the internet has positive effects on politics, while 30% believe it has negative effects on politics.

In emergent and developing countries, there is a stronger consensus that the internet has a negative effect on morality. A median of 42% of individuals believe that the internet has a negative impact on morality, while 29% believe that it has a positive impact. In addition, no examined nation has a majority of people who believe the Internet has a positive effect on morality. Despite this, many individuals in these emerging and developing nations are completely excluded from the internet revolution. Although consumption rates vary considerably, less than half of the 32 countries analysed utilise the internet at least

occasionally, via smartphones or other devices. The percentage of computer owners varies as well, ranging from 3% in Uganda to 78% in Russia.

Accessing the internet no longer requires a computer and a mixed line, and in many countries, cell phones have largely supplanted landlines. Comparable smartphone penetration rates exist in Chile and China, as well as the United States. In these emerging and developing nations, the rates of internet connection and smartphone ownership are highest among the educated and young, i.e., those between the ages of 18 and 34 who grew up during a period of rapid technological development. People who read or speak English are more likely to access the internet, even when other significant factors, such as age and education, are held constant. Economies with greater prosperity and development have, on average, higher Internet penetration rates. (Internet Use is More Common Among Young, Well-Educated, and English-Speaking Individuals, 2015)

Summary

Literature and research showed that the Internet, teachers, students, the learning setting, and gender were all factors that affected how students used Educational technology and Google Apps for Education in the same way. Also, it's clear that some of these factors combine and affect each other. For example, the way a teacher teaches and the atmosphere he or she makes in the classroom are often affected by the teacher's personality.

CHAPTER THREE

METHODOLOGY

In this chapter, we will discuss the procedures and approaches that were utilised in the conduct of this study. This chapter discusses the methodology, the population that the study was conducted on, the sample and how it was selected, the instruments that were used to collect data, and the manner in which the results were analysed.

Research Design

The survey research design methodology was utilised. This requires the use of questionnaires designed specifically for undergraduate students at the University of Benin.

Population of Study

The population of the study is comprised of all students at the University of Benin, which is located in Edo State.

Sample and Sampling Techniques

Two hundred twenty (220) students from the University of Benin comprise the sample for this investigation. The sample was selected using stratified random sampling from six (8) faculties, departments, and levels. These faculties have been selected:

S/N	FACULTY	GENDER	LEVEL	AGE	SAMPLE SIZE

1.	Agriculture	Mixed	100-500	15 & above	20
2.	Art	Mixed	100-400	15 & above	20
3.	Basic Medical Science				
4.	Education	Mixed	100-400	15 & above	20
5.	Engineering	Mixed	100-500	15 & above	20
6.	Life Science	Mixed	100-400	15 & above	20
7.	Management Science				
8.	Medicine	Mixed	100-600	15 & above	20
9.	Pharmacy				
10.	Physical Science	Mixed	100-400	15 & above	20
11.	Social Science	Mixed	100-400	15 & above	20

Research Instrument

This investigation makes use of a survey with the heading "Assessing the impact of selected educational apps on the academic performance of UNIBEN students."

The researcher devised a total of twenty questions (also known as "questions") with the pupils in mind. The questionnaire is broken up into two parts, referred to as A and B respectively. In Section A, we ask respondents questions about their gender, their faculty,

their academic level, and the age group they fall within. It is required that you provide information in Section B regarding your acquaintance with and use of the e-learning capabilities at UNIBEN.

Validity of Instrument

The supervisor of the project was given a draught copy of the questionnaire so that they could aid in critically reviewing the questions and making any necessary revisions if necessary. This was done so that the questions could be used appropriately.

Reliability of Instrument

A test-and-retest technique was used so that the reliability of the research instrument could be determined and maintained. This allowed for the instrument to be used repeatedly.

Method of Data Collection

At the University of Benin, the researcher personally distributed the questionnaire to students enrolled in a variety of departments so that those students might subsequently provide their responses. He then proceeded to provide the students with a more in-depth explanation of the purpose of the research in an effort to gain their unwavering support. However, there were a few occasions in which respondents were unable to handle theirs immediately, and those questionnaires were collected at a later date. The researcher collected the questionnaires that were handed out to respondents and collected them on the spot.

Method of Data Analysis

After collecting all of the finished surveys, the researcher performed an analysis on them using the straightforward percentage technique. In other words, the responses will be compiled, and a percentage will be calculated for each item. Those who selected SA and A as their responses to questions (such as whether or not utilizing Google Apps may yield equally high academic achievement and other student outcomes) will be considered to have provided positive responses, whilst those who selected D and SD would be considered to have provided negative responses. The analysis was carried out by counting the frequency of occurrences and utilizing a straightforward percentage.

Percentages are calculated using:

Percentage positive responses (% +ve responses)

$$= \frac{\qquad\qquad\qquad\qquad\qquad\qquad}{\qquad\qquad}$$

While percentage negative responses (% -ve responses)

$$= \frac{\qquad\qquad\qquad\qquad\qquad\qquad}{\qquad\qquad}$$

That and average total responses calculated to analyse each research question 1-4

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

The results of an analysis of the data acquired from the questionnaire that was given to undergraduate students at the University of Benin are presented in this chapter. The

questionnaire was distributed at that institution. These students were selected from among the eight different faculties that the college offered.

In this particular research project, the presentation of the data and the analysis of the data are carried out in a manner that is wholly consistent with the research questions. Throughout the process of carrying out the survey, several percentage numbers were utilised in order to ascertain the overall level of responses. After the completion of the questionnaire, the responses to its many questions were collated into tables after the questionnaire had been closed. As a guide, please use the list of abbreviations that follows, together with their full definitions:

SD – Strongly Disagree

D – Disagree

A – Agree

SA – Strongly Agree

TABLE 4.1 DISTRIBUTION OF RESPONDENTS BY FACULTY

Faculty		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agriculture	20	9.1	9.1	9.1
	Art	20	9.1	9.1	18.2
	Basic Medical Science	20	9.1	9.1	27.3
	Education	20	9.1	9.1	36.4
	Engineering	20	9.1	9.1	45.5
	Life Science	20	9.1	9.1	54.5
	Management Science	20	9.1	9.1	63.6
	Medicine	20	9.1	9.1	72.7
	Pharmacy	20	9.1	9.1	81.8
	Physical Science	20	9.1	9.1	90.9
	Social Science	20	9.1	9.1	100.0

	Total	220	100.0	100.0	

TABLE 4.2 DISTRIBUTION OF RESPONDENTS BY LEVEL

Level		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	100	12	5.5	5.5	5.5
	200	50	22.7	22.7	28.2
	300	58	26.4	26.4	54.5
	400	73	33.2	33.2	87.7
	500	12	5.5	5.5	93.2
	600	15	6.8	6.8	100.0
	Total	220	100.0	100.0	

TABLE 4.3 DISTRIBUTION OF RESPONDENTS BY SEX

Sex		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	150	68.2	68.2	68.2

	Female	70	31.8	31.8	100.0
	Total	220	100.0	100.0	

TABLE 4.4 DISTRIBUTION OF RESPONDENTS BY AGE

Age		**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	15-19	23	10.5	10.5	10.5
	20-24	152	69.1	69.1	79.5
	25 and above	45	20.5	20.5	100.0
	Total	220	100.0	100.0	

Research Question 1

How exposed are University of Benin students to Google Apps for Education?

TABLE 4.4

Research Question 1: Frequencies	**Responses**		**Percent of Cases**
	N	**Percent**	

Exposure[a]	1. I am AWARE of Google Apps	199	31.4%	94.3%
	2. I am AWARE of Google Apps for Education	182	28.7%	86.3%
	3. I USE Google Apps	169	26.7%	80.1%
	4. I USE Google Apps for Education provided by my University through my UNIBEN email	32	5.0%	15.2%
	5. I HAVE a student University email address	52	8.2%	24.6%
Total		634	100.0%	300.5%
a. Dichotomy group tabulated at value 1.				

The results of an analysis of the data acquired from the questionnaire that was given to undergraduate students at the University of Benin are presented in this chapter. The questionnaire was distributed at that institution. These students were selected from among the eight different faculties that the college offered.

In this particular research project, the presentation of the data and the analysis of the data are carried out in a manner that is wholly consistent with the research questions. Throughout the process of carrying out the survey, several percentage numbers were utilised in order to ascertain the overall level of responses. After the completion of the questionnaire,

the responses to its many questions were collated into tables after the questionnaire had been closed. As a guide, please use the list of abbreviations that follows, together with their full definitions.

Research Question 2

2. Is it possible to use Google Apps for Education to achieve certain educational goals?

TABLE 4.5

Research Question 2: Frequencies		**Responses**		**Percent of Cases**
		N	**Percent**	
Educational Goals[a]	6. Using Google Apps for Education can produce high academic achievement and other student outcomes	196	16.7%	89.1%
	7. Using Google Apps for Education can provide equitable access to education	205	17.4%	93.2%
	8. Using Google Apps for Education can promote equitable treatment of students	170	14.4%	77.3%

	9. Using Google Apps for Education provide equitable opportunity to learn	197	16.7%	89.5%
	10. Using Google Apps for Education can provide equitable resources for students	201	17.1%	91.4%
	11. I believe Google Apps can be used to help promote accountability of students and teachers	208	17.7%	94.5%
Total		1177	100.0%	535.0%
a. Dichotomy group tabulated at value 1.				

The majority of students are of the opinion, as seen in Table 4.5, that Google Apps for Education is capable of assisting in the attainment of educational goals and aims. The belief that it can enhance equitable access to education is held by 93.2 percent of the population. 77.3 percent of respondents think that it has the potential to encourage equitable treatment of students. Ninety-one point five percent of people think that it offers fair and equal chances to learn. Ninety-one point four percent of people think that it has the potential to offer children equal access to resources.

Research Question 3

Are college students ready to use Google Apps for Education?

TABLE 4.6

Research Question 3: Frequencies		Responses		Percent of Cases
		N	Percent	
Readiness[a]	12. I had orientation on using Google Apps for Education as a student	48	9.6%	21.8%
	13. I find it easy using online tools and mobile Apps for learning	162	32.3%	73.6%
	14. I use the internet and other Apps for academic purposes	207	41.2%	94.1%
	15. I have challenges preventing my use of internet tools and Apps for academic purposes	85	16.9%	38.6%
Total		502	100.0%	228.2%

a. Dichotomy group tabulated at value 1.

Only 21.8% of students obtained instruction on how to use Google Apps for Education, despite the fact that most students already use the internet and other apps for school (73.6% and 94.1% of respondents, respectively). Table 4.6 reveals that students find it easy to utilise online tools and mobile apps for learning, and most students already use the internet and other apps for school.

Research Question 4

4. How much do certain things affect how students use Google Apps for Education?

TABLE 4.7

	Research Question 4: Frequencies	**Responses**		**Percent of Cases**
		N	**Percent**	
Factors[a]	16. The Teacher constitutes a major factor affecting students' use of Google Apps for Education	175	22.5%	79.5%
	17. The students constitute a major factor affecting their own use of Google Apps for Education	152	19.5%	69.1%
	18. The Learning Environment constitutes a major factor affecting	202	25.9%	91.8%

	students' use of Google Apps for Education			
	19. Gender differences constitute a major factor affecting students' use of Google Apps for Education	30	3.9%	13.6%
	20. Internet availability constitute a major factor affecting students' use of Google Apps for Education	220	28.2%	100.0%
Total		779	100.0%	354.1%
a. Dichotomy group tabulated at value 1.				

According to the data presented in Table 4.7, every single respondent believes that having access to the internet is the single most essential factor that determines how well students use Google Apps for Education. The subsequent step is the learning environment, which may consist of things like traditional classrooms or online eLearning facilities. 91.8%. The majority of those who provided feedback agreed that the educator is the single most significant factor. Another 69.1% of respondents believe that the student is the single most important consideration.

CHAPTER FIVE

SUMMARY

Undergraduate students at the University of Benin served as a case study for the research project, and its primary objective was to determine what factors lead students in developing nations to use Google Apps for Education. The individual who carried out this research conceived of a total of four (4) questions for further investigation. These items are as follows:

1. How much do students at UNIBEN use Google Apps for Education?
2. Is it possible to use Google Apps for Education to achieve certain educational goals?
3. Are college students ready to use Google Apps for Education?
4. How much do certain things affect how students use Google Apps for Education?

In order to get a representative sample from each of the 11 faculties at the University of Benin, we employed a standard random selection approach to choose 220 students from each of those faculties to take part in the study. For this particular investigation, the technique of survey research was selected as the appropriate course of action to take, and the questionnaire was the tool of choice to use when carrying out the data collecting. To establish whether or not the instrument could be depended upon, the test-retest method was utilised, and it was carried out with the assistance of the study supervisor. The researcher went to the trouble of filling out the questionnaire on their own. The frequency count and the percentage were the two types of statistics that were utilised in the process of conducting the analysis of the responses that were provided by the respondents. In addition to that, discussions were held regarding the findings of the analysis.

Major Findings

The following discoveries were made after the acquired data were analysed, which led to their discovery as a result of the examination:

- The degree to which students have access to the internet is the single most critical factor that impacts whether or not they make use of Google Apps for Education.
- The learning environment was the second most important factor that determined how frequently Google Apps for Education was utilised in schools after the number of devices that were connected to the internet.

- The degree to which students make use of Google Apps for Education on their own is the fourth most important element in determining how much students make use of Google Apps for Education on their own.

- The teacher, in addition to his or her instructional strategy and style, was the third most influential element in the students' utilisation of Google Apps for Education. This was followed by the students' motivation to use the software.

- The gender gap is the element that has the least significant impact on the amount of time students spend using Google Apps for Education.

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Conclusion

The failure to implement instructional technologies such as Google Apps for Education would not only fail to pique the attention of students living in the 21st century, but it would also render those students useless when it comes to the application of collaborative technology in the workplace once they have completed their education. In other words, the failure to implement instructional technologies would not only fail to attract the attention of students living in the 21st century. For the student of the 21st century to be successful in a world that is always shifting and evolving, even the tools that are employed in the process of spreading education and passing on knowledge need to have a modern interface.

Recommendation

• The findings of this research, in addition to a proposed framework that might aid the school management and instructors in adopting Google Apps for Education into the teaching and learning processes, have revealed the following: • There is a significant correlation between student achievement and the use of Google Apps for Education.

• The provision of internet service to pupils within the educational establishment ought to take precedence and receive increased focus; this should be the top priority.

• The environment of the classroom ought to be designed in such a way as to inspire students to make use of the technical instruments that are available to them; power outlets and other sources of electricity should be installed.

• It is highly suggested that students obtain instruction on how to utilise Google Apps for Education.

• Educators should receive training and encouragement to adjust their pedagogical practises in order to make successful use of Google Apps for Education.

Suggestions for Ongoing or Upcoming Research: The researcher advises performing additional research on the topic of the use of Google Apps for Education in educational settings and the ways in which it encourages students' learning and multiple intelligences as a response to the findings of this study. The findings of the planned future research would demonstrate school administrators and teachers how to make the most of Google Apps for Education to cater to the plethora of different learning methods employed by a wide variety of students, hence improving the overall learning results for those kids. This research is intended to be carried out in the future.

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QUESTIONNAIRE

Dear Respondent,

The purpose of this questionnaire is to gather information, and draw out relevant conclusion on **Assessing the impact of selected educational apps on the academic performance of UNIBEN students.** You are kindly requested to read and complete the questions posed.

Thanks for your cooperation.

Otasowie Omoruyi Godfrey,

Researcher.

SECTION A

Faculty: Art [ ] Agriculture [ ] Basic Science [ ] Education [ ] Engineering

[ ] Life Science [ ] Medicine [ ] Pharmacy [ ] Physical Science [ ] Social Science [ ]

Level: 100 [ ] 200 [ ] 300 [ ] 400 [ ] 500 [ ] 600 [ ]

Sex: Male [ ] Female [ ]

Age: 15-19 [ ] 20-24 [ ] 25 and above [ ]

SECTION B

INSTRUCTION

Kindly tick [ ] in the option that best expresses your opinion.

Key:

SA=Strongly Disagree

A=Agree

Disagree=Disagree

SD=Strongly Disagree

SN	Items	SA	A	D	SD
1.	I am AWARE of Google Apps				
2.	I am AWARE of Google Apps for Education				
3.	I USE Google Apps				
4.	I USE Google Apps for Education provided by my University through my UNIBEN email				
5.	I HAVE a student University email address				
6.	Using Google Apps for Education can produce high academic achievement and other student outcomes				
7.	Using Google Apps for Education can provide equitable access to education				
8.	Using Google Apps for Education can promote equitable treatment of students				
9.	Using Google Apps for Education provide equitable opportunity to learn				
10	Using Google Apps for Education can provide equitable resources for students				
11.	I believe Google Apps can be used to help promote accountability of students and teachers				
12.	I had orientation on using Google Apps for				

	Education as a student				
13.	I find it easy using online tools and mobile Apps for learning				
14.	I use the internet and other Apps for academic purposes				
15.	I have challenges preventing my use of internet tools and Apps for academic purposes				
16.	The Teacher constitutes a major factor affecting students' use of Google Apps for Education				
17.	The students constitute a major factor affecting their own use of Google Apps for Education				
18.	The Learning Environment constitutes a major factor affecting students' use of Google Apps for Education				
19.	Gender differences constitute a major factor affecting students' use of Google Apps for Education				
20.	Internet availability constitute a major factor affecting students' use of Google Apps for Education				