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COMPARATIVE ANALYSIS OF STUDENTS USAGE OF FREE INTERNET SERVICES ON ACADEMIC ACTIVITIES AND SOCIAL NETWORKING

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ABSTRACT

The study focuses on the comparative analysis of between the effect of free internet usage by students in their academic activities and it usage on other social networking activities. The major goal of the study is to see whether free internet services installed in some tertiary institutions has impacted significantly on students' academic performance or promotes it usage on other social media activities. To achieve this objective, the study focused on students from the department of Business Administration and Management, Akwa Ibom State Polytechnic, Ikot Osurua. The methodology of the study was survey research technique where Taro Yamane' statistical method was used to selected the sample size of two hundred and eight (208) respondents out of the population of one thousand and twenty one (1021). The major instrument of data collection was self-developed questionnaire while the formulated hypotheses were tested using Statistical Package for Social Science (SPSS). The results revealed that the free internet services on campuses have significant impact on academic research that its usage on social media content creation. It was also revealed that free internet access has less impact on students' virtual classes than using it on social media content such as watching online movies, playing games, gambling and chatting. The study concluded that installation of free internet on campuses could improve students' academic performance as it will help them have unimpeded learning access and at the same time speed up academic activities on campus. It was recommended that tertiary institutions should provide strong Wi-Fi signals on campus to enable students have unhindered internet services, internet service providers should put in place a mechanism to limit students access to some sites that are inimical to students learning, tertiary institutions should subscribe to online learning management system softwares to provide students with more learning experiences, and courses taught should be made to have some internet related contents to ensure that students develop interest for virtual classes.

KEYWORDS: **Internet Access, Academic Performance, Social Networking, Media Content creation**

Introduction

Nigeria is facing some difficulties just like any other developing nations especially in providing its people with an affordable and easily available internet. The government has been urged to offer free internet in public domain, including schools parks, airports, libraries, and government buildings, in recent years. As of January 2023, Datareportal.com reported that there were only 122.5 million internet users in Nigeria, a country with a population of over 220 million, according to Worldmeter (2023). At the beginning of 2023, 55.4 percent of Nigerians were using the internet. The goal of this is to close the digital gap by increasing internet accessibility for those who might not otherwise be able to afford it. In Nigeria, where data costs are expensive and internet penetration is still low, free internet in public areas may contribute to greater access to services and information.

Still, it's unclear if the free internet in public spaces, particularly in higher education institutions, can function in a nation like Nigeria. The United States, Canada, and some regions of Europe are among the nations that have already instituted free internet access in public spaces. Nevertheless, very few public tertiary schools, including Akwa Ibom State Polytechnic, Ikot Osurua in Nigeria have joined the league of prime movers in making available free internet access on campus for information accessibility by students. The essence of this is to give students access to information for effective academic research to improve their performance.

Statement of the Problem

The Internet shrinks the world. It connects the globe with a single click, even people are thousands of kilometers apart. Today's generation is primarily reliant on the internet. As has been seen, it has become one of the essentials, particularly in the operation of businesses, communication, studies and education, entertainment, and so on.

But the question is, does the provision of free internet access by public tertiary institutions allow for the proper utilization so as to assist student attain academic excellence? Students at Akwa Ibom State Polytechnic, Ikot Osurua, are frequently observed clustering during their free lecture periods near areas with strong Wifi signals, with the majority of them surfing for academic materials and some engaged in social media activities. Therefore, it is based on this observation that the researcher conducts the study to comparatively analyze to see whether this clustering is mainly for academic related activities which could boast their performance or is for other social media activities which could retrogress their academic performance.

Objectives of the Study

The main objective of the study was to examine the effect of free internet usage on academic performance as compare to it usage on social networking in tertiary institution. Hence, the specific objectives were:

- To examine the effect of free internet usage by students on academic researches as compared to it usage on social media content creation.
- To examine the impact of free internet usage by students on virtual classes as compared to watching online movies

- To determine the effect of free internet access on students learning abilities as compared to social media experience

Research Questions

- What is the effect of free internet usage by students on academic research as compared to social media content creation?
- What is the effect of free internet usage by students on virtual classes as compared to online movies?
- What is the effect of internet access on students' learning abilities as compared to social media experience?

Statement of Hypotheses

The researcher developed the following hypotheses to guide the research work:

HO1: Free internet access by students has no significant effect on academic research as compared to Social media content creation

HO2: Free internet access by students has no significant effect on students' virtual classes compared to watching online movies

HO3: Free internet access by students has no significant effect on students' learning abilities as compared to social media experience

Literature Review

Concept of Internet

The Internet is a global network of interconnected computer networks that serve billions of people worldwide by utilizing the standard Internet protocol suite (commonly referred to as TCP/IP, though not all applications utilize TCP). It is a network of networks composed of millions of private, public, academic, commercial, and government networks ranging in size from local to global in scale and linked by a diverse set of electrical, wireless, and optical networking technologies. The Internet provides a wide range of information resources and services, such as the World Wide Web's (WWW) interlinked hypertext pages and email infrastructure.

In the late 1950's the Advanced Research Projects Agency (ARPA) was founded in the United States with the primary focus of developing information technologies that could survive a nuclear attack.(Internet History) In 1967 ARPA university and private sector contractors met with representatives on the Department of Defense to discuss possible protocols for sharing information via computers.

The Internet was first developed by the Advanced Research Projects Agency (ARPA), established in the United States in the late 1950s with the primary goal of creating information systems that might withstand a nuclear assault. ARPA universities and private sector contractors met with representatives from the Department of Defense in 1967 to examine potential methods for information exchange via computers.

The United States Defense Department financed a study in 1969 to construct a network that

could resist bombing. Essentially, the goal was to create a highly secure network that could function even after a nuclear assault. This project was known as ARPANET. The intended network was not supposed to have a centralized control, which would be an apparent target.

It linked four locations at the University of California, Los Angeles, Santa Barbara, Stanford Research Institute, and the University of Utah. During the 1970s, researchers focused on establishing protocols for managing networks, transporting messages across a network system, and providing remote access to networks. When the first email was transmitted in 1972, there were roughly two dozen computers connected at various locations, but the number of sites and messages quickly grew. There were 63 locations by 1975 (Leiner et al 2009).

Local Area Ethernet Networks (LANs) were established after ten years of study, and workstations were designed to connect to LANs. The ARPANET was then linked to these workstations and LANs. The ARPANET expanded rapidly over the following decade, thanks to its decentralized qualities. ARPANET computers communicate with one another using a standard or rule. ARPANET's standard is known as NCP (National Control Protocol). Protocol is a network word that refers to the communication standard employed by a network. However, the passage of time and fast progress in information technology repressed NCP and introduced TCP/IP (Transmission Control Protocol/Internet Protocol) into the world of networking. TCP "converts messages at the source into streams of packets, which are then reassembled into messages at the destination." These packets are routed via IP. It manages the addressing and ensures that a packet arrives at its destination after passing through several nodes and even across various networks with different standards. TCP/IP's ability to accommodate numerous networks with diverse protocols invites other networks to join ARPANET. The ARPANET gradually grew into a large network of networks that is now known as the "Internet." (Leiner et al., 2009).

The Internet has transformed the computing and communications industries like nothing before. The inventions of the telegraph, telephone, radio, and computer laid the groundwork for this unparalleled convergence of powers. The Internet is a global broadcasting capacity, a means for information transmission, and a medium for cooperation and interaction between persons and their computers that is not geographically limited. The Internet is one of the most effective examples of the benefits of ongoing investment and dedication to information infrastructure research and development.

According to Rouse (2005), the Internet, also known as "the Net," is defined as a worldwide system of computer networks - a network of networks in which users at any one computer can get information from any other computer (and sometimes talk directly to users on other computers) if they have permission.

Communication has become considerably faster as a result of the internet. It connects us to various parts of the world. People can now not only talk but also video conference. It is now quite simple to contact loved ones who live in various parts of the world. Communication is the most valuable gift that the internet has provided for the average person. Email and social networking sites are prominent examples.

Significant benefits of internet access include:

1. Academic Research

Previously, researching meant dealing with a large number of books and reading materials. All you have to do with the internet is input your topic and, with a single click, the results are in your hands. This saves you time and effort while providing you with accurate and current information.

2. Education

Education is limitless. As a result, the internet makes knowledge accessible. There are numerous tutorials, books, reference books, online assistance centers, expert opinions, and other study focused materials on the internet that may make the learning process very easy and enjoyable. There are several websites that cover a wide range of topics. You may go there and get an infinite quantity of information that you desire.

3. Financial and booking Transaction

The internet simplifies our lives. Banking and booking transactions are now quicker and simpler. People no longer need to make the effort to stand in line at the bank; instead, we can just go online.

4. Leisure

The internet provides several entertainment perspectives. Videos, games, music, and even online shopping are available.

5. Job Search

With the aid of the internet, searching for a job that will suit your qualifications is now much easier.

6. Blogging

It is one way of expressing your thoughts and feelings about a certain problem. They may not only create blogs as they desire, but they can also market their work so that it reaches the majority of people and is appreciated. There are several places on the internet that allow you to write blogs.

Meaning of Academic Performance

People frequently associate "academic performance" with a person's GPA. Several indicators, however, reflect a student's academic achievement. While some students may not finish at the top of their class, they may occupy leadership roles in many student organizations or perform well in standardized examinations.

When defining academic performance, people frequently prioritize grades. This includes institutions that rank students based on their GPA, bestowing honorific titles such as valedictorian and salutatorian to those who graduate first and second in their class, respectively. Scholarship organizations and institutions, as well as certain businesses, look at grades first, especially when employing fresh graduates. Grades are more important in some businesses, particularly in technical fields such as law, medicine, and finance. Other businesses place less emphasis on GPA, notably artistic professions like writing or painting,

and vocations like sales, where interpersonal skills are more important than technical understanding.

Academic performance is a "net result" of their cognitive and non-cognitive characteristics, as well as the sociocultural setting in which they live (Liem, 2021), which is a necessary requirement for personal success as well as the creation of a wealthy society (Steinmayr et al., 2019). Personality, cognitive capacity, social interactions, family dynamics, school environment, and sociocultural context are all elements that impact children' academic achievement, according to education and psychology researchers.

Academic performance is the degree to which a student, instructor, or institution has met their short or long-term educational objectives. Academic accomplishment is defined as the completion of educational benchmarks such as secondary school diplomas and bachelor's degrees (Friedman, 2011). Academic accomplishment is routinely quantified through tests or ongoing assessments, but there is no consensus on how it should be evaluated or which components are most significant - procedural knowledge such as skills or declarative information such as facts (Bossaert et al 2011). Furthermore, there is conflicting data regarding whether individual characteristics successfully predict academic performance; components such as exam anxiety, surroundings, motivation, and emotions must be taken into account while building school accomplishment models.

Meaning of Social Networking

The Internet has swiftly grown from a purely information-sharing platform to a social networking platform where people share material, ideas, and information. Social networking is a worldwide phenomenon that has transformed how individuals communicate with one another. Education, communication, employment, politics, healthcare, social connections, and personal productivity are all affected.

A social networking system (SNS) is an Internet-based platform enabling people to create and deepen social relationships. It allows users to communicate online with individuals who share similar interests, whether for romantic or social reasons. Users may share emails, instant messages, online comments, wikis, digital photographs and videos, and blog posts. It also allows persons with impairments to express their views and opinions in a virtual setting.

Social networks play dual functions as both content sources and consumers. They provide the user the option of who can see their profile. Answers to questions such as age, location, interests, and so on are used to create a profile. Some sites allow users to upload photos, add multimedia material, or change the style and feel of their profile, make blogs, comment on postings, and construct and share contact lists. Social networks often contain restrictions that enable users to choose who may read their profile, contact them, add them to their contact list, and so on to safeguard user privacy. Facebook, Twitter, YouTube, LinkedIn, Google+, Whatsapp, TikTok, and MySpace are some of the most popular current social networking sites.

Social networking applications have grown in importance since they give Internet-based venues for its users to engage socially. Common uses include computer-mediated social contact, education, business, finance, healthcare, politics, religion, and crowdsourcing. Benefits include:

- **Social Interaction:** Social networking sites enable computer-mediated social contact and link people with similar interests and activities beyond political, economic, and geographic boundaries. They offer a contemporary type of entertainment. Others use them to make new friends, reconnect with existing ones, identify others with similar interests, and remain in contact with old acquaintances. They also give an online forum for users to chat and exchange personal information for the aim of dating. Some job searchers utilize social media to increase their chances of obtaining job offers and finding meaningful employment (Hoye, Hooft, and Lievens, 2009).

- **Education:** Social networks influence how students and instructors learn. They are now utilized for learning, professional development for educators, and information sharing. Social media are used by scientific groups to exchange information. Researchers and librarians commonly utilize social media to maintain professional ties and share ideas. Social media may be used to establish research and learning networks. Many colleges utilize social networking sites such as Facebook, Twitter, and Instagram, with each university having at least one page on a site (Nini 2019). Privacy, genuine friendship, time consumption, and misunderstanding are all issues that educators face while using social networking. The primary advantages, on the other hand, are flexibility, reproducibility, ease, and accessibility (Zaidieh, 2009).

- **Business:** Another excellent use is business-to-business social networking. It may be a powerful marketing tool for companies, entrepreneurs, actors, singers, and artists. Companies use social networking sites in five ways: to raise brand recognition, to manage online reputations, to recruit, to learn about new technologies and rivals, and to intercept potential customers (Wikipedia). Social networking platforms assist businesses with advertising their products, recognizing customer requirements, and gathering comments on a variety of topics. The introduction of virtual money on social networks creates new prospects for global finance. Consumers may share their own experiences on social media, which helps early adopters make educated purchase decisions and reduces the risk of purchasing a new product.

- **Healthcare:** Social media facilitate many sorts of social interaction among stakeholders such as physicians, patients, and caregivers. Social networking sites (SNS) are a great teaching and learning tool for physicians and nurses since they bring new knowledge from research and help them deliver quality treatment to their patients. These technologies have the potential to alter virtually every area of healthcare. Icliniq.com, verywellhealth.com, practo.com, doctorondemand.com, and other health-related social networking sites are examples.

- **Politics:** Social networking appears to be having an influence on political life and movements all around the world. It has affected voting and caused societal transformations, riots, upheavals, and revolutions around the world. Social networking will make governments more responsible and allow individuals to use their right to free expression. It also aids in engaging people in the democratic process and involving younger generations in politics. For example, in 2008, Barack Obama successfully integrated social media into his campaign, engaging people, empowering volunteers, and significantly increasing donations. Obama was the first US president to recognize the potential of social media, (Weeden, Cooke, & McVey, 2013).

Methodology

The survey research design was used in this study, which solicited the opinions of students from the Department of Business Administration and Management at Akwa Ibom State Polytechnic to compare the effect of free internet access on academic performance to social networking on public campuses. This sort of research was deemed most appropriate due to its descriptive strategy, which guaranteed that the perspectives of students on issues ranging from the rate of free internet usage on academic performance to social networking were sought. The research included a population of 1021 students, with 208 chosen as the sample size using Taro Yamane's method. A convenience sample strategy was employed to select at will respondents for questionnaire administration. A normal confidence level of 95% and error tolerance of 5% was used. The researcher tested the hypotheses using regression analyses and Anova.

Data Analysis

Test of Hypothesis one

HO1 Free internet access by students has less impact on academic research than social media content creation

Correlations

APSM Internet			
Pearson Correlation	ARSM	1.000 .030	
	Internet	.030	1.000
Sig. (1-tailed)	ARSM	.	.306
	Internet	.306	.
N	ARSM	287	287
	Internet	287	287

ARSM (Academic Research and Social Media Content)

Model Summary[b]					
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin Watson**
1	.0942[a]	.830	.813	.731	1.889

a. Predictors: (Constant), Internet
b. Dependent Variable: APSM

ANOVA[b]						
	Model	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	173.138	1	.138	2.58	.0.01[a]
	Residual	152.273	285	.534		
	Total	152.411	286			

a. Predictors: (Constant), Internet

b. Dependent Variable: ARSM

Coefficients[a]

Standardized Unstandardized Coefficients Coefficient s Correlations

Model	**B**	**Std. Error**	**Beta**	**t**	**Sig.**	**Zero order**	**Partial**	**Part**
1 (Consta nt)	.816 .124 13.674 .000							
Internet	.0.46	.032	.030	.508	.612	.030	.030	.030
a. Dependent Variable: ARSM								

The R which is the coefficient of determination was high with a value of .830 which indicate that 83% of the changes in the dependent variable can be explained by the changes in the independent variable while 17% can be explained by the stochastic terms in model. This implies that this variable (Free Internet Access) can explain up to 75 percent of Change in Academic Performance to Social Media Content Creation, leaving 25% percent unexplained. Looking at the ANOVA table; the significant value (p-value) = less than 0.05 (alpha), hence we conclude that the model is significant (F1, = .2.58, p = 0.01). furthermore, y = .816 + .046 is the equation line in using the Free Internet Access variable in predicting the comparison effect on Academic Performance and Social Media Content creation Variables (otherwise called the slope) is significant at p < 0.000. With this, the researcher affirm alternative hypothesis and state Free internet access by students has greater impact on academic performance than Social media content creation

Test of Hypothesis Two

HO2 Free internet access has less impact on students' virtual classes than watching online movies

Correlations
VCOM Internet

Pearson Correlation	VCOM	1.000 .164	
	Internet	.164	1.000
Sig. (1-tailed)	VCOM	.	.003
	Internet	.003	.
N	VCOM	287	287
	Internet	287	287

VCOM (Virtual Class & Online Movies

Model Summary[b]

Std. Change Statistics

Model	R	R Square	Adjusted R Square	Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin Watson
1	.164[a]	.027	.024	.721	.027	7.917	1	285	.005	1.948

a. Predictors: (Constant), Internet
b. Dependent Variable: VCOM

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	412.119	1	4.119	7.917	.014[a]
	Residual	148.292	285	.520		
	Total	152.411	286			

Model Summary[b]

Std. Change Statistics

Model	R	R Square	Adjusted R Square	Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin Watson

1	.164[a].027 .024 .721 .027 7.917 1 285 .005 1.948

a. Predictors: (Constant), Internet
b. Dependent Variable: VCOM

Model	**B**	**Std. Error**	**Beta**	**t**	**Sig.**	**Zero order**	**Partial**	**Part**
1 (Consta nt)	.218 .168 13.172 .000							
Internet	.111	.039	.164	-2.814	.005	.164	.164	.164
a. Dependent Variable: VCOM								

The R^2 which is the coefficient of determination was low with a value of .027 which indicate that 2.7% of the changes in the dependent variable can be explained by the changes in the independent variable while 97.3% can be explained by the stochastic terms in model. This implies that this variable (Free Internet Access) can explain only 2.7 percent of Change in Virtual Class to watching movies online, leaving 25% percent unexplained. Looking at the ANOVA table; the significant value (p-value) = greater than 0.05 (alpha), hence we conclude that the model is significant (F1, = .2.58, p = 0.01). furthermore, y = 141 + .046 is the equation line in using the Free Internet Access variable in predicting the comparison effect on students joining virtual classes and watching movies online Variables (otherwise called the slope) is significant at p < 0.000. With this, the researcher upheld the null hypothesis and state that Free internet access has less impact on students' virtual classes than watching online movies

Test of Hypothesis Three

HO3 Free internet access has less impact on students' learning abilities than social media experience

Correlations

Coefficients[a]

Model	**B**	**B Std. Error**	**Beta**	**t**	**Sig.**	**Zero order**	**Partial**	**Part**
1 (Consta nt)	.904 .607 9.190 .000							
Internet	.549	.247	.042	.714	.476	.042	.042	.042
a. Dependent Variable: VCOM								

The R^2 which is the coefficient of determination was high with a value of .668 which indicate that 66.8% of the changes in the dependent variable can be explained by the changes in the

independent variable while 43.2% can be explained by the stochastic terms in model. This implies that this variable (Free Internet Access) can explain 66.8 percent of Change in learning abilities to social media experience, leaving 43.2% percent unexplained. Looking at the ANOVA table; the significant value (p-value) = less than 0.05 (alpha), hence we conclude that the model is significant (F1, = 5.10, p = 0.042). furthermore, y = 904 + .549 is the equation line in using the Free Internet Access variable in predicting the comparison effect on learning abilities and social media experience Variables (otherwise called the slope) is significant at p < 0.000. With this, the researcher reject the null hypothesis and state that free internet access has greater impact on students' learning abilities than social media experience

Findings

Based on the analyses, the researcher found out that:

- Free internet services on campuses has significant impact on academic research than its usage on social media content creation.
- Free internet access has less impact on students' virtual classes than using it on other social media content such as watching online movies, playing games, gambling and chatting · Free internet access has greater impact on students' learning abilities than social media experience

Conclusion/Recommendations

This study was conducted to compare the effect of free internet access on students' academic performance to social networking. However, the researchers discovered that free internet access in public institutions has a greater effect on academic performance than social media content creation, whereas the opposite was true when analyzing the effect of free internet access on students joining virtual classes versus watching online movies. However, it was suggested that:

1. Tertiary institutions should provide strong Wi-Fi signals on campus to enable students have unhindered internet services.
2. Internet service providers should put in place a mechanism to limit student access to some sites that are inimical to students learning.
3. Tertiary institutions should subscribe to online learning management system softwares to provide students with more learning experiences, and courses taught should be made to have some internet related contents to ensure that students develop interest for virtual classes.

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