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INFLUENCE OF SOCIAL MEDIA USAGE ON SECONDARY SCHOOL PHYSICS STUDENTS' DIGITAL MARKETING PLATFORM IN KOGI STATE, NIGERIA

BY

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Abstract

The research is to determine the influence of Social Media Usage on Secondary School Physics Students' learning outcome as determinant of students setting up digital marketing in Kogi State, Nigeria. Two research questions were raised, and one hypothesis was formulated to guide the study. The study utilizes descriptive research design where qualitative data were collected. The population consists of all secondary school Physics students in Kogi State. The sample is 210 secondary school physics students selected by multistage sampling techniques. One instrument was used for data collection which was validated and a reliability index of 0.83 was obtained. The data collected was analyzed using Mean, standard deviation and Z-test. The findings of the study revealed that WhatsApp and YouTube platforms helped students to create digital marketing Platforms. Hence it was recommended that Physics teachers should be properly trained to use WhatsApp and YouTube in the teaching and learning of Physics.

Keywords: WhatsApp, YouTube, Physics, digital, marketing

Introduction

Social media platforms have become essential parts of people's lives across different age groups and demographics in the current digital era. They are widely used for various purposes such as socialization, information seeking, entertainment, education, shopping and digital marketing (Ogunlade & Ajibade, 2020). Digital marketing according to Baltezarevic, (2023) typically refers to online marketing campaigns that appear on a computer, phone, tablet, or other device. It can take many forms, including online video, display ads, search engine marketing, paid social ads and social media posts. Digital marketing is often compared to

"traditional marketing" such as magazine ads, billboards, and direct mail. Television is usually lumped in with traditional marketing. Digital marketing, called online marketing, promotes brands to connect with potential customers using the internet and other forms of digital communication. This includes not only email, social media, and web-based advertising, but also text and multimedia messages as a marketing channel. Digital marketing is a sub-branch of traditional marketing that uses modern channels for marketing products to communicate with target audience. In digital marketing, communication is two- way, which provide feedback from the market, used in the decision-making process (Baltezarevic, 2023). The term digital marketing simply refers to a wide range of services and strategies used to advertise products, services, and brands online. Majority of youths are shifting speedily from electronic media like television viewers and radio listeners to social media. This craze of social media has led to a host of questions regarding its impact on society in general and on youth in particular. While many might be quick to blame the prevalent poor academic achievement on other factors including the poor quality of teachers, it may be good if we shift our attention to the use of social media as a major factor (Ezeah, 2020). The influence of social media on students' learning outcome, learning outcome here includes academic achievement and interest, particularly in subjects like Physics, is multifaceted and complex. On one hand, social media platforms can serve as valuable tools for enhancing students' learning experiences through access to educational content, online tutorials, and collaborative learning communities (Bosch et al., 2016). Similarly, educational forums and groups on social media platforms facilitate peer-to-peer learning, knowledge sharing, and academic support networks among students interested in Physics (Lin, 2016). The influence of social media on students' interest in Physics is further shaped by socio-cultural factors, educational policies, and institutional practices within the Nigerian context (UNESCO, 2017).

Literature Review

Asmah and Okpanachi (2023) opined that the exposure to social media by secondary students is high and this has negative effect on their achievement. On the other hand, there are other adults and many professionals, including teachers and school administrators, who encourage the use of social networking sites like Telegram, Zoom, WhatsApp, YouTube among others because they allow students to connect with one another and discuss school related issues (Ojedokun & Owolabi 2021). They further said that students can form online communities to plan for a project, have group discussions about class material, or use the SNS to keep in contact when a student has been absent and needs to be updated on current academic information. Physics is one of science subject that deals with the study of matter and energy. Physics is abstract in nature due to its abstractness that makes it difficult to understand the content especially for secondary school students. The

low Academic achievement in this subject in many years back has become worrisome to the educationalist and stakeholders because Physics play an important role in science courses such as medicine, Engineering, health sciences among others. Also, Physics plays an important role in individual placement either in the academic institutions or job placement. The pursuit of academic excellence is a global phenomenon. Due to this, many people are concerned with the ways they can enhance academic achievement. This has encouraged many studies about the conditions affecting it. However, many strategies have been used by many researchers, but the problem is not yet solved, therefore, this study will be established to determine the influence of Social Media Usage on Secondary School Physics Students' learning outcome as determinant of students for setting up digital marketing in Kogi State.

Ausubel's Learning Theory Ausubel learning theory emphasizes that meaningful learning occurs when new concepts are linked with concepts existing in the learners' cognitive structure. Meaningful learning implies achieving a deep understanding of complex ideas that are relevant to students' lives. It assumes that students already have some knowledge that is relevant to a new experience they are about to encounter and that students are ready and willing to do the mental work necessary to create connections with the new knowledge the students are about to acquire. Ausubel's cognitive theory states that learning is only meaningful to the extent to which the learner can integrate old learning experiences with new learning experiences. This theory rests principally on two major issues: i. the most general ideas of a subject should be presented first and then progressively differentiated in terms of details and specificity and ii. Instructional materials should attempt to integrate new material with previously presented information through comparisons and cross-reference of new and old. Ausubel is concerned with the learning of contents, facts, principles, concepts, among others, as opposed to mastering of skills and processes. There are four principles underlining Ausubel's theory, and these include: Principle of Subsumption or Integration; Principle of Progressive Differentiation; Principle of Integrative Reconciliation; and Principle of Consolidation. The influence of social media on students' learning outcome, particularly in subjects like Physics, is multifaceted and complex. On one hand, social media platforms can serve as valuable tools for enhancing students' learning experiences through access to educational content, online tutorials, and collaborative learning communities (Ogunlade et al 2020). Platforms like YouTube offer a wealth of instructional videos and tutorials on Physics concepts, catering to diverse learning styles and preferences (Ezeah, 2020). Similarly, educational forums and groups on social media platforms facilitate peer-to-peer learning, knowledge sharing, and academic support networks among students interested in Physics (Lin, 2016). The influence of social media on students' interest in Physics

is further shaped by socio-cultural factors, educational policies, and institutional practices within the Nigerian context (UNESCO, 2017). In modern society, technological progress and changing consumer demands have stimulated the use of digital marketing (Ojedokun & Owolabi 2021). Digital marketing has assured a widespread application across sectors, however in the current context with proliferation of digital and social media have gained enormous popularity and are integral part of decision making of young students seeking higher education. Digital marketing enables the students in educational institutions to make use of the power of social media. Various social media sites can be used to share information with a global audience. This information can be shared in the form of pictures as well as videos.

The presence of such information on social networking sites is instrumental in influencing the decision-making process of the students. One of the main reasons why educational institutions can make use of social media is the fact that 99% of the student population in higher institutions' population has a presence on social networking websites. Why is digital marketing is the best means to impress and reach students? There are various reasons that make digital marketing the best means of reaching out to most of the student population today. Some of these reasons are: (i) Prospective students are already searching online for educational and training courses. (ii) Students spend more time on the internet rather than in front of other media including television. (iii) Display advertisements on the internet are highly effective and outperform traditional advertising. (iv) Parents and guardians have started to judge a school or college based on its website and its online presence. (v) Most students have also begun to judge a school or college through its online presence. (vi) The internet is today the most favored channel for applying and making admission queries. (vii) Expatriates and outstation students rely heavily on the web for college admissions. (viii) Parents and students now consider the web as the most convenient means for carrying out admission processes (Asmah & Okpanachi, 2023). In Kogi State, where this study is situated, socio-economic disparities, infrastructural challenges, and cultural norms may intersect with the use of social media among secondary school students, shaping their attitudes, behaviors, and perceptions towards Physics education (Ogunlade, Ogunlade & Ajibade, 2020). Understanding the dynamics of social media usage and its impact on students' interest in Physics is essential for educators, policymakers, and stakeholders seeking to enhance the quality and relevance of Physics education in the local context. To address the gap in existing literature and inform evidence-based strategies for promoting students' interest in Physics, this study will adopt a quasi-experimental research approach. By integrating quantitative surveys and qualitative interviews, the study aims to explore the patterns of social media usage among senior secondary school students in Kogi

State, examine the factors influencing their interest in Physics, and elucidate the nuanced ways in which social media platforms intersect with their academic experiences and aspirations (Ogunlade, Ogunlade & Ajibade, 2020). Through a comprehensive analysis of data collected from students, educators, and community stakeholders, this study seeks to generate insights that can inform targeted interventions, pedagogical approaches, and policy recommendations aimed at fostering a conducive learning environment for Physics education in Kogi State and beyond. Hence, the influence of social media platforms on senior secondary school students' interest in Physics represents a significant area of inquiry with implications for educational practice, policy, and research (Anthonia, Nwabueze, & Aduba 2024). By elucidating the complex interplay between social media dynamics, educational contexts, and students' academic engagement, this study endeavors to contribute to the broader discourse on technology-enhanced learning, youth development, and Physics education in Nigeria's educational landscape. Through collaborative efforts and evidence-informed strategies, stakeholders can harness the potential of social media platforms to inspire, motivate, and empower students to excel in Physics and pursue diverse educational pathways in the digital age.

Objectives of the Study

1. To determine the influence of WhatsApp's on secondary school physics students' learning outcome in creation of Digital Marketing.
2. To determine the influence of YouTube on secondary school physics students' learning outcome in creation of Digital Marketing.

Research Questions

1. What is the influence of WhatsApp's on secondary school physics students' learning outcome in creation of Digital Marketing?
2. What is the influence of You-Tube on secondary school physics students' learning outcome in creation of Digital Marketing?

Research Hypothesis

HO: There is no significant relationship between male and female physics students' responses on the influence of WhatsApp and YouTube on the creation of Digital marketing Platforms

Methodology

This study utilized descriptive research designs where quantitative data was collected. The population of the study are all the senior secondary school students in Kogi state, Nigeria. Kogi state has 21 local governments spread across the three senatorial districts. The sample of the study is 210 students that were randomly selected from 21 schools in Kogi state using multistage sampling techniques. One instrument was used for data collection. Physics Students Creation of Digital

Marketing Questionnaire. The instrument was rated on a four-point scale as follows: Highly Created (HC), Fairly Created (FC), Not Created (NC) and Highly Not Created (HNC) with their nominal value of 4, 3, 2, 1. The instrument was validated by three (3) Experts in Physics Education, Measurement and Evaluation, and Marketing Department. The Kuder-Richardson formula 20 was used to determine the reliability of the instrument which index is 0.83. All collected data were analyzed using mean, standard deviation and Z-test.

Presentation of Results

Research Question One: What is the influence of WhatsApp's on secondary school physics students' learning outcome in creation of Digital Marketing?

Table 1

Mean ratings of Digital Marketing Skills Created by Physics Students due to the Influence of WhatsApp Platforms

S/N	Item	Mean	SD	Decision
1	WhatsApp Platform have helped me to be a content creator	3.3	1.2	HC
2	WhatsApp Platform has helped me create business emails	3.6	1.1	HC
3	WhatsApp Platform has helped me negotiate prices of goods to make profit	3.3	1.3	HC
4	WhatsApp Platform has helped me reach target audience	3.2	1.1	HC
5	WhatsApp Platform has helped me create video for products	2.9	1.6	FC
6	WhatsApp Platform has helped me create good product analysis	3.1	1.3	HC
7	WhatsApp Platform has helped me create adequate business engagement with my customers	3.7	1.1	HC
8	WhatsApp Platform has helped me create marketing channels for profitability	3.4	1.2	HC
9	WhatsApp Platform has helped me create special product brands	3.5	1.1	HC
10	WhatsApp Platform has helped me create reliable payment platforms for my product.	3.4	0.9	HC
	Grand Mean	3.3		HC

Table 1 indicated that WhatsApp platform helped the students to create all the digital marketing skills that is content creator (Mean = 3.3, SD=1.2), business emails (Mean = 3.6, SD=1.1), negotiate prices of goods to make profit (Mean = 3.3, SD=1.3), reach target audience (Mean = 3.2, SD=1.1), video for products

(Mean = 2.9, SD=1.6), good product analysis (Mean = 3.1, SD=1.3), adequate business engagement with my customers (Mean = 3.7, SD=1.1), marketing channels for profitability (Mean = 3.4, SD=1.2), special product brands (Mean = 3.5, SD=1.1), reliable payment platforms for my product. (Mean = 3.4, SD=0.9) and a grand mean of 3.3.

Table 2

Mean ratings of Digital Marketing Skills Created by Physics Students due to the Influence of YouTube Platforms

S/N	Item	Mean	SD	Decision
11	YouTube Platform have helped me to be a content creator	3.1	1.3	HC
12	YouTube Platform has helped me create business emails	3.4	0.9	HC
13	YouTube Platform has helped me negotiate prices of goods to make profit	3.8	1.2	HC
14	YouTube Platform has helped me reach target audience	3.5	0.8	HC
15	YouTube Platform has helped me create video for products	3.0	1.4	HC
16	YouTube Platform has helped me create good product analysis	3.3	1.1	HC
17	YouTube Platform has helped me create adequate business engagement with my customers	3.1	1.3	HC
18	YouTube Platform has helped me create marketing channels for profitability	3.2	0.8	HC
19	YouTube Platform has helped me create special product brands	3.1	1.4	HC
20	YouTube Platform has helped me create reliable payment platforms for my product.	2.4	1.5	NC
	Grand Mean	3.1		HC

Table 2 indicated that YouTube platform helped the students to create most of the digital marketing skills that is content creator (Mean = 3.1, SD=1.3), business emails (Mean = 3.4, SD=0.9), negotiate prices of goods to make profit (Mean = 3.8, SD=1.2), reach target audience (Mean = 3.5, SD=0.8), video for products (Mean = 3.0, SD=1.4), good product analysis (Mean = 3.3, SD=1.1), adequate business engagement with my customers (Mean = 3.1, SD=1.3), marketing channels for profitability (Mean = 3.2, SD=0.8), special product brands (Mean =

3.1, SD=1.4) except reliable payment platforms for my product. (Mean = 2.4, SD=1.5) and a grand mean of 3.1.

Table 3

Z-Test Analysis of the Mean ratings of Digital Marketing Skills Created by Physics (male and female) Students due to the Influence of WhatsApp and YouTube Platforms

Groups	N	Mean	SD	Z-Cal	Z-crit	Decision
Male	134	3,64	1.22			
				-0.45	1.96	Not
Female	76	3.61	1.27			rejected

The result of Table 3 revealed that the value of the calculated z of -0.45 is less than the z-critical value of 1.96 at 0.05 level of significance. Therefore, the null hypothesis (HO) is not rejected. This implies that both male and female Physics students shared similar opinion on the influence of WhatsApp and YouTube Platforms on students' creation of digital marketing skills.

Discussion of Results.

The findings of this study indicated that WhatsApp platform helped the students to create all the digital marketing skills that is content creator, business emails, negotiate prices of goods to make profit, reach target audience, video for products, good product analysis, adequate business engagement with my customers, marketing channels for profitability, special product brands, reliable payment platforms for my product. This could be as result of the learning outcomes which Physics students enjoy using WhatsApp platforms in the learning process. This is in line with the findings of Anthonia, Nwabueze and Aduba (2024) whose study revealed that students learning outcome increased significantly when taught using social media.

This present study revealed that YouTube platform helped the students to create all the digital marketing skills that include content creator, business emails, negotiating prices of goods to make profit, reach target audience, video for products, good product analysis, adequate business engagement with my customers, marketing channels for profitability, special product brands, reliable payment platforms for my product. This could be as result of the learning outcomes which Physics students enjoy using WhatsApp platforms in the learning process. This is in line with the findings of Sunday, etal (2023) whose study revealed that students learning outcome increased significantly when taught Mathematics using YouTube among the undergraduate students.

The results of this study also revealed that male and female students responded similarly on the influence of WhatsApp and YouTube on students' creation of digital marketing skills. This could be as a result of WhatsApp and YouTube been

user friendly irrespective of sex of the user. This is line with the findings of Abdulwaheed and Sunday (2025), Sunday, etal (2014) whose findings revealed that students' performances in Physics and Mathematics respectively did not differ significantly when taught using Guided discovery and target-task approach.

Conclusion

Based on the findings of this study, it was concluded that WhatsApp and YouTube helped Physics students to Create digital Marketing skills irrespective of their gender. This could boost their productivity in their respective fields of endeavors.

Recommendation

Based on the findings of this study, the following were recommended:

1. Physics Lecturers and Teachers should be properly trained through workshops and seminars to improve their usage of WhatsApp and YouTube for teaching Physics.
2. Students should be properly guided on the effective use of WhatsApp and YouTube to be able to utilize them for their academic and business development.
3. Government should make Wi-Fi much more available in schools and its environment to minimize cost of purchasing data for WhatsApp and YouTube.

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