

INFLUENCE OF SOCIAL MEDIA IN LEARNING AGRICULTURAL SCIENCE AMONG SECONDARY SCHOOL STUDENTS IN IKA SOUTH LOCAL GOVERNMENT AREA OF DELTA STATE

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ABSTRACT: This study looked at how social media affects the way Agricultural Science is taught and learned by students in secondary schools. The study looked closely at extent students use social media when learning Agricultural Science, also, the extent social media affects their school performance, the good things about using social media in teaching and learning Agricultural Science, and the problems or difficulties that come with using it. The study used a descriptive survey research design. The group included 323 students, with 123 boys and 200 girls. Data was gathered through a structured questionnaire and then looked at using averages, standard deviations, and a test called independent samples t-test. The hypotheses were checked at a significance level of 0.05, and the critical t-value used was 1.96. The study found that students use social media a lot for learning Agricultural Science, with an average score of 3.08. The study also found that social media affects how well students do in Agricultural Science, with an average score of 3.12. Moreover, social media was found to offer several advantages, such as making learning more engaging, giving

students access to learning materials, helping them understand better, introducing them to modern farming methods, and improving communication between teachers and students, with an overall average of 3.19. However, challenges like too much use of social media, difficulty focusing, putting things off, getting unreliable information, and bad internet connection were found, with an average score of 3.23. The hypotheses found no major difference in how male and female students answered the questions. The study found that social media can be a helpful tool for learning as long as it is used in a smart and responsible way. It suggested better internet access, clear advice on using social media, and more use of social media tools in teaching Agricultural Science.

Introduction

The proliferation of Information and Communication Technology (ICT) has brought many changes in different fields of human life, and one of them is education. One of the prominent consequences of ICT development is the appearance of such social media platforms as Facebook, WhatsApp, YouTube, and Instagram, which became a part of the everyday routine of the contemporary generation and are widely used for educational purposes. As a rule, social media refers to the set of internet-based platforms that allow users to create, share, and exchange content through online communities. Social media allows making teaching and learning activities more efficient by using the opportunities to communicate and collaborate as well as get easy access to scholarly sources. At its base, social media is made up of digital tools that allow users to share and discuss the information including user-generated text, videos, audio, and other multimedia content on the Internet. Social media can also be defined as electronic communication that provides an opportunity for students to build online communities where to exchange ideas, messages, and other content. There are three main components of social media – content, community, and Web 2.0 technology – that characterize the way people interact, create and comment on information. Social media cannot be defined by actions taken by a single individual; rather it should be described by what people make and communicate to each other globally, in all directions at any given time.

These are web technologies that allow continuous interaction and exchanging user-generated content. Social media consists of the digital communication tools that allow people to interact, create, find and exchange information in different formats – text, images

or videos that can be subsequently archived, discussed and used further by other users within the online networks. The specific benefit of social media for development-oriented communication is its mobile nature, ability to use both mass and personalized communication, huge network of loose connections to distribute ideas and high level of interconnectivity and content sharing between the platforms.

The importance of Agricultural Science to the Nigerian secondary school education system is not in question since this discipline offers the necessary knowledge and skills in crop production, animal husbandry, soils, and agricultural economics while ensuring food security, job creation, and development in the country. However, traditional means of teaching Agricultural Science in schools are usually dependent on books and lectures with minimal hands-on experience, which in turn negatively impacts learners' engagement and understanding of the subject matter. Social media use in education opens up new horizons in this field. For instance, YouTube can provide students with video examples of farm practices, and WhatsApp helps disseminate information in a more timely manner through notes, assignments, and announcements. Besides that, learners become engaged with each other as they interact while discussing their issues related to Agricultural Science and can get feedback from each other outside class hours. According to Agumagu et al. (2023), consistent involvement in agricultural practice is crucial for staying interested in this field of work.

Secondary education in Nigeria serves as a base for further tertiary studies and acquisition of skills needed for the future profession of students. Agricultural Science as a mandatory subject is intended for conceptual and practical competence development concerning crop farming, animal husbandry, soil conservation, and agricultural economics. The significance of this subject is explained by the long-standing nature of agriculture as an economic backbone in the country, helping with employment, food provision, and development. Thus, in order to properly teach Agricultural Science, one must not only use traditional methods of instruction but also provide learners with demonstrations and practice along with the latest knowledge in agriculture. Today, learners have no trouble finding instructional videos of farming, joining agricultural discussion groups on the Internet, discovering new agricultural innovations and getting advice from experts in various social media. Educators themselves widely use social media for material dissemination,

assignments, and updates. It became a new way of enhancing students' knowledge of Agricultural Science in a more interesting, interactive, and visual way (Susilowati, 2024).

However, despite all these advantages, there are several disadvantages that go along with them. Many Nigerian secondary school students spend considerable time on non-study activities such as chatting, entertaining themselves, and just networking that could be a distraction from their studies. Excessive use of social media may reduce attention span, disturb studying routines, and affect the performance of some subjects, for example, Agricultural Science, which demands concentration, practical skills, and repetition of actions. The reasons behind that problem are poor control over the process, low digital literacy among students and teachers, and inconsistent availability of high-speed internet connection. These aspects make the analysis of influence of social media on academic achievements and learning experience in Agricultural Science highly relevant (Susilowati, 2024).

On the other hand, according to Moro and Rita (2018), excessive or nonacademic use of social media can lead to distractions, less study time, decreased concentration levels, and reduced academic achievement. Many secondary school students spend much time on entertainment videos that may decrease their ability to focus on disciplines like Agricultural Science where constant study is required. In a developing country like Nigeria, the incorporation of technologies in the teaching of Agricultural Science is increasingly becoming common; however, many problems remain, including low digital literacy, lack of control over the use of these platforms, and lack of organized educational material. This situation demonstrates the need to investigate the effect of social media on students' learning habits, motivation to learn, and academic performance. Apart from the distracting nature, the intensive use of these sites can reduce concentration levels and negatively affect academic achievements because many students spend too much time socializing, entertaining themselves, and browsing on social media instead of studying. While many researchers note that social media can contribute to learning, they also warn about the negative impact of improper use of these platforms on academic performance. Another challenge is the potential spread of false information that affects the effectiveness of learning in Agricultural Science as this discipline is dependent on practical knowledge.

Traditionally, Agricultural Science has been taught using classroom teaching methods, textbooks, laboratory work, and on-farm teaching to connect the theoretical knowledge to practice. However, with the advent of technology, specifically social media, this field has been significantly changed. Today students are provided with new opportunities through such platforms as WhatsApp, Facebook, YouTube, Instagram, TikTok, and Telegram to obtain information, communicate, and interact with learning materials. Since the internet access and possession of smartphones increases across Nigeria, the number of secondary school students spending time on these platforms both for academic and other purposes continues to grow (Zittrain, 2024).

According to Zittrain (2024), social media has created many possibilities in order to improve Agricultural Science teaching. Students have the opportunity to view learning materials about the latest farming practices, join online forums related to agriculture, follow agricultural experts, and learn innovative practices adopted worldwide. At the same time, teachers use social media in their classes, communicating with students and delivering learning materials there, assigning tasks and providing feedback. In general, this approach may lead to a situation when Agricultural Science will become more interactive, hands-on, and interesting to learn, but it is not entirely positive. Many secondary school students in Nigeria use these platforms mainly to entertain themselves, communicate with friends, and do nothing about education. Such kind of behavior may result in distractions, reduced study time, low attention level, and loss of academic discipline.

Some of the factors within Nigeria's educational environment which limit the usefulness of social media as an educational tool include lack of proper supervision of students' online behavior, inadequate digital skills among the students and the teachers, frequent power failure, and lack of access to reliable internet, especially in rural areas. These factors may act as barriers to the productive use of social media for learning purposes and hence may make it easy for these sites to be used improperly. In light of the strengths and weaknesses identified above, it is imperative to carry out a critical evaluation of the effects of social media on the teaching and learning process of Agricultural Science in secondary schools in Nigeria. Whether these social media sites are helpful in promoting learning or they serve as distractions thus affecting academic performance should be considered relevant to all stakeholders in education.

Statement of the Problem

Despite the increase in the presence of social media among secondary school students, the extent to which it influences teaching and learning, especially in Agricultural Science, is not yet known. Although there are chances of improving the learning experience through access to information and communication, these social media sites are majorly used by students for entertainment purposes, hence making them poor learners. Teachers may also lack enough knowledge on how to use social media effectively in the teaching process. The current research highlights another problem that is characterized by misinformation on social media which may easily misguide those learners who do not have the required supervision and thus give them a wrong conception of agriculture as an academic discipline. In this regard, this research intends to establish whether the social media positively or negatively impacts the teaching and learning of Agricultural Science at the secondary level in Ika South Local Government Area in Delta State. From a number of social media sites, including WhatsApp, Facebook, YouTube, Instagram, and Tiktok, the use of such platforms is very much popular among the students, providing the opportunity of learning while most of the time being used for entertainment purposes. The teachers and other school authorities find themselves in difficult situations because they lack a way of using these platforms effectively in the learning process without creating distractions.

Purpose of the Study

The main purpose of this study is to examine the influence of social media in learning Agricultural Science among secondary school students in Ika South Local Government Area of Delta State. The specific purpose are to:

- i. Examine the extent to which social media is used by students in learning Agricultural Science.
- ii. Determine the influence of social media on students' academic performance in Agricultural Science.

Research Questions

The following research questions will guide the study:

- i. To what extent do students use social media in learning Agricultural Science?

- ii. What is the influence of social media on students' academic performance in Agricultural Science?

Hypotheses of Study

The following hypotheses will be used guide the study

H₀₁: There is no significance difference between the mean response of male and female students and the extent students use social media in learning Agricultural Science.

H₀₂: There is no significance difference between the mean response of male and female students and the influence of social media on students' academic performance in Agricultural Science

Literature Review

Concept of social media

Social media refers to the internet platforms through which users can create, share and exchange information, ideas and multimedia contents. Some of these include: WhatsApp, Facebook, YouTube, Instagram, TikTok and many others. Kaplan & Haenlein (2020) define social media as an umbrella term for internet-based applications which make it possible to create and share content. The concept of social media includes all kinds of new media technologies and communicative processes, and has assumed great importance for researchers, academicians, extension officers, farmers, private corporations and NGOs alike as a tool for information sharing and networking. Blogs, Facebook and Twitter are commonly used by companies for advertising.

Kaplan & Haenlein (2020) define social media in a more structured way as online applications based on the ideology and technology behind Web 2.0 that facilitate the production and distribution of user-generated content. Kietzmann et al. (2021) describe them as platforms where individuals exchange information, communicate and build relationships using interactive digital tools. Boyd and Ellison (2021) describe social network sites as web services that offer users the opportunity to create public or semi-public profiles, identify and list their connections, and explore networks belonging to others and themselves.

Agricultural Science Education

This includes the scientific investigation of farming techniques, crop production, animal production, soil sciences, and agricultural economics. According to FAO (2022), agricultural education is essential for achieving food security and youth empowerment. Agricultural science is broadly referred to as the science and art of cultivation of the soil, rearing of livestock, feed preparation, processing of farm produce, and marketing of surplus farm products. According to Ezeh (2025), the term Agricultural Education can be described as an instructional program intended at equipping people with the skills and knowledge that are useful in increasing agricultural productivity and related services, hence developing manpower in the agricultural sector through proper population development. Agricultural education as a vocational subject involves the acquisition of skills that will make students employable after school.

The author Phipps (2023) describes Agricultural Education as a structured and organized program that targets persons who are interested in a career that has agriculture connections and requires further training to become independent farmers. It targets the knowledge, principles, and skills associated with the production, processing, and marketing of crops and livestock. The instruction aims to achieve several purposes like food production, supply of raw material for industries, creation of foreign exchange through exports of agricultural produce, generation of employment, and also an academic subject in educational institutions. Agriculture in Nigeria has high potential, with about 60% of the country's adult population being engaged in agricultural activities (Njoku, 2023). According to Federal Ministry of Agriculture, Water Resources and Rural Development (2025), agriculture plays a key role in national economic development through various activities such as supporting a growing population, supplying industrial raw materials, employment generation, foreign exchange, and markets for industrial products.

Learning in Agricultural Science

Agricultural Science Instruction entails a combination of formal instruction and practical demonstration with learning through observation, experimentation, and doing things like school gardens and keeping animals. Perspectives from scholars reveal that it is the best way to help students gain an understanding of concepts through experiential learning

where one gains knowledge through the activities involved (Kolb, 2023). Learning is a dynamic and systematic process which involves the interactive transmission of agricultural knowledge, skills, values, and attitudes in both formal and informal settings. Learning Agricultural Science involves classroom instruction, practical exercises, experimentation, observation, evaluation, and feedback in the acquisition of the necessary skills for agricultural productivity and food security. Learning Agricultural Science, to put it clearly, refers to the process whereby instructors try to make students understand concepts related to crop production, animal rearing, soil sciences, agricultural economics, and farm management. Such processes include lectures, demonstrations, discussions, field visits, projects, among others, as well as use of modern instructional approaches. From the learner point of view, learning involves an active engagement of the content, interaction with the environment, and the development of knowledge and skills which brings about behavioral changes. In Agricultural Science, it is beyond the understanding of the content and involves development of competencies, attitudes, and values (Chisenga, Kedemi & Sam, 2023).

According to Kolb (2020), the best learning involves a cycle of concrete experiences, reflective observations, abstract conceptualizations, and active experiments. This kind of process is very appropriate in Agricultural Science as the students are likely to learn effectively through participation in various activities like planting, irrigation, pests control, and keeping of livestock. The FAO (2022) views agricultural education as the way of capacity building through training, research, and extension services. All these aspects show that teaching and learning in Agricultural Sciences involve a process of structured, interactive, and practice-based in which instructors guide the learners and the learners gain agricultural knowledge, skills, values, and competencies using traditional as well as technological instructional approaches such as social media. This framework views teaching as not only about theoretical instruction but also the organization of practical experiences and activities that will equip students with hands-on skills in crop production, farm management, and other areas. Hence, the learning process is described in terms of being active and participatory whereby students will be interacting with the material, engaging with peers, and applying what they have learned to solve agriculture-related challenges. In this case, the discipline is therefore very practical and skill-based where learning is achieved through observation, experiments, fieldwork, technology and the use

of social media especially in making available agricultural information, learning opportunities, and engagement beyond classroom setting.

Extent to which Students Use Social Media in Learning Agricultural Science

Social media is viewed as one of the necessary tools in agricultural education by both farmers and scientists due to advanced facilities provided by customer service entities and information centres. Farmers are using social media in large numbers to increase production through social media and ICT which allow the sharing of production, information, and assistance. Rural networking has facilitated two-way communication through which farmers can connect despite the distance, provide solutions to agricultural problems and exchange their success and failure stories. The popular social media channels that farmers use include Facebook, YouTube, and WhatsApp where they learn about harvesting, post-harvesting handling, marketing of products, markets, and solving problems in the community (Adegoke, 2023).

Social Media Tools Used in Agricultural Extension

The application of social media in agriculture and extension practice has become more frequent, as platforms like Facebook, Twitter, and YouTube have become popular, whereas WhatsApp becomes the main tool of direct interaction between extension agents and farmers because of its more private nature; thus, there is less documentation of its group applications. Most used tools are:

Facebook is one of the most popular social media platforms in the world with 1.87 billion active monthly users and has great potential to be used in extension practice by individuals, professionals, and extension agencies (Agumagu et al., 2023). Twitter, which has about 320 million users, has become an important catalyst for influencing public opinions and communities, including agriculture communities. YouTube, which is founded on the principles of freedom of expression, information, opportunity, and belonging, allows users to upload, watch, share, comment on, and subscribe to content. Blogs provide in-depth discussions regarding various topics through comments made by readers (Nujaimi et al., 2025).

Influence of Social Media on Students' Academic Performance in Agricultural Science

Social media allows people to express and communicate with each other using personal profiles, thus changing personal and professional communication thanks to rapid bidirectional information exchange. Kaplan and Haenlein (2020) describe social media platforms as dynamic systems that allow disseminating huge amounts of information to the global community fast and in a cheap way (Prykhodkina & Makhynia, 2020). The use of technology by social media is viewed as the basic element of modern communication, where the internet becomes a powerful social factor influencing daily activities of individuals. Due to rapid technological advancement in digital technology, education has been impacted largely in various ways through introduction of tools that can assist in teaching and learning. Social media which initially was meant for social purposes has emerged as a powerful tool for communication, collaboration and knowledge transmission and various tools including WhatsApp, Facebook, YouTube, Instagram and TikTok are increasingly being used to communicate and teach students (Destari et al., 2024).

As a globally interconnected tool, social media has transformed the nature of business and communication around the world and is very useful especially in agriculture as it connects farmers and agribusiness professionals within huge distances and its usefulness increases according to the time that the user invests. It helps in enhancing the interaction and information flow between people interested in innovation in agriculture and extension capability (Ghadei & Jyoti, 2023). Agricultural production involving growing, harvesting, processing, storing, marketing of crops and livestock together with supplying of raw materials to industries is very important in national development but farmers always find difficulties in meeting increased demands. In today's production process, there is need for internet based access, recording and distribution of information regarding agriculture using information and communication technologies (ICT), due to increase in demand of food and diversification of industrial sectors, there is need to modernize agriculture education (Greenhow & Lewin, 2023).

Theoretical Framework

This research combines Constructivist Learning Theory, first proposed in the middle of the twentieth century by Jean Piaget, and later expanded upon by Lev Vygotsky (1978), with Social Learning Theory introduced by Albert Bandura in 1977.

Constructivist Learning Theory (Lev Vygotsky)

The Constructivist Learning Theory of Lev Vygotsky serves as an ideal framework for studying the effect of social media on teaching and learning of Agricultural Science because of its focus on social interaction, collaboration, and guidance as core learning principles that are common for the social media environment. In the context of the Constructivist Learning Theory, learners of Agricultural Science do not learn things independently but create knowledge as a result of interaction with instructors, classmates, and digital resources. The platforms such as WhatsApp, YouTube, Facebook, Instagram, and TikTok serve as virtual classrooms where concepts are discussed, ideas are exchanged, and demonstrations are viewed in line with Vygotsky's principle of learning as socially mediated activity that becomes internalized in time.

The Zone of Proximal Development is especially relevant. When the students face problems in comprehending complex disciplines like soil science or animal husbandry, they can turn to instructional videos, communication with peers, and consultation with teachers or experts on social media and move from difficult tasks to those that are easier to perform under guidance, which helps to improve academic performance. In addition, the constructivist principle of collaborative learning, which takes place on the social media platforms, allows forming online study groups and learning from each other. Finally, the theory emphasizes the importance of language and communication as tools of learning which are illustrated by chats, comments, voice messages, and video conversations performed via social media.

Empirical Studies

Various studies have been done to determine the effect of social media on learning outcomes of students. For instance, Preeti and Sangeeta (2018) carried out research in Unnao district, Uttar Pradesh, concerning social media as a source of agricultural information. They sampled 120 respondents in two blocks who were skewed in terms of OBC caste (43.3%) and agricultural occupations (40.0%) and educational levels from graduate (42.5%) to illiterate (4.2%). The study showed that there is a relationship between education and better economic and social status of respondents.

Moreover, Thomas and Jacob (2023) did research concerning knowledge-sharing and academic use of social media among Nigerian agriculture students as a way to reduce the digital divide in Nigeria. The study included two colleges in Plateau State—the Federal College of Forestry, Jos, and the Federal College of Animal Health and Production Technology, Vom—and sampled 120 students using multistage sampling. According to the results, the majority of the sampled students (63.6%) was male, and 86.3% of the sampled respondents were 21–30 years old. The majority of them had personal computers (61.8%), but all of them had access to the internet. However, only 35.5% of them considered information from social media credible, and 55.5% of them noted that the main limitation in using internet was its cost. Regression analysis showed the connection between the academic use of social media and the location of respondents; thus, the study suggested improving access to personal computers as additional source of information.

Another researcher, Apuke (2017), analyzed the effect of social media on academic performance of Taraba State University students. There were 100 undergraduates sampled from a population of about 5,000 people using Taro Yamane's formula and fully returned questionnaire. The research was based on uses and gratifications theory and analyzed using SPSS. The results show the wide internet access via smartphone, tablet, and computer as well as the relationship between social media use and bad academic performance. Thus, the study recommended to minimize social media exposure and concentrate on studies, especially if students want good grades.

According to Sunday, Titilayo, and Peter (2025), the academic impact of social media use was assessed among senior secondary students in Ogbomoso, Oyo State based on a sample size of 300 S.S.2 students. More than half admitted to daily use, whose major purposes include photo/video sharing (24.3%), news tracking (20.7%), and skills acquisition. Academic engagement was noted only by 37%, while smartphones served as the most popular access point (82.3%). Despite the issues with distractions, cyber bullying, and mental health problems, the researchers found no significant connection between social media use and academic performance in Agricultural Science ($r = 0.057$, $p > 0.05$). However, the researchers provided several recommendations for the future research and cooperation of educators, parents, and students. Adejo, Ibrahim, and Ogurinde (2018) looked into the effects of social media use on student academic performance in the Faculty

of Agriculture at Kogi State University. All 1,673 full-time undergraduates were involved in the study, in which the multistage sampling and structured questionnaire were used, and descriptive statistics and Pearson's correlation were utilized to analyze the data. The results show a significant positive relationship between the time spent on social media and academic performance of students, as well as the influence of the socioeconomic status of students on their platform use.

The authors of the third article (Ajah, Alabi, and Nnaji, 2021) researched the determinants of social media use for agriculture in Nigeria among young people who live in the Federal Capital Territory, Abuja. In order to understand the ways in which social media helps youths get involved in agriculture and to define the socioeconomic factors that affect the use of platforms for agricultural information, Ajah et al. applied multistage sampling, questionnaires, and focus group discussions with the help of the utility and rational choice theories. The analysis of data was carried out with the help of descriptive statistics and logit regression. The latter explained 51.0% of the variance and included such predictors as age, education, farm experience, income, and sex. Moreover, 30.0% of respondents stated that social media contributed to their involvement in agriculture due to extension services.

Methodology

Survey research design was adopted in the conduct of this study. The study was carried in Ika South Local Government Area of Delta State. The population of the study consists of nine hundred and fifty six (956) male and female secondary school students from twenty two (22) public junior secondary schools in Ika South Local Government Area. A purposive sampling technique was used to select 8 public secondary schools out of the entire population. In this case all the students in these schools that were selected was used as the sample. Based on this, 323 students participated will be selected in the study. Twenty (20) items structure questionnaire was used for the study. The questionnaire is made of information drafted from the research questions which will based on four (4) points Likert rating scale of Strongly Agree (SA=4), Agree (A=3), Disagree (D=3), Strongly disagree (SD=1). The reliability of the research instrument was done by using the pretest method to establish the reliability of the instrument. The instruments were reliable because the questionnaire carried out by the researcher in the selected schools proved the effectiveness of the questionnaire. Item obtained was tested with the use of Pearson Product Moment

Correlation to obtained Coefficient of 0.89 respectively. A total number of 323 questionnaires was administered and retrieved with help of two research assistance; the researcher passed vital information to respondents with regards to the whole exercise. Data collected from the questionnaire was assigned figures and tabulated. The data obtained from such tabulation was analyzed using mean and standard deviation to answer the research question using SPSS version 25. While t-test was used to test the hypotheses stated at 0.05 alpha level.

Analysis

Research Question One

To what extent do students use social media in learning Agricultural Science?

Table 4.1: Mean score on the Extent to Which Students Use Social Media in Learning Agricultural Science (N = 323)

S/N	Statement	$\bar{X}$	SD	Remark
1	Students use social media to watch videos related to Agricultural Science topics.	3.15	0.93	High Extent
2	Students participate in online discussions or groups about Agricultural Science.	3.04	0.96	High Extent
3	Teachers use social media to access notes, tutorials, or study materials in Agricultural Science.	3.08	0.95	High Extent
4	Students follow pages or accounts that share Agricultural Science knowledge.	3.09	0.96	High Extent
5	Teachers use social media to ask questions or seek help on Agricultural Science topics.	3.02	0.98	High Extent
Grand Mean		3.08	0.96	High Extent

Table 4.1: The table shows that all the items recorded mean scores above the criterion mean of 2.50. The grand mean of 3.08 indicates that students use social media for learning Agricultural Science to a high extent. This shows that students make use of social media to watch Agricultural Science videos, participate in online discussions, access study materials, follow educational pages, and seek help on Agricultural Science topics.

Research Question Two

What is the influence of social media on students' academic performance in Agricultural Science?

Table 4.2: Mean score on the Influence of Social Media on Students' Academic Performance in Agricultural Science (N = 323)

S/N	Statement	$\bar{X}$	SD	Remark
1	Social media helps students understand Agricultural Science concepts better.	3.18	0.91	Accepted
2	Teachers use social media to improve students' performance in Agricultural Science.	3.12	0.94	Accepted
3	Educational content on social media positively affects students' Agricultural Science results.	3.16	0.92	Accepted
4	Social media distracts students from studying Agricultural Science.	3.05	0.98	Accepted
5	Excessive use of social media reduces learners' performance in Agricultural Science.	3.11	0.95	Accepted
Grand Mean		3.12	0.94	Accepted

Table shows that all five items recorded mean scores above the criterion mean of 2.50, with a grand mean of 3.12. This indicates that social media has a significant influence on students' academic performance in Agricultural Science, with both positive effects such as improved understanding and access to educational content, and negative effects such as distraction and excessive use.

Test of Hypotheses

H₀₁: There is no significant difference between the mean responses of male and female students on the extent to which they use social media in learning Agricultural Science.

Table 4.5: Test of Hypothesis One on Students' Use of social media in Learning Agricultural Science

Gender	N	$\bar{X}$	SD	df	t-cal	t-crit	Level of sign	Remark
Male	123	3.09	0.95				0.05	
Female	200	3.08	0.97	321	0.09	1.96		Not Significant

Since the calculated t-value of 0.09 is less than the critical t-value of 1.96 at the 0.05 level of significance, the null hypothesis is accepted. Therefore, there is no significant difference between male and female students in the extent to which they use social media in learning Agricultural Science.

H₀₂: There is no significant difference between the mean responses of male and female students on the influence of social media on their academic performance in Agricultural Science.

Table 4.6: Test of Hypothesis Two on the Influence of social media on Students' Academic Performance in Agricultural Science

Gender	N	$\bar{X}$	SD	df	t-cal	t-crit	Level of sign	Remark
Male	123	3.13	0.93				0.05	
Female	200	3.11	0.95	321	0.19	1.96		Not Significant

Since the calculated t-value of 0.19 is less than the critical t-value of 1.96 at the 0.05 level of significance, the null hypothesis is accepted. Therefore, there is no significant difference between male and female students regarding the influence of social media on their academic performance in Agricultural Science.

Discussion of Findings

Extent to Which Students Use social media in Learning Agricultural Science

According to Table 4.1, it is clear that students make significant use of social media in learning Agricultural Science, considering the overall mean of 3.08 and standard deviation of 0.96. It means that social media has become practically a useful platform where students get access to information, education material and chance to interact regarding Agricultural Science content. The first item that focuses on use of social media by students to watch videos about Agricultural Science topics gave the highest mean among all items with the score of 3.15 and standard deviation of 0.93, meaning that students use social media videos to learn about Agricultural Science concepts. These kinds of educational videos can visually demonstrate agricultural processes, hence making it easy to understand the difficult concepts presented in other ways. The second item that deals with online discussion and group involvement by students regarding Agricultural Science has given the mean of 3.04 and standard deviation of 0.96, meaning that students participate in online environment where they discuss agricultural issues, exchange ideas and learn from their peers and instructors. This finding is consistent with Adegoke (2023) that found out that Facebook, YouTube and WhatsApp are some of the widely used social media platforms by farmers who also use social media to share their success and failure stories, information about harvesting and post-harvest practices, market agricultural products, receive information about markets and answers to their farming issues from their known communities.

Third item produced a mean of 3.08 and a standard deviation of 0.95, showing that students rely on social media in order to get notes, tutorials and other study materials on

Agricultural Science, hence complementing learning done in class. Fourth item yielded a mean of 3.09 and a standard deviation of 0.96, revealing that students follow pages or accounts devoted to spreading knowledge about Agricultural Science, hence using social media in order to stay up to date with educational content. Fifth item yielded a mean of 3.02 and a standard deviation of 0.98, showing that students also use social media in order to ask questions or receive assistance in relation to Agricultural Science. All in all, grand mean of 3.08 demonstrates that students use social media for learning Agricultural Science to some extent, an assertion which is supported by the work of Fabinu (2024), who stated that social media works as an important supplementary learning tool through provision of educational videos, study materials, discussion, agricultural information and other opportunities for academic support.

Influence of Social Media on Students' Academic Performance in Agricultural Science

The results in Table 4.2 show that social media has a great influence on academic performance of students in Agricultural Science, judging by grand mean of 3.12 and a standard deviation of 0.94. Since the grand mean is above the criterion mean of 2.50, it can be concluded that social media affects performance of students in both positive and negative ways. First item, which says that social media helps students achieve a deeper understanding of concepts in Agricultural Science, produced a mean of 3.18 and a standard deviation of 0.91, meaning that students find social media useful in understanding concepts taught in class. Through videos, illustration, explanations and other educational content, students can get a further explanation of issues covered in class. Second item, whose mean was 3.12 and a standard deviation of 0.94, indicates that even teachers use social media in order to improve academic performance of students in Agricultural Science by posting learning materials, assignments, explanations and other educational content through social media platforms. This finding is supported by the work of Agumagu et al. (2023), who found out that Facebook is the most popular social media site in the world, boasting of more than 1.87 billion monthly active users.

The third item had a mean score of 3.16 and standard deviation of 0.92. This means that educational material obtained through social media positively affects performance of students in Agricultural Science and that obtaining relevant material can be an alternative to formal learning, helping students prepare for examinations. The fourth item gave a mean

of 3.05 and a standard deviation of 0.98, which implies that social media can also cause distraction of students from studying Agricultural Science because too much time spent on fun and irrelevant material leaves little time for study. The fifth item gave a mean of 3.11 and a standard deviation of 0.95, showing that too much use of social media can adversely affect learner performance in Agricultural Science. These results support the findings of Nujaimi et al. (2025) who have stated that social media can improve learning if used educationally but that its excessive or irresponsible use can impair learners' concentration and academic performance.

Conclusion

Based on the above findings, this research study concludes that social media have a significant contribution to the learning and teaching of Agricultural Science at the secondary school level. The students make use of the social media tools for educational videos, educational study material, information related to agriculture, and discussion. This study further affirms that social media could positively impact the academic performance of students when used for educational purposes. Besides, the study has highlighted some of the disadvantages like the distraction, loss of concentration, procrastination of studies, and unreliable information available to the learners through the use of social media. Also, weak internet connectivity reduces the efficiency of social media in teaching and learning. In conclusion, the efficiency of social media in Agricultural Science is dependent on the way social media is used by the teachers and the students.

Recommendations

Based on the findings and the conclusions above, the following recommendations are made:

- i. Agricultural Science teachers should incorporate social media in teaching in the classroom using educational videos, tutorials, agriculture sites, and discussion groups.
- ii. Schools should ensure the provision of reliable internet access to enable teachers and learners to make use of online agricultural learning resources.
- iii. Teachers should guide learners to use social media responsibly with emphasis on educational content during study hours as opposed to entertainment.

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