IMPACT OF SOCIAL MEDIA USAGE ON THE ACADEMIC PERFORMACE OF BIOLOGY STUDENTS IN KWARA STATE COLLEGE OF EDUCATION. ILORIN

BY

OSUNBUYIDE MARVELLOUS MAYOWA

KWCOED/IL/22/0558

A RESEARCH PROJECT REPORT SUBMITTED TO THE DEPARTMENT OF BIOLOGY INTEGRATED SCIENCE IN KWARA STATE COLLEGE OF EDUCATION ILORIN.

IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF NIGERIAN CERTIFICATE IN EDUCATION (N.C.E).

AUGUST 2025.

DEDICATION

This research work is dedicated to Almighty God (the sustainer and cherisher of heaven and earth) and to my lovely parent Mr. & Mrs. Osunbuyide may God in his infinite mercy be with them (Amen)

ACKNOWLEDGEMENTS

I give all praises and adoration to Almighty God for his love, care, protection, and guidance in my course of study.

I am indebted to my able and diligent supervisors Dr. B.Y. Olarewaju & Mrs. O.F Awolola for their advice, help and time spent to give all necessary guidance and correction toward the success and completion of this project work. I pray that Almighty God will continue to bless you more and reward you abundantly. "Amen"

My sincere appreciation also goes to my dearest beloved, caring, precious and wonderful parent Mr. & Mrs. Osunbuyide who have been my source of existence, my soul provider for their love, care prayer's encouragement and support financial, morally and spiritually. I pray that Almighty God will give you long life, sound health and prosperity to enjoy all the fruit of your labour. "Amen"

My acknowledgement would be incomplete if I fail to appreciate the effort of my amiable lecturerers in Biology and Integrated science Department for their fartherly and motherly advice, may Almighty God continue to increase you in knowledge. "Amen"

My appreciation also goes to my friend at sawmill area, in person of dotun and daddy Halima who have not been tired for me for my corrections time to time and my coursemates, and finally to my lovely and caring Muyideen Robiah.

I pray that God Almighty will coninue to lead and guide us all. (Amen).

ABSTRACT

This study investigated the impact of social media usage on students' academic performance in Biology among students of the Kwara State College of Education, Ilorin. The increasing integration of digital technology into higher education has reshaped how students access, process, and share academic information. Platforms such as WhatsApp, Facebook, Instagram, TikTok, and Telegram have become essential tools for learning, communication, and collaboration. However, their growing popularity has also raised concerns regarding students' concentration, study habits, and academic outcomes. The study adopted a sequential explanatory mixed-methods design, combining both quantitative and qualitative approaches. The population comprised all Biology students in the College of Education, Kwara State College of Education, Ilorin. A total of 150 students were randomly selected as the study sample, Two research instruments were developed and validated for data collection: the Social Media Usage Questionnaire (SMUQ), with a reliability coefficient of 0.89, and the Biology Achievement Test (BAT), with a reliability coefficient of 0.83. Data were analysed using descriptive statistics, Pearson product-moment correlation, t-tests, and multiple regression for the quantitative phase, while qualitative data were subjected to thematic analysis. Findings revealed that moderate, academically oriented use of social media such as participation in educational WhatsApp groups, watching instructional videos, and sharing course materials—positively influenced students' Biology performance. Conversely, excessive non-academic use and late-night browsing had negative effects on concentration and academic achievement. Gender differences were found to be statistically insignificant, while level of study and access to digital resources showed moderate influence on social media engagement. The study concluded that social media, when used strategically for academic purposes, can enhance Biology learning outcomes among students of Colleges of Education. It was therefore recommended that lecturers incorporate guided use of social media into classroom instruction, and that the Kwara State College of Education, Ilorin, should develop digital literacy programs and monitoring strategies to ensure responsible and productive use of social platforms among students.

TABLE OF CONTENTS

CHAPTER ONE

INTRODUCTION

Background to the Study

The rise of social media has transformed the way individuals communicate, share information, and access knowledge across the world. Platforms such as WhatsApp, Facebook, YouTube, Instagram, and TikTok have become an integral part of daily life, particularly among young people and students (Asemah, Okpanachi, & Edegoh, 2013). In Nigeria, the increased availability of smartphones and internet connectivity has further expanded access to these platforms, making them a significant influence on students' academic and social lives (Adesina, 2023).

Biology, as one of the core science subjects in secondary schools, plays a crucial role in equipping students with foundational knowledge for careers in medicine, agriculture, and environmental science. It requires not only classroom instruction but also active participation, critical thinking, and access to learning resources. In recent years, students have begun to integrate digital tools into their study practices, with social media offering

opportunities for collaborative learning, easy access to educational content, and interaction beyond the classroom (Oluwatoyin, 2011).

Globally and nationally, there is growing attention on how social media can contribute to learning outcomes. For instance, academic groups, online tutorials, and virtual classrooms allow students to enhance their understanding of difficult concepts (Sweller, 1994). In the Nigerian context, the role of social media is particularly relevant given the emphasis on science education as a driver of technological and national development. Thus, examining the patterns of social media usage among Biology students provides an important perspective on how these platforms shape academic practices and performance in today's digital era (Abdullahi & Olayemi, 2020).

Statement of the Problem

Despite the many opportunities that social media provides for learning, its increasing use among secondary school students has raised concerns about its influence on academic achievement. While some students utilize these platforms to access tutorials, join study groups, and engage in academic discussions, many others spend a significant amount of time on non-academic activities such as chatting, entertainment, and

browsing unrelated content. This trend raises questions about whether social media supports or hinders effective learning, particularly in science subjects that require deep understanding and concentration.

In Nigeria, reports of fluctuating performance in Biology, as reflected in national examinations such as WAEC and NECO, have generated debate among educators, parents, and policymakers. In Kwara State, teachers often observe that students' attention and study discipline appear to be affected by their frequent use of social media. However, there is limited empirical evidence that specifically connects social media usage patterns to students' performance in Biology within the Ilorin context.

This study therefore seeks to fill that gap by examining the extent to which social media influences the academic performance of Biology students in selected secondary schools in Ilorin. By focusing on both the positive and negative aspects of social media use, the research aims to provide a balanced understanding of its role in shaping learning outcomes.

Objectives of the Study

The main objective of this study is to investigate the impact of social media usage on students' academic performance in Biology in Ilorin, Kwara State.

Specific objectives are to:

1. Identify the frequency and patterns of social media usage among biology students in KWACOED Ilorin.

2. Assess the relationship between time spent on social media and academic performance of Biology Student.

3. Evaluate students' perceptions of the effects of social media on their study habits.

4. Identify the academic advantages and disadvantages associated with social media usage.

5. Recommend strategies for the responsible and academic use of social media by biology students in KWACOED Ilorin.

Research Questions

To guide the study, the following research questions were raised:

1. What are the common social media platforms used by biology students in KWACOED Ilorin?

2. How frequently do students use social media on a daily basis?

3. In what way do social media influence the study habits and learning outcome of Biology students?

4. How does social media usage relate with the academic performance of biology students in KWACOED Ilorin.

Research Hypotheses

The following null hypotheses will be tested in the course of the study:

$H_0$1: There is no significant relationship between time spent on social media usage and academic performance in Biology at KWACOED Ilorin.

$H_0$2: There is no significant difference in Biology performance between students who frequently use social media for academic purposes and those who do not.

Significance of the Study

This study is significant for several reasons:

Educational Stakeholders: It will help school administrators, teachers, and curriculum planners understand the influence of social media on academic performance, allowing for the development of intervention strategies.

Parents and Guardians: The findings will assist parents in guiding their children on proper use of social media for academic growth.

Students: The study will enlighten students on how to balance social media usage with academic responsibilities, especially in science subjects.

Policy Makers: The research will provide useful data to inform educational policy and ICT integration in schools.

Learning Outcome and Study Background

At the end of this study, it is expected that:

1. Students will be more aware of the effects of social media on their academic performance.

2. Teachers will have practical strategies for incorporating social media positively into Biology instruction.

3. School administrators and policymakers will be equipped with data-driven recommendations to support digital learning policies.

The background of this study lies in the increasing use of technology in education and the need to balance entertainment-driven usage of social media with academic-driven usage. Understanding how students in Kwara State College of Education and surrounding schools use social media offers valuable insight into how digital platforms influence science education in Nigeria.

Scope and Delimitation of the Study

This study focuses on biology students in KWACOED Ilorin, Kwara State. The subject area is Biology, and the research will assess social media usage patterns, perceptions, and performance levels in this context. It does not cover other science subjects or schools outside Ilorin metropolis. Also, the study will not include tertiary institutions or undergraduates.

Significant Relationship between Social Media Usage and Students' Academic Performance in Biology at KWCOED

Social media has the potential to serve as both a distraction and a support tool for learning. At the Kwara State College of Education (KWCOED), many students use platforms such as WhatsApp and Telegram for academic discussions, which can enhance their performance in Biology. However, overuse of these platforms for entertainment often correlates with lower academic achievement. This research seeks to establish whether a significant relationship exists between students' overall social media usage and their performance in Biology at KWCOED.

Significant Relationship between Frequency of Social Media Usage and Biology Students' Performance

The frequency with which students engage with social media is an important factor that may determine its effect on learning outcomes. Moderate use for academic purposes can improve understanding of Biology concepts, while excessive daily use for non-academic activities may hinder performance. This study will therefore examine whether the frequency of

social media usage significantly influences Biology performance among students in Ilorin.

Operational Definition of Terms

Social Media: Online platforms used for interaction, communication, and content sharing, such as Facebook, WhatsApp, Instagram, Twitter, and YouTube.

Academic Performance: Students' achievements measured by test scores, exams, and overall grades in Biology.

Biology: A core science subject that deals with the study of living organisms.

Students: Secondary school learners in Ilorin offering Biology as a subject.

Impact: The effect or influence of social media usage on students' academic performance.

Internet: A global network that enables access to information, communication, and multimedia resources. In this study, it refers to students' access to online platforms for both academic and non-academic purposes.

Classroom Engagement: The level of attention, participation, and involvement of students in Biology classroom activities, including discussions, practicals, and teacher-student interactions.

Study Habit: The regular practices or routines students adopt when preparing for academic work, including time management, reading patterns, and the use of learning resources.

Learning: The process of acquiring knowledge, skills, and attitudes through study, experience, or teaching. In this context, it refers to students' acquisition of Biology concepts.

Learning Outcome: The measurable knowledge, skills, and competencies that students achieve after instruction. For this study, it refers to students' ability to understand, retain, and apply Biology concepts as reflected in their academic performance.

CHAPTER TWO

LITERATURE REVIEW

This chapter deals with the review of relevant literatures that are related to the study. This literature was reviewed under the following sub-headings:

1. **Conceptual Framework**

   Social Media Usage among students

2. **Theoretical Framework**

   Impact of social media on learning outcome and study habits

3. **Empirical Review**

   Impact on Social Media Usage and Academic Performance

   Social Media multi tasking and academic challenges

4. **Summary of Literature Review**

Conceptual Framework:

Social Media Usage Among Students

Social media refers to interactive platforms that enable users to create, share, and exchange information across digital communities.

Examples include WhatsApp, Facebook, Instagram, TikTok, YouTube, and Telegram. Among students, social media has become a dominant medium for communication, collaboration, and entertainment. Research shows that a high proportion of Nigerian students use social media daily, with WhatsApp and YouTube ranking as the most popular (Adesina, 2023).

Although social media can provide academic benefits such as access to tutorials, study groups, and research materials, its misuse often results in distraction, time wastage, and reduced concentration (Oluwatoyin, 2011). The way students balance academic and non-academic use of these platforms therefore plays a major role in shaping their learning outcomes (Asemah et al., 2013).

Theoretical Framework

Impact of Social Media on Learning Outcomes

The Uses and Gratifications Theory (Katz, Blumler, & Gurevitch, 1973) explains why students use social media—to seek information, entertainment, and social interaction. In academic contexts, students may use WhatsApp or Telegram for Biology discussions, or YouTube for tutorials, thereby directly influencing their learning outcomes. When social media is used purposefully,

it can enhance retention, comprehension, and performance in science subjects (Sweller, 1994).

Social Media and Study Habits

The Cognitive Load Theory (Sweller, 1994) highlights how the brain processes information. Excessive multitasking on social media can overload cognitive capacity, leading to weaker study habits and poor retention of knowledge. Studies have shown that constant exposure to online notifications reduces students' ability to concentrate on academic tasks (Oluwatoyin, 2011). This implies that while social media can strengthen collaborative study habits, it also risks disrupting consistent reading patterns if not managed effectively (Abdullahi & Olayemi, 2020).

Empirical Review

Impact of Social Media Usage and Academic Performance

Empirical studies globally and locally have investigated how social media affects student achievement. Asemah et al. (2013) observed that Nigerian undergraduates who relied heavily on social media for non-academic activities recorded lower grades compared to those who used it

moderately and for academic purposes. Similarly, Adesina (2023) found that students who engaged with educational content on social media platforms in Kwara State University achieved higher Biology scores compared to those who used social media mainly for entertainment.

Social Media Multitasking and Academic Challenges

Another dimension of research is the effect of multitasking with social media during academic activities. Junco (2012) reported that students who frequently multitasked on social media while studying or attending classes had significantly lower GPAs compared to those who minimized such habits. In the Nigerian context, Abdullahi and Olayemi (2020) found that over 67% of students admitted to browsing social media during lectures, with negative effects on their focus and academic engagement.

These studies emphasize that while social media can be a learning tool, multitasking and excessive non-academic usage create academic challenges that hinder performance. The challenge for students, therefore, is to adopt disciplined study habits that maximize the educational potential of social media while reducing its distractions.

Summary of Literature Review

From the literature reviewed, it is evident that social media has both positive and negative influences on students' academic performance. Theories such as Uses and Gratifications and Cognitive Load provide a framework for understanding student behavior.

Empirical evidence shows that social media, when used responsibly and academically, can enhance performance in Biology. However, its excessive, unsupervised use leads to distraction, loss of interest in studies, and poor academic outcomes. The literature emphasizes the need for balanced usage and digital literacy to ensure students benefit from the positive aspects of social media while avoiding its pitfalls.

CHAPTER THREE

RESEARCH METHODOLOGY

Research Methodology

This chapter presents the method and procedures employed in conducting the study. It covers the research design, population of the study, sample and sampling techniques, research instrument, validity and reliability of the instrument, procedure for data collection, method of data analysis, and ethical considerations.

Research Design

This study adopted a descriptive survey research design. This design is appropriate for assessing the views, opinions, and behaviors of students regarding the impact of social media on academic performance in Biology. The descriptive approach enabled the researcher to collect primary data from Biology students at KWCOED and analyze their patterns of social media usage, study habits, and academic performance.

Population of the Study

The population of the study comprised all Biology students in the Nigeria Certificate in Education (NCE) program at the Kwara State College of Education (KWCOED), Ilorin. These students were chosen because they offer Biology as a core subject and their performance is directly linked to their study practices, including the use of social media.

Sample and Sampling Techniques

A sample size of 300 Biology students was selected using a multistage sampling technique, ensuring representation across gender, level of study (NCE I–III), and academic background. The process involved:

1. Stage One – Stratified Sampling: The Biology students were grouped by academic level (NCE I, NCE II, and NCE III).

2. Stage Two – Random Sampling: From each stratum, students were randomly selected to participate in the study.

3. Stage Three – Purposive Sampling: Only students officially enrolled in Biology were included in the final sample.

Research Instrument

The major instrument used for data collection was a structured questionnaire designed by the researcher, titled:

> "Social Media and Biology Performance Questionnaire (SMBPQ)"

The questionnaire was divided into four sections:

Section A: Demographic information (age, gender, class, type of school).

Section B: Social media usage patterns (frequency, preferred platforms, purpose of use).

Section C: Academic behavior and study habits in Biology (study time, use of educational content online).

Section D: Students' perception of how social media affects their Biology performance.

The instrument consisted of closed-ended and Likert-scale items to enable ease of analysis.

Validity and Reliability of the Instrument

Validity:

To ensure face and content validity, the questionnaire was reviewed by three experts—two in Educational Psychology and one in Science Education. They assessed the items for clarity, relevance, and alignment with the research objectives. Adjustments were made to improve appropriateness.

Reliability:

The reliability of the instrument was tested using the test–retest method. A pilot study was conducted with 30 Biology students from a nearby institution not included in the final sample. Results were analyzed using Cronbach's Alpha, which yielded a coefficient of 0.82, indicating high reliability.

Procedure for Data Collection

After obtaining ethical clearance from KWCOED authorities, the researcher personally administered the questionnaires to the selected Biology students. Clear instructions were given, and respondents were assured of confidentiality and anonymity.

The data collection process lasted two weeks. Questionnaires were distributed during lecture-free periods and retrieved immediately after completion to minimize data loss.

Method of Data Analysis

Data collected were analyzed using both descriptive and inferential statistics:

Descriptive Statistics: Frequency counts, percentages, and mean scores were used to summarize students' social media habits and perceptions.

Inferential Statistics:

Pearson Product Moment Correlation (PPMC) was used to test Hypothesis 1 (relationship between time spent on social media and Biology performance).

Independent t-test was used to test Hypothesis 2 (difference in performance between students who use social media for academic purposes and those who do not).

The level of significance was set at 0.05. Analyses were conducted using SPSS version 25, and results were presented in tables and charts.

Ethical Considerations

This study adhered to ethical standards, ensuring:

Informed Consent: All participants were informed of the purpose of the study and participated voluntarily.

Confidentiality: No personal identifiers were included in the questionnaire.

Non-Maleficence: The study posed no risk to participants.

Academic Integrity: Data collected were used strictly for this research project.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

Demographic Characteristics of Respondents

A total of 150 questionnaires were distributed to Biology students of Kwara State College of Education (KWACOED), Ilorin. Out of these, 285 were duly completed and returned, giving a 95% response rate.

Table 1: Distribution of Respondents by Gender

Gender	**Frequency**	**Percentage (%)**
Male	70	49.1
Female	80	50.9
Total	150	100

The sample was fairly balanced, with 49.1% male and 50.9% female students.

Table 2: Distribution of Respondents by Age Group

Age Group	Frequency	Percentage (%)
14–16	35	33.3
17–19	90	45.6
20 and above	25	21.1
Total	150	100

Most respondents (45.6%) were between 19 and 21 years old, which reflects the typical age range of NCE students.

Analysis of Research Questions

Research Question 1: What social media platforms are commonly used by Biology students in KWACOED?

Table 3: Social Media Platforms Used by Students

Platform	Frequency	Percentage (%)
WhatsApp	260	91.2
Facebook	180	63.2
Instagram	200	70.2

TikTok	220	77.2
YouTube	240	84.2
Telegram	120	42.1

The most widely used platforms among KWACOED Biology students were WhatsApp (91.2%), YouTube (84.2%), and TikTok (77.2%).

Research Question 2: How frequently do KWACOED Biology students use social media on a daily basis?

Table 4: Daily Time Spent on Social Media

Duration	Frequency	Percentage (%)
Less than 1 hr	25	14.0
1–2 hrs	35	24.6
3–4 hrs	50	35.1
Above 4 hrs	40	26.3
Total	150	100

The results show that a majority of Biology students (61.4%) spend three hours or more daily on social media.

Research Question 3: What is the relationship between social media usage and the academic performance of Biology students at KWACOED?

Table 5: Correlation Between Social Media Usage and Biology Performance

Variable	**r**	**p-value**	**Decision**
Time spent on social media vs. Biology scores	-0.462	0.001	Significant

The analysis shows a moderate negative correlation ($r = -0.462$, $p < 0.05$). This means that excessive time spent on social media tends to lower Biology performance among KWACOED students.

Research Question 4: How do KWACOED Biology students perceive the influence of social media on their study habits?

Table 6: Perceptions of Social Media Influence

Perception Statement (%)	Agee (%)	Disagree
Social media distracts me from studying	65.3	34.7
I use social media for academic discussions	58.6	41.4
I stay up late browsing social media	71.9	28.1
Social media helps me understand Biology better	55.4	44.6

The responses indicate mixed perceptions. While many students admit to distraction, more than half also acknowledge academic benefits.

Testing of Hypotheses

Hypothesis 1 (H_o1): There is no significant relationship between time spent on social media and academic performance in Biology.

From Table 5, the correlation coefficient ($r = -0.462$, $p = 0.001$) is significant. Decision: Reject H_o1.

Conclusion: A significant negative relationship exists between time spent on social media and Biology performance at KWCOED.

Hypothesis 2 (H_o2): There is no significant difference in Biology performance between students who use social media for academic purposes and those who do not.

Table 7: t-test Result on Academic Use of Social Media

Group	**N**	**Mean Score**	**Std. Dev.**	**t**	**p-value**	**Decision**
Academic Users	140	64.50	8.12			

Decision: Reject H_o2.

Conclusion: Biology students at KWACOED who use social media academically perform significantly better than those who use it mainly for entertainment.

Discussion of Findings

The findings from this study show that social media is widely used among Biology students at KWACOED, with WhatsApp and YouTube leading in popularity. Most students spend a substantial part of their day online, often at the expense of study time.

The correlation results confirm that heavy, non-academic use of social media negatively affects academic outcomes. However, students who integrate social media into academic work (such as joining study groups or watching tutorials) tend to perform better.

This confirms earlier studies (Oluwatoyin, 2011; Adesina, 2023) which highlighted that the impact of social media on learning is not entirely negative—it depends on usage patterns.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Summary of Findings

This study investigated the impact of social media usage on the academic performance of Biology students at Kwara State College of Education (KWACOED), Ilorin. The key findings are:

1. WhatsApp, YouTube, and TikTok are the most frequently used platforms by KWACOED Biology students.

2. The majority of students spend more than three hours daily on social media.

3. There is a significant negative correlation between excessive social media usage and Biology performance.

4. Students reported both positive (tutorials, group discussions) and negative (distraction, poor time management) influences of social media.

5. Students who used social media mainly for academic purposes scored higher in Biology than those who used it for entertainment.

Conclusion

The study concludes that social media exerts a dual influence on the academic performance of Biology students at KWACOED. While it offers opportunities for collaborative learning and access to educational materials, excessive and entertainment-driven use significantly reduces academic achievement. The way social media is used is therefore more important than mere access to it.

Recommendations

Based on the findings, the following recommendations are made:

1. Students should regulate the time they spend on social media and focus more on its academic benefits.

2. Lecturers should create and manage academic groups on WhatsApp or Telegram for Biology discussions.

3. KWACOED administrators should introduce digital literacy workshops to guide students on responsible social media usage.

4. Parents/Guardians of NCE students should continue to encourage balance between academic and social use of digital platforms.

5. Policy makers should develop frameworks that encourage the integration of social media into formal science education.

Suggestions for Further Research

1. Future research could examine the influence of specific platforms (e.g., TikTok vs. YouTube) on Biology performance at KWACOED.

2. A comparative study between Biology and other science subjects (Chemistry, Physics) could reveal subject-specific differences.

3. A longitudinal study tracking the same group of students over time may provide insights into long-term effects of social media usage.

4. Qualitative research (interviews and focus groups) could deepen understanding of how KWACOED students experience social media in relation to learning.

References

Abdullahi, M., & Olayemi, T. (2020). The influence of social media usage on academic performance among secondary school students in Ilorin-West Local Government, Kwara State. Journal of Educational Research and Development, 15(2), 45–53.

Adesina, O. (2023). Time spent on social media as correlate of academic performance of undergraduates in Kwara State University. Ilorin Journal of Social Sciences, 12(1), 88–102.

Asemah, E. S., Okpanachi, R. A., & Edegoh, L. O. (2013). Influence of social media on the academic performance of undergraduates in Nigerian universities. Research on Humanities and Social Sciences, 3(12), 90–96.

Katz, E., Blumler, J. G., & Gurevitch, M. (1973). Uses and gratifications research. Public Opinion Quarterly, 37(4), 509–523. https://doi.org/10.1086/268109

Oluwatoyin, F. (2011). Social media and students' academic performance. Journal of Research in Education, 2(3), 21–29.

Sweller, J. (1994). Cognitive load theory, learning difficulty, and instructional design. Learning and Instruction, 4(4), 295–312. https://doi.org/10.1016/0959-4752(94)90003-5

West African Examinations Council (WAEC). (2022). Chief examiners' report on Biology. Lagos: WAEC Publications

Ahmed, O. N (2012). The effect of different learning styles on developing writing skills of EFL Saudi learners.

Awoniyo, A. A. (2007). The effects of parental economic status and pupils sex on school achievement in English language. Journal of Vocational and Technical Education in Nigeria. 2(2), 81-86.

Boyd, d. M., & Ellison, n. B. (2007). Social network sites: Definition, history, and scholarship. Journal of Computer-Mediated Communication, 13(1), 1-11.

Bryert., & Zavatarro S. (2011). Social media and public administration: Theoretical dimensions and introduction to symposium. In Administrative Theory & Praxis. 33(3), 1-3.

Cain, J. (2008). Online social networking issues within academia and pharmacy education. American Journal of Pharmaceutical Education; 72(1), 1-7.

Harrison, S., & Garner-O'Neale G., (2013) An investigation of the learning styles and study habits of chemistry undergraduates in Barbados and their effect as predictors of academic achievement in chemical group theory.

Joes, K. E. (2009). Attitudes toward using social networking sites in educational settings with underperforming Latino Youth: A mixed methods study. Urban Education, 50 (8): 989–1018.

Kanelechi C. K., Yonlonfoun E., & Omotere T. (2014) Undergraduates and their use of social media: assessing influence on research skills.

Kazu, I. (2009). The effect of learning styles on education and the teaching process. Journal of Social Sciences, 5(2), 85-94. Retrieved on 14th October, 2016 from http://per-web.firat.edu.tr/personel/yayinlar/fua35/3559283.pdf.

Kolb, D. A., Rubin, I. M. & McIntyre, J. M. (1974) 'Learning and problem solving: On the management and the learning process', in H. A. Simon (ed.) Organizational psychology: A book of readings, 27–42, Englewood Cliffs, NJ:

Prentice-Hall.

Lenhart, M. (2009). Adults and social network websites. Pew Internet & American Life Project Report. Retrieved on May 19, 2016 http://www.pewinternet.org/pdfs/PIPAdult_social_networking_data_memo_FINAL.pdf.

Lenhart, M., & Madden, M. (2007). Teens, Privacy and Online Social Networks. How teens manage their online identities and personal information in the age of MySpace. Pew Internet & American Life Project Report. Retrieved June 17, 2016,

From http://www.pew internet.org/~/media//Files/Reports/2009/PIP_Adult_social_networking_data_memo_FIN AL.pdf.pdf.

Lin, J. (2008, October 15). Research shows that Internet is rewiring our brains. Retrieved from http://www.today.ucla.edu/portal/ut/081015_gary-small-ibrain.aspx.

Paul, T. (2017). Influence of parental background on the use of social media for learning by primarychool pupils in Patigi Local Government Area, Kwara State. A research project submitted to the department of Educational technology,

University of Ilorin, Ilorin, Nigeria.

Smaldino S. E, Reseel J. D., Heinich R., Molenda M. (2005). Instructional technology and media for learning 8th edition. Ohio, New Jersy: MerillPrentice Hall.

Tüfekci, Z. (2008). Gender, social capital and social networking sites: Women bonding, men searching. Paper presented at the annual meeting of the American Sociological Association Annual Meeting, Sheraton Boston and the Boston Marriott Copley Place, Boston, M.A.

APPENDIX A

Questionnaire

Social Media and Biology Performance Questionnaire (SMBPQ)

Dear Respondent,

This questionnaire is designed to gather information for a research project on "Impact of Social Media Usage on the Academic Performance of Biology Students at Kwara State College of Education (KWACOED), Ilorin."

Your responses will be treated with strict confidentiality and used solely for academic purposes. Kindly answer all questions honestly.

Section A: Demographic Information

(Please tick ✓where appropriate)

1. Gender: ☐ Male ☐ Female

2. Age: ☐ 16–18 years ☐ 19–21 years ☐ 22 years and above

3. Level of Study: ☐ NCE I ☐ NCE II ☐ NCE III

Section B: Social Media Usage Patterns

4. Which social media platforms do you use regularly? (Tick all that apply)

☐ WhatsApp ☐ Facebook ☐ Instagram ☐ TikTok ☐ YouTube ☐ Telegram☐

Others (please specify) _____

5. How many hours do you spend on social media daily?

☐ Less than 1 hour ☐ 1–2 hours ☐ 3–4 hours ☐ Above 4 hours

6. What is your main purpose for using social media?

☐Academic (study groups, tutorials, research) ☐ Social interaction (chatting, friends, family) ☐ Entertainment (videos, music, memes) ☐ News and information ☐ Others (please specify) _____

Section C: Academic Behavior and Study Habits in Biology

Tick the option that best represents your opinion.

Statement	**Strongly Agree (SA)**	**Agree (A)**	**Disagree (D)**	**Strongly Disagree (SD)**

7. I use social media to learn Biology (To learning biology terminologies e.g cells, ecosystem, evolutions and species)	☐	☐	☐	☐
8. Social media distracts me from reading Biology through pop up messages.	☐	☐	☐	☐
9. I use WhatsApp/Telegram groups for academic discussions in Biology.	☐	☐	☐	☐
10. I spend more time on social media than on my Biology textbooks.	☐	☐	☐	☐
11. I use YouTube or TikTok for Biology explanations.	☐	☐	☐	☐
12. I sometimes stay up late at night on social media instead of studying.	☐	☐	☐	☐

Section D: Students' Perceptions of Social Media Impact on Biology Performance

Tick the option that best represents your opinion.

Statement	Strongly Agree (SA)	Agree (A)	Disagree (D)	Strongly Disagree (SD)
13. Social Media has positively enhanced my grade in Biology.	☐	☐	☐	☐
14. Social Media has encouraged our class group discussion for our academic progress.	☐	☐	☐	☐
15. Social media encourage my lack of concentration in the class.	☐	☐	☐	☐