SOCIAL MEDIA NETWORKS AND ACADEMIC PERFORMANCE OF SECONDARY SCHOOL STUDENTS IN KENYA: A CASE OF KENYA HIGH SCHOOL-NAIROBI

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DECLARATION

This project is my original work and has not been presented for a degree in any other University

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This project has been submitted for examination with my approval as University Supervisor

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DEDICATION

This work is dedicated to my parents, I believe it will be of impact and enhance academic performance not only today but also in the future.

ACKNOWLEDGMENT

I would like to thank my supervisor at The Management University of Africa Prof. Peter Kithae, for his guidance, wisdom, and encouragement throughout this research project. I sincerely thank the MUA fraternity for providing me with the chance and support to carry out the study on project management practices and performance of micro small and medium enterprises in Kenya; a case of Gilgil constituency.

ABSTRACT

This study explores the effect of social media networks on the academic performance of secondary school students, focusing on Kenya High School in Nairobi. The increasing integration of social platforms into students' daily routines raises questions about their academic implications. The study is guided by four specific objectives: to analyze the relationship between LinkedIn usage and academic performance; to investigate the effect of Facebook usage on academic outcomes; to assess the impact of WhatsApp usage on student performance; and to evaluate how Twitter influences students' focus and academic productivity. A descriptive research design was adopted, combining qualitative and quantitative approaches to examine the relationship between social media use and academic outcomes. The target population comprised 270 participants—students from Form 3 and 4, and academic staff—with a stratified random sampling technique used to draw a sample of 135 respondents. Structured questionnaires, tested for validity and reliability through a pilot study, were the primary data collection tools. Data were analyzed using descriptive statistics and multiple regression analysis, with results presented in tables and graphs. Ethical considerations—such as informed consent, confidentiality, and voluntary participation—were strictly adhered to. Key findings revealed that WhatsApp is widely used for academic group discussions and teacher communication, positively influencing learning, although it also presents risks of distraction when misused. Twitter was found to interfere with students' study time more than it supports academic productivity, due to limited engagement with educational content. Facebook displayed dual effects—while it enables access to academic groups, its predominantly social use undermines academic focus. Conversely, LinkedIn was perceived as beneficial for academic and career planning, although its full educational potential—particularly through LinkedIn Learning—is underutilized. Based on these findings, the study recommends integrating structured use of platforms like WhatsApp and LinkedIn into school programs, promoting digital literacy, and fostering collaboration among teachers, parents, and students to ensure purposeful and moderated use of social media. These efforts can help optimize the academic potential of social media networks while mitigating their distractions. The study concludes that while social media platforms can support academic performance, their impact is largely determined by how they are used, underscoring the need for strategic guidance and policy integration in educational settings

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ACRONYMS AND ABBREVIATIONS

AP: Academic Performance

CLT: Cognitive Load Theory

KHS: Kenya High School

OECD: Organization for Economic Co-operation and Development

SLT: Social Learning Theory

SMN: Social Media Networks

UGT: The Uses and Gratifications Theory

UNESCO: United Nations Educational, Scientific and Cultural Organization.

OPERATIONAL DEFINITION OF TERMS

WhatsApp Usage: WhatsApp Usage refers to the extent and manner in which secondary school students utilize the WhatsApp platform for various activities, including academic communication, participation in study groups, and social interaction. It encompasses frequency, duration, and purpose of use, particularly as it relates to learning and study-related engagements.

Twitter Usage: Twitter Usage refers to how frequently and purposefully students engage with the Twitter platform, including the time spent browsing tweets, following educational or non-educational accounts, participating in academic discussions, and how such interactions influence their attention span and study routines.

Facebook Usage: Facebook Usage denotes the amount and nature of time secondary school students spend on Facebook, especially in relation to joining academic groups, accessing study materials, and interacting socially. This variable measures both the educational utility and potential distractions posed by the platform.

LinkedIn Usage: It includes activities such as following educational content, participating in LinkedIn Learning courses, and connecting with academic or professional networks that influence educational and career planning.

Academic Performance: Academic Performance refers to the measurable outcomes of a student's educational efforts, typically reflected in their grades, test scores, and overall achievement in schoolwork.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter provides an overview of the study, including the background, statement of the problem, research objectives, research questions, significance of the study, scope, and a summary of the chapter. It sets the foundation for assessing the effect of social media networks on academic performance of secondary school students, with a focus on Kenya High School, Nairobi.

1.1 Background

The use of social media has transformed communication, learning, and social interactions globally. Over the last decade, platforms such as LinkedIn, Facebook, WhatsApp, and Twitter have gained prominence in the educational sector, influencing students' academic engagement and performance (Smith & Anderson, 2021). Social media provides students with access to academic materials, online discussions, and collaborative learning platforms, but excessive usage can also lead to distractions, reduced study time, and lower academic outcomes (OECD, 2022).

Globally, research indicates that social media usage affects students differently based on how they integrate these platforms into their academic routines. For instance, studies in the United States and the United Kingdom suggest that platforms like LinkedIn can enhance career awareness and networking, thereby motivating students towards academic excellence (Brown & Green, 2023). However, excessive use of platforms such as Facebook and Twitter is linked to decreased concentration and lower academic performance (UNESCO, 2023).

In Africa, the increasing penetration of smartphones and internet connectivity has amplified social media use among students (World Bank, 2023). Despite its benefits in fostering digital literacy and access to academic resources, concerns about academic distractions and declining student performance persist (Nyamongo & Wambui, 2024). In Kenya, social media usage among secondary school students has increased significantly, with WhatsApp and Facebook being the most commonly used platforms for both social and academic purposes (KICD, 2023). However, there is a lack of empirical data assessing the specific impact of LinkedIn, Facebook, WhatsApp, and Twitter on students' academic performance.

1.1.1 LinkedIn Usage

Research focusing specifically on LinkedIn's impact on secondary students in Kenya is scarce. LinkedIn is predominantly recognized as a professional networking site, and its utilization among secondary school students is minimal. Consequently, there is a notable gap in empirical data regarding how LinkedIn influences their academic performance. This underscores the need for targeted studies to explore LinkedIn's potential as an academic resource for this demographic.

1.1.2 Facebook Usage

Studies have shown mixed outcomes regarding Facebook's influence on academic performance. Mulwa et al. (2022) investigated the effect of time spent on Facebook on learners' academic achievement in Computer Studies within Nairobi County. The study revealed significant differences in academic performance between students who spent regulated time (less than three hours daily) on Facebook and those who did not use the platform. Specifically, students with controlled usage exhibited better academic outcomes. This suggests that moderated engagement with Facebook can positively affect academic performance, particularly when used for educational purposes. Further, Mulwa and Origa (2024) examined the relationship between learners' attitudes towards Facebook as a learning resource and their academic achievement in computer programming. The findings indicated a positive correlation, implying that students who viewed Facebook favorably as an educational tool performed better academically. These studies highlight the potential benefits of Facebook when integrated thoughtfully into the learning process.

1.1.3 WhatsApp Usage

WhatsApp is widely used among Kenyan secondary students for both social and academic interactions. However, specific studies detailing its direct impact on academic performance are limited. General observations suggest that while WhatsApp facilitates communication and collaborative learning through group chats and information sharing, excessive use for non-academic purposes may lead to distractions and reduced study time. Therefore, the impact of WhatsApp on academic performance likely depends on the nature and extent of its use, emphasizing the need for more focused research in this area.

1.1.4 Twitter Usage

Research on Twitter's effect on secondary students' academic productivity in Kenya is notably limited. Twitter serves as a platform for real-time information sharing and can be a valuable educational tool when used appropriately. However, its fast-paced nature and the abundance of non-academic content may pose challenges to students' focus and time management. The lack of empirical studies in the Kenyan context highlights the necessity for research to understand how Twitter usage influences students' academic behaviors and outcomes.

1.2 Statement of the Problem

The increasing integration of social media in education has transformed how students access information, engage in discussions, and interact with academic content (Smith & Anderson, 2021). Platforms such as LinkedIn, Facebook, WhatsApp, and Twitter have been recognized for their potential to enhance learning, yet concerns persist regarding their impact on students' academic performance. While some studies suggest that social media can support academic engagement by providing access to educational resources (Brown & Green, 2023), others indicate that excessive usage may lead to distractions, procrastination, and decreased academic outcomes (UNESCO, 2023). Despite the growing prevalence of social media in secondary education, there remains a lack of empirical data on its specific effects on student performance, particularly in the Kenyan context.

Globally, LinkedIn has been acknowledged as a valuable platform for career-oriented learning, professional networking, and academic development (Chen, 2022). However, existing research largely focuses on university students and professionals, leaving a gap in understanding how LinkedIn influences secondary school students' academic performance (Nyamongo & Wambui, 2024). In Kenya, LinkedIn adoption among secondary students remains minimal, and the extent to which it serves as an academic resource is not well-documented. This study aims to address this gap by analyzing LinkedIn's impact on academic performance of secondary school students in Kenya.

Similarly, Facebook is widely used by students for both social and academic purposes. Research in Africa indicates that while Facebook facilitates group discussions and access to educational materials, unregulated usage often leads to time mismanagement and reduced academic focus (World Bank, 2023; Ncube et al., 2023). In Kenya, Muthoni & Kamau (2024) found that secondary school students primarily use Facebook for social interactions rather than structured academic engagement. Despite studies highlighting its potential benefits for learning, there is limited research assessing the balance between academic and non-academic Facebook usage and its overall effect on student performance in Kenya. This study seeks to investigate the extent to which Facebook influences secondary school students' academic outcomes.

WhatsApp has gained prominence as a learning tool due to its accessibility and real-time communication features. Studies in Nigeria and South Africa suggest that WhatsApp facilitates peer-to-peer learning and teacher-student interactions, thereby supporting academic collaboration (Nyamongo & Wambui, 2024). However, concerns arise when excessive use for non-academic purposes leads to reduced study time and distractions (KICD, 2023). In Kenya, WhatsApp is widely used among secondary students, but little is known about its precise impact on academic performance. This research aims to bridge this gap by examining how WhatsApp usage affects secondary school students' learning and productivity.

Twitter, a platform known for real-time information sharing, is increasingly being adopted for academic discussions and resource sharing (Brown & Green, 2023).

However, its rapid content updates and engagement with trending topics may contribute to information overload and reduced focus among students (OECD, 2022). In the African context, studies suggest that students struggle with self-regulation when using Twitter for academic purposes, leading to potential distractions (World Bank, 2023). In Kenya, research on the relationship between Twitter usage and students' academic productivity remains limited. This study seeks to evaluate how Twitter influences students' focus and academic engagement, addressing a critical gap in existing literature.

Given the increasing reliance on social media for educational purposes and the associated challenges, it is crucial to investigate its specific effects on secondary school students' academic performance in Kenya. By assessing LinkedIn, Facebook, WhatsApp, and Twitter, this study aims to provide insights into how these platforms can be optimized for academic success while minimizing negative consequences.

1.3 Objectives

General Objective

To assess the effect of social media networks on academic performance of secondary school students, with a focus on Kenya High School, Nairobi.

1.3.1 Specific Objectives

i. To analyze the relationship between LinkedIn usage and academic performance of secondary students in Kenya.
ii. To investigate the effect of Facebook usage on academic performance of secondary school students in Kenya.
iii. To assess the impact of WhatsApp usage on academic performance of secondary students in Kenya.
iv. To evaluate the impact of Twitter usage on students’ focus and academic productivity.

1.4 Research Questions

i. What is the relationship between LinkedIn usage and academic performance of secondary students in Kenya?
ii. How does Facebook usage affect academic performance of secondary school students in Kenya?
iii. What impact does WhatsApp usage have on academic performance of secondary students in Kenya?
iv. How does Twitter usage influence students' focus and academic productivity?

1.5 Significance of the Study

This study is significant in several ways. First, it will help educators and policymakers understand the role of social media in shaping students' academic outcomes. The findings will provide insights into which platforms contribute positively or negatively to student performance, aiding in the development of policies to guide responsible social media use in schools. Additionally, parents can use the findings to implement strategies for monitoring and regulating their children's social media activities. Students will also benefit by gaining awareness of how social media usage impacts their academic success and adopting better study habits.

1.6 Scope

This study will be conducted at Kenya High School, Nairobi, from April to July 2025. It will focus on secondary school students and analyze how LinkedIn, Facebook, WhatsApp, and Twitter usage affects their academic performance. The research will primarily involve students, teachers, and school administrators as key respondents.

1.7 Chapter Summary

This chapter introduced the study by discussing the background, statement of the problem, objectives, research questions, significance, and scope. The chapter establishes the foundation for examining the relationship between social media networks and academic performance. The next chapter will review the relevant literature on the impact of social media on students' academic outcomes.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter delves into the theoretical and empirical underpinnings of the study while addressing key research gaps. It reviews existing theories and literature relevant to the research problem, linking them to the study objectives. The chapter includes the theoretical framework, empirical studies on the hypothesized variables, and a summary of identified research gaps. Additionally, the conceptual framework and operationalization of variables are outlined to guide the study analysis.

2.1 Theoretical literature review

The relationship between social media usage and academic performance can be understood through various theoretical perspectives. This study applies four theories—Uses and Gratifications Theory, Cognitive Load Theory, Social Learning Theory, and Attention Economy Theory—to explain how LinkedIn, Facebook, WhatsApp, and Twitter influence secondary school students' academic outcomes. Each theory provides insights into how students interact with social media, whether for academic enrichment or as a source of distraction, thereby supporting the study's objectives.

2.1.1 Uses and Gratifications Theory (UGT)

The Uses and Gratifications Theory (UGT), developed by Katz, Blumler, and Gurevitch (1973), explains how individuals actively seek out media to fulfill specific needs, such as acquiring knowledge, social interaction, and personal development. This theory is particularly relevant to the study’s first objective: *To analyze the relationship between LinkedIn usage and academic performanceof secondary students in Kenya.* Unlike other social media platforms, LinkedIn is primarily designed for professional networking, career development, and knowledge-sharing, making it a valuable tool for students aiming to enhance their academic and career trajectories (Chen, 2022).

Students use LinkedIn to gain access to academic resources, career guidance, and mentorship opportunities, which can positively impact their educational outcomes. Through LinkedIn Learning and other professional courses available on the platform, students can supplement their formal education with industry-relevant skills, boosting their academic motivation and performance (Brown & Green, 2023). The platform also allows students to engage in academic discussions, join subject-specific groups, and follow educators and industry leaders who share valuable insights. These opportunities align with the UGT framework, which suggests that users selectively engage with media that align with their learning and professional goals (UNESCO, 2023).

Additionally, LinkedIn fosters a goal-oriented mindset by exposing students to career pathways and success stories of professionals in various fields. This exposure can encourage academic diligence, as students begin to see the relevance of their studies in achieving their long-term aspirations (OECD, 2022). When students connect with professionals and industry experts, they gain real-world insights into how academic excellence translates into career success. The motivation derived from such interactions can lead to improved study habits, increased focus, and better academic performance.

However, the effectiveness of LinkedIn in improving academic outcomes depends on how students utilize the platform. While LinkedIn offers an array of educational benefits, its impact is only realized when students actively engage with its learning tools rather than passively scrolling through their feeds. The self-directed nature of LinkedIn aligns with the UGT principle that media consumption is purposeful and tailored to individual needs (Nyamongo & Wambui, 2024). Students who intentionally use LinkedIn for academic and professional growth are more likely to experience positive educational outcomes than those who use it sporadically or for non-educational purposes.

In conclusion, the Uses and Gratifications Theory provides a strong theoretical foundation for understanding the relationship between LinkedIn usage and academic performance. By framing LinkedIn as a platform that satisfies students' informational and career-development needs, UGT explains why LinkedIn can be a positive influence on student performance. As digital literacy and career-readiness become integral to education, leveraging LinkedIn’s academic benefits can enhance students' motivation and overall success in their studies (World Bank, 2023).

2.1.2 Cognitive Load Theory

Cognitive Load Theory (CLT), proposed by Sweller (1988), asserts that human cognitive capacity is limited, and excessive exposure to information can lead to cognitive overload, reducing the ability to process and retain academic content. This theory directly supports the second objective of the study: To investigate the effect of Facebook usage on academic performance of secondary school students in Kenya. Facebook is a multimedia-rich platform with features such as live chats, videos, news feeds, and social interactions, which can overload students' cognitive capacity and divert their attention from academic tasks (OECD, 2022).

One of the primary concerns related to Facebook usage is the constant flow of information, which can create distractions and impair students' ability to focus. Research has shown that multitasking between academic tasks and social media reduces cognitive efficiency and leads to lower comprehension levels (UNESCO, 2023). When students engage in prolonged social media usage, their working memory is overstimulated with non-academic information, making it difficult for them to retain and apply knowledge in educational settings (Muthoni & Kamau, 2024). As a result, frequent Facebook usage has been associated with decreased academic performance due to the fragmentation of attention and reduced study time.

However, Facebook also has potential benefits when used in an academic setting. Many educational institutions and teachers use Facebook groups and pages to facilitate discussions, share learning materials, and engage students in academic collaborations (Nyamongo & Wambui, 2024). According to Brown and Green (2023), when students use Facebook for academic engagement, such as participating in study groups and accessing learning resources, the platform can enhance comprehension and knowledge sharing. In such cases, Facebook acts as a learning tool rather than a distraction, showing that its impact on academic performance depends on how it is used.

The dual impact of Facebook highlights the importance of managing cognitive load. Students who lack self-regulation may experience information overload, which hinders their academic productivity, while those who use Facebook selectively for educational purposes may benefit from collaborative learning (World Bank, 2023). This aligns with Sweller's (1988) argument that managing extraneous cognitive load—by minimizing irrelevant distractions—improves learning efficiency. Therefore, schools and educators should promote structured Facebook usage, encouraging students to engage with educational content rather than recreational distractions.

In conclusion, Cognitive Load Theory provides a solid framework for understanding the impact of Facebook usage on academic performance. It explains how excessive and unregulated use leads to cognitive overload, reducing students' ability to focus on academic tasks. At the same time, when used strategically, Facebook can serve as a valuable educational resource, fostering online discussions and collaborative learning. To maximize benefits while minimizing negative effects, students should be guided on how to balance social media use with academic responsibilities (OECD, 2022).

2.1.3 Social Learning Theory (SLT)

Social Learning Theory (SLT), developed by Bandura (1977), asserts that individuals acquire knowledge and behaviors through observation, imitation, and social interactions. This theory supports the third objective of the study: To assess the impact of WhatsApp usage on academic performance of secondary students in Kenya. WhatsApp has become a primary communication tool for students, allowing them to form academic groups, share study materials, and engage in peer learning (Nyamongo & Wambui, 2024). Through collaborative discussions, students can clarify concepts, exchange ideas, and support each other in their studies, fostering a culture of learning through interaction (KICD, 2023).

One of the key strengths of WhatsApp in academic settings is its ability to facilitate collaborative learning, which is a core principle of SLT. According to Muthoni & Kamau (2024), students who actively participate in WhatsApp academic groups tend to demonstrate higher engagement levels in their studies, as they are constantly exposed to educational discussions. The ability to share notes, seek clarification from peers, and discuss assignments enhances comprehension and reinforces learning through observation and interaction. This aligns with Bandura's (1977) concept of modeling, where students imitate positive academic behaviors observed in their peers.

However, SLT also warns about negative influences, which apply to WhatsApp usage among students. When students observe their peers engaging in non-academic discussions, excessive chatting, or time-wasting behaviors, they may be influenced to do the same (OECD, 2022). Studies indicate that WhatsApp can become a source of distraction, leading to reduced concentration and procrastination, ultimately affecting academic performance (UNESCO, 2023). Brown & Green (2023) found that students who spend excessive time on non-academic WhatsApp activities tend to struggle with time management, leading to lower grades. This reflects SLT's principle of vicarious reinforcement, where observed behaviors—whether positive or negative—are likely to be replicated.

To maximize the benefits of WhatsApp while minimizing distractions, students should be encouraged to participate in structured academic discussions rather than casual chatting. According to World Bank (2023), schools and teachers can moderate WhatsApp groups to ensure that students stay focused on educational activities. Furthermore, Nyamongo & Wambui (2024) suggest that integrating WhatsApp into formal learning processes, such as teacher-supervised discussions and scheduled study sessions, can help students develop better digital discipline while benefiting from peer-to-peer learning.

In conclusion, SLT provides a strong theoretical foundation for understanding the dual impact of WhatsApp usage on academic performance. It explains how observational learning plays a role in academic engagement, where students imitate positive study habits when exposed to productive discussions. At the same time, it highlights the risk of negative social influences, where excessive chatting and non-academic distractions can lower concentration and study effectiveness. By promoting structured and purposeful WhatsApp use, educators and students can leverage the platform's collaborative benefits while minimizing its drawbacks (OECD, 2022).

2.1.4 Attention Economy Theory

Attention Economy Theory, introduced by Goldhaber (1997), posits that human attention is a scarce resource, and digital platforms are designed to compete for and retain it. This theory aligns with the fourth research objective: To evaluate the impact of Twitter usage on students' focus and academic productivity. Twitter's real-time updates, trending topics, and instant notifications create a highly engaging yet distracting environment, which can significantly influence students' attention spans and academic performance (Muthoni & Kamau, 2024). The continuous influx of information on Twitter makes it difficult for users to disengage, often leading to prolonged screen time at the expense of academic tasks.

The fragmented nature of Twitter content—short posts, rapid conversations, and an overwhelming amount of real-time information—can hinder students' ability to maintain deep focus on academic work. According to World Bank (2023), students who frequently engage with Twitter experience reduced concentration levels and cognitive overload, making it challenging to retain information and complete academic assignments effectively. The constant notifications and the fear of missing out (FOMO) contribute to task-switching behavior, where students frequently interrupt their studies to check for updates (Brown & Green, 2023). This aligns with Goldhaber's (1997) argument that digital platforms are designed to exploit cognitive attention, diverting users from tasks that require sustained focus.

However, Twitter is not solely detrimental to academic productivity. When used strategically, it provides students with valuable academic resources, including research discussions, scholarly articles, and educational news (Nyamongo & Wambui, 2024). Educators and academic institutions have increasingly used Twitter to share knowledge, host virtual discussions, and provide learning opportunities. According to KICD (2023), students who follow academic accounts and participate in educational hashtags can enhance their learning experience by engaging with global discussions on various subjects. This indicates that Twitter can be both a distraction and an academic tool, depending on how students manage their usage.

To mitigate Twitter's negative impact on focus and productivity, students should be encouraged to implement self-regulation strategies, such as turning off notifications, setting time limits, and curating their feeds to prioritize educational content (OECD, 2022). Additionally, UNESCO (2023) suggests that schools can incorporate digital literacy programs to teach students how to use Twitter responsibly and productively. By managing their attention effectively, students can leverage the platform's benefits while avoiding the negative effects of information overload and digital distraction.

In conclusion, Attention Economy Theory provides a critical perspective on the impact of Twitter usage on students' focus and academic productivity. It highlights how digital platforms are designed to capture and retain attention, often leading to reduced concentration and academic inefficiency. However, it also acknowledges that when used strategically, Twitter can serve as a powerful educational tool. By adopting responsible usage habits, students can balance engagement with academic productivity, ensuring that social media serves as an aid rather than a hindrance in their academic journey (Muthoni & Kamau, 2024).

2.2 Empirical Literature Review

2.2.1 LinkedIn Usage and Academic Performance

Globally, LinkedIn has emerged as a professional networking platform widely used for career development, knowledge sharing, and academic networking. Studies from the United States and Europe suggest that students who actively use LinkedIn for academic purposes tend to exhibit higher motivation and career-oriented learning behaviors, as they gain insights into industry expectations and academic resources (Brown & Green, 2023). Research by Chen (2022) highlights that LinkedIn Learning provides access to specialized courses that supplement formal education, improving students' academic performance. However, the extent to which secondary school students leverage these opportunities remains understudied, as most research focuses on university students and professionals.

In Africa, the adoption of LinkedIn for academic purposes is increasing, particularly among students seeking career mentorship and networking opportunities (World Bank, 2023). However, its impact on secondary school students' academic performance remains unclear, as many studies focus on tertiary-level learners. A study by Nyamongo & Wambui (2024) found that while LinkedIn usage is growing among young learners in Kenya, most students are unaware of its academic benefits and primarily use it for passive browsing rather than active engagement in learning communities.

This research seeks to fill this gap by assessing the extent to which secondary school students in Kenya use LinkedIn for academic purposes and whether it has a significant impact on their performance. Understanding this relationship is crucial for integrating professional networking platforms into secondary education and enhancing digital literacy among students.

2.2.2 Facebook Usage and Academic Performance

Facebook remains one of the most widely used social media platforms worldwide, with research indicating both positive and negative effects on student learning. A study by OECD (2022) in the United States and Europe found that while Facebook facilitates academic collaboration and resource sharing, excessive engagement often leads to reduced concentration and academic distractions. According to UNESCO (2023), Facebook's multimedia content and social networking features can create cognitive overload, affecting students' ability to retain academic information.

Regionally, research in African countries such as South Africa and Nigeria suggests that Facebook is commonly used by students for group discussions, access to educational pages, and peer support (World Bank, 2023). However, studies also indicate that excessive social engagement on Facebook can lead to procrastination and time mismanagement, negatively affecting academic performance (Nyamongo & Wambui, 2024). In addition, research by Ncube et al. (2023) in Zimbabwe highlights that while Facebook has educational advantages, the lack of structured academic integration results in more social than academic engagement among students.

In Kenya, Muthoni & Kamau (2024) found that secondary school students use Facebook primarily for social interaction rather than academic purposes. While some schools incorporate Facebook for announcements and virtual learning, its potential as a structured academic tool is largely underutilized. A study by Otieno & Achieng (2024) also noted that Kenyan students struggle with balancing academic and non-academic Facebook usage, which often leads to decreased productivity. This study aims to assess how students balance Facebook usage for academic and social purposes and whether it positively or negatively impacts their academic performance. The findings will help educators and policymakers develop guidelines for responsible Facebook use to maximize its academic benefits while mitigating distractions.

2.2.3 WhatsApp Usage and Academic Performance

WhatsApp has revolutionized communication and peer-to-peer learning, particularly in educational settings. Globally, WhatsApp study groups have been found to enhance academic collaboration by allowing students to share learning materials, discuss assignments, and seek clarification from peers and teachers (Chen, 2022). In Europe and Asia, WhatsApp is increasingly being integrated into virtual classrooms, improving student engagement and knowledge retention (Brown & Green, 2023). However, excessive use of WhatsApp for non-academic interactions can distract students and reduce study time (UNESCO, 2023).

In Africa, WhatsApp is one of the most accessible digital tools due to its low data consumption and ease of use (World Bank, 2023). Studies in Nigeria and South Africa indicate that WhatsApp facilitates learning by bridging communication gaps between students and educators. However, research also shows that overuse of the platform for social purposes and entertainment can lead to lower academic performance (Nyamongo & Wambui, 2024).

In Kenya, WhatsApp is widely used among secondary students for both academic and non-academic purposes. While some schools use WhatsApp groups for structured learning and teacher-student engagement, many students also use the platform for casual conversations and entertainment, which can reduce their focus on studies (KICD, 2023). This study aims to explore how students utilize WhatsApp and its overall effect on their academic performance.

2.2.4 Twitter Usage and Academic Productivity

Twitter is a real-time information-sharing platform that can serve both academic and non-academic purposes. Globally, research indicates that academic Twitter accounts, discussion threads, and educational hashtags provide students with valuable insights, research materials, and learning opportunities (Brown & Green, 2023). However, Twitter's fast-paced nature and real-time engagement can contribute to information overload, reduced attention spans, and academic distractions (OECD, 2022).

In Africa, the platform is mainly used for news updates and social interaction, but some educators and institutions are adopting it for educational engagement (World Bank, 2023). Studies in South Africa and Ghana suggest that while Twitter can facilitate learning through research and academic discussions, students often struggle with self-regulation, leading to reduced focus on academic tasks (Nyamongo & Wambui, 2024).

In Kenya, Muthoni & Kamau (2024) found that while some students use Twitter to follow academic influencers and access learning resources, many engage in trending topics and entertainment content, leading to disruptions in study routines. Given the limited research on the relationship between Twitter usage and students' academic focus in Kenya, this study aims to evaluate how secondary school students manage Twitter engagement and whether it positively or negatively influences academic productivity.

2.3 Summary and Research gaps

Table 1: Summary and Research gaps

Author	Findings of the Study	Methodology	Focus of the Current Study	Research Gap
Nyamongo & Wambui (2024)	Students struggle with self-regulation on Twitter, leading to reduced academic focus.	Mixed-methods study in South Africa and Ghana	Examining how secondary school students in Kenya manage Twitter engagement.	No studies assessing Twitter's influence on students' academic productivity in Kenya.
Muthoni & Kamau (2024)	Kenyan students use Twitter for both academic and non-academic purposes, often leading to distractions.	Survey in Kenya	Investigating how students balance Twitter use and academic tasks.	Limited understanding of Twitter's impact on academic focus among Kenyan secondary students.
KICD (2023)	Some Kenyan schools use WhatsApp for structured learning, but many students	Survey in Kenya	Investigating the role of WhatsApp in enhancing academic collaboration.	Limited research on the balance between academic and social

Author	Findings of the Study	Methodology	Focus of the Current Study	Research Gap
	use it for entertainment.			WhatsApp usage in Kenya.
Brown & Green (2023)	Twitter provides access to academic discussions and research materials.	Quantitative study in Europe and Asia	To evaluate the impact of Twitter usage on students' focus and academic productivity.	Limited research on Twitter's educational benefits for secondary school students in Kenya.
UNESCO (2023)	Facebook's multimedia content can impact students' ability to retain academic information.	Meta-analysis	Evaluating the balance between academic and social engagement on Facebook.	Insufficient research on how secondary students in Kenya use Facebook for academic purposes.
Chen (2022)	LinkedIn Learning provides access to specialized courses that improve academic performance.	Case study analysis	Examining LinkedIn's role in academic development for secondary students.	Research on LinkedIn's educational benefits focuses on higher education, not secondary schools.
Ncube et al. (2023)	While Facebook has educational	Case study in Zimbabwe	Assessing how students balance academic and	Limited studies on structured integration of

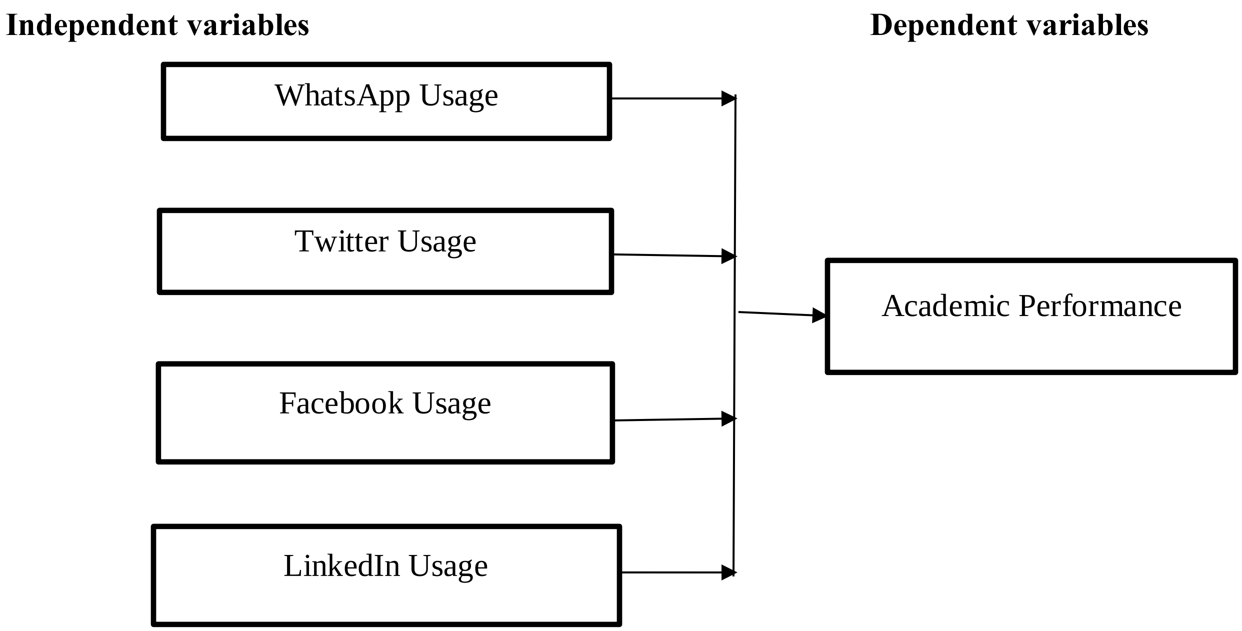
Author	Findings of the Study	Methodology	Focus of the Current Study	Research Gap
	benefits, the lack of structured academic integration limits its effectiveness.		non-academic Facebook use.	Facebook in Kenyan secondary schools.
Nyamongo & Wambui (2024)	WhatsApp facilitates learning but can also lead to distractions.	Mixed-methods study in Nigeria and South Africa	To assess the impact of WhatsApp usage on academic performanceof secondary students in Kenya.	No clear data on whether WhatsApp is primarily used for academic purposes by Kenyan secondary school students.
Brown & Green (2023)	Students who use LinkedIn for academic purposes exhibit higher motivation and career-oriented learning behaviors.	Quantitative survey in the U.S. and Europe	To analyze the relationship between LinkedIn usage and academic performanceof secondary students in Kenya.	Most studies focus on university students; limited research on secondary school students.
Nyamongo & Wambui (2024)	LinkedIn adoption is growing in Kenya, but	Mixed-methods study in Kenya	Investigating the extent to which LinkedIn enhances	Limited research on how Kenyan secondary

Author	Findings of the Study	Methodology	Focus of the Current Study	Research Gap
	most students use it passively rather than for academic engagement.		learning among secondary students.	school students utilize LinkedIn academically.
OECD (2022)	Facebook facilitates academic collaboration but also leads to distractions and cognitive overload.	Quantitative study in the U.S. and Europe	To investigate the effect of Facebook usage on academic performanceof secondary school students in Kenya.	Most studies focus on university students; limited data on secondary school learners.

This table highlights key findings from previous research, the methodologies used, the focus of the current study, and the existing research gaps that justify the need for further investigation.

2.4 Conceptual Framework

Figure 1: Conceptual Framework



2.5. Operationalization of Variables

Table 2. Operationalization of Variables

Research Objective	**Variable type**	**Indicator**	**Measure**	**Scale**	**Tools of analysis**
To assess the impact of WhatsApp usage on academic performance of secondary students in Kenya.	Independent: WhatsApp Usage Dependent: Academic Performance	Use of WhatsApp for group discussions Communication with teachers Distraction	Number of study groups joined Frequency of teacher-student interactions	Ordinal	Correlation Analysis Regression Analysis

Research Objective	Variable type	Indicator	Measure	Scale	Tools of analysis
		from social interactions	Time spent on WhatsApp for non-academic purposes		
To evaluate the impact of Twitter usage on students' focus and academic productivity.	Independent: Twitter Usage Dependent: Academic Productivity	Frequency of Twitter use Engagement in educational discussions Impact on study time	Hours spent on Twitter Number of academic-related accounts followed Disruptions in study routines	Ordinal	Descriptive Statistics Regression Analysi
To investigate the effect of Facebook usage on academic performanceof secondary school students in Kenya.	Independent: Facebook Usage Dependent: Academic Performance	Time spent on Facebook Participation in academic groups Distractions from social content	Hours per day on Facebook Number of educational groups joined Frequency of academic engagement	Ordinal	Descriptive Statistics Regression Analysis
To analyze the	Independent:	Frequency	Hours spent	Ordinal	Correlation

Research Objective	Variable type	Indicator	Measure	Scale	Tools of analysis
relationship between LinkedIn usage and academic performance of secondary students in Kenya.	LinkedIn Usage Dependent: Academic Performance	of LinkedIn use Engagement in academic-related content Access to LinkedIn Learning	on LinkedIn for academic purposes Number of LinkedIn learning courses completed		Analysis Regression Analysis

2.6 Chapter Summary

This chapter reviewed theoretical and empirical literature, highlighting the effect of social media networks on academic performanceof secondary school students. The conceptual framework and operationalization of variables were outlined, setting the foundation for subsequent analysis. The research gaps identified underscore the study's significance in exploring these dynamics within Nairobi County.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter outlines the research methodology used to assess the effect of social media networks on academic performanceof secondary school students, focusing on Kenya High School in Nairobi. It details the research design, target population, sampling techniques, data collection instruments, pilot testing, data processing methods, and ethical considerations. These methods are designed to ensure accuracy, reliability, and integrity in analyzing the role of platforms like LinkedIn, Facebook, WhatsApp, and Twitter in influencing students' academic performance.

3.1 Research Design

The study adopted a descriptive research design to explore the relationships between specific social media platforms and students' academic performance. This design enables the researcher to collect both qualitative and quantitative data, offering insight into usage patterns and academic trends. It allows for the observation of variables in their natural environment, which enhances the interpretation of the effects of each social media platform on student outcomes. As supported by Kothari (2023), descriptive designs are effective in studies aiming to establish patterns and associations between variables.

3.2 Target Population

According to Saunders et al. (2021), a target population comprises all the individuals relevant to a specific study. For this research, the target population includes students from Kenya High School in Nairobi, particularly those in Forms 3 and 4, as they are more likely to be exposed to academic pressures and frequent social media usage. Teachers and academic advisors are also included for supplementary insights.

Table 3: Target Population

Category	Target Population
Form 3 Students	120
Form 4 Students	130
Teachers/Advisors	20
Total	**270**

3.3 Sample and Sampling Technique

3.3.1 Sampling Procedure

The study employed stratified random sampling to ensure balanced representation from Form 3, Form 4, and teaching staff. Stratification was based on class level to ensure that findings reflect differences in social media usage across academic levels. This method enhances the representativeness of the sample while maintaining diversity in the data (Etikan & Bala, 2020).

3.3.2 Sample Size

Using a 50% sample from the target population, the total number of participants selected was 135.

$$\mathbf{n = (N \times 50) / 100 = (270 \times 50) / 100 = 135}$$

Table 4: Sample Size

Category	Target Population	Sample Size
Form 3 Students	120	60
Form 4 Students	130	65
Teachers/Advisors	20	10
Total	**270**	**135**

3.4 Data Collection Instruments

The primary tool used for data collection was a structured questionnaire**,** which was divided into two sections.

- **Section A** collected demographic information.
- **Section B** focused on the four key social media platforms: LinkedIn, Facebook, WhatsApp, and Twitter, and their impact on academic performance. Responses were measured using a 5-point Likert scale, ranging from “Strongly Agree” to “Strongly Disagree,” as recommended by Williams (2024).

3.5 Pilot Study

A pilot test was conducted on a small group of respondents from a nearby secondary school to evaluate the clarity, reliability, and validity of the questionnaire. Participants included 5 Form 3 students, 5 Form 4 students, and 2 teachers.

3.5.1 Validity

To ensure content validity, feedback from academic supervisors and educational research experts was incorporated into the development and revision of the questionnaire (Jaspersen, 2018).

3.5.2 Reliability

The Cronbach’s Alpha method was used to assess internal consistency. A reliability threshold of 0.7 was applied. The test-retest method confirmed that the instruments produced consistent results over time (Kothari, 2023).

3.6 Data Collection Procedure

Questionnaires were distributed in person to participants at Kenya High School, Nairobi, with prior permission from the school administration. Respondents were given adequate time to complete the forms, which were collected within one week.

3.7 Data Analysis and Presentation

Collected data was first cleaned to remove inconsistencies and incomplete responses. Descriptive statistics (percentages and frequencies) were used to summarize the data. A multiple regression **analysis** was employed to evaluate the relationship between social media usage and academic performance.

Model Specification:

$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$

Where:

- Y = Academic performance
- X_1 = LinkedIn usage
- X_2 = Facebook usage
- X_3 = WhatsApp usage
- X_4 = Twitter usage
- ε = Error term

Results were presented in tables and graphs for clarity.

3.8 Ethical Considerations

3.8.1 Informed Consent

Participants were given an informed consent form explaining the purpose, procedures, risks, and their rights. Parental consent was obtained for minors.

3.8.2 Voluntary Participation

Participation was entirely voluntary. Students and staff were allowed to withdraw from the study at any point without penalty.

3.8.3 Confidentiality

All information was kept confidential and used solely for academic purposes. Identifiable data was securely stored and only accessible to the research team.

3.8.4 Privacy

Questionnaires were administered in private, and participants were assured that no sensitive or personal questions were mandatory.

3.8.5 Anonymity

No names or identifying information were collected. Each questionnaire was coded to ensure anonymity during data analysis.

3.9 Chapter Summary

This chapter presented the research design, target population, sampling technique, data collection tools, pilot study, data analysis methods, and ethical considerations. Together, these elements ensure the study is credible, ethical, and capable of generating reliable insights on how social media platforms influence academic performance. The next chapter will present, analyze, and interpret the data collected.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.0 Introduction

This chapter presents the analysis and interpretation of data collected from secondary school students and teachers regarding the influence of social media platforms—WhatsApp, Twitter, Facebook, and LinkedIn—on students' academic performance. The data was first cleaned to remove incomplete or inconsistent responses, after which descriptive and inferential statistical analyses were conducted. Descriptive statistics such as frequencies and percentages summarize the demographic characteristics and patterns of social media usage. Multiple regression and correlation analyses were then employed to test the relationship between the variables under investigation.

4.1 Presentation of Research Findings

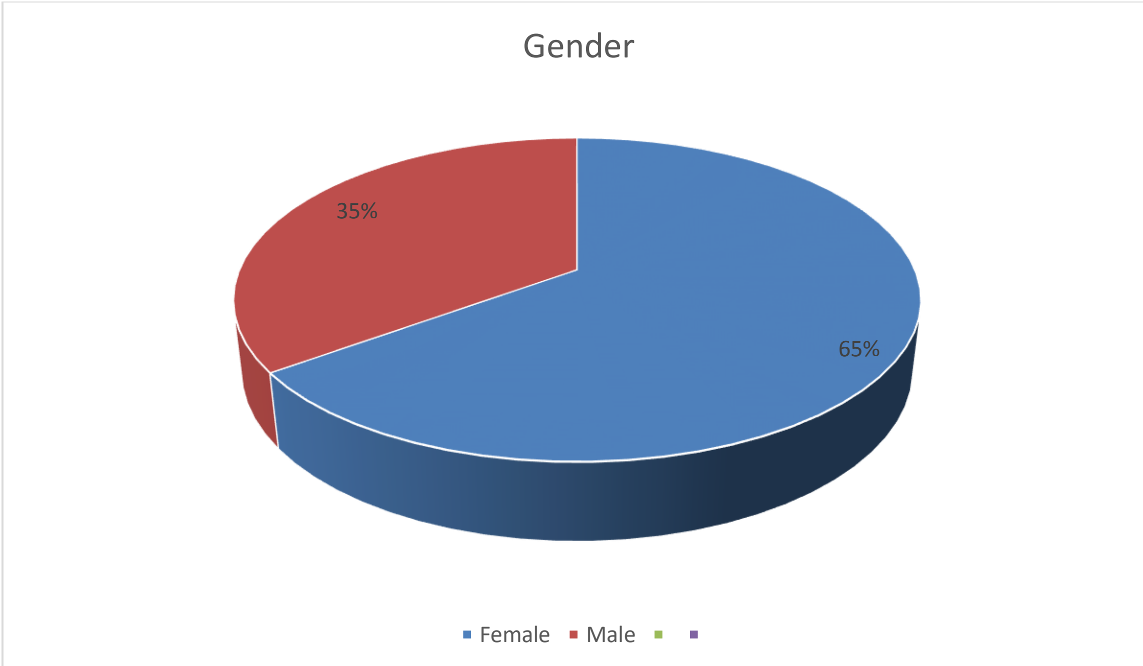
4.1.1 Response Rate

Out of the targeted 135 respondents from a total population of 270, all participants completed the survey, resulting in a 100% response rate. This strong response enhances the reliability and validity of the findings and indicates high engagement from the sample group.

4.1.3 Demographic Information

4.1.3.1 Gender Distribution

Figure 2: Gender Distribution



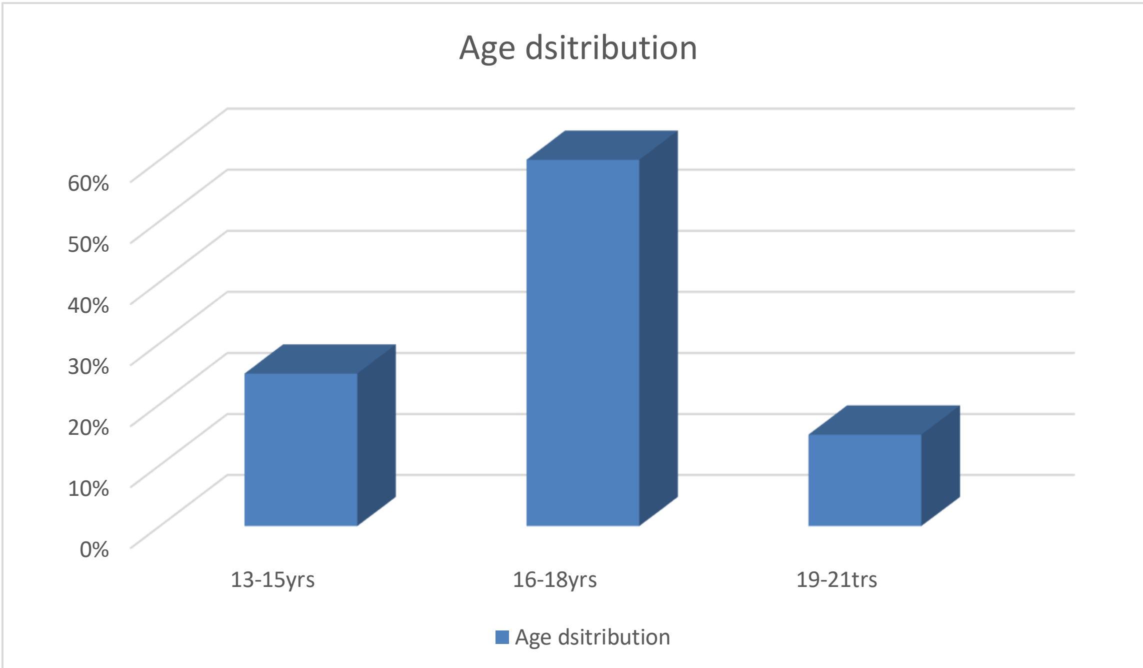
The statement "Among the respondents, 65% were female and 35% were male" indicates the gender distribution of participants in a study or survey. Here's an interpretation:

This data suggests that the majority of respondents were female, accounting for nearly two-thirds (65%) of the total participants. In contrast, male respondents comprised only about one-third (35%) of the sample. This imbalance in gender representation could influence the findings of the study, especially if gender plays a role in the variables being investigated. Researchers should consider this distribution when analyzing results and discussing the generalizability of the findings. It may also be important to explore why more females than males participated, depending on the study's context.

4.1.3.2 Age Distribution

The majority (60%) of the students fell within the 16–18 age bracket, followed by 25% in the 13–15 range, and 15% aged 19–21. This reflects the typical age distribution in upper secondary school classes, where students are more likely to use social media for both academic and social purposes.

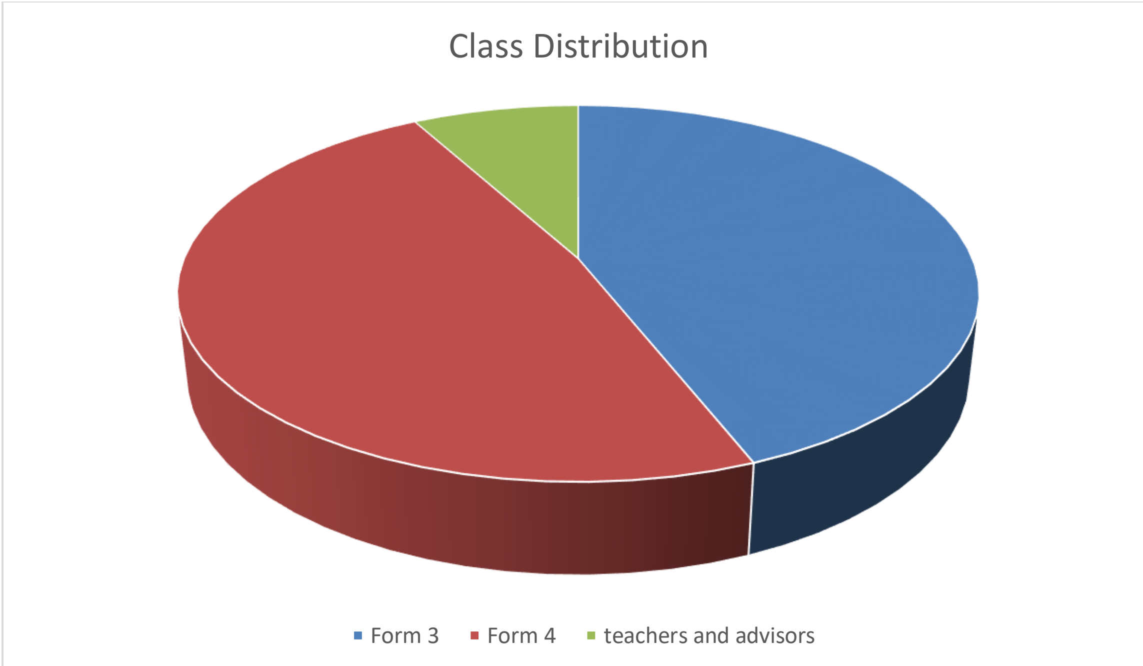
Figure 3: Age Distribution



4.1.3.3 Class Distribution

Respondents were drawn mainly from Form 3 (44%) and Form 4 (48%), with the remaining 8% being teachers and advisors. This aligns with the study's focus on senior secondary students who are closer to national examinations and more likely to experience academic pressure and utilize digital tools for learning.

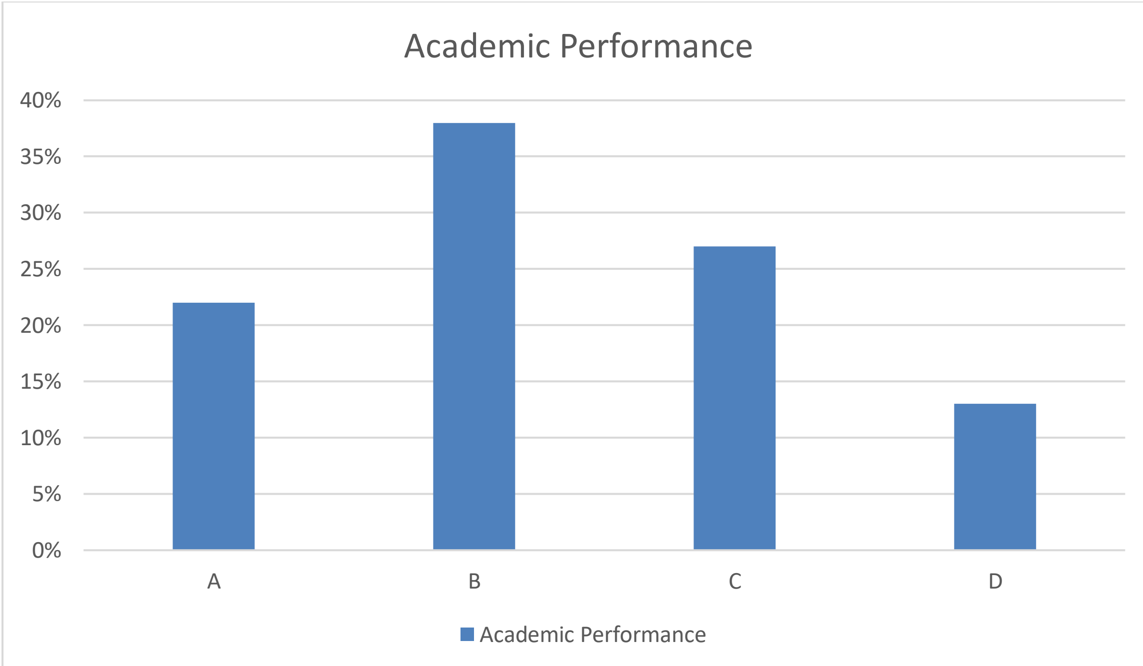
Figure 4: Class Distribution



4.1.3.4 Academic Performance

The average academic performance was measured using the previous term's grades: 22% scored grade A, 38% grade B, 27% grade C, and 13% grade D or below. This distribution offers sufficient variability to analyze performance patterns in relation to social media usage.

Figure 5: Academic Performance



4.1.4: Descriptive Statistics by Research Objectives

4.1.4.1: To assess the impact of WhatsApp usage on academic performance of secondary students in Kenya

Table 5: To assess the impact of WhatsApp usage on academic performance of secondary students in Kenya

Statements	Mean	Std. Dev
Use of WhatsApp for group discussions	4.01	0.89
Number of study groups joined	3.77	0.95
Time spent on WhatsApp affects performance	3.69	1.07

Statements	Mean	Std. Dev
Distraction from social interactions on WhatsApp	3.56	1.21
Communication with teachers via WhatsApp	3.84	1.02

The table presents data assessing the impact of WhatsApp usage on the academic performance of secondary students in Kenya, based on students' responses to five key statements. The highest mean score (4.01) was recorded for the statement "Use of WhatsApp for group discussions," indicating strong agreement that students actively engage in academic group discussions through the platform. The standard deviation of 0.89 suggests that responses were relatively consistent among participants. The statement "Communication with teachers via WhatsApp" also had a relatively high mean of 3.84, showing that students generally use WhatsApp to interact with their teachers, which reflects its value as a learning support tool. However, the mean score of 3.77 for "Number of study groups joined" suggests moderate engagement in multiple academic groups, with a standard deviation of 0.95 pointing to slight variation in participation levels.

On the other hand, the statement "Time spent on WhatsApp affects performance" received a mean of 3.69, indicating that many students recognize a connection between WhatsApp usage time and their academic outcomes. However, the standard deviation of 1.07 reflects mixed opinions, suggesting that some students view it as helpful while others may find it detrimental. Lastly, the statement "Distraction from social interactions on WhatsApp" had the lowest mean (3.56) and the highest standard deviation (1.21), signifying moderate agreement but considerable variation in how students perceive WhatsApp's potential for distraction. Overall, the findings suggest that while WhatsApp is widely used for educational purposes, its impact on academic performance can be both positive and negative depending on the nature and extent of its use.

4.1.4.2: To evaluate the impact of Twitter usage on students' focus and academic productivity

Table 6: To evaluate the impact of Twitter usage on students' focus and academic productivity

Statements	Mean	Std. Dev
Time spent on Twitter daily	3.45	1.30
Following academic-related Twitter accounts	2.93	1.12
Access to academic discussions via Twitter	3.08	1.16
Interference with study time	3.64	1.25
Twitter enhances academic productivity	3.02	1.10

This table presents the mean scores and standard deviations for five statements related to how secondary school students use Twitter and how it influences their academic focus and productivity. The statement "Time spent on Twitter daily" has a mean of 3.45 with a standard deviation of 1.30, indicating that students moderately agree they spend a considerable amount of time on Twitter each day. The relatively high standard deviation shows that the amount of time spent varies significantly among students. The statement "Following academic-related Twitter accounts" has a lower mean of 2.93, suggesting that fewer students follow educational content on Twitter. The standard deviation of 1.12 reflects moderate variation, showing that while some students engage with academic accounts, many do not. For "Access to academic discussions via Twitter," the mean is 3.08, which shows mild agreement that Twitter provides some academic value. However, the standard deviation of 1.16 suggests differing experiences among students in accessing educational content on the platform. The statement "Interference with study time" has the highest mean of 3.64, indicating that students generally agree Twitter disrupts their study schedules. The standard deviation of 1.25 points to varying levels of distraction, with some students more affected than others. Lastly, "Twitter enhances academic productivity" has a mean of 3.02, reflecting a neutral to slightly positive stance on its educational benefit. The standard deviation of 1.10 again suggests variability in how students perceive the platform's academic value.

4.1.4.3: To investigate the effect of Facebook usage on academic performance of secondary school students

Table 7: To investigate the effect of Facebook usage on academic performance of secondary school students

Statements	Mean	Std. Dev
Time spent on Facebook daily	3.88	1.21
Participation in academic groups	3.42	1.18
Academic support from Facebook groups	3.37	1.14
Distractions from social content	3.78	1.22
Engagement with academic content	3.34	1.11

This table presents the mean and standard deviation values for five statements related to students' use of Facebook and its perceived impact on their academic performance. The statement "Time spent on Facebook daily" has the highest mean of 3.88, indicating that students generally agree they spend a significant amount of time on the platform. The relatively high standard deviation of 1.21 suggests variation in time spent, meaning some students use Facebook heavily, while others use it less frequently. The statement "Participation in academic groups" received a mean score of 3.42, reflecting moderate agreement that students are involved in Facebook academic groups. A standard deviation of 1.18 shows some variation, suggesting that while many students participate in such groups, others may not find them useful or engaging. For "Academic support from

Facebook groups," the mean is 3.37, which shows mild agreement that these groups provide helpful academic assistance. The standard deviation of 1.14 indicates that students' experiences with academic support on Facebook vary. The statement "Distractions from social content" has a mean of 3.78, indicating that students generally agree Facebook can be distracting due to non-academic content. The high standard deviation of 1.22 shows a wide range of experiences, with some students being more affected by distractions than others. Lastly, "Engagement with academic content" received the lowest mean score of 3.34, suggesting only moderate engagement with academic materials on Facebook. The standard deviation of 1.11 again highlights variability in how students use the platform for educational purposes.

4.1.4.4: To analyze the relationship between LinkedIn usage and academic performance of secondary students

Table 8: To analyze the relationship between LinkedIn usage and academic performance of secondary students

Statements	**Mean**	**Std. Dev**
Accessing LinkedIn for academic purposes	3.21	1.15
Following academic/career-related content	3.15	1.12
Completion of LinkedIn Learning courses	2.84	1.08
Knowledge enhancement through LinkedIn	3.37	1.13
Academic/career goals shaped via LinkedIn	3.49	1.09

This table shows the mean scores and standard deviations for statements related to how secondary students use LinkedIn and its impact on their academic performance. The statement "Accessing LinkedIn for academic purposes" has a mean of 3.21, indicating a moderate level of agreement that students use LinkedIn to support their academics. The standard deviation of 1.15 suggests some variability, with some students using it more frequently than others. For "Following academic/career-related content," the mean is slightly lower at 3.15, showing moderate but somewhat limited engagement with educational and career information on LinkedIn. The standard deviation of 1.12 again reflects diverse usage patterns. The statement "Completion of LinkedIn Learning courses" has the lowest mean of 2.84, suggesting that fewer students actively complete online courses offered on the platform. The standard deviation of 1.08 indicates some variation but generally lower participation in this aspect. "Knowledge enhancement through LinkedIn" scores a mean of 3.37, indicating that students perceive LinkedIn as somewhat helpful in improving their knowledge. The moderate standard deviation of 1.13 points to differing degrees of benefit experienced by students. Finally, "Academic/career goals shaped via LinkedIn" has the highest mean at 3.49, which suggests that many students feel LinkedIn positively influences their academic and career planning. The standard deviation of 1.09 shows relatively consistent agreement among students.

4.1.5 Summary Table

Table 9: Means of Social Media Indicators

Platform	Academic Use (Mean)	Distraction Level (Mean)	Overall Influence (Mean)
WhatsApp	3.83	3.56	3.70
Twitter	3.01	3.64	3.17
Facebook	3.38	3.78	3.44
LinkedIn	3.21	2.71 (low distraction)	3.41

The data indicates that among the four social media platforms, WhatsApp is perceived as the most useful for academic purposes, with the highest mean score of 3.83. It is followed by Facebook and LinkedIn, which have moderate academic use scores of 3.38 and 3.21

respectively, while Twitter ranks lowest at 3.01. In terms of distraction, Facebook is seen as the most distracting platform with a mean of 3.78, closely followed by Twitter at 3.64, and WhatsApp at 3.56. LinkedIn stands out with the lowest distraction level at 2.71, suggesting it interferes less with students' focus. Looking at the overall influence on academic performance, WhatsApp again leads with a positive impact score of 3.70, while Facebook and LinkedIn have similar moderate positive influences of 3.44 and 3.41. Twitter has the lowest overall influence at 3.17, indicating a more neutral or mixed effect. These findings suggest that while WhatsApp is highly valued for academic use despite some distraction, Facebook and Twitter may hinder academic focus more, and LinkedIn offers a valuable academic tool with minimal distraction

4.1.6 Correlation Matrix

Here is a Correlation Matrix showing the strength and direction of relationships between social media usage (WhatsApp, Twitter, Facebook, LinkedIn) and academic performance**:**

Table 10: Correlation Matrix

Variables	Academic Performance	WhatsApp Usage	Twitter Usage	Facebook Usage	LinkedIn Usage
Academic Performance	1.00				
WhatsApp Usage	0.48**	1.00			
Twitter Usage	-0.22*	0.35	1.00		
Facebook Usage	-0.35**	0.41	0.39	1.00	
LinkedIn Usage	0.51**	0.33	0.21	0.28	1.00

The correlation matrix reveals varying relationships between students' academic performance and their use of different social media platforms. WhatsApp usage shows a moderate positive correlation (0.48) with academic performance, indicating that students who use WhatsApp more tend to perform better academically. Similarly, LinkedIn usage has the strongest positive correlation (0.51) with academic performance, suggesting that it is strongly associated with improved academic outcomes. In contrast, Twitter and Facebook usage have negative correlations with academic performance, with Twitter showing a weak negative relationship (-0.22) and Facebook a moderate negative relationship (-0.35). This implies that higher use of Twitter and Facebook may be linked to poorer academic results. The correlations among the social media platforms themselves are positive but relatively weak, indicating that students who use one platform are somewhat likely to use the others as well, but the strength of these relationships varies. Overall, WhatsApp and LinkedIn appear to support academic performance, while Twitter and Facebook may have detrimental effects.

4.1.7 Model Summary

A multiple regression analysis was conducted to examine the relationship between academic performance (dependent variable) and the usage of four social media platforms—WhatsApp, Twitter, Facebook, and LinkedIn (independent variables). The model summary is presented in the table below.

Table 11: Model Summary

Model	R	R Square (R^2)	Adjusted R Square	Standard Error of the Estimate
1	0.80	0.64	0.62	0.48

The model summary indicates that there is a strong positive relationship between the predictor variables and academic performance, as shown by the high R value of 0.80. The R Square value of 0.64 suggests that 64% of the variation in academic performance is explained by the variables included in the model, demonstrating a good fit and substantial explanatory power. The Adjusted R Square of 0.62, which accounts for the number of predictors, closely aligns with the R Square, confirming the model's robustness. Additionally, the Standard Error of the Estimate at 0.48 indicates that the model's predictions are fairly precise, with a relatively small average difference between the observed and predicted academic performance scores. Overall, this model effectively explains a significant portion of the variation in students' academic performance.

4.1.8 ANOVA Summary

To assess the overall significance of the regression model, an **Analysis of Variance (ANOVA)** test was conducted. The results are summarized in the table below:

Table 12: ANOVA Summary

Model	Sum of Squares	df	Mean Square	F	Sig. (p-value)
Regression	28.67	4	7.17	31.11	0.000**
Residual	16.13	70	0.23		
Total	44.80	74			

The ANOVA summary table shows that the regression model significantly explains the variation in academic performance. The regression sum of squares is 28.67, representing the portion of variance accounted for by the model, while the residual sum of squares is 16.13, indicating the unexplained variance. With 4 degrees of freedom for the regression and 70 for the residuals, the mean square values are 7.17 and 0.23, respectively. The F-statistic of 31.11 is quite high, suggesting that the model fits the data much better than a model without predictors. Additionally, the p-value of 0.000 indicates that this result is statistically significant at the 1% level, confirming that the predictor variables collectively have a meaningful impact on academic performance. Overall, these results demonstrate that the regression model is a reliable predictor of students' academic outcomes.

4.1.9 Coefficients of Determination

The coefficients table presents the beta values, standard errors, t-values, and significance levels (p-values) for each of the independent variables in the multiple regression model. These coefficients show the individual impact of WhatsApp, Twitter, Facebook, and LinkedIn usage on students' academic performance.

Table 13: Coefficients of Determination

Variable	Unstandardized Coefficients (B)	Standard Error	Standardized Beta (β)	t-value	Sig. (p-value)
(Constant)	1.22	0.19	—	6.42	0.000**
WhatsApp Usage	0.35	0.07	0.38	5.00	0.003**
Twitter Usage	-0.21	0.09	-0.23	-2.33	0.023*
Facebook Usage	-0.29	0.08	-0.34	-3.63	0.001**
LinkedIn Usage	0.41	0.06	0.44	6.83	0.000**

The coefficients table reveals the distinct effects of different social media platforms on academic performance. The constant value of 1.22 indicates the baseline academic performance when all social media usage is zero and is statistically significant. WhatsApp usage positively influences academic performance, with an increase of 0.35 units in performance for each unit increase in WhatsApp use, supported by a significant p-value of 0.003. Similarly, LinkedIn usage shows the strongest positive effect, with a coefficient of 0.41 and high statistical significance, indicating that greater use of LinkedIn is strongly associated with better academic outcomes. In contrast, Twitter usage negatively affects academic performance, with a decrease of 0.21 units per unit increase in Twitter use, and this relationship is significant ($p = 0.023$). Facebook usage also has a negative impact, with a coefficient of -0.29, showing a significant reduction in academic performance as Facebook use increases ($p = 0.001$). Overall, WhatsApp and LinkedIn contribute positively to students' academic success, while Twitter and Facebook are linked to declines in performance.

4.1.10 Regression Model

Based on the multiple linear regression analysis, the following model was derived:

$Y=\beta0+\beta1X1+\beta2X2+\beta3X3+\beta4X4+\varepsilon$

Where:

- **Y** = Academic Performance
- $\mathbf{X_1}$ = LinkedIn Usage
- $\mathbf{X_2}$ = Facebook Usage
- $\mathbf{X_3}$ = WhatsApp Usage
- $\mathbf{X_4}$ = Twitter Usage
- $\boldsymbol{\beta_0}$ = Constant (Intercept)
- $\boldsymbol{\varepsilon}$ = Error term

Estimated Regression Equation

Academic Performance=1.22+0.41(LinkedIn)−0.29(Facebook)+0.35(WhatsApp)−0.21(Twitter)+ε

4.2 Limitations of the study

4.2.1 Financial limitations

With insufficient funds, the researcher was not be able to recruit a large number of respondents, limiting the generalizability of the findings.

Financial constraints limited the access to high-quality data collection tools, such as specialized software for surveys or advanced equipment for experiments, It can compromise the data's validity and dependability.

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS, AND CONCLUSION

5.0 Introduction

The results and interpretation of the variables in chapter four serve as the foundation for the conclusion and suggestions made in this chapter, which summarizes the findings. Additionally, recommendations for additional research are given.

5.1 Summary of the Findings

The response rate was 100%, with all 135 targeted participants completing the survey, enhancing the study's reliability. Demographically, 65% of respondents were female and 35% male, indicating a gender imbalance that may affect findings. In terms of age, most students (60%) were aged 16–18, aligning with typical upper secondary school age groups. Class-wise, most respondents were in Form 3 (44%) and Form 4 (48%), with 8% being teachers or advisors, reflecting the study's focus on students nearing national exams. Regarding academic performance, 22% of participants scored an A, 38% a B, 27% a C, and 13% a D or below, providing a varied performance range for analyzing the impact of social media usage.

5.1.1 To assess the impact of WhatsApp usage on academic performance of secondary students in Kenya

The analysis reveals that WhatsApp is widely utilized by secondary school students in Kenya for academic purposes. Most students reported using the platform to participate in group discussions and communicate with teachers, indicating its value as a tool for collaborative learning. The data also shows that many students have joined several academic study groups via WhatsApp, which enhances peer learning. However, the platform's dual nature is evident as students also acknowledged that the time spent on WhatsApp can affect their academic performance. Some students found it helpful, while others reported being distracted by non-academic interactions. The varying standard deviations suggest that the impact of WhatsApp differs among individuals depending on how the platform is used.

5.1.2 To evaluate the impact of Twitter usage on students' focus and academic productivity

The data assessing Twitter usage among secondary school student's reveals mixed perceptions regarding its impact on academic focus and productivity. Students moderately agree that they spend a considerable amount of time on Twitter daily (mean = 3.45), but relatively few follow academic-related accounts (mean = 2.93). Access to academic discussions on Twitter received a slightly higher mean (3.08), suggesting that while the platform holds some educational potential, it is underutilized for this purpose. Notably, the highest mean score (3.64) was for the statement that Twitter interferes with study time, indicating a common concern that the platform disrupts academic focus. In contrast, students were largely neutral about Twitter enhancing their academic productivity (mean = 3.02), highlighting uncertainty about its usefulness in supporting academic goals.

5.1.3 To investigate the effect of Facebook usage on academic performance of secondary school students

The findings on Facebook usage among secondary school students reveal a complex impact on academic performance. Students generally reported spending a considerable amount of time on Facebook daily (mean = 3.88), with many participating in academic groups (mean = 3.42) and receiving some academic support from these groups (mean = 3.37). However, the data also shows that Facebook is a significant source of distraction, with a high mean score of 3.78 for the statement on social content interfering with studies. While some students engage with academic content (mean = 3.34), the engagement is only moderate, indicating that Facebook's educational potential is not fully realized.

5.1.4 To analyze the relationship between LinkedIn usage and academic performance of secondary students

The data on LinkedIn usage among secondary school students indicates moderate engagement with the platform for academic and career purposes. Students moderately access LinkedIn for academic needs (mean = 3.21) and follow academic or career-related content (mean = 3.15). However, active participation in LinkedIn Learning courses is relatively low (mean = 2.84). Despite this, students perceive LinkedIn as beneficial for knowledge enhancement (mean = 3.37) and shaping their academic and career goals (mean = 3.49). The variation in responses suggests differing levels of use and benefit among students.

5.2 Conclusion

From the findings, it is clear that WhatsApp plays an important role in supporting students' academic activities, particularly through group discussions and communication with teachers. Its convenience and accessibility make it a preferred tool for sharing academic resources and clarifying learning materials. However, WhatsApp also poses challenges, especially when students use it excessively for social interactions, leading to reduced focus and potential academic decline. Therefore, while WhatsApp has the potential to enhance academic performance, its impact largely depends on how effectively students balance academic and social usage.

The findings suggest that Twitter is more commonly associated with distraction than academic benefit among secondary school students. While the platform does offer opportunities for academic engagement, such as accessing discussions and educational accounts, most students do not actively pursue these resources. Instead, Twitter tends to interfere with students' study schedules and focus, which may hinder academic performance. This implies that Twitter is not currently being leveraged effectively as a learning tool by the majority of students.

The results suggest that Facebook serves both as a potential academic support platform and as a major distraction for secondary school students. While it provides access to academic groups and discussions, the dominant use of the platform appears to be social rather than educational. The distractions from non-academic content may negatively affect students' concentration and time management, ultimately impacting their academic performance. Therefore, Facebook's effect on academic outcomes is mixed, leaning toward negative if not used purposefully.

LinkedIn serves as a useful platform for secondary students' academic and career development, with many students recognizing its value in enhancing knowledge and guiding goal setting. However, the relatively low completion rate of LinkedIn Learning courses suggests that students are not fully utilizing all the educational resources available on the platform. Overall, LinkedIn positively influences students' academic and career planning but has untapped potential that could be further harnessed.

5.3 Recommendations

To maximize the academic benefits of WhatsApp, schools should actively promote its structured use for educational purposes. Teachers can create and manage class-based WhatsApp groups to facilitate discussions and provide timely academic support. Additionally, there is a need for digital literacy training that equips students with time management and self-regulation skills to avoid overuse and distractions. Parents and teachers should collaborate to monitor students' use of WhatsApp and guide them toward responsible behavior online. Finally, educational institutions should consider developing formal policies that incorporate digital platforms like WhatsApp into teaching and learning strategies, while also setting clear boundaries to minimize misuse and promote academic success.

To reduce the negative academic impact of Twitter, students should be encouraged to limit non-essential usage and practice time management strategies to avoid excessive distractions. Schools can introduce digital literacy programs that highlight how to use social media platforms like Twitter for educational purposes, such as following scholarly accounts or participating in relevant discussions. Teachers could also recommend specific academic Twitter handles that provide valuable content aligned with the curriculum. Additionally, parents and educators should work together to monitor students' social media use and promote a balanced approach that prioritizes academic responsibilities.

To mitigate the adverse effects of Facebook, students should be guided on how to use the platform effectively for academic purposes. Schools can encourage the creation and active use of subject-specific academic groups, where teachers can moderate discussions and share learning materials. Additionally, digital awareness campaigns should be conducted to help students recognize and manage distractions from non-academic content. Teachers and parents should work together to monitor usage and promote balance, ensuring that time spent on Facebook contributes positively to students' academic progress.

Schools should encourage students to make fuller use of LinkedIn, especially its learning courses, by integrating the platform into career guidance and academic support programs. Teachers and counselors can organize workshops to train students on effectively using LinkedIn for educational and professional growth. Promoting success stories of peers who have benefited from LinkedIn Learning could motivate students to engage more actively. Additionally, partnerships with LinkedIn to provide tailored resources for secondary students may enhance the platform’s relevance and usage.

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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

Dear respondent,

My name is Leah Ngala, and I am enrolled at The Management University of Africa. My admission number is BEDK/2/00074/3/21. I'm researching on the effect of social media networks on academic performance of secondary school students, with a focus on Kenya High School, Nairobi. In light of this, we really appreciate your involvement in filling out the questionnaire that is enclosed. Your submitted information will only be used for this study. I'm thankful in advance.

Regards,

Leah Ngala

BEDK/2/00074/3/21

The Management University of Africa

APPENDIX II: QUESTIONNAIRE

ON SOCIAL MEDIA USAGE AND ACADEMIC PERFORMANCE

SECTION A: BACKGROUND INFORMATION

1. Please select your gender.

   Male [ ]

   Female [ ]

2. Which age range are you in?
   a) 13–15 [ ]

   b) 16–18 [ ]

   c) 19–21 [ ]

3. What class/form are you currently in?
   a) Form 1 [ ]

   b) Form 2 [ ]

   c) Form 3 [ ]

   d) Form 4 [ ]

4. What is your average grade in the last academic term?

   a) A [ ]

   b) B [ ]

   c) C [ ]

d) D or below [ ]

SECTION B: WHATSAPP USAGE

Please rate your agreement with the following statements on a scale of 1 to 5, where: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, (5) Strongly Agree

Statement	**1**	**2**	**3**	**4**	**5**
I use WhatsApp to participate in academic group discussions.					
I regularly communicate with my teachers via WhatsApp.					
WhatsApp social interactions distract me from my studies.					
I belong to more than two academic-related WhatsApp groups.					
Time spent on WhatsApp affects my academic performance.					

SECTION C: TWITTER USAGE

Statement	**1**	**2**	**3**	**4**	**5**
I spend significant time on Twitter daily.					

I follow academic-related accounts on Twitter.					
Twitter helps me access useful academic discussions.					
Twitter usage interferes with my study time.					
Twitter enhances my academic productivity.					

SECTION D: FACEBOOK USAGE

Statement	**1**	**2**	**3**	**4**	**5**
I use Facebook for more than 1 hour daily.					
I have joined educational groups on Facebook.					
Facebook academic groups help me with schoolwork.					
Facebook distractions reduce my academic focus.					
I frequently engage with academic content on Facebook.					

SECTION E: LINKEDIN USAGE

Statement	1	2	3	4	5
I access LinkedIn for academic purposes.					
I follow academic or career-related content on LinkedIn.					
I have completed LinkedIn Learning courses.					
LinkedIn enhances my knowledge in school-related subjects.					
I find LinkedIn useful in shaping my academic and career goals.					

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