

Article

Appraising of Social Media Network in the Academic Performance of Students in Ghana: A Case of Komenda Edina Eguafo Abirem Municipality

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Abstract: Quantitatively, the study adopted a descriptive research design. The population of this study comprised two thousand (2000) students in the four (4) senior high schools (Edinaman Senior High, Eguafo Senior High, Peter Hold Book Senior High and Komenda Senior Technical Institute) in Komenda Edina Eguafo Abirem municipality. Purposive, simple random and stratified sampling techniques were used to select two hundred students from the four for this study. A questionnaire was the main instrument for data collection. There are more adverse effects of social media network participation on academic performance than positive effects. Social media network sites serve as a useful medium for enhancing students' academic performance if properly used. Therefore, SHS students should be guided to use social media properly to enhance their academic performance. It is recommended that regular counselling by school authorities and parents for students who participate in social media networks should be done to prevent improper use of social media and avoid addiction and its consequences. It is also recommended that teachers should encourage students to use the right grammar and correct spelling of words when participating in social networks to help stop the negative effect it has on students' academic performance. It is once again recommended that all stakeholders should be involved in educating students on the proper use of social media networks for their academic work as well as the dangers of improper use on their academic performance and social well-being.

Keywords: Social Media, Network, Academic Performance, Komenda Edina Eguafo Abirem Municipality

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1. Introduction

The Internet revolution changed the information world with regard to sharing speed, storage and retrieval of information in whatever form regardless of the person's location. Through the Internet, a number of web technologies emerged. One technology, which is making waves with regard to information sharing and communication, is social media technologies. The evolution of social media had cut across all facets of society with its positive and negative impacts. Social media has impacted communication, learning, research and education in general. Among the vast variety of online tools available for

communication, social networking sites have become modern and attractive tools for connecting people throughout the world [1].

Numerous studies have been carried out on the impact of social media on academic performance among students. Teenagers use these technologies for a number of positive activities, which involve going deeper into interest-driven communities and participating in various activities [2]. "Social Network Sites (SNS) provide a platform for the youth to participate in communities that help them to learn, and practice skills within particular knowledge area" [3]. In the same way, college students produce a tremendous volume of writing through various social media tools, such as blogs, emails and other social media environments [4]. Conversely, researchers found a continuing drop in grades among students who use social networking sites [5]. This was supported by other researchers who found a significant negative relationship between Facebook use and academic performance. They concluded that students who use Facebook spend fewer hours per week studying on an average than Facebook non users and this resulted in lower mean grade point averages (GPAs) [6]. Another researcher examined the relationship between numerous measures of frequency of Facebook use with time spent preparing for class and overall GPAs. Hierarchical linear regression analysis from the study indicates that time spent on Facebook was strongly and significantly correlated with overall GPA [7].

A report by the National Communication Authority (NCA) of Ghana indicated that mobile data subscribers in the country have increased exponentially with a penetration rate of 90.78%. As at the end of March 2015, the mobile data subscriber base had increased to 16,106,218 [8]. The statistics indicate that as more people subscribe to the Internet and mobile phone, the more the increase in data subscriptions. This data subscription is used to access the Internet, which in effect is used more to participate on social networks. People using social media will still keep on increasing since the data are in use. There have been a lot of debates on various platforms and media as to the impact that social media has on society and, specifically, its effect on education. Some of these studies found a drop in students' grades and academic performance, and lack of time for studies as consequences of social media network participation [6, 9]. However, a site-specific culture can both positively and negatively affect the building capital and Facebook usage is not positively associated with the lower grades of students; rather Facebook users scored higher grades [10].

A number of studies in relation to social media have been conducted in Ghana. These, however, have centred on social media use in basic schools and social media usage at the tertiary level [11, 12]. Since these studies have been conducted at the basic and tertiary levels, it is necessary to conduct such studies at the secondary level also. Hence, this study sought to assess the effects of social network participation on the performance of students in Senior High Schools in the Komenda-Edina-Eguafo-Abirem Municipality. The researchers believed this would add a new dimension and fill the research gap between basic and tertiary institutions in terms of the effects of social media participation on students' academic performance. The purpose of this study was to examine social media networks on the academic performance of senior high school students in the KEEA Municipality. The study was guided by these research questions (1) What are the views of students on the effects of social media on their academic performance? (2) How do social media enhance students' performance?

1.1. Influence of Social Media Networks on Student Academic Performance

Though there have been many social, economic, and environmental factors that have added to the pressure of university students in the past ten years, the drop-out rate for students is still a major national problem [13]. Current statistics show that university students in Nigeria are under increased pressure due to higher academic standards in other countries, and it has become more important than ever for educators to encourage graduation and further education [13]. However, with more and more students being

preoccupied with social media networks and technological social lives, how will this affect their studies? It is estimated that even those students who do graduate high school, one out of three do not have possession of the knowledge and skills that would lead them to the next level, such as college or an advanced trade school [13].

The top academic areas that many school professionals are concerned about are English (ELA) and advanced literacy [14]. The current generations of teens live in a fast-paced technological world with many different types of communication happening all at the same time. For example, he or she may be on the computer on a SNS, while also talking on the phone, sending instant messages to a friend, and emailing someone else all at the same time [14]. While there may be some advantages to this, such as the teen learning how to type faster and multi-task many things at once, there may also be a breakdown in much of that communication [14]. Literacy has also taken a dive in the past decade, which has caused many educators to question what can be done to help students improve their reading, writing, speaking, and thinking- all of the most basic skills for a successful future [15]. As one researcher stated, "Literacy is, in reality, the cornerstone of student achievement, for any student, in any grade" [15]. The question that many school professionals have with regard to communication is whether or not a tertiary institution student is able to follow the school curriculum in courses like English or Language Arts [14]. Also, it will be possible to teach them without the use of multi-tasking and using new forms of technology.

1.2. Effects of Social Networks on Academic Performance

There have been mixed reactions from academics and researchers with regard to the effect of social networks and how they affect academic performance. Studies have found that the participation of students and young people on social networks may have both positive and negative impacts on their studies and, for that matter, their academic performance. A researcher defined academic performance as "the apparent demonstration of understanding, concepts, skills, ideas and knowledge of a person and proposes that grades clearly depict the performance of a student" [16]. Hence, students' academic performance must be managed efficiently keeping in view all the factors that can positively or negatively affect their educational performance. The use of technologies, such as social media networks and the Internet, is one of the most important factors that can influence the educational performance of students positively or adversely [17].

A study conducted in the United States about students' extracurricular activity, rather suggested that new media, such as Facebook, Twitter etc. replace or improve other leisure activities, but do not take away time from the youth. In other words, the time spent on social network sites is the time that is normally used for extracurricular activities and, therefore, does not affect their away, their productive time for studies [18]. In Ethiopia, a study also indicates that there is no significant relationship between time spent on social networks, such as Facebook, and students' grade point average (GPA) [19]. This is reliable with a study conducted in Pakistan among six universities and found not much relationship between time spent on social media networks and students' academic performance [20]. Conversely, a number of researchers and studies have also found a negative effect that social network participation has on students' academic performance. A similar study found a "significant negative relationship between Facebook use and academic performance. Facebook users reported lower mean GPAs and also reported spending fewer hours per week studying on average than Facebook non-users. The majority of students claimed to use Facebook accounts at least once a day" [6].

1.3. Advantages of Social Network (SN)

The research highlighted the importance of social networks in influencing young people. A study by researchers utilized 302 responses from young people in Jordan and investigated the influence of social networks on social reform through a conceptual model

with five analysts of intention to use social networks and they are satisfaction, isolation, trust, social participation and intensity of SN use. Results indicated a significant prediction of intensity and separation only [21]. Information and communication technologies (ICTs) are becoming important tools for educational support. Computers and the Internet are becoming more and more important in the learning and teaching processes. With the advent of mobile phones, especially smartphones, it is becoming easier to reach students and even utilize the capabilities of technology. A study utilized three groups of students, where the assignments and interactions were conducted with three levels: 1) traditional methods, 2) fair use of phones, and 3) extensive use of smartphones in working on mathematical assignments for school students [22]. The sample included 58 secondary students in Qatar. Results indicated a higher performance of the smartphone group compared to the other two groups. Facebook resulted in a significant improvement in students' performance in universities. A study in a Vietnamese university concluded that students using Facebook as a social media has improved substantially with respect to their grades [23]. The same study also concluded that the enhancements and value of social network sites were not related to academic performance but also to the adaptation to the social environment of the school. The same argument relating to social absorption by students emphasized the role of social networks in socializing students and opening channels for finding more academic resources, thus improving their academic achievement. Such a result was not supported for senior students, where social absorption is less pertinent in later years and student involvement might profit more in the academic area. A social network is a strong tool for social communication and connection, where it can improve family ties and friends in a rich social context. A study on 161 Tunisian students concluded that [24].

1.4. The Disadvantages of Social Networks (SN)

The negative influences of SN on students' performance are reported in research, where a study utilized a sample of 384 students and concluded that Facebook use has an adverse influence on student academic performance. The study noticed that males and females spent equal time on the Internet whereas females used Facebook more, but males had more friends than females. The important difference was that Facebook use had an adverse influence on males' performance than females. The authors accounted for such adverse performance because males spend more time on sports and games activities than females, which caused a loss of time and a bad influence on performance [25]. It is authoritative to realize that time spent on social activities (using Facebook or other social media) will be on account of academic performance. This judgment is essential regardless of the positive side we see in SNs. A study that utilized students in a US university concluded to a negative relationship between time spent by students on online social networks and their academic performance [26]. The authors pointed to the importance of the consideration span devoted to multiple sources of attractions. Such a result indicates the importance of using Facebook and other social media tools wisely and towards a productive time in classrooms and back home. The same study motioned in the previous section, regarding the improvement of social absorption and academic achievement concluded that using Facebook by students consumes time and thus negatively influences academic performance [24]. Using mobile phones for texting and social network access also was explored to see if it is related to the engagement level in classrooms, where research showed that engagement is closely related to teachers' style and control. Also, the use of social networks and mobile texting was not related to lower performance results [26]. Such an issue emphasizes the distraction that social media causes, but not to the extent of risking academic performance.

Some universities fixed the use of computers, tablets and other technology channels in their educational setup. A study that focused on the issue of multitasking in classrooms concluded to the fact that students who use ICT and involve in multitasking (examples

like text messaging, Facebook, Internet searching, emailing, and instant messaging) would have lower GPAs, which means lower academic performance based on their behaviour [27]. The study also related risk-taking behaviour to such use of ICT and concluded that multitasking would result in higher risk-taking behaviour. Social network use is related to the personality of students, where some students are influenced more than others depending on their personality. A study of Swedish university students utilized 239 undergraduate students to fill out a survey related to their Facebook use [28]. Results indicated that the extensive use of Facebook by students with extraverted personalities will lead to poor academic performance. The authors concluded also that self-regulation and goal orientation (related to performance) characterized the students who are more in control of this social activity, and this better academic performance. The time spent on using Facebook was significantly associated with the negative performance of students in a study that used 3866 US students. The other indicator that showed significant association with performance is time spent preparing material for classes, where students devoted some time to sharing resources and material using Facebook or other social media website [7].

1.5. Benefits of Social Networking

Though many arguments can be made about the possible risks of adolescent social networking, it is important to point out the benefits of these websites as well. Many schools have started to use these sites to promote education, keep students up to date with assignments, and offer help to those in need [29]. In general, the Internet and social networking sites can be a positive influence on adolescents. Social networking sites provide an outlet for teens to express themselves in their own exclusive ways [29]. In addition, they serve both as a meeting place for teens to interact with other compatible people and as showplaces for a teen's artistic and musical abilities [29]. Finally, high school students use these sites as tools to obtain information and resources for graduation preparation and future planning. For example, students applying for college visit profiles of that college's students to view pictures and read blogs of past students to decide whether the college would be a good fit [29].

2. Materials and Methods

Quantitatively, the study adopted a descriptive research design. The population of this study comprised two thousand (2000) students in the four (4) senior high schools (Edinaman Senior High, Eguafo Senior High, Peter Hold Book Senior High and Komenda Senior Technical Institute) in Komenda Edina Eguafo Abirem municipality. Purposive, simple random and stratified sampling techniques were used to select two hundred students from the four for this study. A questionnaire was the main instrument for data collection. The data collected for the study was organized and arranged in an orderly manner to ensure clarity and consistency. The researchers entered all the data into the IBM SPSS Statistics tool; a tool formerly known as Statistical Package for Social Sciences, Version 21. This software was used because it is specially designed to analyse quantitative data. SPSS is the most suitable package for analysing quantitative data. Therefore, the researchers considered this software for data analysis [30]. The type of data analysis was determined by the objectives of the study and the research design. The survey method was used and data was collected by means of a questionnaire. The Statistical Package for Social Science (SPSS) was used to analyse the data collected. The descriptive analysis tools in the SPSS were employed to develop tables and frequencies which was constructively analysed. The researcher adopted Kendall's coefficient of concordance and factor analysis as analytical tools for the study.

3. Results and Discussions

3.1. Effects of Social Media on their Academic Performance

This section presents results and discussions on research question one (1): *What are the views of students on the effects of social media on their academic performance?* This question is intended to examine the views of students on how the use of social media could impact their academic performance. In an attempt to do that, the students were asked a series of questions. These questions range from students' addictiveness, exposure and use of social media. The responses were based on a four-point Likert scale with the scale notation being disagreed = 1, strongly disagree = 2, agree = 3 and strongly agree = 4. For the sake of this discussion, responses which are between the mean of 0 – 2.4 disagree and 2.5 – 4.0 agreed. Again, a standard deviation which is below 1 indicates homogenous responses whereas a standard deviation which is also above 1 implies a heterogeneous response. The outcome is presented in [Table 1](#).

Table 1. Students' Addictiveness to Social Media Networks and Academic Performance

Statements	Mean	Std. Dev.
Addictive to online social networks is a problematic issue that affects my academic life	2.59	1.00
Online social networks distract me from my studies	2.68	0.99
Hours spent online can never be compared to the number of hours I spend reading	2.81	1.00
There is no improvement in my grades since I became engaged in these social networking sites	2.89	1.12

From [Table 1](#), it can be noticed that addiction to online social networks is a problematic issue that affects the majority of the student's academic life ($M = 2.59$, $SD = 1.00$). The responses indicate that social media addictiveness was distractive, many hours that could be used for studies were wasted on social media, and the academic performances of the students were negatively affected. These findings are in agreement with a similar study that, in Malaysia, most students unconsciously got addicted to the use of social media networks and get obsessed with them. The participants in the study indicated that they always intended to spend a few minutes but ended up spending hours surfing and updating profiles as well as viewing photos. This made it hard for the students to concentrate on their studies when they knew they could play games and chat with their friends on these social media sites [\[31\]](#).

Apart from the items presented in [Table 1](#), the researchers also sought to examine how students' exposure to Social Network sites on their academic performance. Results obtained from the students with regard to these items were presented in [Table 2](#).

Table 2. Exposure of students to social networks and their academic performance

Statements	Mean	Std. Dev.
I usually have unlimited access to Facebook and this had affected my academic performance negatively.	3.18	1.07
I engage in academic discussions on Twitter and this has improved my academic performance	1.74	1.01
I make use of WhatsApp to disseminate knowledge to my classmates	1.72	0.99
I solely rely on information gotten from Wikipedia to do my assignments without consulting other sources	3.18	1.07

From [Table 2](#), it can be noted that Facebook had affected students' academic performance negatively as many have unlimited access ($M = 2.59$, $SD = 1.00$). Moreover, most respondents did not engage in academic discussions on Twitter. This means that they only engaged in discussions that were not related to their academic work or, even if they did, it was very little. This also suggests that they mostly talked about irrelevant issues such as relationships, football matches, and politics, among others, instead of probably talking about subjects they were studying in school. It was surprising to know that almost all of the respondents did not make use of WhatsApp to disseminate knowledge to their classmates. This was a clear indication that most of the things they did on some of these social media sites had nothing to do with their educational life.

Table 3. Use of Social Networks and Students' Academic Performance

Statements	Mean	Std. Dev.
Comparing my grades before and after participating on social media networks, I experienced a drop in my academic performance	2.52	0.99
The usage of Wikipedia for research has helped improve my grades	2.99	0.91
Social network sites are personal /social and cannot be used for educational purposes	1.90	0.98
I receive examination questions and papers through social media	2.59	1.03
I do examination discussions with my friends on social media	2.87	0.93
Social media participation affects my English Language (spelling, Grammar and Pronunciation).	2.33	1.112
I use material gotten from blogging sites to comment on what I have been taught in class.	2.27	0.93
During vacation, I spend a lot of time participating on social media than reading my books (Use)	2.68	1.06
My grades will improve if I stop participating in social networks differently and at different frequencies.	3.90	0.98

As shown in [Table 3](#), there was a drop in academic performance when respondents compared their grades before and after they started participating on social network sites. Similarly, the use of social media during vacation also affected performance, which suggests that the majority of the respondents spend most of their time during vacation participating in social media discussions rather than for educational purposes or reading their books ([Table 3](#)). This indicates that participation on social networking sites affected their academic performance negatively because they were distracted from their studies. Social media also negatively affected the grammar and spelling as well as the pronunciation of students as indicated by a high mean score of 2.68. Thus, most respondents confirmed that their spelling of words had been negatively affected as a result of their participation on social media networks. The majority ($M = 2.87$, $SD = 0.93$) of the respondents shared examination questions using social media networks ([Table 3](#)). Therefore, social networks have become one of the main channels through which respondents shared questions on examinations with their peers in other schools. It is interesting to note that a greater number of the respondents indicated that their grades would improve if they stopped participating on social media networks as indicated by a mean of 3.90 ([Table 3](#)). Thus, the students are aware of the negative implications of participation in social networks and that if they reduce or stop participation, their grades will improve. A little education or counselling could assist them use social networks for the right purposes to improve their academic performances.

The use of technologies, such as social media networks and the Internet is one of the most important factors that can influence the educational performance of students positively or adversely. The adverse effects of participation in social networks on students' academic performance have been highlighted by a number of researchers [32]. For instance, in a similar study, there was a significant negative relationship between

Facebook use and academic performance [6]. They found that Facebook users reported achieving lower mean GPAs, which could be due to the average fewer hours per week they spent studying compared to non-Facebook users. The majority of these students claimed they used Facebook accounts at least once a day [6]. Similarly, a previous study reported that 8.9% of students in 2000 and 4.4% in 2003 indicated that their grades had suffered as a result of too much time spent on the Internet as well as on social media networks [33]. In addition, a related study that utilized students in a US university concluded to a negative relationship between time spent by students on online social networks and their academic performance [26]. Another study that focused on the issue of multitasking in classrooms concluded to the fact that students who use ICT and involve in multitasking (text messaging, Facebook, Internet searching, emailing, and instant messaging) obtain lower grade point averages (GPA), which means lower academic performance based on their behaviour [34].

However, some earlier studies have found no correlation between social media network use and students' academic performance. Notable among such studies is the one by researchers in Ethiopia, whose findings indicate that there is no significant relationship between times spent on social networks, such as Facebook, and students' GPA [19]. This is congruence with a study conducted in Pakistan among six universities which found not much relationship between time spent on social media networks and students' academic performance [20]. These may arise because of differences in student geographical settings and educational levels. University students could be more focused and use social media and the Internet for educational purposes. Hence, these activities would have a less negative impact on academic performance, unlike SHS students who are comparatively younger and easily distracted.

3.2. Use of Social Media Networks to Enhance Students' Performance

This sub-section also presents results and discussions on research question two (2): *How can social media be used to enhance students' performance?* This is an overview of the results obtained from respondents on how social media can be useful to students in enhancing their academic performance. The results obtained from respondents are shown in Table 4.

Table 4. How Social Media Network Enhances Students' Performance

Statements	Mean	Std. Dev.
The faster rate of online charts with social media has brought about easy access to communication on online education	3.14	0.88
Online social networks enable learners and instructors to present themselves socially in an online environment and connect with one another	3.96	0.78
Media websites provide a possibility to create a sense of presence, community-building, and learner participation in interactive discussions	3.03	0.80
Social media tools make the learning environment more dynamic by supporting new features and characteristics.	3.97	0.80
Social networking sites provide an outlet for teens to express themselves in their own exclusive ways	3.68	0.89
They serve both as a meeting place for teens to interact with other compatible people and as showplaces for a teen's artistic and musical abilities	3.93	0.82
Senior High school students use these sites as tools to obtain information and resources for graduation preparation and future planning	3.11	0.82

A greater number of the respondents ($M = 3.96$, $SD = 0.78$) indicated that online social networks enable both learners and instructors to present themselves socially in an online

environment and connect with one another. In addition, the majority of the respondents also strongly agreed ($M = 3.98$, $SD = 0.83$) that social media websites provide a possibility to create a sense of presence, community-building, and learner participation in interactive discussions. The majority of the students ($M = 3.97$, $SD = 0.80$) also agreed that social media tools make the learning environment more dynamic by supporting new features and characteristics. Moreover, it was brought to light that social networking sites provide an outlet for teens to express themselves in their own exclusive ways ($M = 3.68$, $SD = 0.89$). More importantly, senior high school students used these sites as tools to obtain information and resources in preparation for graduation and future planning ($M = 3.11$, $SD = 0.82$). The study further found that social media sites served as both a meeting place for teens to interact with other compatible people and showplaces for a teen's artistic and musical abilities ($M = 3.94$, $SD = 0.82$). These findings are in agreement with an earlier study that online social networks enable students and teachers to present themselves socially in an online environment and connect with one another and this enables learners to participate in a group learning process [36]. The current findings are also similar to the findings of the previous study that social media websites provide a possibility to create a sense of presence, community-building, and learner participation in interactive discussions [37]. Furthermore, social media network sites bring with them the freedom for learners to connect and collaborate outside of institutional boundaries, as well as to gain practical experience for the workforce [38].

4. Conclusions and Recommendations

There are more adverse effects of social media network participation on academic performance than positive effects. Social media network sites serve as a useful medium for enhancing students' academic performance if properly used. Therefore, SHS students should be guided to use social media properly to enhance their academic performance. It is recommended that regular counselling by school authorities and parents for students who participate in social media networks should be done to prevent improper use of social media and avoid addiction and its consequences. It is also recommended that teachers should encourage students to use the right grammar and correct spelling of words when participating in social networks to help stop the negative effect it has on students' academic performance. It is once again recommended that all stakeholders should be involved in educating students on the proper use of social media networks for their academic work as well as the dangers of improper use on their academic performance and social well-being.

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