

Utilization of Social Networking Sites: Association with Chemistry Academic Performance

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Abstract: *The study investigated the association between the utilization of Social networking sites (SNS) with the chemistry academic performance of the third-Year students of New Corella National High School, New Corella, Davao del Norte for SY 2013-2014. The researcher utilized the correlation method. Data were collected through a modified survey questionnaire from Mehmood (2013) and Mahamat et. al (2012) using a sample (N=209) SNSs users were purposively selected to gather the data. Findings revealed that most of the students were subscribed to one or two SNS and majority of them were found to spend most of their time with SNS from less than an hour to three hours. A greater number of students have an access to SNS in the internet café at least once a day and weekly. Moreover, getting information, playing games, communicating and chatting with friends were the main purpose of using SNS while to search information, to have fun, enjoyable and to communicate with friends were the gratification obtained by the students which is consistent with their purpose. Furthermore, the utilization of SNS did not influenced their academic performance in chemistry. However, they agree that the use of SNSs can be helpful in their academic performance. Thus, there is a need for the Science supervisor to integrate SNSs in the Science program and to conduct trainings for teacher for effective Science teaching particularly in chemistry through the use of social networking sites (SNSs).*

Keywords: Social Networking Sites, Chemistry Performance, Philippines.

1. Introduction

Many teenagers use the internet for the majority in their daily activities and information gathering compared to older generations who used resources like television, radio or newspaper. A recent survey showed that approximately ninety percent of teens in the U.S have internet access and about seventy five percent of these teens use the internet more than once per day [1]. It was furtherly showed that approximately half of all teens who have internet access are also members of social networking sites and uses the internet to make plans and socialize with friends.

According to [2], the use of technology such as internet is one of the most important factors that can influence educational performance of students positively or adversely. Some studies have claimed that social networking sites are being blamed for the poor performance of the students. According to reports, children whose spend much of their time online find it harder to concentrate in class and are permanently distracted. They were observed to have shorter attention span. While they may be positive affected by the information use of Internet, and they may also drastically impact if use mainly for recreational purposes. social networking can be both advantageous to students and teachers if it uses as a tool to create knowledge and disseminate information. This was further supported that student's users are affected by the internet and this impact is determined by the type of internet usage. They are either positively affected by the information use of internet while having drastic impact of recreational use of internet on them. Using internet may be advantageous to both students and teachers if it is use as a tool of knowledge creation and dissemination.

A number of studies have been done regarding the use of social networking and students' performance specifically on grades. Factors like the type of social networking sites used, the time spent on a site were among those that were considered. Some studies have shown no correlation between how much times is spent in a social networking sites and grade, while others have shown that the users received high grades compared to light users. While some studies had shown a continuing drop of grades among students who are users of social networking sites, others studies also found a positive association between use of internet and Social Networking Sites and academic performance of the student users.

The popularity of online Social Networking through the Internet has grown exponentially in New Corella National High School, New Corella, Davao del Norte, Philippines where the researcher was assigned. Most of the secondary students in Public and Private schools were known to have been registered on popular networking sites such as Facebook. Many of these students were observed to have spent a lot of time on these sites creating profile, updating use but doing less concerning their academic works while some just use it to chat with friends, post latest pictures of event they have attended, or exchange information with their peers. Other students specially the males were also observed to be using SNS for entertainment such as games. More observations show that most students remain connected to their favorite sites like Facebook through their cell phones, laptops and other gadgets while inside their classroom. Teachers were worried and unhappy at the increase in the number of students who are in social networking because the students are unable to concentrate in class and some have failed to complete their assignments on time as they rush to finished it so they can communicate with others online. They were also observed to have shorter

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attention span. The school have also experience cases of tardiness and cutting classes and were found to stay late in the internet café thus affecting their attitudes. Some teachers believe that despite the schools banning mobile phones, many students secretly take their cellphones and internet ready gadgets to school and remain connected to SNSs even during class hour.

In this study, the researcher would like to explore how the students of New Corella National High school use the internet and more specifically SNS, their purpose of using SNS, the gratifications drawn from these social media , and how they perceive the use of SNSs have an influence to their academic performance and to determine whether there is an association between use of SNSs to their academic performance.

2. Conceptual Framework and Paradigm

This study is also anchored on Uses and Gratification Theory by [3]. Uses and Gratification Theory is an approach to understanding “why” and “how” people actively seek out specific media to satisfy specific needs. This is a powerful mass communication theory that directly place power in the hands of the audience. Rather than assuming that media message has direct, uniform effects on those who consumes them, the Uses and Gratification perspective proposes that members make deliberate, intentional decisions about the media messages they expose themselves to base on personal needs and desires.

The conceptual paradigm of the study is shown in Figure 1. It shows the visual representation of the two variables, the utilization of Social networking sites its association with the Academic performance of the students in Chemistry. The box on the left shows the independent variable which is the student’s utilization of SNSs. The association of these variables is found in the right box which shows the dependent variable, the academic performance of the students in chemistry. Grades in chemistry during the first and second grading period served as indicators of academic performance of the students.

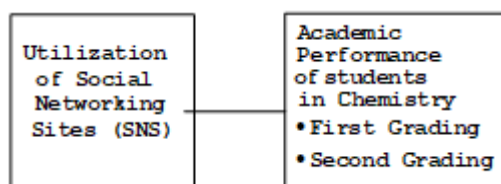


Figure 1: Conceptual Paradigm of the study

3. Statement of the Problem

This study aimed to determine how the students utilize SNS and the relationship of the utilization of Social Networking Sites (SNS) with the Chemistry academic performance of the students. This was conducted at the New Corella National High School, New Corella for the school year 2013-2014.

Specifically, this sought answer to the following questions:

- 1) How do the students utilize Social Networking Sites as to
 - 1.1 frequency of usage
 - 1.2 purpose of using Social Networking Sites
 - 1.3 gratifications obtained by using Social Networking Sites
- 2) What are the students’ perceptions on the influence of the utilization of the Social Networking Sites (SNS) with their Chemistry academic performance?
- 3) What is the academic performance level of students in Chemistry?
- 4) What is the relationship of the utilization of Social Networking sites with their Chemistry Academic performance?

4. Significance of the Study

The researcher believes that the findings of this study could offer great help by explaining the importance of the proper usage of SNS and at the same time will give them enlightenment regarding the use of SNS. Since the students of New Corella High school are exposed various kinds of SNSs, the results of the study will help how SNSs can be improved to be used as a platform for educational learning to improve academic performance among students.

For the Department of Education, this study will convey them with a deeper knowledge about the utilization of SNS which can be help them design new program to cater to specific education needs of each student, thus, SNSs can be a useful instrument in improving academic performance. The parents will also gain knowledge and understanding about the importance of the utilization of social networking sites and may help regulates the use of SNS to their children so as not to distract their studies.

To the community, especially to the business establishments like internet café, this will give them awareness of the significance of SNS and may help regulate or control the usage of SNS and give a full support for academic purposes and not purely for entertainment purposes. For Science Education Program, the end result of this study will serve as the basis for integrating Social Networking Sites in the curriculum especially in areas where these sites are available. Moreover, teacher can also help students to use online tools to empower students by utilizing the appropriate use of SNSs so as not to expose them to other inappropriate material. They will also be benefited in such a way that they will be able to provide their students in Chemistry with opportunities to gain and increase their students’ academic performance using this instructional technology.

5. Methods

5.1 Research Design

The research was a correlational study with help of a questionnaire. The questionnaire was adopted and modified

from the instrument by [2]. The critical analysis was carried out from the collected facts and figures.

5.3 Participants of the Study

The target population of the study were the third-year chemistry students of New Corella National High School, Division of Davao del Norte during the school year 2013-2014. These students belong to the basic education curriculum and were considered to be active participants in both academic and school - related activities. They are active users and members of Social Networking sites. Most of them belongs to middle income families (land owners, government employees, farmers).

5.4 Research Instrument

The survey questionnaire was adopted and modified from the instruments of [2] Slight modification like rewording, rephrasing and simplifying some of the statement was made in order to suit to the students' level of understanding. The questionnaire is divided into two parts (A and B). Part A of the instrument will describe how the students utilized Social Networking sites as to the frequency of usage, purpose of using social networking sites and gratification obtained by the students utilizing social networking sites. Their choices will be based on the checklist provided in the questionnaire.

Part B of the instrument will focus on students' perception on the influence of the utilization of Social Networking Sites (SNS) to their Chemistry academic performance. This is composed of nine (9) items using a Five-point Likert scale to determine their responses.

The participants will indicate their degree of agreement or disagreement as to whether their utilization of Social Networking Sites (SNS) have an influence with their chemistry academic performance using the Five-point Likert scale : Strongly Agree (5), Agree (4), Uncertain (3), Disagree (2), and strongly Disagree (1). The numbers 5, 4,3,2,1 will be used for the scale which correspond to their degree of agreement with every statement. For negative statements (items 3 and 4), the scoring was reversed.

Before the conduct of the questionnaire, it was first tried out to Third Year students at BSU to check its reliability and consistency in actual setting and to cross check culture load of the said instrument. The reliability was tested using the Cronbach's Alpha. The reliability coefficient was 0.655*.

5.5 Data Gathering Procedure

Prior to the conduct of the study the researcher obtained a letter of approval from the Office of the Dean of Graduate Studies. Upon approval. The approved letter was handed to the Division Superintendent of Davao del Norte for the approval of the permit to conduct the study. Proper communication was prepared from the office of the School's Division Superintendent before it was disseminated to the School Principal of New Corella National High School.

Upon the approval of school principal, the questionnaire as the data gathering tool was distributed to the selected participants. The researcher personally distributed the questionnaire to the participants. Before the conduct of the survey questionnaire, the participants were given orientation by explaining the purpose of the study in order to effectively carry out the results. The participants were further informed that the results of their responses will be kept with confidentiality and will be treated strictly for research purposes.

After collecting all the questionnaires, they were immediately collated and were subjected to appropriate tool for interpretation and analysis.

6. Results and Discussion

Utilization of Social Networking Sites as to:

6.1 Frequency of Usage

6.1.1 Number of SNS subscribed

Figure 1 shows the number of Social Networking Sites that students are subscribed to. From the pie chart, it can be gleaned that most of the third-year students are subscribed to one SNS (43.06%) or two SNSs (35.89%). Findings shows that despite the presence of the different social media network available, they have chosen a site according to their interests or purpose and availability. This includes YouTube, Twitter, Myspace, Instagram and the most popular site which is the Facebook. Casual interviews from students have expressed their interest in subscribing to one or two Social Networking sites because of its accessibility (ex. Facebook and Twitter) and popularity like Facebook (which is the "in" thing). The results were supported by the study of [4] who found out that most students admitted having membership of one or more SNS. The findings are also consistent with the literature regarding SNS popularity which is the Facebook. The same is also true with the result of [2] that students used one or the other Social Networking sites.

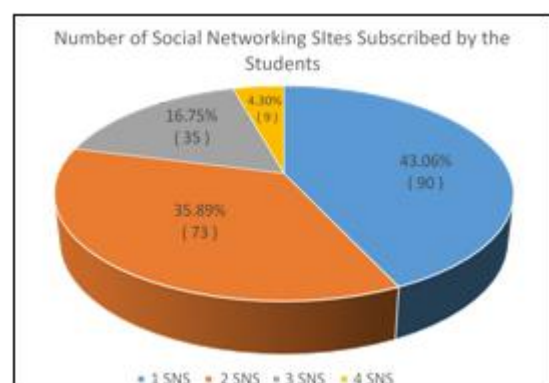


Figure 1: The number of Social Networking Sites Subscribed by the third Year Students

According to [5] social network websites provide ease of connecting people to one another which is free of cost. This free of cost factor fascinate students for communication and

data sharing. Furthermore, [6] asserted that increased use of social networking Websites has become an international phenomenon which started out as a hobby for some people and has become a social norm and the way of life for people from all over the world. Teenagers and young adults have especially involved in those sites as a manner to connect with their peers, share information, and showcase their social lives.

6.1.2 Frequency of usage as to the number of times spent with SNS

Figure 2 presents the frequency of usage as to the number of times spent with Social Networking Sites. Results indicate that most of the students spend their time with SNS from less than an hour to three hours and only few of them spend more than five hours.

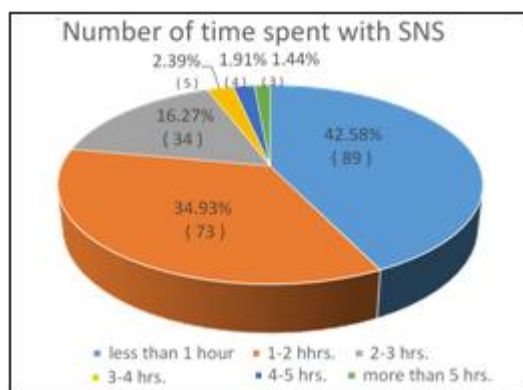


Figure 2: Pie Chart showing the frequency of the number of time students spent with SNS

Based on interviews, most of the third-year students spent less time with social networking sites in school because they only have few hours left after their classes in accessing themselves on SNS. Furthermore, most students have reasoned out that spending with SNS even just for a few minutes would give them a feeling of satisfaction. This is supported by [7] stating that the students use social networking websites approximately 30 minutes throughout the day as a part of daily routine life. This statement shows the importance of social networking websites in students' life. Other reasons are the availability of the signal of networks when using their mobile device to access SNS. Most of the third-year students admitted that they spend more time in the internet café because it is more accessible and available anytime they want. This supports "availability hypothesis" which states that where is increased access and opportunity to engage in an activity (in this case SNS), there is an increase in the numbers of people who engage in this activity. Other factors which motivate students to spend more time with SNS is their motivation for social interaction rather than academic purposes [8].

6.1.3 Frequency of Usage to SNS according to location

Figure 3 shows how frequently the third-year students have an access with Social Media from the different locations as enumerated.

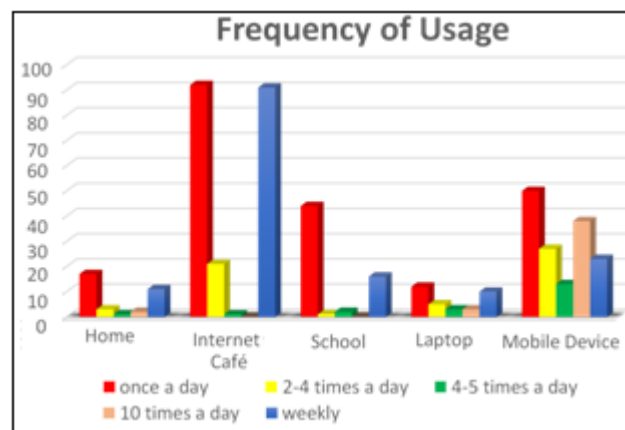


Figure 3: Bar Graph showing Students' access to SNS according to location

A greater number of student participants (92) was found to have their access to social media networks through the internet café. It can also be seen that a larger number of students spend their time in the internet café at least once a day or weekly. Others spend their time by utilizing their school computers at least once a day or weekly. Most students would prefer to go to internet café for several reasons like the consistency of signal (better signal), affordable, accessible and enjoyable, and because they claim that it has become a part of their life. Very few students own a laptop or an internet ready gadget like cell phones, I-phone or I-pods. Based on observation and random interviews with the students, some of them don't own home computers so they prefer to utilize their school computer or to go to an internet café. The results of the study also corroborate with [6], that majority of the youth and teenagers use the internet café for social purposes. [7] have found out that students use Social networking sites as part of their routine life.

In school, not all Third-year students can have access to the computer laboratory. Students enrolled in ICT, on TLE have express their sentiments due to their limited access to school laboratory computers. Most students commented that only when there are assignments or assigned topics like movie making and Power point presentation that they may be allowed to use the computers. Due to this limited access to their school computers, most students would rather go to internet café.

6.1.4 Frequency of Usage According to the Number of times the Student Access to the different Social Media Networks

Figure 4 presents the frequency of usage as to the number of times students' access to the different social media networks. The data in the table reveals that Facebook was the most frequently visited website by students.

Findings revealed that the participants utilize Facebook either weekly or once a day. Based on personal observations, students were found to have viewed or logged on the Facebook even inside the school premises, and inside or outside of their classroom. Facebook compared to other Social network websites is the most

frequently visited website among students. According to them, it is because they are familiar with this friendly network and because it is the most widely visited network due of its popularity, accessibility, connectivity and because it offers a wide range of online application.

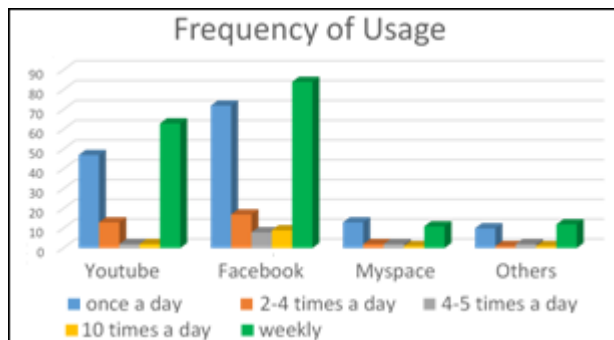


Figure 4: Bar graph showing the frequency of Usage according to the number of times Students access with Social media network

The results of this study were supported by Tinto (1997) who appraised that new information on social networking websites encourages growth and provide students with an ever-growing learning community which in return substitute both academic and social success. As shown in figure 4 social websites like Facebook or YouTube provide users information which is accessible to the external users and by the help of information it can help analyze one's profile including more features.

According to [9][10] point of view social networking websites best serves educational goal and objectives by connecting students through such informal methods as it allows student through the process of collaborative sense making. [9] argue that often students use social networking websites to discuss their academics issues formally and informally and also to interact with their instructor, teachers and professor. Social networking facilities open communication, leading to enhanced information discovery and delivery. In addition, it does not require one to voice out their opinions and ideas. Individuals are able to choose the preferred option and that is to communicate through social networks.

6.1.5. Frequency of usage as to the number of times spent with SNS for academic and non-academic purposes

Figure 5 shows the frequency of the time spent with social networking sites for academic and non-academic purposes. The figure tells that most of the students spent less than one hour for academic purposes while other students spend more than five hours with SNS for non-academic purposes.

Findings revealed that students use social networking sites not purely for academic purposes, but more for non-academic activities. Students use social networking sites to communicate with friends, follow the life of popular personalities in the media, finding new friends, communicating with them, and getting in touch with the people they know in the different social networking sites

rather than using the social networking sites to get information related to their lessons in Chemistry.

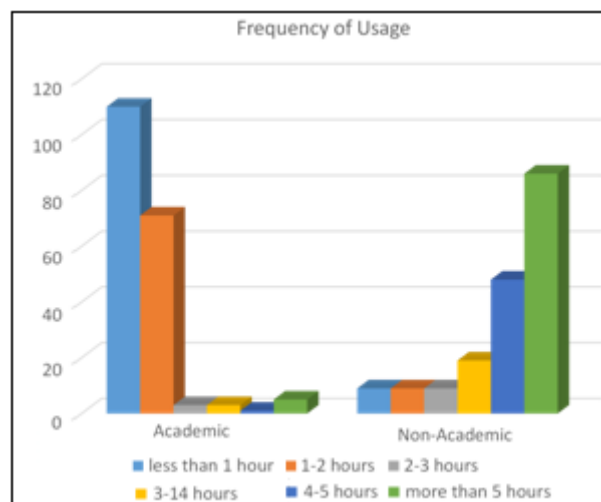


Figure 5: Bar graph showing the frequency of Usage on the time spent with SNSs for Academic and Non-academic performance

This study was supported by Nielsen (2010) who established that the online social activity of consumers around the world has increased to 82% in time spent on social networking sites. On average, users spent more than five and a half hours on popular networks such as Facebook and twitter. Furthermore, online users concentrated most of to their time on social networking and blogs, placing them ahead of other forms of engagement and interaction including online games and instant messaging. This data revealed that students have more time spent for non-academic activities [11]. This was supported by [8] that most students make use of online social networks for social interaction rather than academic purposes.

6.2 Purpose of Using Social Networking Sites (SNS)

Figure 6 presents the various purposes of the students in accessing Social Networking websites. The purposes as indicated were ranked from highest to the lowest based on their response to the given questionnaire. It can be seen from the graph that the three most popular activities that the third-year students do are the following: getting the information, playing games and communicating with friends.

It can be gleaned that the main purpose of utilizing SNS is getting information which is on top of the list. They believe that through the use of social networking sites they would be able to gather information on things they are interested. These may involve educational information that would help them in their academic matters, latest news, events, and some other issues they want to know. Students perceive social networking sites as one of the sources that would enrich their knowledge in various fields and be updated on current issues and at the same time be updated and connected on the lives of people that interest them. Casual interviews with the students regarding their purpose of

using SNS have responded the same answers which is to get information and to connect with friends.

According to [12] student activity on social networking cites focuses on communicating with each other. This allow the students to express themselves communicate and to collect profiles that highlight their talents and experiences. Involvement of a student in these forms of activities such as getting information, communicating with friends on social networks should be seen a way of information among their friends and the people around them.

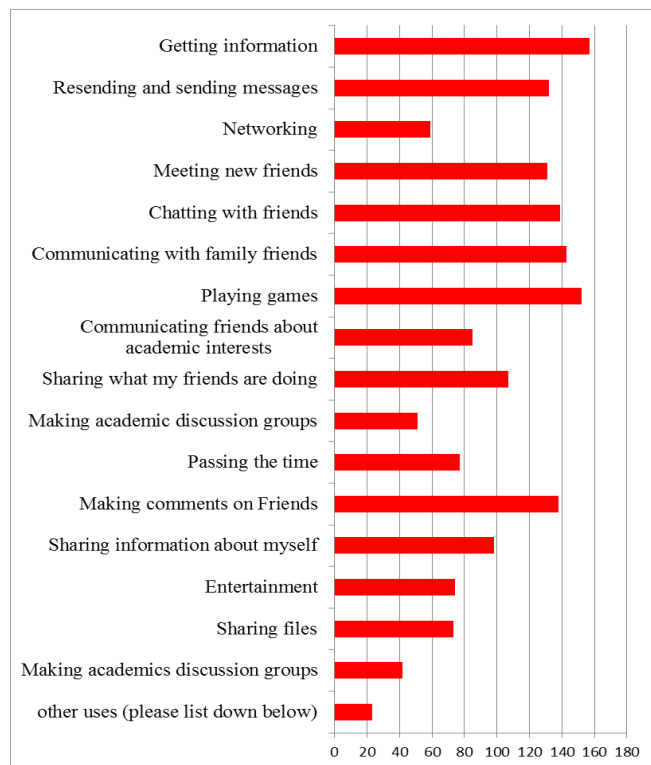


Figure 6: Bar graph showing the purposes of Using Social Networking Sites

The results of the study are in consonance with the study of [13] that when all purposes enumerated were evaluated altogether getting information having fun, contacting friends and following news on Facebook come to the force as social networking sites usage purposes. This was further supported by [14] that many students use media networks to communicate with family, and making friends even with a stranger.

It is also interesting to note that making academic discussion groups and making academic group were not among their priority when using SNS. Although some students were found to log on Facebook to communicate with their classmates in getting information that is related to their studies, but majority of them use SNS for purposes of getting information for some other reasons that are non-academic related.

7. Conclusion and Recommendation

Most of the students were subscribed to one or two SNS and majority of them were found to spend their time with SNSs from less than an hour to three hours. A greater number of students have an access to SNSs in the internet café once a day and weekly and some of them were found to access with SNS through their mobile devices or school computers.

Facebook was the most frequently visited website among the students because they believe that it offers a wide range of online application. There is more time spent for non-academic purposes compared to the time spent for academic purposes. Getting information, playing games, communicating and chatting with friends were found to be the main purpose of the students in accessing SNSs while to search for information, to have fun, enjoyable, and to communicate with friends were the gratifications obtained by the students in using SNSs.

The students perceived that the utilization of SNS did not influence their academic performance and their concentration in their study of chemistry were not affected. However, most of the students agreed that the utilization of SNS may help improve their chemistry academic performance. Furthermore, there was low or weak but positive correlation between SNSs users and academic performance of students in chemistry during the first grading. However, there a low or weak and negative relationship between variables.

7.1 Conclusion

Therefore, there was a weak association between SNSs usage and academic performance. Students who are users of SNS have no link with their academic performance. Students' utilization of Social networking sites such as Facebook have low association on academic achievement specially on grades despite how often they used them and how many SNSs they used. There was also weak association between time spent on SNSs and academic performance. Overall, SNSs usage is a weak predictor for academic performance and it is inconclusive as to whether it can influence academic performance positively or adversely.

7.2 Recommendation

Further experimental research needs to be done on the effects of SNS utilization and academic performance on a larger scale since the present studies were limited to a small sample size. Studies on SNSs usage and academic performance together with other variables such as motivation to use or attitudes of students of different level of students much be included.

There is a need for the Science supervisor to integrate SNSs in the Science program and to conduct trainings for teacher for effective Science teaching particularly in chemistry through the use of social networking sites (SNSs). Teachers should allocate time for their students to get access to their

school computers but close monitoring should be done to ensure that their purpose of using SNSs are academically related.

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