Attitude of Science Secondary School Students to Social Media Usage in Gwagwalada Area Council

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Abstract
This study examined attitude of science secondary school students to social media usage. The design used for the study was descriptive survey. The total population of the study comprised of 1,537 SSII science students in Gwagwada Area Council. The sample size comprised of 100 science secondary school students drawn from five selected co-educational schools from Gwagwalada Area Council. The research instrument was questionnaire, (SSSMUT) Science Students Social Media Usage Test of twenty-one items drawn to examine attitude of science secondary school students to social media usage. The questionnaire was validated by two experts, one from Measurement and Validation and the other from Science and Environmental Education Department, University of Abuja. The instrument reliability coefficient was 0.83 established using Cronbach's alpha. Mean and standard deviation were used to answer the research questions. Findings show that social media have great impacts on attitude of science secondary school students among others. It was therefore recommended that students should be shown those sites that will help them academically and discourage them from those sites that will waste their time and energy. They should be encouraged on what to do on the site with or without anybody's permission.

Keywords: Social media, science and attitude.

Introduction

Education system around the world is under increasing pressure due to the use of social media. Currently, there are hundreds of social media sites that can connects millions of people with diverse technological affordance. Social media has become the need of the day due to several reasons, some of which are: to connect with peers, share information, showcase social lives, announce invents, advertise and add more people to your profile. Teenagers now use the internet for the majority of their daily activities and information gathering as opposed to the older generations who used resources like television and newspaper (Lewis, 2010).

According to Date, (2012), since the introduction of social media, millions of users have integrated these media to their daily lives. Example of which are: Twitter, Yahoo Message, You tube, Facebook, WhatsApp, Skype, Xanga, Myspace, Google plus, Bedo, Friendster, and others. Thus, the use of online communication and sourcing for information by students of today era, has drastically abridged the reliance on human brain. While interest in social media practices and their impact on education is sky-rocketing, the impact of social media on students' academic lives merits critical investigation (Green & Burton, 2011).

What started out as a hobby for some computer literate people has become a social norm and way of life for people from all over the world (Boyd, 2012). Teenagers and young adults have especially embraced these sites as a way to connect with their peers, share information, reinvent their personalities, and showcase their social lives (Boyd, 2012). In the past years, social media websites have become common; giving young people a new way to interact with each other and communicate with the world. Social networking became popular between 2004 and 2006, after Facebook and MySpace were created. Facebook, for example has over 500 million members and it is still growing and approximately 85% of undergraduate students are Facebook users (Schneider, 2012).

These numbers are expected to grow since Facebook users will continue to grow. And this is not only true for Facebook, numbers for YouTube users closely follow as well. Social networking websites provide tools by which people can communicate, share information, and create new relationships. With the popularity of social networking websites on the rise, our social interaction is affected in multiple ways as we adapt to our increasingly technological world. The way web users interact and talk to each other has changed and continues to change. These users now socialize through the internet and it takes away from the person socialization that has been around forever.

Social networking websites have affected our social interaction by changing the way we interact face-to-face, how we receive information, and the dynamics of our social groups and friendships (Asur et.al, 2010). Most of the students are engaged in the use of social media for mainly socializing activities rather than academic purpose. Personal findings show that youth spend more than eight hours using some form of technology along with social media playing a large role in their daily lives. By using this social media, one can build an entire cabal of friends on his or her personal profile. Preferably, they often use social media to stay in touch with their online friends or bolster existing connections.

Constructivism theory propounded by Piaget (1969) in Lewis (2010) stated that the way children learn came to conclusion that learning is created by interactions with the environment. Piaget concluded that the best way for students to learn is to keep them curious, make them wonder and offer them problem challenges, rather than giving them information. This is exactly what social media

provides for learners to learn through challenging tasks shown on their accounts. Constructivist philosophy has a long history of application in education programs for learners learning environments (Salvin, 2014). As human develop there are qualitative changes in their ability to think logically about experiences, but the processes by which learning occur, cognitive adaptation and social mediation, are believed to be continuous or remain the same throughout the life (Lewis, 2010). At the heart of constructivist philosophy is belief that knowledge is not given but gained through real experiences that have purpose and meaning to the learner, and the exchange of perspectives about the experience with others, which gives social media as suitable usage among these class of leaners (Schneider, 2012).

Science at the secondary schools which encompasses majorly Biology, Chemistry and Physics have been seen as a key pivotal to drive the vehicle of this nation successfully to the destination of among the advanced countries. Science has said to account for life, molecular level and spacial interactions. It's a subject of universal interest in human development with regards to the utility of its knowledge in real-life situations likely to be faced by many students someday. Despite this importance of science, observation of students' performance in science at the Secondary School Certificate Examination (S.S.C.E) revealed that only a very negligible number of students perform well in the examination (Okwokor, 2014).

A number of studies have been conducted to find out impact of social media on academic achievement of science students. Sucy, (2013) found that in every class, there is at least small amount of student on their phones while the teachers are busy teaching, explaining subject in the class. It takes up their time and that only leaves them to lack behind of what it's being taught in the class. While others who use their time wisely have more understanding of what is being taught and also have time to read and work hard for the examination. Felix, (2015) discovered that the most common ways of a distraction for students was with the use of social media. It has an effect that is both harmful to the productivity of students and has been proven to decrease the student's grades academically.

Owusu-Acheaw & Larson, (2015) confirmed in their study that most students visit their social media sites using their phones and spend between thirty minutes to three hours per day. In addition, they discovered that the use of social media sites had affected academic performance of the students negatively and that there was direct relationship between the use of social media sites and academic performance. Social media have also brought about exposure of these learners to early sexual promiscuity and internet crime. Gbolahan, (2012) noted that social media give the learners assess to friends contact which exposed them to sexual with same and different sexes. It also served as avenue to share nude and sexual image. It was accounted that; social media introduced the emergence of cyber criminals commonly known as internet hacker and scammers.

Science has been described to be an abstract and difficult subject, be it Biology, Chemistry, and Physics. It's a major subject that are affected by low achievement of some students Gbolahan, (2012). This poor academic achievement of students in science has continued to be a major cause of concern to all, particularly those in science education in Nigeria. The consistent poor academic achievement of science students at Senior Secondary Schools Examination (S.S.C.E) leaves one in doubt about the course, which one of it can be their participation of social media. Salvin, (2014) found that social media had adverse effects on science student's academic performance in secondary schools and he also discovered that social media consumed most of their resourceful time during the day and night.

Empirical studies have indicated that several factors such as availability and utilization of teaching and learning resources, teaching methodology, overloaded syllabus, school environment, topic difficulty and students' involvement in their learning (distraction with social media) are some of the factors that may lead to poor academic achievement among secondary schools' students. Therefore, this study aimed at investigating the impacts of social media on academic achievement of sciences students in secondary schools.

Objectives of the Study

The objectives of the study consist of the following:

1. To determine the reason science students in secondary schools, make use of social media.
2. To identify the negative impacts of social media on academic achievement of science students in secondary schools.
3. To examine ways science students in secondary schools can utilize social media in learning science.

Research Questions

To achieve the objectives of this study, the following research questions were answered.

1. What are the reasons science students in secondary schools make use of social media?
2. What are the negative impacts of social media on academic achievement of science students in secondary schools?
3. What ways can science students in secondary schools make social media useful in learning sciences?

Methodology

A descriptive survey research design was adopted for the study. The area of the study Gwagwalada Area Council, Abuja. The entire population of science students at secondary schools in the Area Council comprised the total population of the study comprised of 1,537 SSII science students in Gwagwada Area Council Simple random sampling was used to select 100 students which made-up the sample size of the study. The instrument for the data collection was a 21 items questionnaire SSMUT developed by the researchers. The questionnaire contains items which sought demographic data from the respondents and their participation of social media. It is a four Likert scale of strongly agreed, agreed, disagreed and strongly disagreed.

The questionnaire was face validated by two experts, one from Measurement and Validation and the other from Science and Environmental Education Department, University of Abuja. Their corrections were used to establish reliability of the instrument and the coefficient of internal consistency was achieved by the used of Cronbach's alpha which gave 0.83. Mean score and standard deviation were used in answering the research questions. Any response on the four-point scale with mean score of 2.50 and above is considered to be in agreement with the item of the instrument. And any mean score of 2.49 and below was considered to be in disagreement with the item of the instrument.

Results

Research Question 1:
What are the reasons science students in secondary schools make use of social media?
Table 1: Mean scores and standard deviation of reasons for social media among sciences students in secondary schools.

S/N	Items	Mean	S.D.	Decision
1.	Social media enable me to get acquitted with friends and know what is currently trending.	2.81	.19	Agree
2.	I majorly gist with friends, check people's status and read current write-up	2.67	.13	Agree
3.	Social media help me to participate with some on-line stuff	2.98	.43	Agree
4.	I use social media to place my current pictures and new things.	3.91	.87	Agree
5.	Social media enable me to learn new things for my creative work	2.51	.51	Agree
6.	I use social media to sell my products and services	2.21	.12	Disagree
7.	I use social media to download application	2,66	.45	Agree
	Total	**2.82**		

Table 1 presents the mean and standard deviation of reasons for social media usage among sciences students in secondary schools. From the table, most of the items revealed what the students use social media for and they only disagree with one item which stated that social media are use sell my products and services. Considering the average mean from the table, this implies that science students in secondary have various reason for the use of social media.

Research Question 2:
What are the negative impacts of social media on academic achievement of science students in secondary schools?

Table 2: Mean scores and standard deviation of negative impacts of social media on academic achievement of science students in secondary schools

S/N	Items	Mean	S.D.	Decision
1.	I stay on social media more than 3 hours per day	3.50	.94	Agree
2.	I access more than 2-3 social media sites per day	3.42	.87	Agree
3.	I slept around 12 to 2am every day while I'm on social media	2.92	.86	Agree
4.	I do several things on social media aside my academic work	3.45	.76	Agree
5.	I always visit social media everyday	3.55	.97	Agree
6	I sometime do my assignments and get materials from social media.	2.89	.86	Agree
7.	I use social media to connect with other academic classes around the world.	2.42	.67	Disagree
	Total	**3.16**		

Table 2 indicates the responses of social media negative impacts on academic achievement of science students in secondary schools. The table revealed that students agreed with items on negative impacts of social media on their academic achievement. While most of them don't even use social media to connect with other academic classes around the world.

Research Question 3:
What ways can science students in secondary schools make social media useful in learning sciences?

Table 3: Mean scores and standard deviation of science students making social media useful in learning science

S/N	Items	Mean	S.D.	Decision
1.	I use social media for downloading/browsing/uploading material for my assignment and getting more information.	2.33	.17	Disagreed
2.	I connect to other classes online through social media especially on you tube.	2.25	.16	Disagreed
3.	I gain more understanding in my practical classes when go online.	2.38	.19	Disagreed
4.	Social media help me to participate in a students' discussion forum.	2.22	.15	Disagreed
5.	Social media give me the advantage to see animated fashion of most topics in sciences.	2.12	.14	Disagreed
6	I use social media to download and install software on my computer.	2.51	.21	Agreed
7.	Social media provide me the advantages of feedback and assessing different instructors.	2.11	.16	Disagreed
	Total	**2.27**		

Table 3 shows the mean responses and standard deviation of how science students make social media a veritable tool. The table revealed that science students can make social media useful if they are expose in that direction, but majority of these science students are yet to exploit social media in useful ways to their learning. They are still making use of social media as connective device to other friends.

Discussion of Findings

The result of the study revealed that science students in secondary have various reason for the use of social media. This agrees with Lewis, (2010) who resolved that teenagers use social media for majority of their daily activities as opposed the older generations who used television and newspaper. And they use social media for several things among which are: to connect with peers, share information, showcase social lives, announce invents, advertise and add more people to your profile. And Date, (2012) said since the introduction of social media, millions of users have integrated these media to their daily lives. Example of which are: Twitter, Yahoo Message, You tube, Facebook, WhatsApp, Skype, Xanga, Myspace, Google plus, Bedo, Friendster, and others.

The findings therefore, showed that there are diverse things to do with social media and there are also different media application for utilization of science students in secondary schools.

Findings from this study also showed that social media have great negative impacts on science students' academic achievement of secondary schools. This collaborates with the study of Salvin, (2014) who found that social media had adverse effects on science student's academic performance in secondary schools and he also discovered that social media consumed most of their resourceful time during the day and night. Also, Owusu-Acheaw & Larson, (2015) confirmed in their study that most students visit their social media sites using their phones and spend between thirty minutes to three hours per day. In addition, they discovered that the use of social media sites had affected academic performance of the students negatively and that there was direct relationship between the use of social media sites and academic performance. Thus, students should be taught moderation with the use of social to enable them perform at the best in any examination.

This study revealed that science students in secondary schools are yet to device avenue to make social media a veritable tool to their academic advantages. This is line with Sucy, (2013) who found that in every class, there is at least small amount of student on their phones while the teachers are busy teaching, explaining subject in the class. It takes up their time and that only leaves them to lack behind of what it's being taught in the class. Felix, (2015) also submitted that the most common ways of a distraction for students was with the use of social media. It has an effect that is both harmful to the productivity of students and has been proven to decrease the student's grades academically. Contrary to use of social media to create academic distraction, they can be used as a site to get information, share knowledge, join online classes and for their academic benefits which can turn social media into veritable tools towards betterment of their academic achievement.

Conclusion

Based on the findings of this study, the researchers concluded that science students in secondary have various reason for the use of social media. It was shown that social media have negative impacts on academic achievement of science students in secondary schools. And majority of these science students are yet to exploit social media in useful ways to their learning.

Recommendations

From the results of the study, the following recommendations were made:

1. Since students have various reasons of the use of social media, they should be encouraged to divert major part of its use towards their academic achievement and should be taught moderation of how long to stay on the site per day.
2. Students should be shown those sites that will help them academically and discourage them from those sites that will waste their time and energy. They should be encouraged on what to do on the site with or without anybody's permission.
3. Science students in secondary schools should be taught how to make social media useful in learning of science subjects.

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