

Influence Of Facebook and Instagram Social Networking Sites Usage on Computer Science Students' Academic Achievement in Tertiary Institutions in South East Zone, Nigeria

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Abstract

The purpose of the study was to ascertain the influence of Facebook and Instagram social networking sites usage on Computer Science students' academic achievement in tertiary institutions in South East Zone, Nigeria. Two research questions and two null hypotheses tested at 0.05 level of significance guided the study. Correlational research design was adopted for the study. The population of the study consists of (859) eight hundred and fifty nine of 2019/2020 academic session in the five federal universities in South East Zone while (615) six hundred and fifteen third year Computer Science students were using the social networking sites under study. The sample size of 242 respondents was selected using Taro Yamane formula among the social networking sites users and 19%, 21%, 19%, 20% and 22% of respondents were selected proportionately using simple stratified random sampling technique among the social networking sites users from five federal universities in South East Zone. Structured questionnaire and Computer Science Achievement score from the Computer Science Department of the Federal Universities in South East Zone were used for data collection. Computer Science Achievement score from the Computer Science Department of the Federal Universities were not subjected to any other validation and reliability assessment exercise because it is an official valid document domiciled in the Departments and Exams and Records of the federal universities under study. The questionnaire was validated by three lecturers and the internal consistency of the (questionnaire) instrument was determined using Cronbach Alpha coefficient method which yielded an overall reliability estimate of 0.79. Research questions were analyzed using the Pearson's Product Moment Correlation Coefficient (r) and coefficient of determination (r^2) while the hypotheses were tested at the 0.05 level of significance using Simple Linear Regression procedures. The result of the study found out that the usage of Facebook and Instagram social networking sites all recorded positive predictive influence on Computer Science students' academic achievement. It also revealed that the usage of Facebook does not significantly influence Computer Science students' academic achievement while Instagram significantly influence Computer Science students' academic achievement. It was recommended among others that Teachers can adopt new strategies by channeling assignments or discussions on social networking sites like Instagram to help inculcate the habit of using these sites for academic work. Students should be encouraged to utilize social networking sites like Instagram in a manner that will promote their academic achievement positively. They should be encouraged to create educational groups and see how to use that to enhance their academic growth and worth.

Keywords: Facebook, Instagram, Social Networking Sites, Tertiary Institution, Computer Science

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Introduction

Education reform is occurring throughout the world and one of the tenets of the change is the introduction and integration of technology in the education system (Jhurree, 2005). Technological advancement is one of the most essential factors for teenagers and young adults in many societies. Due to the enormous development of technologies, this era can also be called the Age of Technology. With the purpose of serving in the social, educational, and employment world, technology is becoming the most essential tool. Computer Science students are not left out in the use of these technologies. Graduates of Computer Science from universities are expected to have acquired the required knowledge and skills in designing and updating software systems of varying complexity, implementing and evaluating computer-based systems and processes for organizations and society. The Computer Science graduates are prepared to teach in secondary schools and post secondary schools, for self-employment or paid employment in the public or private sector. Unfortunately, these

objectives are still far from being achieved most importantly when one looks at the performances of Computer Science students in their examination.

Most of these graduates do not perform academically up to their abilities. Though some of these students usually pass out successfully from the system, the overall performance of many of them does not always reflect the level expected of them. Many of them are unemployed and a few that managed to be employed are disengaged too early by their employers because of lack of or poor quality of skills. The employers see the majority of the graduates as incompetent in the work to which they are employed. Even those that are self-employed have been observed to close down their business as a result of poor patronage occasioned by poor performance. For instance, available records from University of Nigeria, Nsukka have shown that between the 2014 and 2018 academic sessions 370 candidates that sat for computer programming exams had the following grade represented: 20% scored above 60 marks while 80% scored less than 50 marks (Omeh and Odelewe, 2021). The same problem is applicable to other federal institutions in South East Zone.

The poor achievement and incompetence of the graduates have been traced to technological developments such as social networking. While technological advancement is gradually gaining dominance in the present society, the study habits of students are also fast vanishing into thin air (Ezema and Ekere, 2009). Apuke (2016) postulated that it is a common thing these days for young people to become addicted to social networking activities; as a result, they abandon their studies and shift attentions to chatting with friends, even during lectures. Additionally, many students use their desktop computers, laptops, tablets, and smart phones to actively engage in social networking, text messaging, blogging, content sharing which appear to be quite distracting most time. Browsing the internet, playing with handsets and passing non-stop text messages seem to be the order of the day; this has made reading books and other pieces of written materials in a quiet or peaceful corner of libraries or homes appear an archaic idea for most students and adults

Social Networking sites are the most recent and popular trend today, especially among students and youths. Social networking sites which are a component of the internet's creation have become more well-known and utilized for communication among students and younger population than any other sites (Hamade, 2013). It started out as a hobby for some computer literate people but has become a social norm and way of life for people from all over the world. 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, 2007).

Social networking sites have been described as a "website that allows users to create a profile, connect that profile to that of other users and view and explore the connections between the profiles (Sei-Ching and Kyung-Sun, 2013). Singh and Gill (2011) define a social networking site as a web-based service that allows individuals to become part of a specific group and establish profiles within a closed system, manage connections with other users and share activities, ideas, interests and events. In a similar vein, Beal (2019) opined that *social networking site* is any website that enables users to create public profiles within that website and form relationships with other users of the same web site who access their profile. Social networking sites can be used to describe community-based websites, online discussions forums, chat rooms and other social spaces online. These sites allow people with common interests to create their communities online for exchanging and sharing ideas, data, information, knowledge and even wisdom through voice, text, images, videos and what not. These sites are used to build personal blogs, personal websites, discussions forums, chat rooms and other social spaces in virtual environment accessible to users for communication and exchange of information. These sites indeed have changed the nature of interaction and collaboration among individuals and organizations (Veletsianos and Kimmons, 2013).

Social networking sites are used not only for social networking and entertainment, but also for access to information (Tonta, 2009), for educational purposes (Gülbahar and Kalelioglu, 2010), for learning and for carrying out professional work (Tonta, 2009). Social networks have an important educational potential with their interaction and communication tool. Social networking can be transformed to educational networking (Eteokleous, 2012). Social networking sites enable teachers to get information about their students and better communication. These sites have relation with constructive and pedagogical approaches, and supports active and social learning, and implementation (Kele and Demirel, 2011). Online social networking can be regarded as a platform allowing teachers and students to communicate and collaborate on school subjects and projects outside the classroom. Teachers can post school related works on these online communities and students can further enrich their learning experiences by teaming up with their class mates to work on assignments and projects (Khedo, Elaheebocus, Mocktoolah and Suntoo, 2012).

The emergence of social networking software and popular networking sites has raised questions regarding its influence in the academic achievement of students. The growing use of social networking sites have significantly changed the way students learn and interact. There are numerous social networking sites such as Facebook, Twitter, Instagram Snapchat, WhatsApp and Telegram and so on (Latif, Hussain, Saeed, Qureshi and Maqsood, 2019). Facebook is most popular in the group of social network (Seaman and Tinti-Kane, 2013)

which is considered one of the best environments for teaching and learning purposes at educational institutions. (Junco, 2015)

Facebook is a social networking site that allows users to interact and collaborate within a pre-defined virtual community. Facebook is an online communication tool allowing users to construct a public or private profile in order to connect and interact with people who are part of their extended social network (Boyd and Ellison, 2007). The majority of undergraduate students at tertiary institutions use Facebook on a daily basis (Hewitt and Forte, 2006; Kirschner and Karpinski, 2010). Bosch (2009) reports that students use Facebook instinctively to support both their academic and social goals but majority of evidence suggest that students' main motive for using Facebook is for social connectivity. Despite being known primarily for social networking activity, Facebook is quickly being recognized as a respectable e-learning platform (Bosch, 2009). Compared with traditional university course sites, students are more engaged with Facebook. In addition, some studies suggest that students are receptive to the possibilities of integrating Facebook into university courses, with the potential for learning benefits associated with increased communication among students, greater access to course materials, and improved logistical management of courses (Bosch, 2009; Ophus and Abbitt, 2009).

Facebook engages students in online learning communities using technologies familiar to and accepted by their generation (Oradini and Saunders, 2008). Incorporation of this pedagogical strategy could offer new opportunities to enhance academic instruction and students' learning experiences (Ouf, Nasr and Helmy, 2010). For example, Facebook has the capacity to support course management activities, enhance the provision of information and resources to students, as well as engage and motivate students through interactivity and collaboration (Naidu, 2005). People exchange ideas and information through Facebook. They can also share their resources, materials, projects and documents with their students and staff members to build collaborative communities in higher educational institutions (Peruta and Shields, 2017). Facebook provides students with plenty of resources and materials, as well as activities based on exchanging multimedia resources, videos, animated videos, and audio materials. Thus, through Facebook, students can easily access some links to external resources or pages, with audio and visual materials and resources.

The use of Facebook as a learning environment in higher education is not without potential risks and limitations. Questions regarding content ownership, privacy, stalking and cyberbullying, and virtual integrity are often issues that require consideration (McCarthy, 2012; Willems and Bateman, 2011). In addition, concerns about Facebook as a form of distraction (Wise, Skues and Williams, 2011) and the influence it has on academic performance (Kirschner and Karpinski, 2010) have been raised. Facebook users spend less time studying and achieve lower academic results compared to Facebook non-users (Kirschner and Karpinski, 2010), whereas other authors have not found this association (Kabre and Brown, 2011). However, the limitation of these studies is that they have explored the impact of Facebook on individual academic performance, independent of its potential to provide other educational benefits to students. Incorporation of Facebook into the learning resources of tertiary courses may impact upon students' satisfaction of course delivery, as they are able to integrate academic requirements with a social networking platform that they are familiar and highly engaged with. Instagram is next social networking site in popularity after Facebook.

Instagram is another popular social networking site to be considered. Instagram is a social networking photo-sharing mobile application that allows users to take pictures, apply filters to them, and share them on the platform itself, as well as other platforms like Facebook and Twitter (Stec, 2015). Instagram is the fastest growing social networking site (Wagner, 2015) due to the rapid growth in its popularity among teenagers and young adults (Alhabash and Ma, 2017; Jackson and Luchner, 2017). Instagram is the most popular social media platform compared to other platforms such as Facebook, Twitter, and Snapchat especially among young people (Kircaburun and Griffiths, 2018). One of the main influences of Instagram is the ability to build communities of learners instantly, mediated by hashtags and followers (Reyna, 2021). This feature is a significant advantage that allows a student's work to be discovered globally and, by creating a sense of having an audience, it motivates the learning of subject content. This is particularly so if students need to develop a video or animation to share on Instagram, as reported for online video sharing by pre-service teachers (Kearney and Schuck, 2005). Other Instagram functionalities that align well with learning include the ability for students to showcase their learning and receive feedback from their lecturers and other users worldwide. Students can develop digital media skills if the Instagram activity design includes training in digital media principles to produce compelling images, animations, and videos (Reyna, Hanham and Meier, 2018).

Another way to incorporate Instagram for large classrooms is as a communication tool. The teacher can send reminder posts about critical concepts, due dates, and other important information to students (Reyna, 2021). Students can also learn to communicate effectively in the digital space, especially to summarize their ideas to fit the limited space allowed for replies to IG posts. Using IG as a formative assessment can be implemented by posting images after the class in conjunction with a question in the descriptions below them (Reyna, 2021). This approach will prompt students to discuss or provide their opinion. By doing this, the educator can gather whether students have understood the concept or require further instruction. Students will have the

opportunity to reflect on their learning and interact with their peers. The teacher can also more organically invite students to showcase concepts, questions, and reflections to the whole classroom.

Instagram, a visually or photo based social networking site got points for self-expression and self-identity, though it was associated with high levels of anxiety, depression, bullying and FOMO, or the “fear of missing out” (MacMillan, 2017). It may be more detrimental to the mental wellbeing of its users compared to text-based sites like WhatsApp and Telegram due to body dissatisfaction, eating disorder, social comparison, social acceptance and internalization of the ideal amongst its users which may explain the detrimental impact of Instagram on the user (Faelens, Hoorelbeke, Cambier, Van Put and Van de Putte, 2021). Social comparison is worse on Instagram which focuses heavily on the body and lifestyle (Wells, Horwitz and Seetharaman, 2021). The tendency to share only the best moments, a pressure to look perfect and an addictive product can send youths spiraling toward eating disorders, an unhealthy sense of their own bodies and depression.

Students rely heavily on social networking sites for their daily communication, entertainment and information needs. Students use social networking sites for various purposes including opinion sharing, information acquisition, entertainment, self-expression and social interactions, among others. Educational use of social networking sites, such as accessing course information, organizing group work, receiving feedback and interacting with instructors are indispensable.

Despite the above benefits, some parents, teachers and researchers view these platforms as distractive and harmful to students (Omini and Osuolale, 2019; Owusu-Acheaw and Larson, 2015). It could lead to negative effects like peer humiliation, cyber-bullying, depression, anxiety, isolation, exposure to offensive material, developing distorted image of self and academic fluctuations on the students (Burrow and Rainone, 2017; O’keeffe and Clake-Pearson (2011). Hence, the need to ascertain the influence of Facebook and Instagram social networking sites usage on Computer Science students’ academic achievement in tertiary institutions in South East Zone, Nigeria.

Purpose of the Study

The main purpose of the study was to investigate the Influence of Facebook and Instagram social networking sites usage on Computer Science students’ academic achievement in tertiary institutions in South East Zone, Nigeria. Specifically, the study sought to determine:-

1. the influence of Facebook on Computer Science students’ academic achievement.
2. the influence of Instagram on Computer Science students’ academic achievement.

Research Questions

The following research questions guided the study:-

1. what is the influence of Facebook on Computer Science students’ academic achievement?
2. what is the influence of Instagram on Computer Science students’ academic achievement?

Research Hypotheses

The following null hypotheses guided the study and were tested at 0.05 level of significance.

1. Facebook usage does not significantly influence Computer Science students’ academic achievement.
2. Instagram usage does not significantly influence Computer Science students’ academic achievement.

Research Methods

The study adopted correlational research design. Correlational research design, according to Price, Jhangiani and Chiang (2015) is a type of non experimental research in which the researcher measures two variables and assesses the statistical relationship (i.e., the correlation) between them with little or no effort to control extraneous variables. Correlational research design investigates relationships between variables without the researcher controlling or manipulating any of them (Bhandari, 2021). A correlation reflects the strength and/or direction of the relationship between two (or more) variables. The direction of a correlation can be either positive or negative.

The area of the study is the South-East Zone of Nigeria. It is one of the six geopolitical zones in Nigeria. South East Nigeria is made up of five Igbo speaking states namely Enugu, Anambra, Ebonyi, Abia, and Imo States, each having a Federal university and at least one State university. However, the focus of this study is on federal universities in five states of the South East Zone, Nigeria. Each of these institutions have Computer Science as an academic programme.

The population of the study consists of (859) eight hundred and fifty nine of 2019/2020 academic session in the five federal universities in South East Zone while (615) six hundred and fifteen third year Computer Science students were using the social networking sites under study. The sample size of 242 respondents was selected using Taro Yamane formula among the social networking sites users in the five federal universities namely: Michael Okpara University of Agriculture, Umudike, Nnamdi Azikiwe University, Awka,

University of Nigeria, Nsukka, Alex Ekweme Federal University, Ndufu-Alike and Federal University of Technology, Owerri; 19%, 21%, 19%, 20% and 22% of respondents were selected proportionately using simple stratified random sampling technique among the social networking sites users.

The Instruments for data collection was questionnaire and Computer Science Achievement Score (CGPA) from the Computer Science Department of the Federal Universities in South East Zone, Nigeria. This questionnaire is constructed on the basis of research questions on a four point rating scale. The Computer Science Achievement Score (CGPA) are valid official documents domiciled in the Computer Science Department and the Exams and Records of the federal universities in South East Zone, Nigeria that should not be subjected to any other validation and reliability assessment exercise. The initial drafts of the instrument were submitted to three lecturers from the Department of Science Education, Ebonyi State University, Abakaliki, Ebonyi State. These lecturers subjected the instrument to rigorous scrutiny in order to ascertain the clarity, relevance, adequacy and other attributes which a good research instrument should possess. The researcher reconstructed the instrument based on the suggestions of the experts. The questionnaire was subjected to reliability test, using Cronbach alpha method to determine the internal consistency which yielded a coefficient of 0.79. The questionnaire was administered by the researchers with the aid of two research assistants.

Research questions were answered using the Person's Product Moment correlation coefficient (r) and coefficient of determination (r^2) while the hypotheses were tested using Simple Linear Regression procedures at the 0.05 level of significance.

Results

The results of the study were presented in line with the research questions and hypotheses that guided the study.

Table 1: Correlation Matrix of Facebook and Instagram Social Networking sites influence and Computer Science Academic Achievement

		Use of Facebook	Use of Instagram	Normalized Achievement Score
Use of Facebook	Pearson Correlation	1	.059	.034
	Sig. (2-tailed)		.364	.602
	N	242	242	242
Use of Instagram	Pearson Correlation	.059	1	.130*
	Sig. (2-tailed)	.364		.043
	N	242	242	242
Normalized Achievement Score	Pearson Correlation	.034	.130*	1
	Sig. (2-tailed)	.602	.043	
	N	242	242	242

* Correlation is significant at 0.05 level (2-tailed)

The Persons Product Moment Correlation was employed to determine the linear relationship among the variables. Summary of the linear relationships are presented in table 1. The relationship between the use of social networking sites and the normalized Computer Science students' academic achievement scores were subjected to Linear Regression (R) procedure to determine the predictive strength of the use of social networking sites on Computer Science students academic achievement scores. Summary of the results are shown above.

As shown in table 1 above, Pearson's 'r' between influence of Facebook and Computer Science students' academic achievement score is 0.034 and the 'r' between the use of Instagram and Computer Science students' academic achievement is 0.130. Instagram recorded the highest values 0.130 while Facebook recorded the lowest value 0.034. Thus, the computed 'r' values indicate low but positive correlation between the use of social networking sites and the Computer Science students' academic achievement score.

The coefficient of Determination (r^2) for the computed (r) values for all isolated social networking sites are as follows:

$$\begin{aligned} \text{Facebook } r &= 0.034 & r^2 &= 0.001 \\ \text{Instagram } r &= 0.130 & r^2 &= 0.017 \end{aligned}$$

The above figures for r^2 indicate that Facebook have about 0.1% predictive influence on Computer Science students' academic achievement while Instagram have about 1.7% influence on Computer Science students' academic achievement. Detailed results and interpretations of the isolated social networking sites on the Computer Science students' academic achievements are shown below based on research questions.

Research Question 1: what is the influence of Facebook on Computer Science students' academic achievement?

Table 2: Simple Regression Analysis of the influence of Facebook on Computer Science students' academic achievement

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	.034 ^a	.001	-.003	11.14263

a. Predictors: (Constant), Use of Facebook

From the analysis in table 2, $R = 0.034$, $R^2 = 0.001$, Adjusted $R^2 = -0.003$, standard error = 11.14263. The R^2 value reveals that Facebook influences about 0.1% on Computer Science students' academic achievement. This indicates a positive but negligible predictive influence of Facebook on Computer Science students' academic achievement.

Research Question 2: what is the influence of Instagram on Computer Science students' academic achievement?

Table 3: Simple Regression analysis of the influence of Instagram on Computer Science students' academic achievement

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	.130 ^a	.017	.013	11.05409

a. Predictors: (Constant), Use of Instagram

In table 3, the result shows the linear regression R of the influence of Instagram on Computer Science students' academic achievement $R = 0.130$, $R^2 = 0.017$, Adjusted $R^2 = 0.013$, standard error = 11.05409. The R^2 value shows that Instagram have about 1.7% influence on Computer Science students' academic achievement. This indicates a positive predictive influence of Instagram on Computer Science students' academic achievement.

Testing of the Hypotheses

H₀₁: Facebook usage does not significantly influence Computer Science students' academic achievement.

Regression analysis was employed in determining the significance influence of Facebook on Computer Science students' academic achievement. Summary of the analysis is presented in 4.

Table 4: Significance influence of Facebook on Computer Science students' academic achievement

Predicted Variable	Unstandardized Coefficients		Standardized Coefficients		T	Sig.	Remark
	B	Std. Error	Beta				
(Constant)	66.361	6.633			10.005	.000	
Use of Facebook	.047	.090	.034		.522	.602	Not Significant

As shown in table 4, the calculated 't' value is 0.522 while the significance value is 0.602. Based on the result, the significance value [$p = 0.602 > 0.05$] which is greater than the 0.05 alpha level of significance, the null hypothesis is therefore upheld. It indicates that Facebook usage does not significantly influence Computer Science students' academic achievement. Hence, the associated regression equation is $Y = 66.361 + 0.47(x)$ where x represent Facebook usage.

H₀₂: Instagram usage does not significantly influence Computer Science students' academic achievement.

Table 5: Significance influence of Instagram on Computer Science students' academic achievement

Predicted Variable	Unstandardized Coefficients		Standardized Coefficients		T	Sig.	Remark
	B	Std. Error	Beta				
(Constant)	56.598	6.532			8.665	.000	
Use of Instagram	.177	.087	.130		2.034	.043	Significant

Table 5 indicated that the calculated 't' value is 2.034 while the significance value is 0.043. Since the significance value [$p = 0.043 < 0.05$] which is less than the 0.05 alpha level of significance, the null hypothesis is therefore not upheld. It shows that Instagram usage significantly influence Computer Science students' academic achievement. Hence, the associated regression equation is $Y = 56.598 + 0.177(x)$ where x represent Instagram usage.

Discussion of the Results

Influence of Facebook on Computer Science students' academic achievement.

The summary of the result presented in table 2 revealed that $R = 0.034$, $R^2 = 0.001$, Adjusted $R^2 = -0.003$, standard error = 11.14263. The R^2 value reveals that Facebook influences about 0.1% on Computer Science students' academic achievement. This indicates a positive but negligible predictive influence of Facebook on Computer Science students' academic achievement. The result shown in table 8 indicates the calculated 't' value is 0.522 while the significance value is 0.602. Based on the result, the significance value [$p = 0.602 > 0.05$] which is greater than the 0.05 alpha level of significance, the null hypothesis is therefore upheld. It indicates that Facebook usage does not significantly influence Computer Science students' academic achievement.

The study has found a positive but negligible and not significant influence between Computer Science students' Facebook usage and their academic achievement. The result of the findings in this study is in line with findings of Murad, Gul, Changezi, Naz, and Khan (2019) who also recorded that students who spend some time on Facebook for academic purposes have no effect on their education. The result is also in conformity with the findings of Mathur, Nathani, Sharma, Modi, and Arora (2019) who also recorded positive negligible and not significant impact of Facebook usage on students' involvement on studies.

The results of the findings of the present study is however not in conformity with some earlier studies like Kirschner and Karpinski (2010) who revealed that most students use Facebook while studying, which could negatively affect their academic performance due to the distraction afforded by Facebook. Moon (2011) in his study on the impact of Facebook on undergraduate academic performance, the researcher stated that the social media has negative impact on students. It shows in the result that the more students use Facebook, the more it affects their academic performance. It has been observed that Facebook users reported spending less time studying compared to non-Facebook users (Alloway, Horton, Alloway and Dawson, 2013). Higher rates of Internet usage during classroom periods are associated with lower exam scores (Ravizza, Hambrick and Fenn, 2014).

Influence of Instagram on Computer Science students' academic achievement.

In table 4, the result shows the linear regression R of the influence of Instagram on Computer Science students' academic achievement $R = 0.130$, $R^2 = 0.017$, Adjusted $R^2 = 0.013$, standard error = 11.05409. The R^2 value shows that Instagram have about 1.7% influence on Computer Science students' academic achievement. This indicates a positive predictive influence of Instagram on Computer Science students' academic achievement. Table 10 indicated that the calculated 't' value is 2.034 while the significance value is 0.043. Since the significance value [$p = 0.043 < 0.05$] which is less than the 0.05 alpha level of significance, the null hypothesis is therefore not upheld. It shows that Instagram usage significantly influences Computer Science students' academic achievement.

The study indicated a positive and significant influence between Computer Science students' Instagram usage and their academic achievement. The result is not conformity with Ahmed, Rony, Ashhab, and Ahmed (2020) that carried out a study on the impact of Instagram on academic results. The researchers revealed that there is no significant correlation between Instagram usage data and students' academic results. Supporting the correlational analysis, the comparative study also showed that high and low users' do not have significantly different CGPA. Moreover, high and low CGPA holders' Instagram usage data is also not significantly different. This reveals that Instagram does not have an impact on students' academic achievement. Alatawi (2016) also

found out that students who spent more than 4 hours per day on Instagram had a negative impact on their academic results; however, students who did not spend much time had no negative impact on their academic results. Previous studies also found that the impact of Instagram can vary depending on its usage (Danquah, Asiamah and Fordjour, 2018) and time management is the most important factor to avoid negative influence on academic results (Alatawi, 2016) Therefore, high users of the study may also have good time management skill which may cause to mitigate the negative impact on their CGPA.

Danquah, Asiamah and Fordjour (2018) observed that a unit increase in the use of Instagram will predict academic performance by 66.7%, holding all the other factors constant. This result indicates that there is sufficient evidence to suggest that the coefficient of Instagram is significant in predicting the academic performance of the tertiary students. Concluding that the use of Instagram can have both positive and negative impacts on academic performance based on its usage. Akhiar, Mydin, and Kasuma, (2017) as well as Handayani, Cahyono, and Widiati (2018) revealed that Instagram affected significantly students' achievement in positive way.

Conclusion

The usage of social networking Facebook recorded positive but negligible predictive influence on Computer Science students' academic achievement in tertiary institutions. The usage of Instagram recorded positive predictive influence on Computer Science students' academic achievement. The usage of Facebook does not significantly influence Computer Science students' academic achievement while the usage of Instagram significantly influences Computer Science students' academic achievement in tertiary institutions. However, Instagram had the stronger predictive power on the Computer Science students' academic achievement more than the usage of Facebook.

Recommendations

Based on the findings and conclusions of the study, the researcher made the following recommendations:

1. Teachers can adopt new strategies by channeling assignments or discussions on social networking sites like Instagram to help inculcate the habit of using these sites for academic work.
2. Students should be encouraged to utilize social networking sites like Instagram in a manner that will promote their academic achievement positively. They should be encouraged to create educational groups and see how to use that to enhance their academic growth and worth.
3. Seminars should be organized in the various schools to enlighten students more about the possible influence of Facebook and Instagram social networking sites usage on their academic achievement.
4. Teachers and school administrators should also inform students on the negative influence of wrong usage of Facebook and Instagram social networking sites. They should ensure that when in school and particularly during lessons, social networking sites usage should not be allowed.

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