

The Impact of Social Network Usage on University Students Academic Performance: A Case Study of Benue State University Makurdi, Nigeria.

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Abstract

Advancement in technology and the increased availability of internet enabled handheld devices have significantly increased students' access and use of the internet. The use of social media is enhanced by the availability and access to internet. In Nigeria and the world today, social media has gained acceptability and has become a tool for communication and social cohesion amongst students. The use of this assortment of social media has diverse effects on the user's life, some of which are negative and others, positive. This study is aimed at investigating the impact of Social Network Usage on University Students Academic Performance using Benue State University Makurdi, Nigeria as a case study. The study sampled 1596 students. The study focused on three key impact areas: the time spent on social media, the frequency of visiting social media and the relationship between the volume of social friends and a student's academic performance. Correlation and regression analyses were used to determine and measure the extent to which the three variables were related to students' CGPA. The study adopted a paper-based close-ended questionnaire and was restricted to undergraduate students in three majors. The study found that the time spent on social media, the frequency of visit and the total number of online friends has a statistically significant relationship with a student's academic performance. It is therefore recommended that access to social media should be restricted and controlled, and the idle time should rather be channelled into studying. This, it is believed, will improve students' performance.

Keywords –Social media, Academic performance, Student, CGPA

1. INTRODUCTION

1.1 Motivation

Social Network usage by students is so rampant recently because of easy access to devices such as smart phones, iphones, black berry, tablets, ipad and laptops which are connected to the internet [1]. Addiction to the usage of social network has extremely increased in recent times. The perils of its effects on the academic performance of the over-involved students are disturbing. Academic performance which is depicted by the grades of students [2] is a great concern to Benue State University, Makurdi. Students that spend excessive time on social networks become dependent on it and it is believed that their academic performance diminishes proportionately. It is perceived that school grades will suffer when spending too much time on social sites such as Facebook, Twitter and Myspace as valuable study time is lost [3]. These therefore necessitate the study of the effects of social network usage on university students' academic performance.

The social network overuse certainly has some negative impact that may counterbalance the potential benefits and poses grave consequences to the academic performance of its victims. Students spend quality time to comment, update, read and share posts on social networks. Jomon *et al.* [1] justifies that a statistically significant negative relationship exist between time spent by students on social networks and their academic performance.

This research seeks to investigate the adverse impacts of social network usage on the Cumulative Grade Point Average (CGPA's) of the undergraduate students, Benue State University Makurdi. Most students have Facebook, Twitter or other social networking sites, e-mails and maybe instant messaging constantly running in the background while receiving lectures, doing homework or reading in the library [4]. It is assumed that running a social networking site on the background on a student's PC while studying or doing homework could lower a student's grade. According to Enriquez [5] students who multi-task between social networking sites and homework are likely to have 20% lower grades than a student who does not have a social networking site in visual range. Napoleon [4] opined a continuing drop of grades among student users of social networking sites.

The rapid adoption of social network sites by students in the countries round the world raises some important questions on the effects of its usage on the performance of students that use these sites. Social networking websites, such as Facebook, Myspace, and Twitter, have become an integral part of U.S. college students' lives [6]. Kirschner and Karpinski [2] report that Facebook users have lower GPAs and spend fewer hours per week

studying than nonusers. However, other research has opposed that social network use has been proven to have no adverse influences on college students' academics [7]. Camilia *et al.* [8] recently looked at the effects of social networking sites usage on the studies of Nigerian students. They however failed to cover a large sample space to cover all the states of Nigeria to justify the topic and did not pay a close attention to the students CGPA's but rather paid attention to their studies.

We are therefore inspired by [2] to investigate the effects of social network usage on the CGPA's of subscribed students of the Benue State University Makurdi, Nigeria.

1.2 Paper Organization

Section 2 gives the methodology of the study. Section 3 shows our Discussion and Results. Section 4 gives the Conclusion and Recommendation.

2. METHODOLOGY

The study adopted a survey design. The sample for the study consisted of 1596 students of Benue State University, Nigeria. A simple random sampling technique was used. The study focused on eight (8) social networks used frequently by students. Four (4) of the social networks (BBM, Whatsapp, 2go, and Facebook) were selected and used for the analysis based on the frequency of usage. The study was restricted to undergraduate students of the selected University. A close-ended questionnaire was designed to address the key issues in the research. The research used a paper-based survey and was conducted with the cooperation of level coordinators/registration officers of the selected departments. This was done to ensure accuracy and to know the exact CGPA's of the respondents'. Participation was voluntary for all the students. Students from (3) majors participated: Business Management, Accounting and Computer Science. The data collected was analysed using SPSS software, version 20. The hypotheses were tested using regression and correlation analysis.

3. DISCUSSION AND RESULTS

The analyses show that the respondents were made up of 1056 (66%) males and 534 (34%) females. The distribution according to the level of study indicated the following: 100 level (5%), 200 level (22%), 300 level (27%) and 400 level made up the last 46% of the respondents.

3.1 Social Media use by respondents'

Table 1 below demonstrates the distribution of social media use among the students. Majority of them (95%) were active users of 3 or more social sites. Facebook, Twitter, 2go and BBM accounted for 84% of the respondents.

Table 1
Social Media use by respondents'

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
FB	546	34.2	34.3	34.3
Twitter	270	16.9	17.0	51.3
2go	252	15.8	15.8	67.2
BBM	264	16.5	16.6	83.8
Gtalk	162	10.2	10.2	94.0
Windows live	48	3.0	3.0	97.0
Skype	42	2.6	2.6	99.6
Whatsapp	6	.4	.4	100.0
Total	1590	99.6	100.0	
Total	1596	100.0		

3.2 Time Spent Per Day Using Social Media

In examining the amount of time spent by those using social media, 402 of the 1596 respondents indicated they spent less than one hour per day; and 258 of the 1596 respondents indicated they spent between one to two hours per day using social media. Overwhelmingly, 750 respondents representing 47% of the respondents revealed that they were always active. This is made possible by the sophisticated handheld devices that are connected to the internet 24 hours a day. Table 2 provides a summary of responses to this question.

Table 2
Time Spent Per Day Using Social Media

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 hour	402	25.2	26.0
	1-2 hours	258	16.2	42.6
	2-3 hours	78	4.9	47.7
	4-10 hours	60	3.8	51.6
	Always active	750	47.0	100.0
Total	1548	97.0	100.0	
Missing	System	48	3.0	
Total	1596	100.0		

3.3 Total number of friends on social media and CGPA

The total number of friends varied from 100- 1000 respondents. Most of the respondents (95%) had more than 100 friends each with an average of a minimum of 3 social media.

3.4 Test of Hypotheses

Hypothesis one: *There is no significant relationship between the time spent on social media and the academic performance of university students*

The study aimed at finding out if there exist a significant relationship between students' CGPA and academic performance. Correlation and multiple regression analysis were conducted to examine the relationship between the students' CGPA and the time spent on social media. A Pearson product-moment correlation coefficient was computed to assess the relationship between the time spent on social media and the students' CGPA. The analysis indicated a correlation between the variable. Time spent on Facebook [$r = -0.32$, $n = 1560$, $p = 0.000$], 2go messenger [$r = 0.44$, $n = 1560$, $p = 0.000$], Blackberry messenger [$r = -0.192$, $n = 1560$, $p = 0.000$] and Whatsapp [$r = 0.15$, $n = 1560$, $p = 0.000$]. The results indicate that the time spent on Facebook and BBM showed a negative correlation and the time spent on 2go messenger and whatsapp had a positive correlation. The analysis shows that there is a significant relation between the time (duration) a student spends using social media and the academic performance of the student.

Multiple regression analysis was used to examine the degree of the relationship between students' CGPA and various potential predictors. The table below summarizes the descriptive statistics and analysis results. As can be seen, the students CGPA score is significantly related to the time spent using social media. The multiple regression with the four predictors produced $R^2 = 0.257$, $F(4,445) = 7.873$, $p < .001$. The results have shown that the duration of time students' spend using the various social media significantly have an effect on their CGPA. Based on the results the hypothesis is therefore rejected

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.257 ^a	.066	.058	.901

a. Predictors: (Constant), Whtstime, FBtime, TGtime, BBtime

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	25.570	4	6.392	7.873	.000 ^b
	Residual	361.310	445	.812		
	Total	386.880	449			

a. Dependent Variable: CGPA

b. Predictors: (Constant), Whtstime, FBtime, TGtime, BBtime

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
(Constant)	3.411	.127		26.890	.000	3.162	3.660			
1 FBtime	-.056	.033	-.085	-1.684	.093	-.120	.009	-.019	-.080	-.077
TGtime	.155	.038	.227	4.100	.000	.081	.229	.133	.191	.188
BBtime	-.168	.038	-.251	-4.413	.000	-.243	-.093	-.090	-.205	-.202
Whttime	.098	.038	.145	2.600	.010	.024	.172	.081	.122	.119

a. Dependent Variable: CGPA

Hypothesis two: *There is no significant relationship between students' CGPA and frequency of visiting social sites*

After establishing that a relationship exists between the frequency of visiting social sites (FOV) and students CGPA, a multiple regression analysis was used to examine the degree of the relationship between students' CGPA and various potential predictors. The table below summarizes the descriptive statistics and analysis results. As shown, the students CGPA score is significantly related to the frequency of using social media. The multiple regression with the four predictors produced $R^2 = 0.202$, $F(4,319) = 3.404$, $p < .001$. The results have shown that the frequency with which students visits the various social media significantly have an effect on their academic performance. Based on the results, the hypothesis is therefore rejected.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.202 ^a	.041	.029	.856

a. Predictors: (Constant), BBFOV, FBFOV, TGFOV, WFOV

ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	9.973	4	2.493	3.405	.010 ^b
Residual	233.583	319	.732		
Total	243.556	323			

a. Dependent Variable: CGPA

b. Predictors: (Constant), BBFOV, FBFOV, TGFOV, WFOV

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
(Constant)	3.513	.138		25.377	.000	3.240	3.785			
1 FBFOV	.044	.030	.083	1.444	.150	-.016	.104	.047	.081	.079
TGFOV	-.018	.035	-.032	-.527	.599	-.086	.050	-.073	-.029	-.029
WFOV	-.133	.042	-.224	-3.176	.002	-.215	-.051	-.162	-.175	-.174
BBFOV	.059	.036	.108	1.628	.104	-.012	.130	-.013	.091	.089

a. Dependent Variable: CGPA

Hypothesis three: *The number of active friends on social media does not have any relationship with a student's academic performance.*

Finally, the study tried to establish if there is a relationship between the total number of friends in the various social media and the relationship with academic performance. The correlation analysis established that a significant relationship exist between the variables. Multiple regression analysis was used to examine the degree of the relationship between students' CGPA and various potential predictors. The table below summarizes the descriptive statistics and analysis results. The multiple regression with the four predictors produced $R^2 = 0.122$, $F(4,415) = 1.567$, $p < .001$. The results have shown that there is a relationship between the number of friends on social media and a students' academic performance, although the extent of the relation isn't very significant. The hypothesis is rejected based on the results.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.122 ^a	.015	.005	.827

a. Predictors: (Constant), BBfrnds, FBfrnds, Tgfrnds, Wfrnds

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4.292	4	1.073	1.567	.182 ^b
	Residual	284.137	415	.685		
	Total	288.429	419			

a. Dependent Variable: CGPA

b. Predictors: (Constant), BBfrnds, FBfrnds, Tgfrnds, Wfrnds

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	
(Constant)	3.377	.130		25.962	.000	3.122	3.633				
1	FBfrnds	-.016	.046	-.019	-.356	.722	-.107	.074	-.012	-.017	-.017
	Tgfrnds	.005	.064	.005	.085	.932	-.121	.132	.011	.004	.004
	Wfrnds	.134	.063	.137	2.124	.034	.010	.258	.060	.104	.104
	BBfrnds	-.127	.062	-.127	-2.036	.042	-.250	-.004	-.051	-.099	-.099

a. Dependent Variable: CGPA

4. CONCLUSION AND RECOMMENDATION

This paper showed that the time spent on social media, the frequency of visit and the total number of online friends has a statistically significant relationship with a student's academic performance. Our experiments strongly supported our conjecture and show that if access to social media is restricted and controlled, and the idle time is rather channelled into studying, this will greatly improve students' performance.

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