Facebook Usage and African American Student's Academic Performance: An Ongoing Investigation

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Abstract: *This article examines extent usage of Facebook among African American college students in a HBCU college in the United States. The research focuses on the effects of college students' Facebook usage on their academic performance. It also explores the potential of using Facebook to enhance college student's academic learning and engagement. The research findings show that the student's time spend on Facebook negatively relates to his/her time spend on study, the checking Facebook frequency negatively relates to the student's self-reported GPA, and the checking Facebook frequency and time spend on Facebook can predict student's self-reported GPA. The research contributes to the academia by investigating the rarely studied Facebook usage among African American student community. It provides higher educators with tips how to use social networking sites such as Facebook to improve student's engagement, learning and academic performance.*

Keywords: *Facebook, Social Network Site (SNS), African American College students, HBCU, academic performance*

I. Introduction

Boyd and Ellison (2008) defined social network site (SNS) as web-based services that allow individuals to construct a public or semipublic profile within a bounded system, articulate a list of other users with whom they share a connection, and view and traverse their list of connections plus those made by others within the system (p. 211). Facebook, one of the most popular SNSs in the world, attracts majority of college student's attention. As of January 2011, Facebook had over 600 million active users, 1 in 13 people on the earth had a Facebook account (Lee, 2012). Since Facebook was introduced to college campuses in 2004, it has become nearly ubiquitous at universities. For instances, in late 2010, an EDUCAUSE Center for Applied Research study of 36,950 students from 126 US universities and one Canadian university discovered that of the 90% of students who used social networking sites, 97% said they used Facebook. This 97% students performed daily activities on the site (Smith & Caruso, 2010). Students in another study reported spending an average of over 1 hour and 40 minutes a day on the Facebook (Junco, 2011).

With such large body of college students using Facebook and spending so long time on it daily, it is clear that social networking sites such as Facebook affect the college students' daily life intensively including their academic performance. If college students spend too much time on the site for socializing such as viewing friends' profiles, posted pictures, posted videos, or playing games, they will not have enough time to be used on their studies. How SNS such as Facebook affects college student's life was a popular research topic, and is still continuously attract educators and researchers' attention.

Previous research on SNS heavily focused on identity presentation, online friendship behaviors, privacy issues and effects of personality traits on Facebook usage worldwide (Lee, 2012). Nevertheless, very little research has been done on examining the SNS usage among minority population such as African American, especially, the African American college students. The present study aims to explore the effects of social media usage i.e. Facebook usage on African American college students' academic performance.

II. Literature Review

Facebook and College Students' Academic Performance

Previously, many studies have investigated the relationship between college students' social networking site activities and their academic performance. The research results vary: for example, Pasek et al. (2009) examined the relationship between Facebook use and academic performance, and found there was no relationship between Facebook use and students' grades; Kolek and Saunders (2008) found that there were no differences in overall grade point average (GPA) between users and non-users of Facebook; Kirschner and Karpinski (2010) discovered that Facebook users reported a lower mean GPA than non-users; meanwhile, Facebook users reported fewer studying hours per week than non-users. Another recent study by Junco (2012) examined the relationship among multiple measures of frequency of Facebook use, participation in Facebook activities and time spent preparing for class and actual overall GPA, and found that time spent on Facebook was

strongly and significantly negatively related to overall GPA and only weakly related to time spent preparing for class.

While almost all of the research on digital inequalities focuses on the Internet and communication technologies, Hargittai (2008) conducted the only published study of gender, ethnic and socioeconomic differences between users and non-users of social networking sites. Her study found that Latino students were less likely to use Facebook than their Caucasian counterparts. Lee's (2015) study investigated the potential effect of smartphone and Facebook addiction on colleges students' GPA in a HBCU college and found that the number of hours of studying outside the classroom significantly affect students' GPA, checking Facebook on their smartphones doesn't negatively affect their GPA.

Facebook and African American College Students

Byrne (2007) was one of the first studies of a Black SNS—BlackPLanet and examined the relationship between public discourse about community issues and civic participation. She reported the most popular online forums on BlackPlanet were about relationships (55%), heritage and identity (9%), religion and spirituality (6.6%), current events (4.2%), and women (3%). However, none of these discussions was about the college studies. Grasmuck et al. (2009) pointed out that Facebook is a potentially rich site for enhancing understanding of racial identity and display and little is known about African American online users. In their study, they examined the African American students' projected identity using visual cues about race through photographs and found African American students' Facebook profile projected a visual self was dramatically more social then non-African American students'. Martinez-Aleman and Wartman (2009) suggested that African American and Hispanic students more concerned with how they would be read by others on Facebook.

Scholastic success is an important gateway to occupational choices, yet non-White students from urban high schools have the largest drop-out rates for students in the United States (Chapman et al., 2010). It has the similar high drop-out rates for under-resourced Historically Black College and University (HBCU) colleges, which is a set of underrepresented socioeconomic university, in the United States. As we know, positive social relationships can aid in one's confidence to perform well in school. Baker (1998) found that a nurturing and safe school social climate significantly affected school satisfaction and academic success among urban, low-income African American students. The Facebook can provide rich social environment virtually for people including college students.

However, as Grasmuck et al. (2009) pointed out very little research has been done so far on the African American college students' usage of SNS such as Facebook, particularly the effect of the Facebook usage on their academic performance, as reviewed above. The following research questions were formulated for the present study:

1. Is there a relationship between time spend on Facebook and the time spend on study? Is so, how do they relate?
2. Is there a relationship among time spend on Facebook, Facebook checking frequency and their self-reported GPA? If so, how do they relate?

III. Research Method

Sample Selection

A total of 63 African American students at one of the Historically Black College and University (HBCU) in a Southern Urban city in the United States participated in this study by taking the survey operated by the author. Those students were from two sections of an entry level technology introduction course. Participants were rewarded with extra credits. Among 63 student data sets, 62 completed demographic information, and 53 data set are useable for data analysis because those who reported they never used SNS were exclude from the data analysis. SPSS was used for data analysis

As shown in tables 1-6, the sample consisted of 47% male and 53% female students; 88% of participates are African American; 80% of them are younger than 25 years of age with the age range from younger than 20 to older than 60; 84% of the self-reported GPA are higher than 2.5; 7 students (i.e. 11%) reported they never checked SNS, and 8 students said they never spent time on SNS.

***Table 1** Gender*

Gender	# of students	%
Male	29	46.77
Female	33	53.23

***Table 2** Ethnicity*

Ethnicity	# of students	%
Caucasian	3	4
African American	55	88
Asian	1	2
Hispanic	1	2

Other	2	3

Table 3 *Age*

Age:	# of students	%
=< 20	34	56.67
21-25	14	23.33
26-30	5	8.3
31-35	3	5
36-40	1	1.7
56-60	2	3.3
>60	1	1.7

Table 4 Self-Reported GPA

Self-reported GPA	# of students	%
0-1.99	3	4.8
2-2.49	7	11.3
2.5-2.99	24	38.7
3-3.49	21	33.9
3.5-4	7	11.3

Table 5 *Frequency to Check SNS*

Frequency to check SNS	# of students	%
Never	7	11.1
1-3 times	15	23.8
4-6 times	12	19
7-9 times	7	11.1
>=10 times	22	35

Table 6 *Time Spend on SNS*

Time spend on SNS	# of students	%
None	8	12.7
0-29 mins.	22	35
30-59 mins.	12	19
1-2.9 hrs.	10	15.9
>= 3 hrs.	11	17.4

Results

The primary purpose of the present study was to explore the effect of Facebook usage on African American college students' academic performance. Findings from the survey are presented by answering the major research questions.

Research question 1: Is there a relationship between time spend on Facebook and the time spend on study? Is so, how do they relate?

Out of 63 total participants, 87% of students spent some time on Facebook daily. 54% of them spent one hour or less, 16% of them spent between 1 to 3 hours, and about 17% spent longer than 3 hours every day (see Table 6). There is a relationship between time spend on Facebook and the time spend on study. As shown in tables 7, time spend on Facebook is negatively relate to the time spend on study significantly (r= -.298, $p<.05$). This result is consistent with other studies conducted in non-HBCU universities e.g., Junco's (2012) study. Author also conducted a linear regression to see relationship between time spend on Facebook and the time spend on study. The linear regressionresults showed that time spend on Facebook significantly predict time spend on study ($F_{(2, 52)}$=4.965, $p<.05$, adjusted R^2=.071). Therefore, the time spend on Facebook significantly affects students' time spend on study. In other words, if the student spends too much time on Facebook, he/she will have less time for his/her study.

Table 7 *Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.911	.291		9.993	.000
	TimeSpe	-.213	.096	-.298	-2.228	.030

a Dependent Variable: HrsOnStudy

Table 8 *ANOVA*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.863	1	3.863	4.965	.030(a)
	Residual	39.684	51	.778		
	Total	43.547	52			

a Predictors: (Constant), TimeSpe
b Dependent Variable: HrsOnStudy

Table 9 *Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.298(a)	.089	.071	.88211

a Predictors: (Constant), TimeSpe

Research question 2: Is there a relationship among time spend on Facebook, Facebook checking frequency and their self-reported GPA? If so, how do they relate?

About 24% of participants check the Facebook account between 1 to 3 times daily, 19% of them check their Facebook account 4-6 times per day, 11% do it 7-9 times, and 35% of them reported more than 10 times a day (see table 5). There is a relationship among time spend on Facebook, Facebook checking frequency and their self-reported GPA. As shown in table 10,the checking Facebook frequency negatively relate to self-reported GPA significantly (r= -.586, p<.01); and time spend on Facebook positively relates to the self-reported GPA significantly (r=.475, p<.05). Author also conducted a multiple linear regression to see relationship among time spend on Facebook, Facebook checking frequency, and the self-reported GPA. The multiple linear regression results show that time spend on Facebook and Facebook checking frequency significantly predict student's GPA ($F_{(2, 52)}$=3.685, p<.05, adjusted R^2=.094).

Table 10 *Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.741	.312		11.985	.000
	Frequency	-.381	.140	-.586	-2.714	.009
	TimeSpe	.346	.157	.475	2.197	.033

a Dependent Variable: GPA

Table 11 *ANOVA*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.808	2	2.904	3.685	.032(a)
	Residual	39.399	50	.788		
	Total	45.208	52			

a Predictors: (Constant), TimeSpe, Frequency
b Dependent Variable: GPA

Table 12 *Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.358(a)	.128	.094	.88769

a Predictors: (Constant), TimeSpe, Frequency

IV. Discussion

The data analysis shows African American college students are active Facebook users. The findings correspond to the results of previous research regarding the relationship between time spend on Facebook and time spend on study (e.g., Junco, 2012). Everyone has 24 hours a day, if you spend much time on one activity, you will have less time for other activities. Since college students' primary goal is study, author will suggest students spend less time on Facebook or using the Facebook time for their educational purpose such as communicating with classmates and professors regarding the academic topics.

The frequency of checking Facebook negatively relates to student's self-reported GPA, which indicates if students focus on Facebook activities, they will not concentrate on their study enough, and then will negatively affect their academic performance i.e. GPA. Surprisingly, time spend on Facebook positively relate to students' self-reported GPA. The possible reason is when students spend time on Facebook, they probably do things relate to their study such as group discussion on the class projects. Author needs to investigate students' activities on the Facebook to determine the accurate reasons in the future study.

Contributions

This study contributes to the scholar field by investigating the rarely researched community on Facebook i.e., African American college student body. The research results suggest that time spend on Facebook can negatively affect students' study time; however, if we use it correctly, Facebook can improve college students' academic performance instead, for example, if the higher educators encourage their students formulate

a warm and nurturing study environment on virtual SNS platform such as Facebook, it could help students' engagement and learning.

Limitations

The study has a relatively small sample size, which can affect the data analysis results. Author plans to collect more data on this topic in the future, which may provide detailed insights on the investigated topics. Another limitation is that the GPA collected is based on students' self-report. Sometimes, students don't remember their accurate GPA, in other words, it could have discrepancy between students' self-reported GPA and their actual GPA. Author plans collect students' actual GPA in the next round study in the future. Furthermore, author didn't investigate the detailed Facebook activities when students were on Facebook. Identifying students' Facebook activities is on author's research agenda in the future.

V.   Conclusion

This study tries to explore how social networking sites such as Facebook affect African American college students' academic performance in HBCU colleges. The paper explores the rarely studied HBCU college students' academic performance and the Facebook usage. The findings of the study are interesting andprovide higher educators in HBCU colleges with tips of using social media such as Facebook effectively to improve students' engagement, persistence and learning.

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