
Use of Facebook in Higher Education: A Promoter or Distractor

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Academic literature suggests that increased academic engagement results in academic success for students. However, available literature does not provide a clear explanation of the concept of student engagement itself. The student engagement has two broad dimensions: academic and social. Recently, the increased proliferation of social media and digital technologies has persuaded academics to use these technologies in a bid to increase student engagement. This study analyzed the use of Facebook (FB) in higher education and majority of students used FB but this use was predominantly social that was affected by the personality factors of individual student. The use of FB in higher education appears a medium that distract rather than engage the students.

Keywords: Facebook, Social Media, Higher Education, Students, Student Engagement.

INTRODUCTION

Student engagement is a significant predictor of academic performance (Chickering & Gamson, 1999; Pascarella & Treznini, 2005; Krause & Coates, 2008; Reyes et al., 2012) and enabler of good undergraduate learning. (Chickering & Gamson, 1987, 1999; Reyes et al., 2012) There exist various measures of student engagement that focus on academic parameters interaction of students with peers faculty and social support (Coates, 2008; National Survey of Student Engagement (NSSE, 2005; McClenney et al., 2012; Henrie et al., 2015; Pike, Kuh & McKinley, 2008; Zhao & Kuh, 2004).

Increasing number of students in the tertiary education has created a diverse student body around the globe (Dobson, 2010). Similarly, many significant shifts are taking place. The funding available for students clubs & societies is decreasing (NUS, 2011; Nichols et al., 2014) more and more students are engaging in work while studying (Polidano & Zakirova, 2011; Quaye & Harper, 2014) and universities facing, increasing pressures to look for new avenues of students engagement with academia (Coates, 2006; Coates & Ransome, 2011; Pike, Kuh & McCormik, 2011; Quaye & Harper, 2014). Most of the present generation of university students has been brought up in an environment where they had access to modern information & communication technologies including Internet. Currently, many universities around the globe are delivering their services online. There is an increasing interest in student engagement via new forms of digital communication media. Online social

media is one form of such communication media. Until recently, the trends of use of social media in academic settings vary significantly across different parts of the world. Many metrics developed to measure student engagement relates to student experience and not to the student learning. In the context of developing world, the existing literature lacks as to how the academic learning is associated with increased social interaction of students and what is the possible role of such social interaction of students in academia. Recently, the use of university-based student portals and online learning management systems has started to take center stage in university course delivery. As such universities must enhance their understanding of the impact of various web-based learning practices including on social media student engagement. (Coates, 2007, Mazer, Murphy, & Simonds, 2007).

The intuitive and appealing concept of engagement is yet a difficult one that lack clarity in its definition. There exist various methods of assessing engagement such as AUSSE (Hagel et al., 2012) and National Survey of Student Engagement (NSSE) (NSSE, n.d.) Both are common survey instruments that include items regarding different aspects of the university and its services. Such items focus on specific tools or processes and not the functions of the institution & its structure. Such focus leads to the confusion as to whether engagement should be regarded as an attribute of student, the university, or the interaction between student & the university.

Earlier, the concept of student engagement was conceived as student engagement with academics that could be increased by enhancing university course offerings to reduce student attrition rate. Little emphasis was placed on academic discipline itself. Recent academic view of engagement recognize two broad meaning of engagement: academic engagement and social engagement. Academic engagement refers to student's willing participation in university learning activities and perform as per instruction provided. The social engagement refers to the social attachment of the student with university and academics. Student

engagement can be considered to have many aspects. Students learning is through a cognitive process. The outcomes of this learning process are supported by appropriate learning behaviors. The learning process and learning behaviors are mediated through affective academic experience. Here the affective experience means desire & motivation to learn. This effective experience can be a result of a positive desire or fear. However, this desire or fear is not enough for good academic learning. To achieve desired learning outcomes, and university must focus on developing students' cognitive skills.

According to Fredrick, Blumenfeld and Paris (2004), instructional designs that take into account the development of the appropriate behaviors required for cognitive engagement can generate the cognitive and behavioral activities essential for learning. The existing literature is predominantly focused on student outcomes with little attention towards student engagement, which is crucial for desired student outcomes. In developing countries perspective, more evidence is required to establish whether increased student engagement is associated with academic success of the student. It can be argued that promoting student engagement through social media may not provide the development of cognitive engagement required for student learning. Still little evidence is available that shows increasing student metrics of engagement can help increase students' success. It is therefore can be argued that increased social engagement through social media, may not improve the student's cognitive engagement required for learning (Amichai-Hamburger & Vinitzky, 2010; Mehdizadeh, 2010; Wilson, Fornasier, & White, 2010, HU, 2011).

Use of social media is rapidly increasing especially with the increased availability of portable computing devices. It is this proliferation of the use of social media that has attracted universities attention for its use in higher education to promote student engagement. Social networking sites, with a large member population that is digitally proficient,

have been regarded as effective tools that can help promote student engagement.

This study focuses on FB because it is the dominant social networking site that had an active user base of more than 1.23 billion by the end of 2013 (Sedghi, 2014). According to Ryan and Xenos (2011), typical FB user spends upto 2 hours per day on FB. Each FB user creates a profile in which he/she provides a range of personal information, work and education history, interests, and other details. Users on also send friend requests to other members, join interest groups and networks, send messages to other users, and write on their walls. The use of FB has attracted significant attention of the researchers. There exist many studies that examine FB and its use (Cheung, Chui & Lee, 2010; Ryan and Xenos, 2011; Junco, 2012; Nadkarni & Hofmann, 2012; Kross et al., 2013), user motivation for using FB (Ross et al., 2009; Lau & Lam, 2012; Deng & Tavares, 2013), and psychological factors that affect use of FB (Carpenter, Green & LaFlamm, 2011; Ryan & Xenos, 2011; Zhong, Hardin & Sun 2011; Nadkarni & Hofmann, 2012; Hong & Chiu, 2014).

RESEARCH METHODOLOGY AND MEASURES

The participants of this research were students from a large public university in Karachi. All 324 participating students had FB accounts. In our

study sample, 175 were male and rest was female. This average age of participants was 19.85 years.

This study used multiple researches instruments. Australian personal Inventory (API) and Facebook Questionnaire developed by Ross et al. (2009) were used. The 28-items of Facebook questionnaire measured basic FB use, attitudes towards FB, and information relating to personal information posted on FB. Each item was measured on a five-point likert-scale. The API was developed by Murray et al., (2009) that measures big five personality traits including neuroticism, extraversion, openness, and conscientiousness. The API consisted of 50 items and each item was measured on a five-point Likert-scale where 1 represented 'very inaccurate' and 5 represented 'very accurate'. Another questionnaire was developed to measure student's academic performance in order examine whether differences exist in the academic performance of student FB users and nonusers. Questionnaires were distributed in hard copy format. Data was examined using SPSS V22 software.

RESULTS AND DISCUSSIONS

The basic descriptive statistics regarding the FB usage of the participants is shown in Table 1. The time spent using FB was measured in minutes.

Table 1: Descriptive Statistics of Students Facebook Usage					
	Time spent using Facebook	Number of Facebook logins per day	Number of Facebook friends	Number of Facebook Groups	Number of photos posted
Overall N = 324	Mean = 67.56 SD = 63.45	Mean = 5.21 SD = 6.12	Mean = 351.6 SD = 230.21	Mean = 65.91 SD = 210.42	Mean = 282.92 SD = 369.21

Table 2 show preferred functions/ applications of FB used by the students.

Table 2: Preferred Functions / Applications used by Students	
Function	Percentage
Wall	36%
Massages	18%
Photos	17 %
Events	15%

Table 3: Students Reasons for Facebook Likings	
Response	Percentage
It is how I communicate with my friends	57%
It allows me to communicate with people from my past	18%
It provides me with information	5%

Table 4: Descriptive Statistics of Students Personality Traits						
	Conscientiousness		Neuroticism		Extroversions	
	Low Mean (SD)	High Mean (SD)	Low Mean (SD)	High Mean (SD)	Low Mean (SD)	High Mean (SD)
Time spent per day using Facebook	81.92 (77.9)	55.21 (49.11)	60.13 (58.21)	82.21 (80.88)	68.12 (65.67)	73.12 (75.11)
Number of Facebook friends	392.82 (260.58)	283.24 (182.11)	365.33 (238.42)	364.63 (242.07)	280.13 (243.01)	443.12 (228.13)
Number of Facebook groups	106.12 (247.11)	37.43 (80.21)	25.21 (58.16)	112.56 (332.04)	43.13 (84.21)	119.56 (356.21)
Number of photos posted	295.11 (328.24)	238.76 (385.17)	301.65 (423.05)	260.13 (274.12)	162.01 (215.11)	384.98 (363.12)

From the information presented in Table 1, 2, and 3, it appears that the most preferred application of FB is the Wall (36%), followed by messages (18%), photos (17%) and events (15 %). When students were asked, why do they like FB, the most common response was “It is how I communicate with my friends (57 %), followed by “It allows me to communicate with people from my past” (18%). The least preferred reason for liking FB was “It provides me with information”. Only 5% of respondents thought that FB provides them with information.

Table 4 shows the participants' responses on big-five personality traits. The table reveals significant differences in FB use among students having different personality traits.

Looking at Table 4, we can see that students high on neuroticism spent more time using FB, participated in more FB groups and posted more photos as compared with the students low on neuroticism. Students high on extroversion spent more time using FB, had more FB friends, participated in more FB

groups and posted more photos as compared with the students low on extroversion. Students high on conscientiousness spent less time using FB, had less FB friends, participated in less FB groups and posted less photos as compared with the students low on conscientiousness.

The relationship between variables of academic performance and FB users and nonusers was examined through Multiple Analysis of Variance (MANOVA). First, missing data and outliers were examined and assumptions of MANOVA were checked. GPA and hours spent studying per week were defined using a five-point Likert scale. To check the independence assumption of MANOVA a residual vs. group plot was developed for each independent variable (i.e. FB use, student status, and student major). The histogram for each dependent variable and independent variable did not show normal distribution but it was expected given that ordinal data was used (Bartlett & Wasley, 2008). GPA showed negative skewness while study hours showed positive skewness. This non-normal

distribution of dependent variables means that the results should be interpreted with caution. The MANOVA assumption of homogeneity of covariance was not met because the significance value of Box's test was less than 0.05. Levene's test was used to check the same assumption for univariate. Test results show that the same assumption for univariate was not met for GPA ($p < 0.01$) but upheld as shown by the results of ($p = 0.21$). The three-factor MANOVA was performed on dependent variables (GPA, and study hours), and independent variables (FB use, student status, and student major). FB use had two categories: yes and no. Student status had two categories: undergraduate and graduate. Student major had three categories: business, engineering, other. The results of Shapiro-Wilk Test showed that multivariate main effect was statistically significant FB use and student status.

FB Use Wilks lambda = .862, $F = 32.234$, $p < .001$
Student Status Wilks lambda = .943, $F = 8.254$, $p = .001$

A univariate ANOVAs was performed on dependent variables and independent variables. Study hours ($F = 57.329$, $p < .001$) and GPA ($F = 13.307$, $p = .001$) were found significant for FB use. Only GPA ($F = 15.812$, $p < .001$) was significant for student status. The ANOVA for student status indicated significant differences on GPA between undergraduate and graduate students. The reported mean of GPA of graduate student was in 3.25-4.0 range while reported mean of GPA of graduate student was in 2.15- 3.0 range. No significant two- and three-way interactions were present in the MANOVA and ANOVA analysis. It can be said that, at univariate level, relationship between student's FB use, study hours, and GPA is independent of student status and student major.

The main reason for respondent's use of FB appears to be social interaction. Use of FB to get information is very uncommon. This finding needs cautious interpretation through. The research scales used in this study contained very few items regarding

student's use of FB for information seeking. It is possible that respondents may not have considered this aspect of FB use in depth. It appears that different personality traits influence pattern of FB use by students. Students high on conscientiousness use FB less as compared with students low on conscientiousness. This suggests that students high on conscientiousness are less likely distracted by FB use in their studies. This finding supports the notion that FB is more suited for social interaction rather than academic interaction. Students high on neuroticism used FB more and were members of more FB networks. Though they had similar number of FB friends as compared with students low on neuroticism, they posted less photos and used block lists more often. In line with the finding of Postman (2005), FB appears to be a medium that helps knowing social and personal lives of friends without active engagement with friends. FB does not provide social engagement with the external world. It appears that FB interface does not provide active social engagement with people. Rather engagement through FB is an indirect social engagement with the external world. Therefore, use of FB to promote engagement among students who are below average may act as a distractor rather than a promoter of academic engagement. Student high on extraversion had more friends, were member of more FB groups, shared more photos, and checked their FB wall more often. It can be seen that FB allows these students to show their extrovert personality.

It can be inferred that FB use reflects personality. FB is a medium that students can use for showing their personality and engaging socially with others in way they prefer. However, FB use does not promote any specific social behavior that could act as a catalyst to enhance academic engagement. In fact, FB may become a distractor for less conscientious students and degrade their academic performance. This finding is in line with Madge, Meek, Wellens and Hooley (2009) that suggest the most common use of FB by students is to setup timings for face-to-face meetings for academic arrangements. In other

words, FB is used to facilitate social engagement around academic engagement that would take place in future. This study also found that students feeling bored or looking for opportunities of some mental rest used FB more often because they considered FB as an easy option to handle such situations of stress or dullness (Zohonet, Al, 2011). Students with less need of cognition use social media more. If this pattern becomes typical, FB can act as a preferred form of distractor. As such, FB would be least effective to promote academic engagement. The current design of FB promotes social interaction and entertainment. FB does not provide any tools that could provide study-relevant form of interaction. Familiarity with FB may help students engage socially within an unfamiliar academic environment. However, its use can be regarded as a source of disengagement rather than solution of disengagement.

This study found that academic performance of student FB users and non-users was significantly different. Student FB users reported a lower mean GPA and spent few hours per week studying on average than student non-users ($M = 3.16$, $SE = .09$; $M = 3.92$, $SE = .06$, respectively). It is interesting to note that both users and non-users spent time on Internet that didn't differ significantly between the two groups. It appears that the users and non-users have very different study strategies. The study also found significant differences between GPA of undergraduate and graduate students with graduate students reporting a higher mean GPA than undergraduates. This study did not find any significant two-way or three way interactions. This suggests that univariate relationship between FB use and GPA and hours spent studying is the same irrespective of student's status or the major. It can be inferred that student personality is a significant predictor of student's inclination to use FB. It appears that student users of FB more actively involved in extracurricular activities and there is an increased probability that these students would use FB to extend their existing social network. The study

also found that non-users of FB reported more working hours. This suggests that probably these students consume too much time in their work and academic lives that they either don't have enough time to engage with other people on FB or may be its not their priority.

CONCLUSION

This study considered the role of social media in increasing academic engagement of students. During initial years of study programs, universities need a common and moderate level of social and academic engagement to facilitate students continue their study. Different types of students may need different types of engagement. Facebook, as a medium of social interaction, has a limited role in engaging students to academics. Academicians planning to use Facebook to promote academic engagement should therefore be cautious and plan accordingly.

LIMITATION AND FUTURE RESEARCH AREAS

Limitations of current study include a relatively small sample of students limited to one country. The results may not be generalizable to students at other universities or other countries. Future research may investigate the role of social media in increasing academic engagement of students in cross-cultural settings and heterogeneous samples of students with different age groups and settings.

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