

**Pattern of Facebook usage and its Impact on
Academic Performance of University Students:
A Gender Based Comparison**

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Abstract

This paper explores the popularity and usage pattern of the Facebook among the University students. A self-administered questionnaire is used for collecting data from a sample of 384 students. The study reveals that 87.5% of the students have account on the Facebook and no gender differences found. Male and female on the average spend equal time on internet. Though female users spend more time on Facebook than their counterparts but male users have more Facebook friends. Facebook use, in general, adversely affecting the academic performance of students but this adverse effect is observed greater for male students. The social interaction with the existing friends is found the most common use of the Facebook among students.

Keywords: *Facebook; Academic performance; Social networking.*

Introduction

Among the vast variety of online tools which are available for communication, social networking sites have become the most modern and attractive tools for connecting people throughout the world (Aghazamani, 2010). The first social networking site was created in 1997 in the name of Sixdegree.com, and now there are hundreds of social networking sites across the world (Boyd & Ellison, 2007). One of the largest social networking sites like Facebook have become so popular, especially among students that it reflected many other traditional features of society. Facebook users share ideas and pictures with friends and family members. Facebook is also to keep in touch with previous high school classmates and work mates. It creates new relationships and friendships or simply a way to unwind with one of the many Facebook applications that include games and quizzes.

Facebook was launched as a social networking site on 24 February 2004 by Harvard students Mark Zuckerberg, Dustin Moskovitz and Chris Hughes. Users of the Facebook can create a personal profile, add other users as friends to send and receive messages that include automatic notifications when they update their profile. Users may also join common interest groups which are organized by workplace, school, and other characteristics. The name of the Facebook stems from the spoken name for the book given to students at the start of the academic year by university administrations in the US with the purpose of helping students to get to know each other better.

Facebook has become so popular especially among students that without Facebook, student life is almost unthinkable (Debatin *et al.*, 2009). Facebook is used at over 2,000 United States colleges and was ranked as the seventh most popular site on the World Wide Web with respect to total page views (Ellison *et al.*, 2007). According to Facebook statistics collected in 2011, people spend over 700 billion minutes per month on Facebook, and over 50 percent of members log in daily. All over the world Facebook offers its services in more than 75 languages. As of December 2011, Facebook has more than 850 million active users including us.

This is the first study of its kind in Pakistan focusing on the purpose of the Facebook usage and its possible impact on the students' academic performance. Following are the objectives we will mainly look at:

- To determine the pattern of use of the Facebook among students.
- To see if there is any gender differences in the Facebook use.

- To assess the frequency of Facebook use among students.
- To assess, in students' opinion, if use of the Facebook has affected their academic performance.

Review of Literature

Pempek *et al.*, (2009) found that students spend approximately 30 minutes on Facebook throughout the day as part of their daily routine. Facebook was used most often for social communication, mostly with friends with whom the students had a pre-established offline relationship. They discussed suggestions through the use of social networking sites for the development of identity and peer relationships.

Aghazamani (2010) studied the students' motivations for Facebook usage. A close ended questionnaire was directed to 595 University students who were recognized as users of the site at Karlstad University in Sweden. Their results suggest that male spend more time on Facebook than females. The appraisal showed that undergraduate students login their Facebook account more times per day than graduate students. Friendship was named the most favorite activity among male undergraduate students.

In the study of Kirschner and Karpinski (2010), they found a significant negative relationship between Facebook use and academic performance. Facebook users reported lower mean GPAs and reported spending fewer hours per week studying on average than Facebook nonusers. A majority of students claimed to use Facebook accounts at least once day. Similar results are also reported in Vanden Boogart (2006), Canales *et al.*, (2009) and Junco (2012).

Junco (2011) studied the relationship between Facebook usage and student engagement, a construct related to positive college outcomes. Facebook was found negatively correlated with engagement scale score and positively correlated with time spent in co-curricular activities.

Junco (2012) examined the relationship among numerous measures of frequency of facebook use with time spent preparing for class and overall GPAs. Hierarchical linear regression analysis showed that time spent on facebook was strongly and significantly negatively correlated with overall GPA.

Roblyer *et al.*, (2010) reported that Facebook have the potential to become an appreciated source to support students' educational communications and associations with faculty. A comparison between faculty and student responses indicates' that

Students are more open to the possibility of using Facebook and similar technologies to support classroom work while Faculty members are more likely to use more traditional technologies such as email.

Hargittai (2008) studied a sample of 1,060 students and found that overall 88% students use social network site, 74% report using at least one social network site frequently and only one student have not heard any of the six social network sites included on the survey. Over 12% respondents do not use any of them. Facebook is the most popular service among these students, with almost four in five using it, and over half of the overall sample doing so repeatedly.

Lenhart and Madden (2007) found that youngsters use social networks for the creation and the maintenance of friendships. 7% of the teens were using the Facebook. 22% use social network sites several times a day, 26% once a day. 49% use social network sites to make new friends, 91% using to stay in touch with existing friends. Youngsters from middle and lower income families were more likely to say that they use the sites to make new friends than higher income teens.

Khan (2009) found that 65 percent of Facebook users accessed their account daily in several times to see if they had received new messages. The amount of time spent varied from just a few minutes to more than an hour on Facebook at each login. The Ohio report shows significant lower GPAs among students who use Facebook than those who didn't use the site. 79 percent students using Facebook believed that the time spent on site had no impact on their academic performance. According to the study, teens spend an average of 31 hours a week online.

Ellison *et al.*, (2007) conducted research to examine the relationship between use of Facebook, and the establishment and maintenance of social capital and one's ability to stay linked with members of a previously settled community.

Material and Methods

In this study we have focused on the usage of Facebook and its impact on the students' academic performance. Chi-square test is used to test the association of gender with various categorical variables in the study. Independent samples t-test is used to test the equality of means.

Results

A random sample of (n=384, Male=192, Female=192) students was selected from the University of the Punjab, Lahore. The age of students ranged from 18 to 30 with mean age of 21 years. Majority of the students (71.4%) were 20-22 years old. Sample consists of 38.5% undergraduate students, 50.5% master degree students and 10.9% postgraduate students.

The study revealed that 87.5% students have Facebook accounts, No significant gender differences were found ($\chi^2_{(5)} = 0.292$, p-value=0.589) in having Facebook account. Among the respondents who did not have a Facebook account, 3.4% did not know about Facebook and 9.1% said they do not require Facebook to interact. 49.1% of the respondents were Facebook members for more than one year and on the average students spent approximately three and half hours daily on internet browsing of which on the average two hours are spent on Facebook. Average number of Facebook friends of the respondents was 82 (Min. = 3, Max. =1000). Average number of Facebook friends from the Punjab University was 30 (Min. = 0, Max. =250).

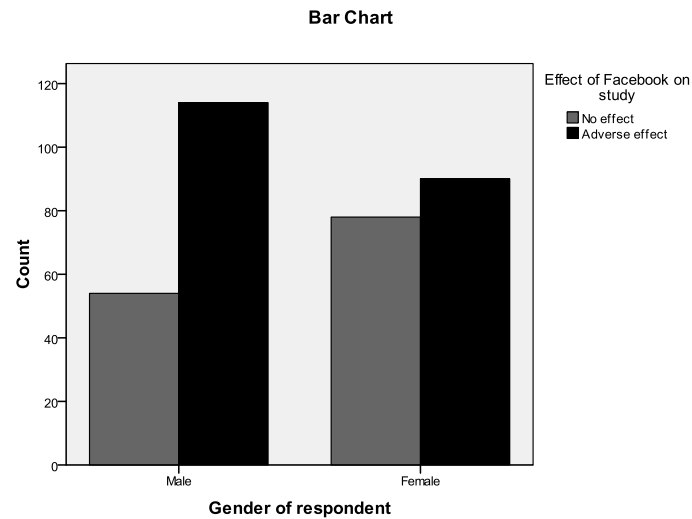
We found that 41.7% students who didn't add a friend in last 3 months and majority of the students 63.4% did not add strangers as a friend. Twenty two percent students use Facebook several times in a day, most of the students 46.7% login to their Facebook account daily, 23.2% login weekly, 6.3% login monthly. Majority (77.7%) of students were using Facebook to communicate with existing friends, 12.5% use for networking purpose, 3.9% for work and 6.0% for other use. 50.6% said Facebook is not a secure place to share personal information. Moreover, results show that majority (83.9%) of the Facebook users have account in real name. Among the students who have a Facebook account, 85.1% do not make their profiles publically available.

Table 1

Frequency (Percentage) of Demographic Variables

Variable		Total	Male	Female
Gender		384	194	190
Age (in years)	≤19	30(7.8)	7	23
	20-22	274(71.4)	135	139
	> 22	80(20.8)	48	32
Degree program	Undergraduate	148(38.5)	84	64
	Master	194(50.5)	90	104
	M.Phil.	42(10.9)	16	26
Family income per month (in Rs.)	<10000	15(3.9)	10	5
	10000-30000	154(40.1)	87	67
	30000-50000	127(33.1)	56	71
	>50000	88(22.9)	37	51
Have a Facebook account	Yes	336(87.5)	168	168
	No	48(12.5)	22	26
Reason of not having Facebook account	Don't know about Facebook	13(3.4)	7	6
	Don't require Facebook to interact	35(9.1)	15	20
Facebook member duration	Less than 4 months	40(10.4)	13	27
	Between 4-8 months	46(12.0)	21	25
	Between 8-12 months	60(15.6)	32	28
	More than 1 year	190(49.5)	102	88

One of the main objectives was to study the opinion of students about the effect of Facebook usage on their academic performance. Results show that 61% of the students were of the opinion that the Facebook use somehow or other adversely affects their academic performance. Chi-square test (p value=0.000) shows that the proportion of the students who think Facebook usage is adversely affecting their studies (61%) is greater than the proportion of the students who think there is no adverse effect of Facebook usage (39%). As shown in Figure 1, the Facebook use is affecting more adversely the studies of male students (68%) as compared to female students (53%).

Figure 1: Adverse effect of Facebook use on their performance in studies.

To see if there is any significant association of gender with other variables exhibiting the pattern and usage of Facebook, we applied chi-square test of association and the results are shown in Table 2

Table 2

Association of various factors with Gender

Variables	χ^2	p-value
Facebook member	0.292	0.589
Last three months, how many strangers have been added as friends	32.843	0.000**
Acceptance of strangers on Facebook	40.061	0.000**
Frequency of Facebook usage	15.897	0.003**
Main purpose of using Facebook	7.755	0.051
To what extent Facebook affects your study	7.187	0.007*
Facebook account in real name	7.149	0.008**
Facebook is a secure place to share personal information	3.048	0.081
Personal information is public	6.015	0.014*

* p-value < 0.05; ** p-value < 0.01

We could not find statistically significant gender difference in having a Facebook account. As expected, a significant association ($p\text{-value}=0.000$) is found between gender and adding strangers as a friend on Facebook in last three months, accepting strangers as a friend on Facebook, how frequently they log onto Facebook, frequency of logging in the extent of adverse effect of using Facebook on their study. There was high association between gender and Facebook account in real name. The same kind of results found and their profile for friends or can be visible to all internet users, we found that majority of female users' Facebook account is not in real name.

Interestingly, results reveal that female Facebook users spend more time on Facebook. This finding is in accordance with the gender distribution of users of this site. In addition, male users have more Facebook friends ($t = 4.019$, $p\text{-value} 0.008$) than female Facebook users. We also found that there was a significant difference between males and females average time spent on internet surfing ($t = -1.197$, $p\text{-value} = 0.232$).

Conclusion

Majority of the students use Facebook and it is equally popular among male and females. Male students though spend more time on internet browsing as compared to female students but female students spend more time on the Facebook. This may be due to the reason that males generally have lesser social restrictions on having their social interactions so they can meet their friends around. As expected, female students feel insecure on sharing their personal information on their Facebook account and due to this most of them do not have their accounts in their real names or have not put their real picture on their profile.

Facebook usage more adversely affects the academic performance of male students as compared to female students. This finding can be further explored but one rationale of this finding is that, in general, male students spend more time on playing sports, social get together with friends and in addition to that the usage of the Facebook making it hard for them to perform their best in their academic career. This issue will be further explored and discussed in our future work.

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