



Eğitim, Bilim ve Teknoloji Araştırmaları Dergisi

Facebook'un Aşırı Kullanımına Etki Eden Faktörler: Bangladeş Khulna Üniversitesi'nde Bir Durum Çalışması

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Bu makaleye atıf için:

Rokon, M. S., Jishan, M., Hassan, K., Biswas, B., Shuchi, T., Islam, S. R., Maniruzzaman, M., & Abedin, M. M. (2018). Facebook'un aşırı kullanımına etki eden faktörler: Bangladeş Khulna Üniversitesi'nde bir durum çalışması. *Eğitim, Bilim ve Teknoloji Araştırmaları Dergisi*, 3(2), 1-11.

Dergi web sayfası için lütfen tıklayınız...



Journal of Research in Education, Science and Technology

Influencing Factors for Excessive Use of Facebook: A Case Study in Khulna University, Bangladesh

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To cite this article:

Rokon, M. S., Jishan, M., Hassan, K., Biswas, B., Shuchi, T., Islam, S. R., Maniruzzaman, M., & Abedin, M. M. (2018). Influencing Factors for Excessive Use of Facebook: A Case Study in Khulna University, Bangladesh. *Journal of Research in Education, Science and Technology*, 3(2), 1-11.

Please click here to access the journal web site...

Eğitim, Bilim ve Teknoloji Araştırmaları Dergisi (EBTAD) ulusal bilimsel ve hakemli bir çevrimiçi dergi olarak yılda iki kez yayınlanmaktadır. Bu dergide, araştırmanın sonuçlarını yansıtan, kabul edilebilir yüksek bilimsel kalitesi olan, bilimsel gözlem ve inceleme türünde araştırma makaleleri yayınlanmaktadır. Bu derginin hedef kitlesi öğretmenler, öğrenciler ve eğitim fakültelerinin alan eğitiminde (fen eğitimi, sosyal bilimler eğitimi, matematik eğitimi ve teknoloji eğitimi gibi) ile çeşitli alanlarda (fen bilimleri, sosyal bilimler ve teknoloji gibi) çalışan bilim insanlarıdır. Bu dergide, hedef kitle nitelikli bilimsel çalışmalardan yararlanabilir. Yayın dili Türkçe'dir. Dergiye yayınlanmak üzere gönderilen makalelerin daha önce yayınlanmamış veya yayınlanmak üzere herhangi bir yere gönderilmemiş olması gerekmektedir. Dergide yayınlanan makalelerin içeriğinden ve sonuçlarından makalenin yazarları sorumludur. Yayınlanmak üzere gönderilen makalelerde *Eğitim, Bilim ve Teknoloji Araştırmaları Dergisinin (EBTAD)* telif hakkı vardır.

Facebook'un Ařırı Kullanımına Etki Eden Faktörler: Bangladeř Khulna Üniversitesi'nde Bir Durum Çalışması

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Makale Bilgisi

Makale Tarihi

Gönderim Tarihi:
13 Eylül 2018

Kabul Tarihi:
14 Aralık 2018

Anahtar Kelimeler

Sosyal ağ siteleri,
Facebook,
Lojistik regresyon,
Ki-kare

Özet

Bu çalışma Khulna Üniversitesi öğrencilerinin Facebook'u aşırı kullandıklarını etkileyen faktörleri arařtırmaktadır. Bu çalışmanın katılımcıları olan 365 kişi basit rastgele örnekleme yöntemiyle belirlenmiştir. Bu çalışma temelde Facebook kullandıklarını aşırı ve normal kullanım şeklinde gruplandırdığımız Khulna Üniversitesi öğrencilerine odaklanmaktadır. Bu çalışmada p değerleri kapsamında gerçekleştirilen ki-kare testiyle elde ettiğimiz sonuçlara göre üniversite öğrencilerinin Facebook kullanım durumları (aşırı ve normal kullanıcı): %1 oranında bir iletişim aracı olarak Facebook, Facebook fan sayfaları, gruplar ve organizasyonlarla ilişkilendirilirken, %5 oranında Facebook'un kolay erişilebilirliği, % 10 oranında ise güncel haber kaynağı olması ve arkadaşların güncellemelerinden haberdar olmak ile anlamlı olarak ilişkilendirilmiştir. Yani tüm bu faktörlerin Facebook kullanıcıların kullanma durumlarını etkilediği söylenebilir. Ayrıca bu çalışma ikili lojistik regresyon modelini kullanarak farklı kategorideki önemli faktörlerin katkı oranlarını belirlemeye ve farklı değişkenler arasındaki ilişkilerin üniversite öğrencisi Facebook kullanıcılarının kullandıklarını etkisini de arařtırmıştır. Bunun yanında üniversite öğrencisi Facebook kullanıcılarının kullanım durumlarını anlamlı düzeyde etkilemeye de Facebook'un iş amaçlı bilgi kaynağı, e-ticaret kaynağı, video/sosyal oyun özellikleri, arkadaşlık yapma, durum bildirme/geri bildirim alma, boş zaman geçirme ve utangaç insanların sosyalleşmesini sağlama gibi faktörlerinde etkilediği tespit edilmiştir.

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Influencing Factors for Excessive Use of Facebook: A Case Study in Khulna University, Bangladesh

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Article Info

Article History

Received:
September 13, 2018

Accepted:
December 14, 2018

Keywords

Social networking sites,
Facebook,
Logistic regression,
Chi-square

Abstract

This paper examines the influencing factors for excessive use of Facebook on Khulna university students. Simple random sampling was used to select 365 respondents for this research. This research mainly focuses on Khulna university students where we primarily classify them into excessive and normal user of Facebook. In this study, we have obtained from chi-square test based on p-values Facebook usages status (excessive & normal user) of the university students is associated with Facebook as a communication medium, Facebook fan pages, groups and events at 1%, easy accessibility of Facebook at 5%, latest news source and getting friend's updates is at 10% level of significance. That is, all these covariates have significant impact on the usage's status of a Facebook user. This study also performs binary logistic regression model to find out the odds ratios of different categories of important factors and assess the association of different covariates on the usages of Facebook user among university students. Facebook as a job information source, source of online business, facilities of social games & videos, making friendship, status & feedback, passing leisure time and socializing opportunity for shy people though they are not found to have significant impact on with the usage status of a Facebook user of University students.

INTRODUCTION

Social networking site (SNS) is defined as web based services that allows individuals to construct public or semi-public profile within a bounded system articulate a list of other users with whom they share a connection and view traverse their list of connection and those made by others within the system (Boyd & Ellison, 2008). Recently, SNS have become popular with the help of digital technologies (tablet, laptop, etc.) and internet. This platform helps people to make new friends, connections, and to improve social connections with other fellow human beings. People are using many social networking sites as like Facebook, Blogs, Instagram, LinkedIn, Twitter, etc. One of the most popular social networking sites is Facebook. Facebook was established by Mark Zuckerberg in 2004 who was a student along with his friends Eduardo Saverin, Dustin Moskovitz, and Chris Hughes Harvard at the department of computer science in Harvard University. As of the fourth quarter of 2018, Facebook had 2.32 billion monthly active users according to website statista. Facebook seems like good way to represent an idealized version of yourself to the world. However, profile analysis of over 200 people in Germany and the US found that they revealed their actual personalities, not their ideal selves. With more than 1.10 billion monthly active users, Facebook is also the most popular social network worldwide according to web portal statista (Statista, 2019a). The Facebook has become an essential part of almost every university students' daily life. While a large number of students seem to get benefits from use of the Facebook by exchanging information for educational purposes, make friends, and other activities. The literature indicates that this social networking site can become addictive to some university students (Zaremohzzabieh, Samah, Omar, Bolong, & Kamarudin, 2014). If we think about the fast way of social media communication in that case Facebook will remain first position in Bangladesh. It's a land of opportunities for social media because this country got more than 60% adult population with adoption capacity. 93.34% internet users of Bangladesh are on social networking website according to web portal stat counter (Statista, 2019b).

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Dhaka has ranked second among the cities with the highest number of active Facebook users according to an article of the daily star (The Daily Star, 2017). People use it for the simplicity and easy to get in touch with other friends and family. While using Facebook, we communicate with people and there are a lot of fun features in it, which are actually so addictive and worse time killer as well. But for someone who needs to focus on his work, especially the students it may be considered as a distraction. Many studies (Duncan, Hoekstra, & Wilcox 2012; Wang, Chen, & Liang, 2011) reported those students' grades negatively affected by SNS (Social networking sites). Other researchers have looked especially at how personality is related to the kind of content people post on Facebook. In a recent study done by the Institute of Health Economics at Dhaka University, it was discovered that 88 percent students were being adversely affected by the excessive use of social media (The Daily Star, 2018). The study also found that students who were spending too much time on social media were spending less and less time on their studies. In another study in Bangladesh by Saha and Guha (2019) found that the majority of students do not feel any impact of social media on their life. Some of the respondents reports positive impacts of Facebook because of communication with others and news updates. But in different circumstances the impacts is negative and badly affect their studies and wastes time. The primary motive of the study is to find out the influencing factors for excessive use of Facebook on university students.

METHODS

Design of the Study

In this study data have been collected using simple random sampling without replacement. From the Khulna University authority, we were able to know the sampling frame of our target population, $N = 7276$. Using this following equations (1) and (2) we have determined sample size required.

$$n_0 = \frac{z^2 pq}{d^2} \quad (1)$$

$$n = \frac{N n_0}{(N-1) + n_0} \quad (2)$$

Where, n_0 is initial sample size, z : standard normal variate, p : the (estimated) proportion of the population which has the attribute in question i.e. $p+q=1$, d : allowed maximum error in estimating population proportion. Considering the degree of accuracy 0.05 and $p = 0.50$, we get required sample size is 365. Data was collected through face to face interview which was conducted for over a month period, from August 2017 to September 2017 using a structural questionnaire.

Participants of the Study

This study conducted on the students of Khulna University, Bangladesh aiming to explore the influencing factors of excessive use of Facebook. This university is a gathering of countrywide students. That's why this study may reveal the scenario of the project. Our participants or respondents are the current students of Khulna University, Bangladesh. Figure 1 presents the flow chart of the whole project.

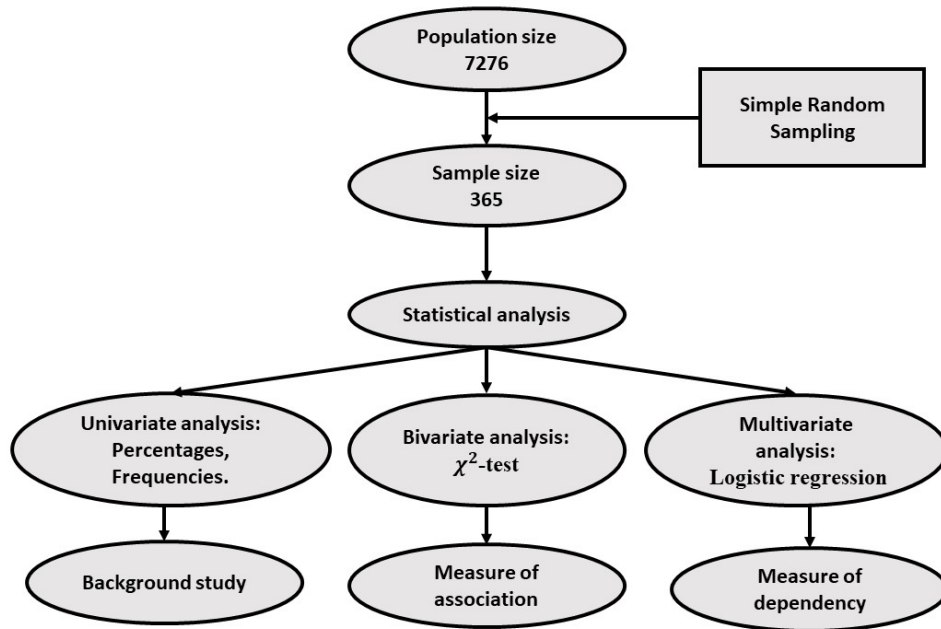


Figure 1. Flow chart of data collection procedure and analysis

Data collection

We gave a copy of the schedule prior to the interview to the respondents, a time and place agreed upon with them, also informed consent was obtained prior to conducting the interview, and finally the results of each interview were transcribed immediately. Collected data was compiled for processing and analysis. The interview was partitioned into three parts pre-interview, interview and post interview. After cleaning the raw data, we had 365 complete observations for our study analysis. We have collected data with prior permission from Khulna University authority.

Data Analyze

Dependent variable

In this study we have used user type as dependent variable. It has two categories excessive user and normal user. The excessive user is denoted as (1) and normal user is denoted as (0) which is defined as follows:

$$Y = \begin{cases} 1; \text{Excessive user} \\ 0; \text{Normal user} \end{cases}$$

Independent variables

Our study used twelve independent variables. These variables are Easy accessibility, Communication medium, Job information, Latest news source, Online shopping & business, Social games & videos, Making friendship, Status & feedback, Friend's updates, Fan pages, groups & events, and Passing leisure time. Table 1 presents the description of variables name along with their categories.

Statistical Analysis

All statistical analysis was performed by Statistical Package for Social Sciences (SPSS) version 20. In order to see the background of the variables, we used some frequency distribution which is presented

in Table 1. We used chi-square to measure the association between Facebook user type and selected several covariates which are presented in Table 2. We also used logistic regression to find the high risk factors of Facebook user type based p-value and odds ratios. In this regard we only considered the variables which are significant in chi-square test.

RESULTS

Univariate Analysis

At first, we did some univariate analysis to the dependent and the independent variables to compare the frequencies and their percentages as presented in Table 1. This table represents the frequency and percentages distribution of Facebook usage status of the University students and its related covariates.

Table 1. Frequency distribution of different selected variables

Variables	Categories	Frequencies	Percentages
Dependent variables			
User type	Normal	100	27.4
	Excessive	265	72.6
Independent variables			
Gender	Male	119	44.9
	Female	146	55.1
Easy accessibility	No	8	2.2
	Neutral	28	7.7
	Yes	329	90.1
Communication medium	No	17	4.7
	Neutral	49	13.4
	Yes	299	81.9
Job information	No	22	6.0
	Neutral	64	17.5
	Yes	279	76.4
Latest news source	No	36	9.9
	Neutral	31	8.5
	Yes	298	81.6
Online shopping & business	No	57	15.6
	Neutral	61	16.7
	Yes	247	67.7
Social games & videos	No	75	20.5
	Neutral	75	20.5
	Yes	215	58.9
Making friendship	No	18	4.9
	Neutral	44	12.1
	Yes	303	83.0
Status & feedback	No	45	12.3
	Neutral	49	13.4
	Yes	271	74.2
Friend's updates	No	39	10.7
	Neutral	41	11.2
	Yes	285	78.1

Table 1. continuous

Variables	Categories	Frequencies	Percentages
Fan pages, groups & events	No	19	5.2
	Neutral	38	10.4
	Yes	308	84.4
Passing leisure time	No	55	15.1
	Neutral	55	15.1
	Yes	255	69.9

Table 1 demonstrates that 100 (27.4%) respondents out of 365 observations are normal users while the rest 265 (72.6%) are excessive users of Facebook. This indicates that, most of the university students are using their Facebook account in a frequent manner. Table 1 indicates that the majority of our respondents are female Facebook user (55.1%) than male counterparts around 45%. In our study we can comprehend that around 90% of our respondents use Facebook for easy accessibility. Around 82% of our respondents also use Facebook for communication medium and 13.4% remained neutral about the fact when asked. 76.4% of our respondents are agreed with the fact that they are using Facebook for getting job information and 17.5% remained neutral about the fact. 81.6% responder was also using Facebook for getting latest news and 9.9% denied the reason. Some portions of our responders (67.7%) use Facebook for shopping and 16.7% remained neutral; furthermore 15.6% doesn't use Facebook for shopping. Around 59% of our respondents use Facebook for social games, watching videos but 20.5% don't agree with the reason and 20.5% remained neutral. 83% of our respondents admitted that they use Facebook for making friends and 12.1% respondents were neutral about the factor. About 74.2% responder use Facebook for checking status (An update feature of Facebook) and 12.3% don't agree with the reason. Surprisingly 78.1% of our respondents admitted that they use Facebook for checking friends' update. Finally, 84.4% of respondents use Facebook for visiting fan pages, surfing groups and events and around 70% use Facebook for passing leisure time.

Bivariate Analysis

We did chi-square test to see the association between Facebook user type and the covariates as presented in Table 2. This table presents the row frequencies of the different categories under covariates with respect to status of the university students as Facebook user. Associated covariates are identified based on corresponding p-values.

Table 2. Association between Facebook user and different factors

Factors	Type of Facebook user		χ^2 -values	p-values
	Normal	Excessive		
Gender				
Male	40	119	0.711	0.399
Female	60	146		
Easy accessibility				
No	4	4	7.931	0.019**
Neutral	13	15		
Yes	83	246		
Communication medium				
No	3	14	16.213	0.000*
Neutral	25	24		
Yes	72	227		
Job-information				
No	5	17	0.544	0.762
Neutral	16	48		
Yes	79	200		

*, ** and *** indicates the significance at 1%, 5% and 10% level of significance, respectively.

Table 2. continuous

Factors	Type of Facebook user		χ^2 -values	p-values
	Normal	Excessive		
Latest news source				
No	15	21	0.4798	0.091***
Neutral	10	21		
Yes	75	223		
Online shopping & business				
No	13	44	0.721	0.697
Neutral	17	44		
Yes	70	177		
Social games & videos				
No	23	52	1.275	0.529
Neutral	17	58		
Yes	60	155		
Making friendship				
No	8	10	4.221	0.121
Neutral	15	29		
Yes	77	226		
Status & feedback				
No	14	31	3.184	0.204
Neutral	18	31		
Yes	68	203		
Friend's updates				
No	16	23	4.909	0.086***
Neutral	13	28		
Yes	71	214		
Fan pages, groups & events				
No	7	12	9.909	0.007*
Neutral	18	20		
Yes	75	233		
Passing leisure time				
No	18	37	1.593	0.451
Neutral	17	38		

*, ** and *** indicates the significance at 1%, 5% and 10% level of significance, respectively.

Facebook user type is associated with communication medium, Facebook fan pages, groups and events at 1%, easy accessibility of Facebook at 5%, latest news source and getting friend's updates is at 10% level of significance. While Facebook as a job information source, source for online shopping & business, facilities of social games & videos, making friendship, status & feedback, facilities of getting friend's updates, passing leisure time, source for scholarship information and socializing opportunity for shy people are not found to have significant impact on with the usage status of a Facebook user of University students.

Multivariate Analysis

In this regard we only used the variables which are showed significant in chi-square test. Table 3 presents the effects of different covariates on usage status of Facebook user among university students using binary logistic regression. In this study, we have used logistic regression model to check multi-collinearity problem based on standard error. Respondents who are agreed with Facebook, easily accessible and who were neutral about it are significantly more likely to use Facebook frequently in compared to the group of respondents who are disagreed with the fact. Respondents who agreed that

Facebook is easily accessible frequently use Facebook (OR: 1.789, CI: 0.485-6.598) more than the group of students who were actually disagreed with the fact.

Table 3. Logistic regression estimates of Influencing factors for Facebook usage

Factors	Coefficient	OR	95% CI for	
			Lower	Upper
Easy accessibility				
No (ref)		1		
Neutral	0.003	1.003	0.225	4.472
Yes	0.582	1.789	0.485	6.598
Communication medium				
No (ref)		1		
Neutral	0.170	1.186	0.588	2.219
Yes	0.644	1.904	0.821	4.415
Latest news source				
No (ref)		1		
Neutral	0.432	1.540	0.477	4.970
Yes	0.427	1.533	0.635	3.703
Friend's updates				
No(ref)		1		
Neutral	0.497	1.643	0.543	4.968
Yes	0.810	2.248	0.894	5.653
Fan pages, groups & events				
No (ref)		1		
Neutral	-0.582	0.559	0.155	2.012
Yes	.462	1.587	0.527	4.783

CI: Confidence interval; ref: Reference category.

All group of respondents who thought of Facebook as one of the best mediums for communication and who were neutral about that are significantly more likely to use Facebook frequently in comparison to the group of respondents who disagreed with the fact. Respondents who agreed that Facebook is one of the best mediums for communication easily accessible frequently use Facebook (OR: 1.904, CI: 0.821-4.415) more than the group of students who were actually disagreed with the fact. Also, the groups of respondents who thought of Facebook as a source of the latest news and who were neutral about that are significantly more likely to use Facebook in comparison to the group of respondents who disagreed with the fact. Respondents who agreed that Facebook is a source of latest news use Facebook (OR: 1.533, CI: 0.635-3.703) more than the group of respondents who were actually disagreed with the fact.

The group of respondents who thought of Facebook as a medium for finding old friends and making new ones and who were neutral about that are significantly more likely to use Facebook frequently in comparison to the group of respondents who disagreed with the fact. Respondents who agreed that Facebook as a medium for finding old friends and making new ones frequently use Facebook (OR: 1.693, CI: 0.521-5.508) more than the group of students who were actually disagreed with the fact. The group of respondents who uses Facebook to share your status on it and also to get feedback from your friends is significantly more likely to use it in a frequent manner in comparison to the group of respondents who disagreed with the statement. Actually, they use Facebook (OR: 1.259, CI: 0.530-2.993) more than the group of respondents who don't agree with the fact.

The group of respondents who love to get updates about friends are actually use Facebook 2.248 (CI: 0.894-5.653) times more than those who don't use Facebook for this purpose. Also, the group of respondents who uses Facebook because of the Facebook fan pages, groups, events etc. are actually using it (OR: 1.587, CI: 0.527-4.783) more than the group who don't use Facebook for this purpose.

And the group of respondents who believe that they can easily pass their leisure time browsing Facebook are actually use Facebook (OR: 1.58, CI: 0.727-3.434) more than those who don't believe that.

DISCUSSION AND CONCLUSION

We have found that majority of our respondents are actually female as well as the percentage of excessive Facebook user is bigger than normal counterparts. Most of the university students confirmed that browsing Facebook during study period and lectures breaks concentration while majority of them literally browse their Facebook account in frequent manner. In this study, we found five potential factors as like Easy accessibility, Communication medium, latest news source Friend's updates, Fan pages, groups & events which were significantly associated with excessive Facebook users. The respondents who are agreed with Facebook are easily accessible and who were neutral about it are significantly more likely to use Facebook frequently in comparison to the group of respondents who disagreed with the fact.

Though respondents who agreed to that Facebook is easily available are more likely to use Facebook 78.9% (OR: 1.789, CI: 0.485-6.598). Some news article agreed with the fact that Facebook expands its social platform across the web through general availability of Facebook connect (Facebook, 2008). Our respondents often use Facebook for communication medium because it's cheap and convenient, easy to use and also includes lots of useful features. But most of the respondents use Facebook for easy availability and the percentages 90.4% (OR: 1.904, CI: 0.821-4.415) more than respondents who were disagreed with the fact, shows exactly that. A study about Facebook as an educational tool found that educational use of Facebook was above average (Kayri & Cakir, 2010). Many of our respected respondents who use Facebook as a source of latest news and who were neutral about that are significantly more likely to use Facebook in comparison to the group of respondents who disagreed with the fact. Respondents who agreed with the fact that Facebook is a source of latest news are 53.3% (OR: 1.533, CI: 0.635-3.703) more likely to use Facebook than others. But not all news of the Facebook is authentic cause of malicious practice of politicians and other irresponsible beings. Such concerns expressed through scientific studies (Lazer et al., 2018). So, our study shows the vulnerability of our respondents because they use Facebook as a news source and can be easily influenced by fake news. Several of our respondents use Facebook for keeping up with their friends update to keep up with new friend and connections. Also for finding new friends and keeping up with their old ones. Many of our Respondents who agreed that Facebook as a medium for finding old friends and making new ones frequently use Facebook 69.3% (OR: 1.693, CI: 0.521-5.508) more than the group of students who were actually disagreed with the fact.

Most of the researchers were agreed with the fact that social connections, shared identities, content and status updating are driving force for usage of Facebook (Joinson, 2008; Ellison, Heino, & Gibbs 2006; Flavelle, 2007; Stafford, Stafford, & Schkade, 2004; Donath & Boyd 2004; McGuire, 1974). Our study also identified fan pages, groups and events as a significant factor for excessive use of Facebook. Many of our respondents only use Facebook for keeping up with fan pages, groups and events. Respondents use 58.7% (OR: 1.587, CI: 0.527-4.783) more than respondents who don't use Facebook for this purposes. Studies support the ideas that people use Facebook for such purposes (Lin & Lu, 2011). Facebook groups also play a vital role for self-gratification and therefore cause continuous use of Facebook (Park, Kee, & Valenzuela, 2009). From our analysis, 51% of respondents are found using Facebook during their class time. And most alarming part is that about 16% students browse Facebook even subconsciously. Besides, most of the students admitted that Facebook reduces time for their non-academic study and also for extra-curricular activities. And they think Facebook as a beneficial tool for academic purpose. The study in USA indicates that the students use Facebook to connect with their classmates in order to facilitate learning (Gikas & Grant, 2013). In a broader sense, the results of the analysis show that most people use Facebook to maintain contact with their friends and receive updated information about public affairs. Another study stated that students use Facebook for entertainment, relaxing/escaping, and passing time, but not for socializing and social information

(Moghavvemi, Sulaiman, Aziz, & Wai 2017). They showed that the spending time on Facebook had a positive effect on their academic performance, which indicated that the time spent on Facebook did not affect their education. In the context of Bangladesh Facebook often plays an important role in the daily lives of students. Majority of young students often use Facebook as excessive form, relative to other countries. Regarding this, in our study we have found that excessive use of Facebook is negatively associated with academic performance.

In light of another study conducted at Patuakhali district in Bangladesh (south Asian country) found that self-control, academic performance, parental behavior these factors are negatively related to Facebook (Ahamad & Das, 2018). Another study shows that University students prefer to use Facebook as tool for making friendship with others, as a media to get updated world news instead of using print or press media. A study in Taiwan among College students found a strong correlation to be an excessive user with those who are self-introvert (Alhabash, Park, Kononova, Chiang, & Wise 2012). That means if any of the factors increase the dependence on Facebook decreases and vice versa. So, from these various studies we can picture that proper use of Facebook improves academic results and overall quality of information but excessive use may lead to depression and poor academic performance.

Though some factors i.e. Communication Medium are shoving students to be an excessive Facebook user, interestingly students are also found using Facebook subconsciously in our research. Using Facebook in an uncontrolled way diminishing the advantage of Facebook in social life regarding today's atmosphere. Some factors such as, maintaining friendship, creating social connectivity, making an accompany those who are introvert as well as others factors are making students an excessive Facebook user. There is no way not to be a Facebook user in current digital world but the excessive amount of Facebook using is making academic performances of students worse. Planning and effective way of using Facebook were found absent amid students. Students, browsing Facebook during their class lectures, were extremely surprising that indicates our whimsical education system in a broader sense as well as the poor ethical practice of the students. Another part of our research found a relationship between Facebook using and academic performances in an adverse way. Light awareness is needed among students to maintain a perfect balance of using Facebook. Responsible authorities as well as government should take awareness programs in this regard.

Acknowledgements

We are very much indebted to Statistics Discipline, Khulna University, where this study is conducted. We are grateful to Benojir Ahammed and Mohammad Ali for their indispensable suggestions.

Conflicted of Interest

Authors have no conflict of interest for any claim about this research.

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