



## Educational Motives and Perceived Educational Consequences as Predictors of Facebook Usage

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### Abstract

This study proposes a model and validates it with the help of uses and gratifications theory, displacement theory and the individual differences theory. The tenets of the proposed model are: the associations of the educational motives with Facebook use; the association of perceived consequences resulting from Facebook use with the Facebook use; the interactional effect of the weekly time patterns and gender for Facebook use; the interactional effect of the daily and weekly time patterns for the educational motives for Facebook use; and the interactional effect of the daily and weekly time patterns for the perceived consequences resulting from Facebook use among university students in Lahore. By using convenience sampling technique, students are selected from the population of educational institutions in Lahore. The variance explained in the dependent variable of motives for Facebook usage and the perceived consequences is 22.9%. Both variables of educational motives ( $\beta = .402$ ) and the perceived consequences ( $\beta = .200$ ) have made significant contribution to the prediction of Facebook usage but the former has made the unique one. Male students are using Facebook more than the female students ( $\eta^2 = .01$ ). The interaction effect of daily and weekly time patterns have small effects on educational motives ( $\eta^2 = .038$ ) and the perceived consequences ( $\eta^2 = .032$ ). Facebook is found empowering the students for the educational motives, however university students perceive that Facebook use has consequences when they use it for more than two hours in different parts of the day.

**Keyword:** *Facebook usage, educational motives, perceived academic consequences, time, university students, Lahore*

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**Introduction**

Any website that allows social interaction is considered a social media site (e.g., Facebook, Twitter and You Tube) and these sites offer youth a portal for entertainment and communication and have grown rapidly in recent years (O’Keeffe et al., 2011, p.800).The social network sites (e.g. Facebook) are the web-based services that allow individuals to construct a public or semi-public 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 and those made by others within the system(Boyd & Ellison, 2007, p.211).

Facebook is a social networking website and the functional definition of Facebook is based on three factors: communication (what), efficiency (how), and friend/family/coworkers (who) and why people like to communicate efficiently with their friends, family and coworkers (Mauri, Cipresso, Balgera, Villamira, & Riva, 2011, p. 1). Beginning in September 2005, Facebook expanded to include high school students, professionals inside corporate networks, and, eventually, everyone (Boyd & Ellison, 2007, p.218). Students who were involved in online relationships were found to be those who were willing to communicate in real life justifying the rich get richer hypothesis, which states that the internet primarily benefits extraverted individuals (Sheldon, 2008).

At the time of writing, several attempts have been made for log-ins in the morning and will continue from dawn to dusk and at night hours with an ongoing cycle. This network site can be accessed anywhere 24/7 with Wi-Fi. In the previous research,

the smart phone was found to be the most motivational factor for Facebook usage (Hussain & Saleem, 2016). With the help of smart phone, there are increased chances of Facebook usage. It is also found that the use of the social networking sites is a particular popular activity on smart phones since nearly 80% of the time with these social networking sites is spent using mobile technologies (Marketingland, 2016). Students in Serbia had spent a daily average of 2.76 hours on Facebook, while the average total daily smart phone use is 8:34 h; student in this country were found to sacrifice academic work, rather than time for Facebook, smart phone, or leisure activities (Janković, Nikolić, Vukonjanski, & Terek, 2016). The other possibility for the excessive usage for this social networking site is that the “Facebook application” can be downloaded easily from Google store with a single click within few minutes on palm top which is today’s smart phone.

This social networking site is user friendly and has many features which invite every age group for liking, sharing, commenting and doing discussion on issues at the national and international levels for communication. This networking social revolution was initially started as an educational platform by Harvard University students (Cassidy, 2006) which still have the potential for the usage for educational purposes in Pakistan. The students in the metropolitan Lahore city of Pakistan are observed to be using this social networking site at home, hostels and the educational institutes. The active social media users in Pakistan have grown by 5.7% from 2018 to 2019; the mobile social media users in Pakistan have grown by 13% or by 4 million; Facebook alone is generating monthly traffic of 46, 000, 000 with time per

visit of 17 minutes 45 seconds (Farooq, 2019). The comparison of Facebook use among university students reveals some interesting statistics. In the year 2006 when Facebook was newly introduced in Pakistan there were only 60% students who were using Facebook in Lahore city in the published research article (Waqas, Afzal, Zaman, & Sabir, 2016); however in the same year 100% students were found to be Facebook users in the same city in a fresh thesis (Hussain & Saleem, 2016). In the beginning from 2006 towards 2011, Facebook was not that popular, however, in 2012 there were 6 million Pakistanis on Facebook (“Over 6 million Pakistanis on Facebook!,” 2012) but in the year 2019 these Facebook users are now 31.4 million (“Facebook users in Pakistan,” 2019).

The Facebook groups are made by students. Trust and presence of teaching members were indicated to have significant influences in affecting higher education students' perception and engagement in Facebook learning groups (Hong & Gardner, 2018). The factors were investigated that influence professors' and students' intentions to add each other as friends on Facebook in United States and consistent with the theory of reasoned action, intention was found to be the strongest predictor of them adding each other as Facebook friends (Sheldon, 2016). However, in another study, students are found to use Facebook for various factors like entertainment, relaxing, passing time but not for knowledge enhancement (Mathur, Nathani, Sharma, Modi, & Arora, 2019). In this way, students are not using this social networking site only for the educational purposes or the gratifications but sometimes misuse it. The students in particular

are found to be utilizing Facebook for interaction with lecturers and perceived it as appealing and would embrace such activities in future; however, lecturers had seemed split in opinion for interaction with students with the help of Facebook (Ellefsen, 2016).

The assumption for the current research is that students who have to spend their valuable time for their studies are spending their time uselessly which can lead to academic consequences rather than the active gratification for educational motives.

Facebook has navigational and customizable features and has contributed towards the right of freedom of speech and expression in today's liberal and modern world. But each innovation brings with it the flow of prospects and consequences. In every era of changing communication, the technology is researched in empowered and vulnerable paradigms. But the current study researches the Facebook in both paradigms to research whether students find it useful or useless.

Thus, the objectives are to research: psychometric validation of extended model: associations of the educational motives and academic consequences as independent variables with the dependent variable of Facebook usage; the interaction effect of weekly time patterns and gender on overall Facebook usage; the interaction effect of the daily and weekly time patterns on the educational motives and perceived academic consequences among university students in Lahore.

In view of conflicting observed facts of positive and negative use of the popular social networking site of Facebook,

the following literature review is done for the educational motives and academic consequences resulting from Facebook usage among students.

In the previous research, Facebook is found to be the social networking site for remaining in contact among students (Foregger, 2008). Female students aged 22 and above were found to be the excessive Facebook users and the students were found to be using Facebook for social interaction, communication, educational and religious gratifications (Shahnaz, 2011).

The previous research (Hussain & Saleem, 2016) had conceptualized the activity patterns for Facebook usage as friending, un-friending, making profiles, playing games, group creation, poking, calling, embedding posts, tagging, event checking, downloading, status updating, notifying, sharing, liking, Facebook roaming, uploading, changing cover photo, chatting and commenting. The mean values for chatting, status update, changing cover photo, embedding posts, event checking, receiving notifications on SMS and email, tagging, uploading, downloading, using more than one place for using Facebook, using more than one media for Facebook usage, logging into Facebook for multiple times in a day; using liking, commenting and sharing features had shown mean values greater than 3 (Hussain & Saleem, 2016).

The youth were found to be motivated by virtual companionship, escape, interpersonal habitual entertainment, self-description of one's own country, self-expression, information seeking and passing time gratifications (Wok & Misman, 2015).

In a vulnerable youth paradigm Dhaha (2013) had researched the association of social interaction, entertainment and communication motives for Facebook usage with the Facebook addiction and by structural equation modeling it was explained that social interaction and entertainment motives were the strongest predictors of the Facebook addiction. Dhaha (2013) had used one item of "My work/study is getting lower because of the amount of time I spend on Facebook" but had researched it under the umbrella of the concept of Facebook addiction.

In a latter research, the entertainment, social interaction and the political motives were found to be the predictors of Facebook Addiction (Dhaha & Igale, 2014). Dhaha and Igale (2015) had again included the item of "My work/study getting worse because of the amount of time I spend on Facebook". These researchers had conceptualized the negative academic factor resulting from Facebook usage in the disorder factor of Facebook addiction.

The previous literature (Dhaha, 2013; Dhaha & Igale, 2014) had extended the item for the academic consequences, "My work/study getting worse because of the amount of time I spend on Facebook " from the conflict factor of six factor model of Facebook addiction (Andreassen, Torsheim, Brunborg, & Pallesen, 2012). The item used by Andreassen et al. (2012) was, "Used Facebook too much that it has had a negative impact on your job/studies?"

Our study argues that the perception of study getting worse resulting from Facebook usage is not a disorder as is reported by Dhaha and Igale (2013; 2014). In fact, this is a certain

problematic cognitive and affective function. This cognitive function can be improved by checking time patterns for Facebook usage by the individuals themselves. But at the affective level students have the emotional attachment with this social networking site and the social peer pressure leads to action for excessive usage of this site. Calling someone addict to Facebook, who thinks that his or her study is disturbed because of Facebook usage, is not the right kind of logic. The technological usage can be excessive and repetitive or problematic but calling it addiction is the exaggeration and not the right kind of scientific inquiry to argue and measure. Therefore, to research the association of educational motives with the Facebook addiction is junk science.

Hussain and Saleem (2016) had conceptualized the perceived consequences resulting from Facebook usage but these researchers had researched its association with the passive Facebook usage. The association of the activity patterns (i.e. like, share and comment) with the individual factor of academic consequences was not researched. The researchers had contributed in the body of knowledge by making scales and indices. They had researched the individual motives, personality traits, activity patterns and social demographics as the predictors to the only generic category of passive Facebook usage. The model designed by these researchers was generic.

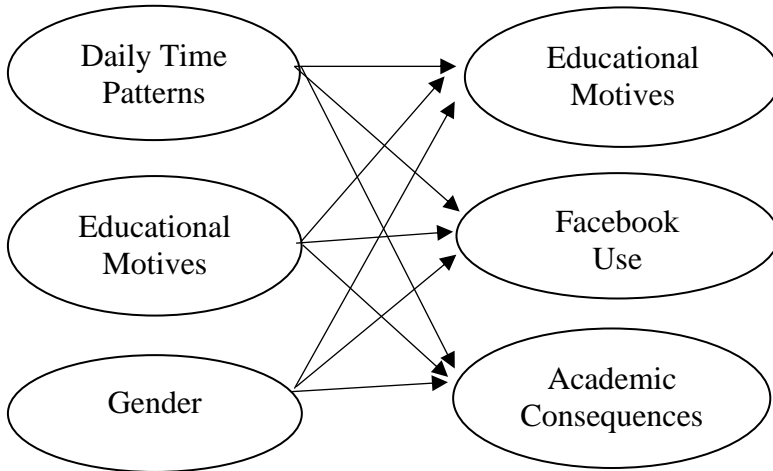
The current study fills the gap by researching the associations of the educational motives as well as the perceived consequences and the relationship of these variables with the Facebook use and the difference in time patterns (e.g. daily and weekly) and the gender for overall Facebook use, educational



motives and the perceived consequences which the previous study in Pakistan had not done (Hussain & Saleem, 2016). In this way the study contributes to both the uses and gratifications theory and the displacement theory.

**Theoretical Framework**

The current study proposes a theoretical model. The major tenets of this proposed model are: (1) association of educational motives with the Facebook use; (2) associations of the perceived consequences with the Facebook use; (3) difference in daily time patterns for Facebook use; (4) difference in time patterns for educational motives for Facebook use; (5) difference in daily time patterns for the educational motives for Facebook use; (6) difference in daily time patterns for the perceived consequences for Facebook use; (7) difference in weekly time patterns for Facebook use; (8) difference in weekly time patterns for educational motives; (9) difference in weekly time patterns for perceived consequences; (10) difference in male and female gender for Facebook use; (11) difference in male and female gender for the educational motives for Facebook; (12) difference in male and female gender for the perceived consequences resulting from Facebook use among university students in Lahore and (13) it is hypothesized that the proposed model shows an adequate level of variance for the association of two independent variables of motives and perceived consequences with the dependent variable of Facebook usage. These tenets are represented in the form of a model.



*Figure1. Educational Motives and Perceived Consequences as predictors of Facebook Use. Difference in Time Patterns (Daily, Weekly) and Gender for Facebook Use, Educational Motives and Perceived Consequences among University Students*

The theoretical strands of uses and gratifications, and the individual differences are extended to validate this proposed model. The uses and gratifications approach focuses attention on individuals in the mass communication process, respects intellect and ability of the media users, provides analysis of how they experience media content, differentiate active users of media from more passive users, studies the use of media as part of everyday social interaction and provides useful insight into adoption of new media (Baran & Davis, 2015) like Facebook. Educational motives for Facebook usage show the intellect and ability of the students. It is hypothesized that students will find Facebook for the educational gratifications rather than they perceive that the consequences resulting from Facebook use. The time is an important factor. It is found in the previous research that harms of the technology are directly proportional to exposure (Neuman,

1988). It is therefore hypothesized that more the students use Facebook more they are of the opinion that Facebook has negative consequences. In addition to this, the theoretical model is also explained with the help of theory of individual differences. The individual differences theory states that individual's different psychological make ups cause media influence to vary from person to person (Baran & Davis, 2015; DeFleur, 1970). It is therefore hypothesized that male and female students are likely to use Facebook differently. In the previous research it is found the discrepancy in the weekly and the daily time patterns of digital media and how they influence the mental wellbeing of youth (Przybylski & Weinstein, 2017). Therefore, it is hypothesized that there will be difference in daily and weekly time patterns for Facebook use for the educational gratifications and the how the students perceive the consequences for Facebook use. To explain these discrepancies, the individual as well as the interactional effects of the daily and the weekly time patterns are explained for the educational motives and the perceived consequences among university students in Lahore.

### **Methodology**

First objective of the research is to explain the associations of the educational motives and the perceived academic consequences with the Facebook usage to explain the best predictor. Second, it is aimed to find the individual and interactional effects of the daily and weekly time patterns and the gender for the Facebook use. Third it is aimed to explain the interaction effect of the daily and weekly time patterns for Facebook use, educational motives for Facebook use and the perceived consequences resulting from

Facebook use. To accomplish these objectives the universe for the study is university students in Pakistan. The population for the study is the university students in Lahore. By using convenience sampling technique 600 students are selected, 300 each from the University of the Punjab and the University of the Central Punjab. The number of questionnaires returned are 582 and 23 incomplete questionnaires are not included. The responses from the remaining 559 complete questionnaires are entered on SPSS.

Shahnaz (2011) had conceptualized the educational motives for Facebook usage sharing web-links related to assignments, discussion of academic matters with group members, to find information related to studies, to motivate friends to study hard and sharing academic related news. Hussain and Saleem (2016) had extended the scale used by Shahnaz (2011) in context of Pakistan which had achieved the better internal consistency value of .877 which is above the recommended value of .7(Pallant, 2007). Therefore, the 6 items being used in the previous research (Shahnaz, 2011; Hussain and Saleem, 2016) are used for the current study which are, "I use Facebook to share web-links related to assignment" "To discuss academic matters with group members" "To find information related to studies" "To motivate friends to study hard" "To share academic related news" and "To share ideas on projects/courses."

The perceived academic consequences resulting from Facebook usage are conceptualized as the consequences resulting from Facebook usage in the opinion of students like it come to their observation that they spend more time for Facebook use than attending classes, feeling guilty when caught using Facebook

during lecture, perceiving that Facebook is resulting into their poor academic grades, the cognition that the work/study/university/college getting worse and getting late for the submission of assignment because of Facebook usage on cell phone/smart phone in front of teacher (Hussain & Saleem, 2016). To measure the “perceived academic consequences resulting from Facebook usage”, 5 items from previous research (Hussain & Saleem, 2016) were extended which are, “ I tend to spend more time on Facebook than attending classes” “I feel guilty when I am caught red-handed using Facebook during lecture” “I notice Facebook usage is one of the factors responsible for my poor academic grades” “I notice that my work/study/university/college getting worse because of the amount of time I spend on Facebook” “I notice that I get late sometimes for the submission of my assignment because of Facebook Usage” and “I cheat teacher and use Facebook in class.” The researchers had not used the last item in their scale therefore the reliability of the extended scale was determined before finding the association.

The conceptualization for the Facebook usage is extended from the previous research related to activity patterns for Facebook usage (Hussain & Saleem, 2016). The Facebook usage for our research means the use of different Facebook features and the roaming for Facebook usage. The use of Facebook features among students means using ‘like’ feature, comment feature, share, chatting, status update, tagging, uploading, down loading. The proposed etiology of the roaming is the probability of being whatever, whenever and everywhere situations. Facebook

roaming thus is proposed to be conceptualized as making multiple or repetitive attempts for Facebook usage whatever the situation, using multiple media for this social networking site whenever is possible with the assistance of internet connectivity and using multiple spaces for Facebook usage wherever possible. The measures for activity patterns for Facebook usage in the previous research (Hussain & Saleem,2016) are extended to research the proposed factors of Facebook usage with the 11 items with two factors of Facebook usage i.e. i.e. usage for Facebook features and Facebook roaming. The features for Facebook usage is proposed to be measured on 8 items which are, "I often use like feature;" "I often use comment feature;" "I often use share feature;" "I use Facebook chat;" "I use status update and wall post;" "I use Facebook for tagging;" "I use Facebook for uploading;" "I use Facebook for downloading." The factor of Facebook usage is proposed to be measured on 3 items which are, "I prefer log into Facebook for multiple times in a day;" "I prefer more than one media for using Facebook;" and "I prefer more than one place for using Facebook." The researchers had made the attempt to make scale for Facebook usage but there were flaws in the level of measurement. The scale is reinvented and the internal consistency of it is made sure.

The response format for evaluating the responses for these independent and dependent variables is five-point Likert Scale with responses of, "1=Strongly Disagree;" "2=Disagree;" "3=Neutral;" "4=Agree;" "5=Strongly Agree."

The time commitment for Facebook usage is conceptualized as the daily time spent in minutes and hours and

the time spent within a week for this social networking site. The daily time in minutes and hours was assessed by asking respondents to select the appropriate time for Facebook use on nominal scale, "1=less than thirty minutes;" "2=thirty to sixty minutes;" "3=two hours;" "4=more than two hours;" and "5=more than three hours;" by asking the question, "How often do you happen to use Facebook on an average day in minutes and hours?". The weekly time assessment was measured on a 4 point ordinal scale with responses of, "1=twice in a week;" "2=once in a week;" "3=after two days interval;" and "4=almost every day", by asking the question from respondents, "In the running weekdays, how often do you happen to use Facebook?"

The gender is measured with responses of male or female on a nominal scale.

By using SPSS version 21, the reliability of the scales is determined; the tests of Spearman rho correlation are applied to research hypotheses. The multiple regressions is applied to test the proposed model. To explain research questions the two-way between groups ANOVAs are run. Tukey HSD tests are applied to explain the difference in groups for further analysis. The parametric tests are applied for the purpose of: explaining the correlations among Facebook use, , for finding the best predictors between the educational motives and the perceived consequences for Facebook usage; and the difference in demographics and the time patterns for overall Facebook usage, educational motives and the perceived consequences. The non-parametric tests are applied because the sampling frame was not available.

## **Results**

The descriptive statistics like mean and standard deviation and the internal consistency of the scales are presented in Table 1. The results for the associations and the predictors for first set of objectives are presented in the form of tables (e.g. Table2; Table 3). To explain interaction effect of weekly time patterns and gender on the Facebook use; and the interaction effects of daily and weekly time patterns for the educational motives for Facebook use and the perceived consequences resulting from Facebook use are explained in Table 4.

**Table 1: Statistics of Scales (n=559)**

Scales and Items	M	SD	$\alpha$
<b>Educational Motives</b>			<b>.812</b>
To share ideas on projects/courses	3.238	1.123	
I use Facebook to share web-links related to assignment	3.168	1.158	
To discuss academic matters with group members	3.268	1.134	
To find information related to studies	3.336	1.095	
To motivate friends to study hard	3.111	1.123	
To share academic related news	3.207	1.096	
<b>Perceived Educational Consequences</b>			<b>.848</b>
I tend to spend more time on Facebook than attending classes	2.526	1.350	
I feel guilty when I am caught red handed using Facebook during lecture	2.798	1.247	
I notice that Facebook usage is one of the factors responsible for my poor academic grades	2.873	1.203	
I notice that my work/study/university/college getting worse because of the amount of time I spend on Facebook	2.855	1.216	
I notice that I get late sometimes for the submission of my assignment because of Facebook usage	3.014	1.294	
I cheat teacher and use Facebook in class	3.052	1.293	
<b>Facebook Usage</b>			<b>.819</b>
<b>Features for Facebook Usage</b>			<b>.781</b>
I use Facebook Chat	3.288	1.294	



## Journal of Media Studies 35(2)

I use Status update	3.313	1.175	
I use Facebook for tagging posts	3.072	1.245	
I use Facebook for uploading	3.385	1.096	
I use Facebook for downloading	3.208	1.209	
I often use like feature	3.322	1.117	
I often use comment feature	3.385	1.143	
I often use share feature	3.374	1.154	
Facebook Roaming			.691
I prefer more than one place for using Facebook	3.288	1.225	
I prefer more than one media for using Facebook i.e cell phone or desk top	3.318	1.182	
I prefer log in to Facebook for multiple times in a day	3.379	1.202	

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Table1 summarizes the internal consistency of the scales for independent and dependent variables. The mean and the standard deviation of each item in these scales is presented for replication for future researchers in Appendix A. The recommended value of .7 (Pallant, 2007) is set as the criteria to evaluate the internal consistency among items. The table demonstrates that the scales for perceived consequences for Facebook usage ( $\alpha = .848$ ), over all Facebook usage ( $\alpha = .819$ ) and the educational motives for Facebook usage ( $\alpha = .812$ ) have shown better level of internal consistency. The scale for “usage for Facebook features” which is a factor for overall Facebook usage, has revealed the good level of internal consistency among items ( $\alpha = .781$ ). The factor of Facebook roaming ( $\alpha = .691$ ) of Facebook usage construct also has an acceptable level of internal consistency.

**Table 2: Association of Educational Motives for Facebook Usage with the Individual Factors of Facebook Usage and the Overall Facebook Usage (n=559)**

	1	2	3	4	5
1.Educational Motives	-	.155**	.411**	.381**	.475**
2.Perceived Academic Consequences		-	.170**	.197**	.226**
3. Features for Facebook Usage			-	.449**	.917**
4.Facebook Roaming				-	.693**
5.Facebook Usage					-

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 2 displays results about the correlations of the independent variables of motives for Facebook usage and the perceived consequences resulting from Facebook usage with the dependent variable of Facebook usage to determine which one between the independent variables shows the significant association. Both the independent variables have revealed the significant positive Spearman's Rho correlation coefficient with the Facebook usage. Against our hypothesis, the Educational motives had shown the medium level of correlation ( $r=.475$ ,  $p=.000$ ) with the Facebook usage in line with the recommendation of Cohen (1988). The educational motives ( $R^2=.23$ ) help to explain the 23% of the variance in respondents' scores on Facebook usage. The table also explains the association of the independent variables with the individual factors of Facebook usage. The educational motives for Facebook usage show medium level of correlation with the features for Facebook usage ( $r=.411$ ) and the Facebook roaming ( $r=.381$ ). The correlations are higher for the features for Facebook usage but slightly lower for Facebook roaming. The perceived academic consequences resulting from Facebook usage have the small levels of correlations with the Facebook usage ( $r=.226$ ). Table 3 presents results about the proposed model by explaining

the level of variance for the association of two independent variables of motives and perceived academic consequences with the Facebook usage.

**Table 3: Model Summary for Educational Motives and Perceived Educational Consequences as Predictors of Facebook Usage(n=559)**

	B	T	p	T	VIF	R <sup>2</sup>
Educational Motives	.402	10.637	.000	.971	1.030	-
Perceived Consequences	.200	5.293	.000	.971	1.030	-
Variance in Model	-	-	-	-	-	.229

To ensure that there are no multi-collinearity issues the recommendations by Pallant (2007) are made sure. Table1 shows that there are no multi-collinearity issues because the two independent variables have correlations less than .7 and one independent variable has correlation above .3; further Table 3 states that the tolerance value is .917 which is above .1 and the Variance Inflation Factor (VIF) is 1.030 which is less than 10, further there are no outliers and the data is equally distributed. The variance explained in the dependent variable of Facebook usage by the model which includes the independent variables of motives for Facebook usage and the perceived consequences is 22.9 % (R<sup>2</sup> = .229). Both the variables of educational motives ( $\beta = .402$ ) and the perceived consequences ( $\beta = .200$ ) are making significant unique contribution to the prediction of Facebook usage at  $p < .05$ . Table 3 summarizes the results about the interaction effects of gender and the weekly time commitment on Facebook usage; secondly, the interaction effect of daily and weekly time for Facebook usage on the educational motives for Facebook use; and thirdly, the interaction effect of the daily and

weekly time consumption on the perceived academic consequences among students.

**Table 4: Interaction Effects for Difference in Groups (n =559)**

Dependent Variables	Interacting Variables	df	Mean Square	F	p	$\eta^2$
Facebook Usage	Weekly Time	3	329.425	4.301	.005	.023
	Gender	1	421.031	5.497	.019	.010
	Weekly Time and Gender	3	98.237	1.283	.279	.007
Educational Motives	Daily Time	4	21.813	.953	.433	.007
	Weekly Time	3	100.061	4.373	.005	.024
	Daily and Weekly Time	10	48.966	2.140	.020	.038
Academic Consequences	Daily Time	4	142.987	4.522	.001	.032
	Weekly Time	3	17.014	.538	.656	.003
	Daily and Weekly Time	10	56.144	1.776	.062	.032

Table 4 shows the ANOVA results. A two-way between-groups ANOVA was run to research the impact of weekly time commitment and gender on overall Facebook usage. Subjects are divided into four groups according to their preference for Facebook usage (Group 1: once in a week; Group 2: twice in a week; Group 3: after two days interval; Group 4: almost every day) among male and female groups. The recommended value of  $< .05$  (Pallant, 2007) provides the basis for the evaluation of significance value. Cohen (1988) has classified the eta squared values of .01 as a small effect, .06 as a medium effect and .14 as a large effect. These values help to determine the effect size of difference in our study. The interaction effect of weekly time and gender on the overall Facebook usage is not significant,  $F(3,551) =$

1.283,  $p = .279$ . But, the individual variable of gender is significant,  $F(1, 551) = 5.497$ ,  $p = .019$  with small effect,  $\eta = .010$ . Post Hoc Comparisons using the Tukey HSD Test indicated that the mean score for Facebook usage among students is higher for weekly usage ( $M = 47.740$ ) than the daily usage ( $M = 42.257$ ). Figure 2 demonstrates that the mean score for male students who have used Facebook once in a week ( $M = 51$ ) and on daily basis is ( $M = 43.419$ ) higher than the female students who have used this social networking site once in a week ( $44.182$ ) and daily basis ( $41.419$ ). However, in both genders mean score for Facebook usage is higher for those who have used it once in week and almost every day.

The two-way between groups analysis was run to explore the interaction effect of daily and weekly time patterns on the educational motives for Facebook usage. Subjects were divided into nine groups in terms of their preference for educational motives for Facebook usage (Group 1: use Facebook for less than 30 minutes; Group 2: between 30 and 60minutes; Group 3: 2 hours; Group 4: more than two hours; Group 5: more than three hours; Group 6: once in a week; Group 7: twice in a week; Group 8: after two days' interval; Group 9: almost every day). The interaction effect of daily and weekly time on the educational motives for Facebook usage is statistically significant  $F(10, 541) = 2.140$ ,  $p = .020$ , with small effect ( $\eta^2 = .038$ ). There was a significantly main effect for weekly time consumption for Facebook usage  $F(10, 541) = 4.373$ ,  $p = .005$ . Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the educational gratifications from Facebook for once in a week ( $M=21.391$ ) was higher than

daily usage ( $M=19.332$ ) for the educational motives among students. The daily time in minutes and hours for the educational motives have not make any difference which implies that Facebook is useful for those students who use it for only once in a week.

The two two-way between-groups analysis was conducted to explore the impact of daily and weekly time patterns on the levels of perceived consequences resulting from Facebook usage. Subjects were divided into nine groups (Group 1: less than thirty minutes; Group 2: between thirty and sixty minutes; Group 3: 2hours; Group 4: more than 2 hours; Group 5: more than 3 hours; Group 6: once in a week; Group 7: twice in a week; Group 8: after two days' interval; Group 9: almost every day).The interaction effect of these two variables is significant,  $F(10,541)=1.776, p = .062$ , with small effect ( $\eta^2 = .032$ ). It is interesting to note the daily time for Facebook usage,  $(4,541) = 4.522, p = .001$  was significant, with the main small size effect ( $\eta^2 = .032$ ).Post-hoc comparisons using the Tukey HSD test enlightened that mean score for the students who have used Facebook once in a week is higher ( $M = 21$ ) than the for those who have used almost every day ( $M = 19$ ).

### **Discussion**

The study is being carried out with the objectives of explaining the associations of the educational motives with the Facebook use; the associations of the perceived consequences with the Facebook use; the interactional effect of gender and weekly time for Facebook use; and the interactional effect of the daily and weekly time patterns on the educational motives for Facebook use and the

perceived consequences resulting from Facebook use among university students. The current study is significant because it contributes to the body of knowledge by triangulating the uses and gratifications, displacement hypothesis and the individual difference theory.

The variance explained in the dependent variable of Facebook by the extended model with independent variables of motives and the perceived consequences is 22.9%. We had predicted that the perceived educational consequences for Facebook usage will more likely to predict Facebook usage but the results are against our expectation because students have used Facebook actively for the educational motives. The independent variable of motives made a unique contribution in this model ( $\beta = .4$ ). The students are using Facebook for sharing ideas on projects and courses, sharing web links related to assignments, discussing academic matters with group members, finding information related to studies and motivating their friends for studying. This result shows the intellectual ability of the students as the active users of Facebook.

The interaction effect of the difference in weekly time patterns and gender on the overall Facebook usage is not significant but the gender has small effect of difference in Facebook usage ( $\eta^2 = .01$ ). The weekly rate of Facebook usage once in a week is higher than daily use in male and female students; but male students are using with the highest mean score. The students are using Facebook features like chatting, status update, tagging, uploading and downloading, like, comment, share, uploading versus downloading with the preference of

more than one place and media for multiple times access to this social networking site in a week. Our study reveals that male students are using Facebook more than female students which is contradictory with the previous research that females had used Facebook more than male students (Shahnaz, 2011) but the research is in assertion with Hussain and Saleem (2016) who had found that male students were using this site more than female students. There was increase in both situations of weekly and daily usage and in both these situations male group of students had used it more frequently than the female group. There is also a decline trend in scores of these two groups from using it once in a week towards daily usage.

There is found small interaction effect of daily and weekly time commitment on the educational motives ( $\eta^2 = .038$ ) with a significant main effect for weekly time commitment for Facebook usage among students. The daily time in minutes and hours for the educational motives did not make any difference for the Facebook usage which implies that Facebook is a tool for social networking among students with the educational motives if students use it once in a week or not frequently.

The small interaction effect ( $\eta^2 = .032$ ) is revealed for the daily and weekly time patterns on perceived consequences resulting from Facebook usage. The point of consideration here is that the daily time has main small ( $\eta^2 = .032$ ) and weekly effect does not make any difference.

Although, there are found low levels of correlations between perceived educational consequences and the Facebook usage, however, there is found a slight decrease in the correlation



of educational motives with the individual factor of “Facebook roaming.” The Facebook roaming among students is done whatever the situation is by using it multiple times; they can access it whenever they want on multiple media; and wherever they want on multiple spaces. This implies that it is alright when students use diverse features of Facebook to interact but the increase in the different features for Facebook usage may lead to Facebook roaming which might result into the perceived academic consequences resulting from Facebook usage if not checked. There is found a trend with the consistency of responses after two hours of Facebook usage which implies that students are not different of their views about the negative impact of Facebook usage on their academic life.

It is explored that students who use Facebook for 2 hours once in a week, twice in a week, after two days interval or almost every day, are high in their opinion that Facebook has negative impact on their studies.

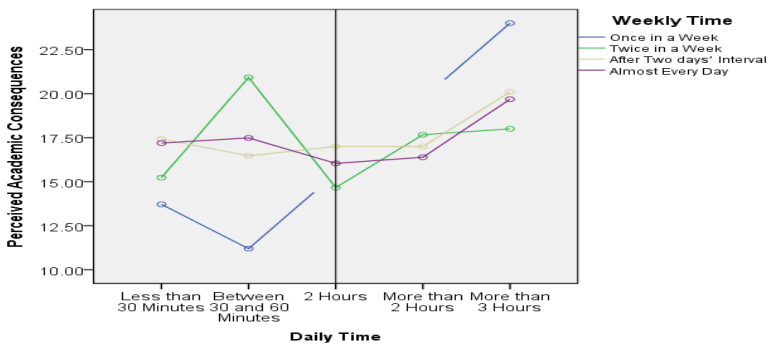


Figure1. Interaction Effect of Daily and Weekly Time Patterns for Increase in Responses of Perceived Academic Consequences resulting from Facebook Usage

The study has contributed to uses and gratifications theory by explaining the intellectual ability of the students who have used Facebook for the educational gratifications. At the same time the study adds to displacement theory by explaining interaction effect of daily versus weekly time commitment on the educational motives versus perceived academic consequence among students. There is conflict in our findings related to the daily and the weekly time commitment for Facebook usage and their impact on the educational gratifications versus the perceived academic consequences among students. Male students are using Facebook more than the female students once in a week and twice in a week which means that there is a higher probability of Facebook usage on weekends like on Saturdays and Sundays. The future researchers should measure the daily time in minutes and hours and also the weekly time to explain the academic performance of students. Students have perceived the educational consequences resulting from Facebook usage like their work/study/university or college is disturbed because of Facebook usage. Sometimes, they get late for the submission of their educational assignments. They are of the opinion that they have happened to compromise the class hours at university because of Facebook usage. They also found to be using Facebook during lectures in the classroom even in front of teacher and they have even perceived that the Facebook is one among the factors responsible for their poor academic results. The Facebook is a useful tool for grooming the intellectual ability of the students but its usage for more than 2 hours on daily or weekly basis is harmful for the academic performance of university students in

metropolitan Lahore city of Pakistan. The variable of age is not considered for our study which can better paint the picture of Facebook usage for educational motives versus the perceived academic consequences. The variable of age is also not interacted with the daily time for Facebook usage.

### **Conclusion**

The independent variable of educational motives for Facebook usage makes the unique contribution with the small interaction effect of daily and weekly time commitment which means Facebook is empowering students. However, the students who use Facebook for 2 hours on daily basis or in different intervals of the week do perceive that the Facebook usage has resulted into the academic consequences. With the smart phone there is possibility of Facebook usage whatever the situation is, whenever the students want and wherever they want indifferent parts of the day like before sleeping, therefore, it is recommended to check the daily use for Facebook which should not exceed two hours. If this recommended time is not checked then it will displace the active educational motives for Facebook usage among university students.

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