How Do University Students Spend Their Time On Facebook? An Exploratory Study

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Abstract: Despite major productive uses of Internet technology in today's digital world, users prefer to spend much more time on social networking sites (SNSs) like Facebook. The objective of this study is to determine student motives for using Facebook. A close-ended questionnaire was administered to 595 University students who were recognized as users of the site at Karlstad University in Sweden. Male users spend more time on the site than female users during both weekdays (p-value=0.9238) and weekends (p-value=0.9953). The survey showed that undergraduate students login more times per day than graduate students (p-value=0.2138). In addition, friendship was named the most favorite activity among male users (p-value=0.8883) and also among undergraduate students comparing with graduate students (p-value=0.2045). If users were asked to pay a membership fee to use the site, the results showed that male users (p-value=0.9991) and undergraduate students (p-value=0.9884) were more likely to pay the charge than other groups (females and graduate students). It is apparent that using Facebook can be seen as an important part of daily life among University students and its phenomenon spread out inevitably.
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1. Introduction

Among the variety of online tools now available for communication, social networking sites (SNSs) are one of the most recent and significant tools for connecting people throughout the world. The online world has already proven to impact numerous aspects of the human life including commerce, education, and health (Jalalian M., 2010, Jalalian M. 2008). These virtual spaces, the new building blocks of today's Internet, provide not only the power to access distributed and heterogeneous information, but also interact with millions of people all over the world. SNSs are virtual spaces that allow individuals to create personal profiles - visible to other users- to establish connections and join an online social network. These websites enable computer-mediated communication (CMC) between people. Social networking has been the tool that brings people together in just a click of a mouse (Raskin, 2006).

It seems that SNSs such as Facebook are changing the nature of social relationships (Body & Elisson, 2007). In fact, virtual spaces like Facebook and MySpace (www.myspace.com) offer today's online users a discursive space to experience "communal affiliation around shared experiences" (Mitra, 1997). SNSs users join cyber-communities to overcome geographical distance as well.

Facebook was established in February 2004 by Mark Zuckerberg, a former Harvard University student. The website has more than 500 million active users worldwide while about 70 percent of its users are outside the United States (Facebook, 2010).

Facebook offers its services in more than 75 languages (five times more than its nearest competitor, MySpace) and because of its popularity among Internet users, the number of users has increased considerably. The study on which this research is based examined the amount of time spent on Facebook and factors that persuade university students to fulfill their needs and desires through Facebook. Information was disclosed through paper-based interviews. The investigation assessed gender, education, and age differences in the disclosure of personal preferences and amount of time spent on Facebook. Respondents were students at Karlstad University in Sweden. The survey provided interviews among 595 students during November and December 2009.

The paper begins by discussing our hypothesis and research questions that were asked in the questionnaire. Next, we describe the methodology used to empirically investigate the hypotheses, followed by our analysis and discussion of the results. Finally, we discuss the implications and limitations of this research and suggestions for future research. A major contribution of this study lies in understanding the relationship among individual differences (gender and education), amount of time spent on Facebook, and individual preferences in Facebook usage among university students.

2. Material and Methods

Twelve hypotheses (Hs) regarding the subject of survey were defined and research on the basis of close-ended questions was designed. Investigations were conducted by questionnaire using six questions, with each question offering two to four proposed answers (PA). The questionnaire was developed using a variety of research questionnaires and the results of prior studies. For instance, question No. 4 addresses student motives (gratification) for using Facebook and other questions examine how a student's individual differences in gender and education are related to their use of Facebook. Table 1 illustrates the structure of the questionnaire.

The hypotheses of the survey were defined as follows:

H1: Facebook male users spend more time on Facebook during weekdays than female users.

H2: Undergraduate students use Facebook more during weekdays than graduate students.

H3: Most of Facebook male users spend more time on Facebook during weekends than females.

H4: Undergraduate students use Facebook more than graduate students during weekends.

H5: Most of Facebook male users login more than once a day than female users.

H6: More undergraduate students login to Facebook each day than graduate students.

H7: Friendship is the most favorite activity among male users on Facebook.

H8: Friendship is the most favorite activity among undergraduate users.

H9: Most of Facebook male users like to connect in the morning – more than female users do.

H10: More undergraduate students use Facebook in the morning than graduate students.

H11: Facebook male users are more favorably disposed top paying a fee to connect to the site than females.

H12: Undergraduate Facebook users are more favorably disposed to paying a fee to connect to the site than graduate students.

The city selected for this study is Karlstad, the capital of Värmland County in Sweden. The authors chose Karlstad University, which has approximately 12,000 students with diverse undergraduate and graduate majors. The survey was conducted on the basis of paper interviews that were held in November and December 2009.The data in this study was obtained using a survey questionnaire completed by undergraduate and master's students at Karlstad University. The University was chosen because of its wide range of Swedish and international students in an academic environment where there are many students who are familiar to Facebook. Students were interested in participating in the survey about Facebook. They were asked to comment on readability; understand the questions, and complete the questionnaire in a small period of time. The results indicate that the questions were clear and understandable and required about 15-20 minutes to complete. The goals of these questions were to consider how differences in education and gender are affected by Facebook use among University students.

Table 1. Questionnaire employed in the study

Gender: ( )Male ( ) Female
Do you currently have a Facebook account?   ( )Yes   ( ) No If you answered ''Yes'' to above question, please continue to item No. 1. If No, thank you for your time. If you connect to Facebook every day (Except weekend), answer the question below:
RQ1. How much time do you spend on Facebook during the day? AA1. a. Maximum 5 minutes   b. Maximum one hour   c. more than one hour
RQ2. How much time do you spend on Facebook during the weekend? AA2. a. Not at all   b. Maximum 5 minutes c. Maximum one hour   d. more than one hour
RQ3. How many times do you connect to Facebook during the day? AA3. a. Only one time   b. more than one time
RQ4. What is your first preference for using Facebook usually? AA4. a. Chat   b. Posts and comments c. Friendship   d. Other
RQ5. What times do you typically connect to Facebook? AA5. a. 8-12   b. 12-17   c. after 17
RQ6. If you had to pay a charge to login to Facebook, how would you be willing to pay per month? AA6. a. Maximum 50 Kr   b. More than 50 Kr c. No charge

To collect the data, we used a questionnaire that was distributed to 750 students and 595 (79.3 percent) answered the research questions regarding their Facebook usage. Responses were voluntary and those who never had a Facebook account did not participate in the survey. We asked students to answer questions and respond to one of the alternatives for each question. After capturing data from students in order to consider our hypothesis, we used Statistical Package for Social Science (SPSS) to analyze the questionnaires. Mean, standard deviation, and coefficient of variance for each question and

group of questions were calculated to determine the order of importance of research factors. ANOVA statistical analysis (t-test) was used to assess the validity of attitudes of male and female students at different education levels toward using Facebook.

3. Results

Table 2 illustrates the frequency distributions of the survey based on gender and education while Table 3 illustrates the separate results. The results showed that 57.6 percent of respondents were male and 42.4 percent were female. Most students were undergraduates. The total results, separated by survey's questionnaire, are presented in Table 2. To consider 12 hypotheses based on p-value test, we used Table 3 to evaluate our hypothesis.

TABLE 2. Frequency Distributions in the study sample

Percentage of the sample (n=595)	
Variable	Frequency (%)
Gender	
Male	342 (57.6)
Female	253 (42.4)
Education	
Undergraduate	434 (72.9)
Graduate	161 (27.1)

Ho is assumed as a null hypothesis. P is the ratio of Facebook users. P has a different meaning with respect to the subject of any hypothesis. For instance, in hypothesis No. 1, P male is the ratio of Facebook male users who spend more time on the site than female users. Results of p-value tests are shown below:

H1. Accepted
H_0: $P_{male} = P_{female}$
H_a: $P_{male} \neq P_{female}$
P-value= 0.9238> 0.05

H2.Accepted
H_0: $P_{Undergraduate} = P_{Graduale}$
H_a: $P_{Undergraduate} \neq P_{Graduale}$
P-value=1 >0.05

H3.Accepted
H_0: $P_{male} \geq P_{female}$
H_a: $P_{male} < P_{female}$
P-value=0.9953 > 0.05

H4.Accepted
H_0: $P_{Undergraduate} = P_{Graduale}$
H_a: $P_{Undergraduate} \neq P_{Graduale}$
P-value=0.3421> 0.05

H5.Accepted
H_0: $P_{male} \geq P_{female}$
H_a: $P_{male} < P_{female}$
P-value=0.9813> 0.05

H6.Rejected
H_0: $P_{Undergraduate} = P_{Graduale}$
H_a: $P_{Undergraduate} \neq P_{Graduale}$
P-value=0.2138> 0.05

H7. Accepted
H_0: $P_{Undergraduate} = P_{Graduale}$
H_a: $P_{Undergraduate} \neq P_{Graduale}$
P-value=0.8883> 0.05

H8. Accepted
H_0: $P_{Undergraduate} = P_{Graduale}$
H_a: $P_{Undergraduate} \neq P_{Graduale}$
P-value=0.2045>0.05

H9. Accepted
H_0: $P_{Undergraduate} = P_{Graduale}$
H_a: $P_{Undergraduate} \neq P_{Graduale}$
P-value=0.3923> 0.05

H10. Accepted
H_0: $P_{Undergraduate} = P_{Graduale}$
H_a: $P_{Undergraduate} \neq P_{Graduale}$
P-value=0.9755> 0.05

H11. Rejected
H_0: $P_{male} \geq P_{female}$
H_a: $P_{male} < P_{female}$
P-value=0.9991>0.05

H12. Accepted
H_0: $P_{Undergraduate} = P_{Graduale}$
H_a: $P_{Undergraduate} \neq P_{Graduale}$
P-value= 0.9884>0.05

TABLE 3. Frequency of survey results based on gender and education

		Education		Gender	
		Undergraduate	Graduate	Male	Female
How much time do you spend on Facebook during the day?	Seldom.	0	4	4	0
	Less than 5 minutes.	25	17	24	18
	5 to 30 minutes.	48	31	41	38
	More than one hour.	350	90	245	195
How much time do you spend on Facebook on the weekend?	Seldom.	213	45	133	125
	Less than 5 minutes.	27	12	16	23
	5 to 30 minutes.	44	40	54	30
	More than one hour.	146	61	134	73
How many times do you connect to Facebook per day? (Except weekends)	Only once.	47	24	30	41
	More than once .	367	114	277	204
	Less than daily.	9	1	6	4
What is your first preference for using Facebook usually?	Chat.	103	24	56	71
	Posts and comments.	140	49	121	68
	Friendship.	176	75	143	108
	Other.	14	12	21	5
What time do you typically connect to Facebook?	8-12.	62	23	45	40
	12-17.	77	33	68	42
	After 17.	292	105	229	168
	Sometimes.	0	0	0	0
If you had to pay a charge to login to Facebook, how much would you be willing to pay per month?	Up to 50 Kr.	88	62	103	47
	50 to 200 Kr.	122	34	93	63
	No charge.	221	65	146	140
How does Facebook affect your social relationships in the real world?	It increases my social relations completely.	94	42	99	37
	It decreases my social relations in completely.	163	49	107	105
	It causes negative and positive effects.	74	40	66	48
	I have never thought about that.	100	28	67	61

4. Discussions

The aim of the study was to examine how university students who deal with SNSs, particularly Facebook.com, spend their time on the site and what their motivations are. In accordance with different gender, education levels, and preferences in using Facebook, results revealed that male Facebook users spend more time on Facebook during the weekday (p-value=0.9238>0.05) than female users. In addition, males spend more time on the site on weekends (p-value=0.9953>0.05) than female users.

The number of site logins among graduate students appears to be less than undergraduate students (P-value=0.2138>0.05). Moreover, most male respondents chose friendship as their most favorite activity (p-value=0.8883>0.05) instead of other activities (chat, postings, and comments). Also, friendship was recognized as the most popular activity for undergraduate students compared to graduate students (p-value=0.2045>0.05). One question related to the user's willingness to pay a membership fee to connect the site. The result of p-value test found that male users (p-value=0.9991>0.05) and undergraduate students (p-value=0.9884>0.05) were more interested in paying a charge than other groups (female and graduate students).

The results showed that the vast majority of respondents in our survey use Facebook. One explanation for this popularity is that SNS usage among Internet users has increased dramatically in

today's information-driven societies in Western countries.

Numerous articles outline the significant relationship between SNS and psychological subjects. Some believe that motivations that determine how young people use online social networks are psychological ones, and they are strongly related to the human needs of communication, socialization, being an active part of a group, or maintaining long-distance friendships (Baltaretu & Balaban, 2010). Moreover, there has been significant discussion about the relationship between online media and offline social activities and interpersonal interaction (DiMaggio, Hargittai, Neuman & Robinson, 2001). Thus, the findings show that Facebook usage among Swedish university students seems to be an important part of their everyday life but can present some challenges in their social relationships.

Some researchers have suggested that greater Internet use results in smaller social circles, less communication at home, and loneliness (Kraut et al., 1998). Spending more time on the Internet and particularly in SNSs can create an addiction to the Internet. Internet addiction is a prevalent problem affecting individuals throughout the world and is recognized as an artifact stage of Internet adoption within a society (Zhang & Amos, 2008). The author believes that there are some limitations to this research.

Like any research, the investigation has many limitations that should be considered before generalizing the results to other contexts and recommending future research. First, the survey only sought opinions of students from just one university. However, every university is different. Therefore, norms and preferences of Facebook users and time usage on this SNS might vary from one university to another or from one part of the country to another. The next limitation of this study involves the lack of facilities and human resources to fully examine the topic of spending time on SNS. Due to these constraints, only 595 students were surveyed. The data comes from students at Karlstad University in Sweden. It is problematic to generalize these findings to the entire worldwide population of SNS members who have diverse backgrounds and different levels of education with different nationalities, attitudes, preferences, and expectations.

Third, the participants were students at one university in Sweden. In this case, the choice of students was appropriate since they are the primary target of one SNS used as a frame of reference in this study. It seems that SNS users are have a wide range of education and interests. Accordingly, to increase the validation of these results and generalize the study's findings, future research should examine other sample groups in different age groups such as high school students, homeowners, and so on.

In addition, the study focused on participants who were studying in Nordic countries. Culture, stage of economic development, and political–economic traditions in Sweden surely influenced the preferences of Facebook users in this country.

The number of Facebook users has increased dramatically in today's global village. Not surprisingly, the site is an important part of daily life among students and its phenomenon has spread out steadily.

Therefore, further investigation is needed to learn if there are specific cultural and nationality differences among Facebook users that could influence generalizability. However, it must be kept in mind that many methodological differences exist among these studies, each of which uses different estimation techniques, question formats, and/or vehicles of payment. Some supplementary issues that should be considered in future research include users' reasons and expectations for using social networking sites such as Facebook. Is it to keep in touch with personal friends or to meet new friends? The content and use of social networking should certainly be a topic of discussion in any managerial aspect such as human resource management (HRM), informal learning within organization, and so on. Consequently, these aspects can be used to either approve or reject our findings.

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