

Revista de Cercetare si Interventie sociala

ISSN: 1583-3410 (print), ISSN: 1584-5397 (electronic)

EFFECTS OF SOCIAL MEDIA USAGE ON ACADEMIC PERFORMANCE OF UNDERGRADUATE STUDENTS

Sevilay ARSLAN

Revista de cercetare și intervenție socială, 2018, vol. 63, pp. 329-345

The online version of this article can be found at:

www.rcis.ro, www.doaj.org and www.scopus.com

Published by: Expert Projects Publishing House



On behalf of: "Alexandru Ioan Cuza" University, Department of Sociology and Social Work and HoltIS Association

REVISTA DE CERCETARE SI INTERVENTIE SOCIALA is indexed by Clarivate Analytics (Web of Science) - Social Sciences Citation Index (Sociology and Social Work Domains)

Effects of Social Media Usage on Academic Performance of Undergraduate Students

Sevilay ARSLAN1

Abstract

Social media has gained widespread and universal usage among higher education students and started to serve as a new communication platform in teaching and learning process. This article presents the results of a survey study conducted to 394 undergraduate students to analyse the relationship between the variables of social media usage and undergraduate student's academic performance. Additionally, to explore the relationship between using social media in communication activities for academic purposes and undergraduate student's academic performance are among the main concerns of this study. The relationships between mentioned variables were studied by correlational method in descriptive manner. Research results reveal once again the high level of social media usage among undergraduate students to perform variety of daily activities. It has been also determined that, social media as an out of class environment that allows communication about academic issues plays a weak but positive role to increase the level of being more active in class and time spent for preparation to the course before class that are all related to higher academic performance.

Keywords: academic communication, academic performance, higher education, new media, social media.

Introduction

We are living in an era that especially young generation need and want real time information, instant response and instead of being passive receivers, involve actively in the learning process. Tapscott (1997) called this generation as Net Generation and argues that they were born surrounded by technology and live in social networks. Prensky (2001) introduced another term and named this generation as digital natives. Digital natives are the generation that grew up with new technology and as Prensky (2001) argues they used to receiving information really fast; like to parallel process and multi-task and they function best when

¹ Cyprus International University, Dept. of Radio and TV, Lefkosa, North Cyprus, Mersin-10, TURKEY. E-mail: soren@ciu.edu.tr

networked. With the arrival and rapid dissemination of digital technology in the last decades students changed radically and the internet, cell phones and instant messages became integral parts of their life (Prensky, 2001).

This study aims to provide descriptive evidence for better understand the nature of the relationship between social media usage and academic performance. Grade Point Average (GPA) is the method most universities use to measure student's academic performance. As such the GPA variable used to measure academic performance in this paper. This study also takes into account the assumptions and research results conclude that GPA is closely linked with class attendance, class participation and preparation to the course before class (Schmidt, 1983; Park & Kerr, 1990; Weaver & Qi, 2005; Marburger, 2006; Petress, 2006; Chen & Lin, 2008). Therefore, in this study, academic performance of undergraduate students also evaluated in relation to class attendance, class participation and preparation to the course before class. In this way, it is aimed to reach a more comprehensive understanding of the effects of social media usage as an independent variable on academic performance.

Following the assumption that, social media is a new communication environment students and lecturers use for academic activities and online activities matters when examining academic outcomes (Junco, Heiberger & Loken 2011) and furthermore, how technologies are used is more essential in predicting outcomes than how much time spent with technology (Gordon et. al. 2007; Cotton 2008) this study investigates the relationship between the independent variables of social media usage for non-academic activities and communication activities for academic purposes and dependent variable that is undergraduate student's academic performance.

Conceptual Framework

Educational researchers and theorists use variety of methods aim to develop theories that conceptualize how new communication technologies are related to teaching/learning process, academic communication, academic performance and etc. Most of the studies used to measure this relationship based on the assumptions of the time-based models of learning and psychological models of learning.

Time-based models of learning accept that student's achieve academic goals because of the time and effort spent on activities designed to meet these goals (Carroll, 1963; Astin 1984; Chickering & Gamson, 1987). Researchers who adopt time-based models of learning state that the amount of time students spend studying is a critical factor for academic success and therefore aim to explore how time spent engaging with new communication technologies including social media is related to academic performance. These studies offer mixed findings about the subject.

Based on the perspective of time-displacement, some of these studies conclude that, if the amounts of time students spend studying displaced with the amount of time spent engaging with social media, there may be a reduction on their available time to spend on academic activities. In this context, social media is negatively related to academic performance and is a lot more momentous than its advantages (Englander, Terregrossa & Wang, 2010). Nalwa and Anand (2003) found that addicted users prefer using internet setting back their personal and professional responsibilities that finally leads to poor academic performance. Tamayo and dela Cruz (2014) argue that, students who use social media in great extent still has no time to do their studies, attendance to school and participation to school activities; so it has a remarkable effect on the academic performance. In their studies, Kuppuswamy and Narayan (2010) conclude that social network websites grab attention of the students and then divert it towards non-educational and inappropriate activities. Jacobsen and Forste (2011) indicate that the most intensive users of social media are interacting on the platform, playing video games and using other electronic media for expressing themselves, and as Mihaly (2009) puts, these are the activities that might limit the time available for studying, thus possibly negatively affect their academic performance.

Other researches aimed to explore whether there is a statistically significant relationship between variables of time spent on social media and academic performance, found either no significant relationship between these two variables (Hargittai & Hsieh, 2010; Ahmed & Qazi, 2011; Ellore, Niranjan & Brown, 2014) or reach any result support the assumption that using social media is a variable that effects student's class attendance and class participation (Ogedebe, Emmanuelle & Musa, 2012).

Besides from the time-based models, some researchers had adopted the psychological models of learning and instead of analysing time factor's effect, they investigate the effects of psychological characteristics of learning environment (Astin, 1993; Fraser et al., 1987) on academic performance. Psychological models of learning suggests that psychological characteristics of classroom learning environment show an increasing effectuality in predicting student achievement by contributing to gains in student abilities, interests, and attitudes (Holland, 1997; Feldman, Ethington, & Smart, 2001). Researchers who adopted this model, have focused on student-student and student-faculty interactions not only in-class context but also out-of class environment and student involvement in learning. Most of the studies have concluded positive outcomes of student-student (Johnson, 1981) and student-faculty interaction on student's academic achievements (Astin, 1993; Pascarella & Terenzini, 2005). In their studies, Kuh and Hu (2001) report a positive influence of student-faculty interaction on the level of effort students devoted to other educationally purposeful activities and all types of gain measures. Weaver and Qi (2005) argue that student-faculty out-of-class interaction could reduce obstacles to communication and in turn encourage students to engage activities involving class participation. The authors report that students perceived student-faculty interaction as influencing their participation rate by increasing their confidence and diminish their fear of instructor's criticisms and other student's disapproval. The authors posit that student-faculty interaction is a critical factor for explaining class participation and furthermore actively participating in the learning process can contribute student's personal and academic development.

Beginning in the 1990s, social media have emerged as a new communication platform and cause an increase in the amount of totally-mediated interactions making the possibility of developing and sustaining entire relationships in an online environment. In parallel with this development, most of the studies based on psychological models of learning or social information theory accepted that social media has become an important communication platform where students develop relationships and interaction with the lecturers and with each other. According to Al-Khalifa and Garcia (2013) social media plays many different roles in education as a communication platform that allowing students to share ideas, build their own communities to collaborate with each other and also allowing instructors to communicate with the students so that they can understand and teach them at the same time. In their study, Manca and Ranieri (2013) list main academic uses of Facebook as; supporting class discussions and improve student's engagement in collaborative learning; developing content; sharing educational resources; delivering content to expose students to extra-curricular resources and supporting self- managed learning. Studies that suggest social media is positively related to academic performance conclude that, social media activities may strengthen student relationship and is used to increase their participation in class and with the help of online activities, students can actively engage online group learning, improve their learning motivation and develop their collaborative abilities (Wheeler, Yeomans & Wheeler, 2008; Rifkin, 2009). Another argument of these studies is that, social media activities may strengthen student's relations and connectedness and this relationship and connectedness is positively related to student's academic engagement (school and lecturers) and in turn their academic achievements (Eccles & Templeton, 2002; Feldman & Matjasko, 2005; Ahn, 2011).

Research Methodology

Problem of the Study

The aim of this study is to provide descriptive evidence for better understand the nature of the relationship between the variables: using social media for non-academic activities; using social media in communication activities for academic purposes and undergraduate student's academic performance in relation to GPA and also class attendance, class participation, and preparation to the course before class as the activities that are positively related to academic performance.

Therefore, the following research questions answered in this study:

- Research Question 1: To what extent do undergraduate students use social media for non-academic activities and communication activities for academic purposes?
- Research Question 2: Is there a statistically significant relationship between using social media for non-academic activities and undergraduate student's academic performance?
- Research Question 3: Is there a statistically significant relationship between using social media in communication activities for academic purposes with other students and undergraduate student's academic performance?
- Research Question 4: Is there a statistically significant relationship between using social media in communication activities for academic purposes with their lecturers and undergraduate student's academic performance?

Data Gathering Methods, Tools and Data Analyses

In this research, the relationship between social media usage and undergraduate student's academic performance was studied by correlational method in descriptive manner. Data was gathered through survey method. A questionnaire used as the main data gathering tool. The questionnaire was divided into 4 sections:

- Section 1 consists of statements for measuring the frequency (f) of social media usage of undergraduate students.
- Section 2 includes statements for evaluating use of social media for nonacademic and communication activities for academic purposes. Use of social media for non-academic activities measured under three groups and adopted by Rahman (2014), Shen and Khalife (2010), Jabr (2011), Agarwal and Mital (2009). These groups are named as "use social media for personal activities", "use social media for entertainment activities" and "use social media for commercial activities". Personal activities (PA) scale items are; connect with friends (PA1), connect with family (PA2). Entertainment activities (EA) scale items include; watch videos (EA1) and listen to music (EA2). Commercial activities (CA) scale items listed as; follow daily news updates on social media (CA1), watch and share world news with friends (CA2). Items used to measure using social media in communication activities for academic purposes are analysed under two categories as student-student communication about academic issues (CAOS) and student-lecturer communication about academic issues (CAOL). Scale items used to measure student-student communication about academic issues are; to ask questions and get feedback about academic issues from other students via social media (CAOS1); to share needs and wants about academic issues with other students via social media (CAOS2) and to establish and develop relationship with other students via social media (CAOS3). Scale items used to measure studentlecturer communication about academic issues via social media are; to ask questions and get feedback about academic issues from lecturers via social media (CAOL1); to share needs and wants about academic issues with lecturers via social media

(CAOL2) and to establish and develop relationship with lecturers via social media (CAOL3). – In the third section of the questionnaire undergraduate students were asked to answer questions regarding their frequency of attending class, class participation and preparation to the course before class. In this research, class attendance (CA) measured in relation to being present in the class during the designated class time (CA1). Class participation (CP) measured in relation to the level of engagement in class material and class activities including contributing in discussion sections (CP1), paying attention to lecture (CP2) and actively participating group activities that accompanied the lectures (CP3). Preparation to the course before class (PCBC) measured as time spent studying class materials outside of class and preparing for the class session itself including completing any homework or tasks assigned by the lecturer before the next class (PCBC1) and reading the class material before the class (PCBC2).

 Section 4 includes various questions to determine the demographic characteristics of participants. This part also includes a question to learn the GPA of undergraduate students.

To test the reliability (the consistency of the measure) and validity of instruments whether they are measuring what we intend it to measure, we piloted the questionnaire. The piloted data was tested with reliability and factor analysis and all results of the construct validity (factor loading), composite reliability (CR), the average variance extracted (AVE) and Cronbach's Alpha (α) are provided in Table 1. There are different reports about the acceptable values of Reliability and Validity analysis results. However, in general, CR value greater than 0.70; AVE and the factor loading value greater than 0.50 and Cronbach's α value greater than 0.70 is acceptable (Hair *et al.* 2011).

Table 1. Reliability and validity analysis results

Constructs	Factors	Scale Items	Factor Loading	AVE	CR	Cronbach's (α)
	DA	PA1	.606			
Use of Social	PA	PA2	.917	_		
Media for Non- Academic Activities	EA CA	EA1	.898	_		
		EA2	.859	_		
		CA1	.830	.687	.928	.792
		CA2	.827			

Use of SOCİAL MEDİA in CAOS CAOS2 .870 CAOS3 .799 CAOL1 .933 Use of Social Media in Communication Activities for Academic Purposes CAOL2 .923 Academic Performance Performance PCBC PCBC2 .776 GPA GPA .662 .870 .743 .945 .915 .743 .945 .915 .743 .945 .915 .744 .945 .915 .745 .945 .915 .746 .921 .821 .821 .822 .923 .748 .945 .915 .749 .945 .915 .749 .945 .915 .740 .945 .915 .741 .945 .945 .915 .743 .945 .915 .743 .945 .915 .743 .945 .915 .743 .945 .915 .743 .945 .915 .744 .945 .915 .745 .945 .915 .746 .945 .945 .915 .747 .945 .945 .915 .748 .945 .945 .748 .945 .945 .74							
CAOS CAOS2 .870 CAOS3 .799 CAOL1 .933 CAOL2 .923 Wedia in Communication Activities for Academic Purposes CAOL CAOL3 .721 AC AC1 .505 CP1 .662 CP2 .674 PCBC PCBC1 .817 PCBC2 .776 CAOL3 .750 .743 .945 .915 .743 .945 .915 .743 .945 .915 .743 .945 .915 .743 .945 .915 .744 .745 .945 .915 .745 .945 .915 .746 .945 .915 .748 .945 .945 .748 .945 .945 .7			CAOS1	.909			
Use of Social CAOL1 .933 Media in Communication Activities for Academic Purposes CAOL CAOL3 .721 ACACLA .743 .945 .915 CAOL3 .721 ACACLA .721 A	MEDİA in	CAOS	CAOS2	.870			
Use of Social Media in Communication Activities for Academic Purposes CAOL Academic Purposes CAOL CAOL3 .743 .945 .915 .915 .743 .945 .915 .915 .916			CAOS3	.799			
Media in Communication Activities for Academic Purposes CAOL CAOL3 .743 .945 .915 CAOL3 .721 Academic Performance PCBC PCBC PCBC2 .776 .743 .7	-		CAOL1	.933	_		
CAOL	Media in Communication Activities for		CAOL2	.923			
Academic Performance PCBC PCBC .776 AC	Academic Purposes	CAOL			.743	.945	.915
CP1 .662 CP2 .674 Academic CP CP3 .845 Performance PCBC PCBC1 .817 PCBC .776 CP1 .662 .674 .845 .521 .864 .701			CAOL3	.721			
CP1 .662 CP2 .674 Academic CP CP3 .845 Performance PCBC PCBC1 .817 PCBC .776 CP1 .662 .674 .845 .521 .864 .701							
Academic CP CP3 .674 Performance PCBC PCBC1 .817 PCBC PCBC2 .776 CP2 .674 .845 PCBC1 .817 .521 .864 .701		AC	AC1	.505	-		
Academic CP CP3 .845 Performance PCBC PCBC1 .817 .521 .864 .701 PCBC PCBC2 .776	_		CP1	.662	_		
Performance PCBC PCBC1 .817 .521 .864 .701 PCBC2 .776			CP2	.674			
PCBC PCBC1 .817 .521 .864 .701 PCBC2 .776		СР	CP3	.845	_		
PCBC2 .776	Pertormance	PCBC	PCBC1	.817	.521	.864	.701
GPA GPA .662	_		PCBC2	.776			
		GPA	GPA	.662			

According to test results given in *Table 1*, reliability and validity analysis results showed that our questionnaire that is designed for this study is reliable and valid. In this descriptive study, quantitative data collected by the survey were examined in the line with correlational method to determine the relationship between independent and dependent variables and obtain data related to level of variance and cause-effect relation. The data were analysed by SPSS 21 using frequency, correlation and regression analysis.

The population of this research comprises the undergraduate students who are educating in Universities located in North Cyprus. The total number of university students enrolled in 13 Universities established in North Cyprus during 2015-2016 Academic Year Fall Semester is approximately 81 thousand (http://www.mebnet.net). In this regard, the sample size of the survey was determined to be 394 (n=394) within a confidence interval of 95% and with a significance level of 0.05. Undergraduate students from three international universities were included in the research sample. These universities sampled based on the fact that they had the highest enrolment. The sizes of samples selected from three universities were determined by taking into account the number of students in each university. The first University included in the sample has around 26 thousand students (comprise 32% of total registered

students) while the second University has a population of about 19 thousand students (comprise 23.5% of total registered students) and the third University has 15 thousand students (comprise 18.5% of total registered students) during 2015-2016 Academic Year Fall Semester.

In this regard, 170 (n=170) students were included in the sample from the first, 125 (n=125) students were included in the sample from the second and 99 (n=99) students were included in the sample from the third University. In each University, different faculties were selected using stratified random sampling. Faculty of Education, Dentistry, Law, Performing Arts, Veterinary Medicine and Engineering students were included in the research sample from the first University. Students from Faculty of Pharmacy, Art and Sciences, Architecture, Medicine and Tourism were included in the sample from the second University. And students from the Faculty of Business and Economics, Politics, Communication and Health Sciences were included in the sample from the third University. After getting necessary legal and ethical permissions from Universities, we visited the faculties and scheduled classes after the 2015/2016 Academic Year Fall Semester and ask for students to participate our survey. The questionnaire conducted face to face.

Results and Discussion

Demographics of Participants

As can be seen in *Table 2*, 22.3% of participants were between 18-20 while 49% were between 21-23, 16.3% were between 24-26 and 12.5% were between 27-30 years old. 60.9% of participants were male while 39.1% were female.

Age Group	Demographics	Percentage (%)		
	18-20	22.3		
	21-23	49.0		
	24-26	16.3		
	27-30	12.5		
Gender	Male	60.9		
	Female	39.1		

Table 2. Demographics of participants

Nationality	Turks	54.1	
	Cypriot	19.3	
	African	9.6	
_	Palestinian	2.8	
_	Iranian	2.5	
_	Syrian	2.5	
	Russian	1.3	
	Pakistani	0.8	
	Lebanese	0.8	
	Azerbaijani	0.5	
_	Egyptian	0.5	
_	Jordanian	1.0	
_	Congolese	0.8	
	Canadian	0.5	
	British	0.5	
	Kazakh	0.5	
	Moroccan	0.5	
	Sudanese	0.3	
_	Yemeni	0.3	
_	Sri Lankan	0.3	
_	Tajik	0.3	
	Turkmen	0.3	
_	Swedes	0.3	

With regards to nationality, majority of participants (54.1%) were from Turkey. The ratio of participants from Cyprus were 19.3% while 9.6% of students were from Africa, 2.8% from Palestine, 2.5% from Iran, 2.5% from Syria, 1.3% from Russia, 0.8% from Pakistan, 0.8% from Lebanon, 0.5% from Azerbaijani, 0.5% from Egypt, 1.0% from Jordan, 0.8% from Congo, 0.5% from Canada, 0.5% from Britain, 0.5% from Kazakhstan, 0.5% from Morocco, 0.3% from Sudan, 0.3% from Yemen, 0.3% from Sri Lanka, 0.3% from Tajikistan, 0.3% from Turkmenistan and 0.3% from Sweden.

Social Media Usage Frequency of Undergraduate Students for Nonacademic Activities and Communication Activities for Academic Purposes

Analysis results in *Table 3*, regarding means of social media usage for non-academic activities and communication activities for academic purposes used to answer Research Question 1. According to Table 3, undergraduate students prefer

to use social media mainly for personal (\overline{X} = 4.06) and entertainment (\overline{X} = 3.86) activities than commercial (\overline{X} = 3.46) and communication activities for academic purposes (\overline{X} = 3.15).

Table 3. Social media usage frequency for non-academic activities and communication activities for academic purposes

Constructs	Factors	Scale Items	Mean (\overline{X})		Std. Deviation			
	PA	PA1	4.19	4.06	.989			
Use of Social Media for non-	.,,	PA2	3.93		1.220 1.065 1.220 1.149 1.316			
Academic	5 4	EA1	3.87	2.06	1.065			
Activities	EA	EA2	3.87	3.86	1.220			
		CA1	3.91	3.91	1.149			
	CA	CA2	3.02	3.46	1.316			
Use of Social	CAOS	CAOS1	3.52		1.181			
Media in		CAOS2	3.45		1.210			
Communication		CAOS3	3.35		1.213			
Activities for Academic Purposes		CAOL1	2.92	3.15	1.300			
	CAOL	CAOL2	2.86		1.315			
	0,102	CAOL3	2.84		1.313			

Results demonstrate that undergraduate students less likely communicate with their lecturers ($\overline{X}=2.87$); to ask questions and get feedback about academic issues ($\overline{X}=2.92$); to share needs and wants about academic issues ($\overline{X}=2.86$) and to establish and develop relationship via social media ($\overline{X}=2.84$) and prefer to communicate more frequently with other students ($\overline{X}=3.44$) to ask questions and get feedback about academic issues ($\overline{X}=3.52$); to share needs and wants about academic issues ($\overline{X}=3.45$) and to establish and develop relationship via social media ($\overline{X}=3.35$).

The Relationship between Social Media Usage for Non-academic Activities and Communication Activities for Academic Purposes and Undergraduate Student's Academic Performance

Table 4 gives the results of correlation and regression analysis conducted to test the nature and strength of relationship between variables of undergraduate students social media usage frequencies for different activities and academic performance in relation to GPA and also class attendance, class participation and preparation to the course before class. Analysis results used to answer Research Questions 2, 3 and 4.

Table 4. Correlation and regression analysis regarding the relationship between social media usage frequency for different activities and the academic performance

Academic Performance	Social Media Usage for Different Activities	PA	EA	CA	CAOS	CAOL
	Pearson Correlation	090	.027	.004	117	071
	Sig. (2-tailed)	.074	.587	.932	.020**	.150
	N	394	394	394	394	394
CA	r²				.011	
	F				5.480	
	S.E.				.056	
	Т				-2.340	
	Pearson Correlation	.253	.119	.227	.245	.217
	Sig. (2-tailed)	.000**	.018**	.000**	.000**	.000**
	N	394	394	394	394	394
СР	r²	.062	.014	.049	.058	.045
	F	26.890	5.600	21.220	24.960	19.410
	S.E.	.049	.043	.045	.061	.069
	Т	5.180	2.360	4.600	4.990	4.400
	Pearson Correlation	.198	.087	.231	.245	.231
	Sig. (2-tailed)	.000**	.085	.000**	.000**	.000**
	N	394	394	394	394	394
PCBC	r²	.037		.051	.057	.051
	F	16.020		21.990	24.970	22.040
	S.E.	.063		.056	.049	.055
	Т	4.000		4.690	4.99	4.690

GPA	Pearson Correlation	.030	.030	080	.070	.060
	Sig. (2-tailed)	.550	.490	.090	.120	.180
	N	394	394	394	394	394

^{**}Correlation is significant at the 0.01 level (2-tailed).

Correlation and regression analysis results given in Table 4 show that, there is a statistically significant and positive relationship between class participation and social media usage frequency for personal (r=0.253, p=0.000<0.05), entertainment (r=0.119, p=0.18<0.05) and commercial (r=0.227, p=0.000<0.05) activities. Social media usage frequency for personal activities were able to account 6.2% (r²=0.062, F=26.890, t=5.180); social media usage frequency for entertainment activities were able to account 1.4% (r²=0.014, F=5.600, t=2.360) and social media usage frequency for commercial activities were able to account 4.9% (r²=0.049, F=21.220, t=4.600) of this positive variances in class participation level of undergraduate students.

Analysis results also revealed that there is a statistically significant and positive relationship between preparation to the course before class and social media usage frequency for personal (r=0.198, p=0.000<0.05) and commercial (r=0.231, p=0.000<0.05) activities. Results indicate that, social media usage frequency for personal activities were able to account 3.7% (r²=0.037, F=16.020, t=4.000) and social media usage frequency for commercial activities were able to account 5.1% (r²=0.051, F=21.990, t=4.690) of this positive variances in preparation to the course before class level of undergraduate students.

According to the data presented in Table 4; there is a statistically significant and positive relationship between the undergraduate student's frequency of social media usage to communicate about academic issues with other students via social media and their level of attending class (r=0.20 p=0.000<0.05); class participation (r=0.245, p=0.000<0.05) and preparation to the course before class (r=0.245, p=0.000<0.05).

The coefficient value of determination (r²) for the variables of undergraduate student's frequency of social media usage to communicate about academic issues with other students via social media and level of attending class has a value of 0.011. The results (r²=0.011, F=5.480, t=2.342) indicate that about 1.1% of the relationship is the result of the frequency of social media usage to communicate about academic issues with other students via social media. Regression analysis results also show that, social media usage to communicate about academic issues with other students via social media were able to account 5.7% (r²=0.057, F=24.961, t=4.996) of the positive variances in class participation and 5.8% (r²=0.058, F=24.960, t=4.990) of the positive variances in preparation to the course before class level of undergraduate students.

According to *Table 4*, there is a statistically significant and positive relationship between the undergraduate student's frequency of social media usage to communicate about academic issues with lecturers via social media and their level of class participation (r=0.217, p=0.000<0.05) and preparation to the course before class (r=0.231, p=0.000<0.05). According to the data at hand, (r²=0.045, F=19.410, t=4.400) about 4.5% of the relationship is the result of the social media usage to communicate about academic issues with lecturers via social media.

Furthermore, based on the values given in *Table 4* (r²=0.051, F=22.040, t=4.690) it can be concluded that, 5.1% of the positive variance in preparation to the course before class can be explained with the social media usage to communicate about academic issues with lecturers via social media.

Conclusion

Analysis results demonstrate that undergraduate students use social media for personal and entertainment activities more frequently than commercial activities and communication activities to communicate about academic issues. Their main purposes of using social media are to communicate with friends and family members. This result reveals that the number of students who use social media to maintain their former relations and find new friends to develop new relationships during their university education is very high. This finding is in line with the literature on social media use by students that has shown students generally use this communication platform for social and/or recreational purposes (Charlene Li *et al.* 2007; Rodriguez-Hoyos, Haya, & Fernandez-Diaz, 2015).

It must be indicated that, apart from personal and entertainment activities a high percentage of undergraduate students visit social media for using this platform in communication activities for academic purposes including communicate with other students and lecturers to ask questions and get feedback about academic issues, to share their needs and wants about academic issues and to establish and develop relationship. In this context, these finding do not completely align with previous studies that claim most students were found to disassociate themselves while they are online and just concerned about keep in touch with each other and communicate on matters that are not academic (Nalwa & Anand 2003; Kuppuswamy & Narayan 2010; Jacobsen & Forste 2011).

According to research results we obtained, the frequency of social media usage for personal, commercial and entertainment activities are factors that increases class participation while using social media for personal and commercial activities cause a positive effect in preparation to the course before class levels of undergraduate students. Therefore, based on the studies claiming that class participation contribute to improve class grade and overall performance of students (Dancer & Kamvounias 2005; Weaver & Qi 2005; Petress 2006); it can be suggest that as a factor that increases class participation and preparation to course before

class, social media usage frequency for personal, entertainment and commercial activities may have a positive effect on overall academic performance of students. To summarize, results of our research showed that social media usage frequency for non-academic activities is not a variable that is negatively related to academic performance; contrarily it has a weak but positive relationship with activities that contribute to improve academic performance. Consequently, our findings contradict with the related literature that suggests a strong positive or negative relationship between time spent on social media and academic performance. This study consistent more with the prior researches find that social media usage can contribute activities like interaction with peers, setting broad and strong social ties and reciprocate students relationships and academic engagement and can be utilized to increase their level of participation in class and in turn this out-of-class environment cause a positive effect on the student's academic performance (Eccles& Templeton, 2002; Feldman & Matjasko, 2005; Pascarella & Terenzini, 2005; Ahn, 2011; Eckles & Stradley, 2012).

The outcomes of our study showed that a vast majority of undergraduate students use social media to communicate with other students and lecturer on academic issues and to establish and develop relationship. Furthermore, findings revealed that, social media usage to communicate on academic issues with other students and lecturers cause an increase in academic performance in relation to the level of contribution to class discussion sections; paying attention to lecture; participating group activities that accompanied the lectures; completing any homework or tasks assigned by the lecturer before the next class and reading the class material before the class. Based on analysis results; although the level of effect is weak; it can be said that, students who use social media for communicating about academic issues become more active in class and spent more time for preparation to the course that are all related to higher academic performance. Therefore, based on the approaches suggest different levels of information sending/receiving among people positively affect establishing and developing relationship; communication about course content lead to greater gains in academic performance and considering the studies argue the importance of contact between students-lecturers, reciprocity and cooperation among students and active learning for academic performance; this study shows the importance of social media as an out of class environment enable communicating academic issues and sources and also support class discussion and students engagement.

Considering identified outcomes it can be concluded that educational institutions should develop new policies and strategies in this field. These policies and strategies should designed to promote social media as a part of teaching/learning process to increase effective learning for students and effective teaching for educational institutions and also as Tapscott (1997) puts it; to move from a teacher- centered approach to a learner-centered approach.

References

- Agarwal, S., & Mital, M. (2009). An exploratory study of Indian university students' use of social networking websites: Implications for the workplace. *Business Communication Quarterly*, 72(1), 105-110.
- Ahmed, I., & Qazi, T.F. (2011). A look out for academic impacts of social networking sites (Social Media's): A student based perspective. *African Journal of Business Management*, 5(12), 5022-5031.
- Ahn, J. (2011). The effect of social network sites on adolescents' social and academic development: Current theories and controversies. *Journal of the American Society for Information Science and Technology*, 62(8), 1435-1445.
- Al-Khalifa, H.S., & Garcia, R.A. (2013). The state of social media in Saudi Arabia's higher education? *International Journal of Technology and Educational Marketing*, 3(1), 65-76.
- Astin, A. W. (1993). What matters in college? Four critical years revisited. San Francisco: Jossey-Bass.
- Astin, A.W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel*, 25(4), 297–308.
- Carroll, J.B. (1963). A model of school learning. Teachers College Record, 64, 723-733.
- Charlene L., Bernoff, J., Pflaum, C. & Glass, S. (2007). *How consumers use social networks*. http://www.forrester.com. Accessed 16.02.2018
- Chen, J. & Lin, T.F. (2008). Class attendance and exam performance: a randomized experiment. *Journal of Economic Education*, 39(3), 213-227.
- Chickering, A.W. & Gamson, Z.F. (1987). Seven principles for good practice in undergraduate education. http://www.lonestar.edu/multimedia/sevenprinciples.pdf. Accessed 19.04.2018
- Cotton, S.R. (2008). Students' technology use and the impacts on well-being. In R. Junco & D. M. Timm (Eds.). *Using emerging technologies to enhance student engagement*. New Directions for Student Services. San Francisco: Jossey-Bass, pp. 55-70.
- Dancer, D., & Kamvounias, P. (2005). Student involvement in assessment: A project designed to assess class participation fairly and reliably. *Assessment & Evaluation in Higher Education*, 30, 445-454.
- Eccles, J.S., & Templeton, J. (2002). Extracurricular and other after-school activities for youth. *Review of Research in Education*, 26, 113-180.
- Eckles, J., & Stradley, E. (2012). A social network analysis of student retention using archival data. *Social Psychology of Education*, 15(2), 165-180.

- Ellore, S.B., Niranjan, S., & Brown, U.J. (2014). The influence of internet usage on academic performance and face-to-face communication. *Journal of Psychology and Behavioural Science*, 2, 163-186.
- Englander, F., Terregrosa, R., & Wang, Z. (2010). Internet use among college student: Tool or Toy?. *Educational Review*, 62(1), 85-96.
- Feldman, A., & Matjasko, J. (2005). The role of school-based extracurricular activities in adolescent development: A comprehensive review and future directions. *Review of Educational Research*, 75, 159-210.
- Feldman, K.A., Smart. J.C., & Ethington, C.A. (2001). A further investigation of major field and person-environment fit: Sociological versus psychological interpretations of Holland's theory. *Journal of Higher Education*, 72, 670-698.
- Fraser, B.J., Walberg, H.J., Welch, W.W., & Hattie, I. A. (1987). Syntheses of educational productivity research. *International Journal of Educational Research*, 11, 145-252.
- Gordon, C.F., Juang, L.P., & Syed, M. (2007). Internet use and well-being among college students: Beyond frequency of use. *Journal of College Student Development*, 48(6), 674-688.
- Hair, J.F., Ringle, C.M. & Sarstedt, M. (2011). PLS-SEM: indeed a silver bullet. *Journal of Marketing Theory and Practice*, 18(2), 139-152.
- Hargittai, E. & Hsieh, Y.P. (2010). Predictors and consequences of differentiated practices on social network sites. *Information, Communication & Society, 13*, 515-536.
- Holland J.L. (1997). Making vocational choices: A theory of vocational personalities and work environments. Odessa, FL: Psychological Assessment Resources.
- Jabr, N.H. (2011). Social networking as a tool for extending academic learning and communication. *International Journal of Business and Social Science*, 2(12), 93-102.
- Jacobsen, W.C., & Forste, R. (2011). The wired generation: academic and social outcomes of electronic media use among university students. *Cyberpsychology, Behavior, and Social Networking*, 14(5), 275-280.
- Johnson, D.W. (1981). Student-student interaction: The neglected variable in education. *Educational Research*, 10, 5-10.
- Junco, R., Heiberger, G., & Loken, E. (2011). The effect of twitter on college student engagement and grades. *Journal of Computer Assisted Learning*, 27, 119-132.
- Kuh, G.D., & Hu, S. (2001). The effects of student-faculty interaction in the 1990's. *The Review of Higher Education*, 24(3), 309-332.
- Kuppuswamy, S., & Narayan, P.B.S. (2010). The impact of social networking websites on the education of youth. *International Journal of Virtual Communities and Social Networking (IJVCSN)*, 2(1), 67-79.
- Manca, S., & Ranieri, M. (2013). Is it a tool suitable for learning?. A critical review of the literature on Facebook as a technology-enhanced learning platform. *Journal of Computer Assisted Learning*, 29(6), 487-504.
- Marburger, D.R. (2006). Does mandatory attendance improve student performance?. *The Journal of Economic Education*, 37(2), 148–155.
- Mihaly, K. (2009). Do more friends mean better grades? Student popularity and academic achievement. *RAND Labor and Population, Working Paper Series*, http://www.rand.org/pubs/working_papers/WR678/ Accessed 12.03.2016.

- Nalwa K., & Anand, A.P. (2003). Internet addiction in students: A cause of concern. *CyberPsychology & Behavior*, 6(6), 654-655.
- Ogedebe, P.M., Emmanuel, J.A., & Musa, Y. (2012). A survey on facebook and academic performance in Nigeria Universities. *International Journal of Engineering Research and Applications (IJERA)*, 2(4), 788-797.
- Park, K.H., & Kerr, P. (1990). Determinants of academic performance: a multinomial logit approach. *Journal of Economic Education*, 21, 101-111.
- Pascarella, E.T., & Terenzini, P.T. (2005). *How college affects students*. San Francisco: Jossey-Bass.
- Petress, K. (2006). An operational definition of class participation. *College Student Journal*, 40, 821-823.
- Prensky, M. (2001). Digital Natives, Digital Immigrants Part 1. On the Horizon, 9(5), 1-6. Rahman, N. (2014). The usage and online behavior of social networking sites among international students in New Zealand. The Journal of Social Media in Society, 3(2), 65-81.
- Rifkin, S.B. (2009). Lessons from community participation in health programs: A review of the post Alma Ata experience. *International Health*, *I*(3), 1-6.
- Rodriguez-Hoyos, C., Haya, I. & Fernandez-Diaz, E. (2015). Research on SNS and education: The state of the art and its challenges. *Australasian Journal of Educational Technology*, 31(1), 100-111.
- Schmidt, R. (1983). Who maximizes what? A study in student time allocation. *American Economic Review*, 73(2), 23-28.
- Shen, K.N., & Khalifa, M. (2010). Facebook usage among Arabic college students. *International Journal of e-Business Management*, 4(1), 53-65.
- Tamayo, D.J., & dela Cruz, G.S.G. (2014). The relationship of social media with the academic performance of bachelor of science in information technology students of Centro Escolar University Malolos. *International Journal of Scientific and Research Publications*, 4(5), 1-10.
- Tapscott, D. (1997). *Growing up digital: The rise of the net generation*. New York: McGraw-Hill, Inc.
- Weaver, R.R., & Qi, J. (2005). Classroom organization and participation: College students' perceptions. *The Journal of Higher Education*, 76, 570-601.
- Wheeler, S., Yeomans, P. & Wheeler, D. (2008). The good, the bad and the wiki: Evaluating student-generated content for collaborative learning. *British Journal of Education and Learning*, 39(6), 987-995.