Attitudes toward Blended Learning and Social Media Use for Academic Purposes: An Exploratory Study

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Up to date, a number of studies have investigated what students feel about using social media for classes and their general attitudes toward online learning. However, there seems to be limited research on the relationship between social media and eLearning. A survey study of Japanese college students from 5 different classes showed that attitudes toward blended learning may be related to attitudes toward social media use for academic purposes. The findings also indicated that attitudes toward other types of online learning methods or having an experience of using a Facebook class page are not related to attitudes toward social media use for academic purposes.

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1 Introduction

Every day, over 175 million messages are posted on Twitter, 250 million photos are shared on Facebook, and about 2 billion videos are watched on YouTube (Bullas, 2012). Social networking is currently the #1 online activity (Third *et al.*, 2011) and as Nagi and Vate U-Lan (2009) pointed out, societies are in the process of transitioning to the Interaction Age from the Information Age. In this new age, teamwork, collaboration, and critical thinking that are closely related with virtual learning environments have become enormously important. Therefore, scholars must understand how social media can contribute to this relationship and how it can be utilized to improve student learning.

Kaplan and Haenlein (2009) defined social media as *"a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content*" (p. 61). Kietzmann and his colleagues (2011) reviewed the relevant literature and some active blogs in the area and developed a different and more comprehensive framework to identify and classify social media platforms. They came up with 7 building blocks: identity, conversations, sharing, presence, platforms, relationship, reputation, and groups. Of these, identity, the way users disclose about themselves which has implications for privacy control, seems to be the most important aspect of social media. After analyzing the Honeycomb framework, we concluded that Facebook may be ideal to assess students' reactions to social media because it fully utilizes all of the features of a social media platform (sharing, reputation management, conversations, social presence, and so on) in addition to having similar functions of other major social media channels as noted by Mendelson (2012):

> Follow a user on Twitter--- Subscribe to a user on Facebook
> Foursquare check-in----Facebook places
> Google+ circles-----Facebook smart groups
> YouTube video sharing---Facebook video sharing

Up to date, how social media is used and what students think of these practices have been assessed by a number of scholars. Valenzuela *et al.* (2009) found that students who used Facebook had higher life satisfaction and civic engagement. By the same token, Lewis and Nichols (2012) observed that, overall, students had positive attitudes toward using social media in the classroom, and actually having an experience of using social media to study improved the positive attitudes. On the other hand, faculty members and students might have different perceptions of social media. Rolbyer *et al.* (2010) explained students

in general were more open to the idea of using Facebook as a study material compared to professors. In the same vein, Munoz and Towner (2011), who are proponents of Facebook for blended learning, stated that students should not be required to join Facebook pages of instructors because of privacy and other issues.

The principal investigator of this study believes that making Facebook optional for college students would breed ambiguity and confusion, especially in countries like Japan where students value harmony (Acar *et al.*, 2012) and do not want to do something different from their peers. That is why this paper compared the attitudes of students who were required to join the Facebook pages of the classes they took and those who were not. Additionally, this study sought answers to the questions including a) Are attitudes toward social media for educational purposes and attitudes toward eLearning related?; b) Are attitudes toward blended learning and attitudes toward web based learning the same?; c) Do privacy concerns impact attitudes toward social media use or attitudes toward online learning?; and more importantly (d) Does the way an instructor uses a Facebook page impact overall attitudes toward Facebook use for educational purposes? Answering these questions will help us successfully incorporate social media into our lessons and better prepare for the Interactive Age.

2. Literature Review

Perceptions and usage of social media in academic platforms has been an important topic. As a matter of fact, one of the earliest studies ever published about Facebook (Hewitt & Forte, 2006) was about student and faculty relations on the platform. Since then, a number of scholars investigated whether social media can improve learning and student satisfaction (see Munoz & Towner, 2011). While some scholars had disappointing findings about social media use, especially Facebook (Hewitt & Forte, 2006; Madge *et al.*, 2009) and Twitter (Welch & Bonnan-White, 2012), many researchers think Web 2.0 services and social networks are useful because they provide support for school related tasks and improve student literacy (Greenhow & Robelia, 2009; Greenhow *et al.*, 2009).

Today, social media has been widely used in educational settings. A comprehensive survey study (Moran *et al.*, 2011) participated by 1,920 college professors across the USA showed that more than 90% of professors incorporate social media channels into their classes. Despite their concerns about privacy and "integrity," 80% of the professors reported using online videos for classes and 20% of them asked their students to post to or comment on class related

content in social media. The same study also found that about 40% of the professors in the sample used YouTube for their classes; 30% of those reported using Facebook, as well.

Many different aspects of Facebook use for educational purposes have been investigated so far. Some of these topics included student motivation and class atmosphere (Mazer *et al.*, 2009), education related posts (Selwyn, 2009), class satisfaction (Valenzuela *et al.*, 2009; Li & Pitts, 2009), impact on grades (Kirscher & Karpinski, 2010; Mendez *et al.*, 2009), teachers' profiles (Olson *et al.*, 2010), discussion boards (Schroeder & Greenbowe, 2009; Estus, 2010) and friendship between professors and students (Hewitt & Forte, Madge *et al.*, 2009; Maranto & Barton, 2010; Mendez *et al.*, 2009; Munoz & Towner, 2011). Most of these studies suggested that Facebook in general can contribute positively to higher education. For instance, Valenzuela *et al.* (2009) found that students who used Facebook had higher civic engagement and higher life satisfaction. In the same vein, Estus (2010) and Schroeder and Greenbowe (2009) concluded that it is easier for students to discuss topics on Facebook. Additionally, according to Mendez *et al.* (2011) students who friend their teachers are more likely to have higher grades.

As mentioned above, a significant amount of literature is dedicated to friendship between students and professors. Even though friendship on Facebook is not like "real friendship" (Acar, 2008), as students have many more friends on Facebook than they may have in real life, it is not difficult to understand why this topic comes up over and over again. The first ever published study on Facebook was about privacy (Gross & Acquisti, 2005) and currently there are over 250 academic papers on Google Scholar that have "privacy" and "Facebook" in their title (search: allintitle:privacy Facebook). So, obviously this is a sensitive topic for many, and some published studies seemingly reflect the authors' personal concerns (Lipka, 2007; Maranto & Barron, 2010) rather than findings based on large samples. When it comes to survey data, the results seem to be conflicting. While 41% of the students say getting a friendship request from a professor is an "uncomfortable" situation (Madge *et al.*, 2009; Mendez *et al.*, 2009) mention that 30% of the students are already friends with instructors. Today, there still does not seem to be any consensus among academicians if professors and students be friends on Facebook or not.

An Ebrary (McKiel, 2012) survey found that 41.3% of college students report using social media for educational purposes in one way or another. Gomez *et al.* (2012) also indicate that more than half of college students feel positive about creating a study group on a social network. Similarly, Ophus and Abbitt

(2009) found that students may be concerned about privacy and distraction, but in general they are open to the idea of using Facebook for learning. In the same vein, Tashir *et al.* (2011) concluded that students evaluate the use of social networks as part of their eLearning activities quite positively. By the same token, Lewis and Nichols (2012) observed that overall, students had positive attitudes toward using social media in classroom and actually having an experience of using social media to study improved their positive attitudes. On the other hand, the Ebrary survey (McKiel, 2012) indicates that more than half of the college students are not likely to ask a question to their instructors on Facebook. Additionally, according to Fox and Varadarajan (2011) students think using Twitter is distracting, and some faculty members are not open to the idea of using Facebook as a study material (Rolbyer *et al.*, 2010).

Whether social media is adopted in academia or not, we think social media can enhance student learning based on the propositions of Vygotsky's social development theory (Riddle & Dabbagh, 1999). First of all, social development theory (SDT) proposes that we acquire knowledge from others through our interactions and finally internalize that knowledge. Since social media is all about interacting and learning from others, we expect that social media improves learning. Secondly, SDT has the concept of the "more knowledgeable other (MKO)" who can be an instructor or a friend who knows more than the learner. Although students can always interact and learn from that MKO, social media increases the possibility of interacting with MKOs 24 hours a day and 7 days a week. Thirdly, SDT suggests that learning depends on how much individuals perform target tasks under a teacher's or a collaborator's presence. Since through social media teachers can act like collaborators and since discussing a topic or submitting an assignment in social media means the learner is performing the task both individually and also with the presence of peers and the instructor, I assume that social media helps learning. Lastly, SDT draws a connection between a learner's ability use socio-cultural communication tools and that learner's learning ability. When using a social media platform, users are somewhat forced to generate meaningful content and have a good command of online communication language and tools which, according to Vygotsky, make the participants better learners.

2.1 Research Questions

Past studies make it clear that social media can be a useful component of eLearning. However, there are still many questions to be answered. For instance, although some studies pointed out Facebook's superiority in online class discussions, so far no study empirically tested whether Facebook can enhance

student learning or if Facebook is as effective as traditional learning when students use the medium to submit and share their assignments with their peers. Secondly, there seems to be conflicting findings about what students think about social media use for formal learning. As Munoz and Towner (2011) recommend considering class size and class content when deciding how to use the platform, I suspect the way professors use online social networks may influence students' attitudes toward social media use for educational purposes. Thirdly, so far no study addressed the potential relationship between attitudes toward eLearning and attitudes toward social media for classroom use. Lastly, our literature review showed that there was no study from Japan, the world's third largest economy and a unique Eastern context, about student perceptions of and attitudes toward social media for educational purposes. Thus I pose these three research questions:

> R1: What do Japanese college students think about using social media for educational purposes?
> R2: Do student attitudes toward social media for educational purposes depend on how their teacher uses the platform? In other words, do activities students do on Facebook influence their overall attitudes toward social media?
> R3: Is there a relationship between attitudes toward social media for educational purposes and attitudes toward eLearning?

Additionally, despite the difficulties of defining eLearning (Keller, 2008), I could not find any study that explains attitudinal differences between different forms of eLearning (e.g. attitudes toward online learning versus attitudes toward getting an online degree). More importantly, most of the studies I reviewed were in the post-usage-survey format which asked course satisfaction questions to participants after taking an online course or a computer assisted course. There was not any recent study that involved students who never used an online course management tool. Lastly, previously no study assessed the relationship between attitudes toward eLearning and attitudes toward social media use for educational purposes. Thus, I pose these research questions:

> R4: Are student attitudes towards blended learning, online learning, online degrees, and social media use for academic purposes different?
> R5: Does using social media as part of class influence attitudes towards eLearning?

3 Methodology

This study employed survey methodology where participants were able to

access the questionnaire online in exchange for class credit. A total of 83 (53 females, 28 males (2 subjects did not indicate any gender)) undergraduate college students who are enrolled in five different undergraduate courses at a small public university in Japan and who were contacted via convenience sampling completed the web-based questionnaire. The data collection took place in January 2013, and students from various demographics (e.g., major, gender, year at the school, etc.) participated in the study.

Fully 95% (n=79) of the participants indicated that they have a profile listed on a social media platform. Among those who have an account, 60% indicated that Facebook is the network they used the most, while about one third (29%) mentioned that their most used social network is Twitter. Nine out of ten students reported having a personal computer at home, and surprisingly about 80% of the participants indicated that they owned a smart phone.

Students from four out of the five classes who participated in this study were asked to join the Facebook pages of the classes they were taking (taught by the principal investigator of this study). Since this is not an experiment, the number of posts, class size, class content, etc. were not manipulated in this study. However, readers should check the following table and note that one class did not have a Facebook page, in one class the instructor rarely used the page, and students from three of the classes were required to post on the Facebook pages while others were not. In the discussions section, this paper will speculate on attitude differences between the classes based on the activities in the Facebook pages.

TABLE 1
Number of Students and Number of Posts in Each Class

Class	Facebook Activity	Reg. # Students	Teacher's posts	Students posts
Oral Comm. 1	No page	18	-	-
Oral Comm. 2	Instructor posted some useful cultural tips, interesting videos, greetings, a notice for being late, reminders about class assignments, some info about an on-campus event. Students were asked to post their assignments on the class page.	19	13	40
Oral Comm. 3	Instructor posted some useful cultural tips, interesting videos, greetings, a notice for classroom change, evaluation scores, some info about an on-campus event. Students were not required to post anything.	25	14	2

Class	Facebook Activity	Reg. # Students	Teacher's posts	Students posts
Global Bus.	Instructor posted greetings, picture from a class trip, useful links to several websites and videos, announcements about events taking place in town, clarification about assignments, some info about an on-campus event, etc.. The instructor also share ppt slides used in class. Students were asked to share the presentations they made in class.	13	41	16
Statistics	Instructor posted greetings and useful links to some videos. The instructor also shared some class notes and SPSS files to be used in class. Students were asked to post a link to surveys they created.	6	10	17

TABLE 2
Survey Items and Reliability Scores

Latent Variable	Note for survey Takers	Items	Reliability
Facebook Satisfaction		I enjoyed the experience of using Facebook for this class	Cronbach's alpha=.90
		Using Facebook for this class was fun	
		Using Facebook for this class was effective	
		I wish we used Facebook for all of our classes	
Attitudes twd. using Facebook for educational purposes		Overall I feel positive about using Facebook for educational purposes	.
Attitudes toward blended learning	The following questions are related with blended learning. Blended learning is using the internet to support classes that are taught at school (blending online tools and face to face instruction)	I prefer getting class notes over the internet or via email instead of getting them in the classroom	Cronbach's alpha=.78
		It is a good idea to have an online discussion board for each class we take	
		It is a good idea to have an official class page that has extra videos and applications about class topics	
		It is a good idea to have a class page that allows us to submit our assignments online	
		Overall, I feel positive about taking classes that are supported by online materials (e.g. videos, class notes, discussion boards, quizzes, etc.)	

Latent Variable	Note for survey Takers	Items	Reliability
Attitudes Toward taking online classes	The following questions are related with distance learning without any face to face instruction. It simply means taking a class online (receiving the learning materials online, taking the exam online and so on)	As effective as traditional face to face instruction	Cronbach's alpha=.74
		I prefer getting class notes over the internet or via email instead of getting them in class.	
		Can replace actual lectures in the near future	
		something that I am interested in	
		Should be offered in this university	
		Allows me to study at my own pace	
		Not necessary for our major (Reverse coded)	
		Boring (Reverse coded)	
		Involves a lot of technical complications (Reverse coded)	
		Overall, I feel positive about taking classes online with no face to face instruction	
Attitudes toward getting an online degree	The following questions are related with online degrees. It is about getting a college degree online (paying the tuition, taking a certain number of classes and then getting a diploma from an online university or a real university with the online learning department)	Something that I am interested in	Cronbach's alpha=.81
		Not respected (Reverse coded)	
		Not useful (Reverse coded)	
		Not effective (students cannot learn the material no matter how good the online instruction is) (Reverse coded)	
		Very difficult (Reverse coded)	
		Overall I feel positive about getting an online degree	
Perceived ease of use		I think it is not so difficult to take classes online	Cronbach's alpha=.44
		I don't have any problem with using the internet for learning new things	
Perceived usefulness		I think taking classes online would be useful for my life	Cronbach's alpha=.80
		I can learn a lot by taking online classes	
Computer self-efficacy		If I had a problem using the computer, I could solve it one way or another	Cronbach's alpha=.74
		I could probably do just about anything I need to with computers	
Privacy concerns		In general I am very concerned about my privacy on the internet	Cronbach's alpha=.86
		I am always concerned about using my real name on the internet	
		I am always concerned about using my real picture on the internet	

3.1 Measures

Table II summarizes the items that were used in this study to measure attitudes toward eLearning, perceived ease of use, perceived usefulness, computer self-efficacy, and privacy concerns. As a procedure, the respondents were provided these statements and asked to indicate their agreement on a 7-point scale where 1 means strongly disagree and 7 means strongly agree. The privacy questions in this study were derived from Buchanan *et al.* (2006) and the perceived ease of use and usefulness were derived from Davis (1989). The questions for attitudes toward social media use for academic purposes and eLearning were developed originally based on past similar studies, and the pretests showed that scales are reliable with the Cronbach alpha levels higher than.85. Although most of these statements were inspired by the past studies in the area, we did not use any scale directly from any study because we thought they might be outdated or not useful in the Japanese context. Additionally, the "attitudes toward Facebook use for educational purposes" was measured with only 1 item as we wanted separate the effect of classroom experience and overall dispositions.

4 Results

4.1 Attitudes of Japanese Students

Our first research question was about Japanese students' attitudes toward online learning. The findings show that they had somewhat mixed feelings about eLearning. It is a little bit difficult to do this analysis because there was no group to compare, but since our scale was a 7-point scale, where the middle point was 4, we ran a one-sample t-test where we compared the mean scores with 4 (the middle (neutral) point). We saw that attitudes toward Facebook use for classes ($t=5.75$, $p<.05$) and attitudes toward blended learning –aka online web assisted learning– ($t=7.84$, $p<.05$) were significantly above the middle point, whereas attitudes toward online web based learning was significantly below the middle point ($t=-3.57$, $p<.05$). Interestingly, most of the participants felt neutral about getting an online degree.

TABLE 3
One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Overall I feel positive about using Facebook for educational purposes	81	4.84	1.355	.151
Overall, I feel positive about taking classes that are supported by online materials	83	5.18	1.372	.151

	N	Mean	Std. Deviation	Std. Error Mean
Overall, I feel positive about taking classes online with no face to face instruction	83	3.37	1.598	.175
Overall I feel positive about getting an online degree	82	3.72	1.612	.178

One-Sample Test

	Test Value = 4		
	t	df	Sig.
Overall I feel positive about using Facebook for educational purposes	5.575	80	.000
Overall, I feel positive about taking classes that are supported by online materials	7.842	82	.000
Overall, I feel positive about taking classes online with no face to face instruction	-3.572	82	.001
Overall I feel positive about getting an online degree	-1.575	81	.119

4.2 Attitudes towards Different Types of Online Learning

We also wanted to see if the mean scores of attitudes towards different types of eLearning (classes supported by Facebook, blended learning, Online Web Based Learning (OWBL), and getting an online degree). We ran a one-way ANOVA found that the mean scores were statistically different than each other ($F_{3,325}=28.03$, $p<.05$).

TABLE 4
ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	186.657	3	62.219	28.039	.000
Within Groups	721.173	325	2.219		
Total	907.830	328			

The post-hoc test showed that the differences between attitudes toward Facebook and blended learning and also attitudes toward web based learning and online degrees were not significantly different.

TABLE 5
Multiple Comparisons: What Kind of eLearning Methods Generate Significantly Different Attitudes?
Tukey HSD

(I)	(J)	Mean Difference (I-J)	Std. Error	Sig.
Facebook	Blended	-.34122	.23266	.459
	OWBL	1.46601*	.23266	.000
	O. Degree	1.11999*	.23336	.000
Blended	Facebook	.34122	.23266	.459
	OWBL	1.80723*	.23124	.000
	O. Degree	1.46121*	.23194	.000
OWBL	Facebook	-1.46601*	.23266	.000
	Blended	-1.80723*	.23124	.000
	O. Degree	-.34602	.23194	.444
O. Degree	Facebook	-1.11999*	.23336	.000
	Blended	-1.46121*	.23194	.000
	OWBL	.34602	.23194	.444

4.3 Facebook Usage Experience and Attitudes toward Facebook for Academic Purposes

Secondly, we wanted to see if having an experience of using Facebook class page influences attitudes toward using Facebook for educational purposes. After comparing the 4 classes that used a Facebook page and 1 class that did not have a Facebook page, we saw that there was absolutely no impact of having an experience ($t=-.02$, $p>.05$) on student attitudes toward using Facebook for academic purposes.

TABLE 6
Group Statistics

	Facebook	N	Mean	Std. Deviation	Std. Error Mean
Overall I feel positive about using Facebook for educational purposes	No	18	4.83	1.465	.345
	Yes	63	4.84	1.334	.168

Independent Samples Test

	t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)
Overall I feel positive about using Facebook for educational purposes	.169	.682	-.022	79	.983
			-.021	25.618	.984

We then checked if the students in each class had a) the same level of satisfaction with the class Facebook page and b) the same levels of attitudes towards Facebook for academic use. The ANOVA tests showed that the classes differed in terms of their attitudes toward Facebook use ($F_{3,80}=2.36$, $p=.06$) and their satisfaction with Facebook pages ($F_{3,60}=4.57$, $p<.05$). It was observed that the Oral Communication 3 class (the largest class where the instructor did not post much) had the lowest positive attitudes toward Facebook (mFBattitude=4.40, StD=1.26) and Facebook page satisfaction score (mSatisfaction=3.89, StD=1.38), while the Global Business and the Statistics class (the smallest class where the instructor shared several different class materials and also asked students to post links to their surveys) had the highest positive attitudes toward Facebook usage and term satisfaction with the Facebook page. These findings indicate that the way an instructor uses a class Facebook page in addition to class content and class size may impact attitudes toward Facebook usage for academic purposes.

TABLE 7
Satisfaction with Facebook Usage

Class	Overall Satisfaction	St. D
Oral Comm. 1	- (No page)	- (No page)
Oral Comm. 2	4.30	1.26
Oral Comm. 3	3.89	1.38
Global Bus.	4.82	1.18
Statistics	5.29	0.88

ANOVA Table For Facebook Satisfaction

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13.708	3	4.569	2.810	.047
Within Groups	97.569	60	1.626		
Total	111.277	63			

Attitudes toward Facebook Usage - Overall I feel positive about using Facebook for educational purposes

class	Mean	N	Std. Deviation
Oral Comm. 1	4.83	18	1.465
Oral Comm. 2	4.68	19	1.493
Oral Comm. 3	4.40	25	1.258
Global Bus.	5.46	13	1.050
Statistics	5.83	6	.753
Total	4.84	81	1.355

ANOVA Table for Attitudes toward Facebook Use - Overall I feel positive about using Facebook for educational purposes

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.244	4	4.061	2.362	.061
Within Groups	130.669	76	1.719		
Total	146.914	80			

Multiple Comparisons: Which Classes are Significantly Different than Each Other?
Dependent Variable: Overall I feel positive about using Facebook for educational purposes
Tukey HSD

(I) class	(J) class	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Oral c. 2	Oral c. 3	.284	.385	.881	-.73	1.30
	Global B.	-.777	.455	.328	-1.98	.42
	Statistics	-1.149	.592	.222	-2.71	.42
Oral c. 3	Oral c. 2	-.284	.385	.881	-1.30	.73
	Global B.	-1.062	.432	.078	-2.20	.08
	Statistics	-1.433	.574	.071	-2.95	.09
Global B.	2.00	.777	.455	.328	-.42	1.98
	Oral c. 3	1.062	.432	.078	-.08	2.20
	Statistics	-.372	.624	.933	-2.02	1.28
Statistics	Oral c. 2	1.149	.592	.222	-.42	2.71
	Oral c. 3	1.433	.574	.071	-.09	2.95
		.372	.624	.933	-1.28	2.02

TABLE 8
Correlation Matrix: Relationship between Attitudes towards Social Media Use and the other Individual Variables

	1	2	3	4	5	6	7	8	9	10
FB attd.	1.00									
FB Satis.	.606**	1.00								
FB usage	0.08	0.00	1.00							
Blended attd.	.350**	.404**	-.255*	1.00						
OWBL	0.07	0.20	-0.02	.309**	1.00					
Online Deg.	0.12	0.18	0.02	0.21	.556**	1.00				
Privacy	.242*	.280*	0.20	.241*	0.20	0.13	1.00			
Easiness	.360**	0.21	-0.10	.416**	.384**	.438**	0.12	1.00		
Usefulness	.302**	.353**	-0.03	.341**	.574**	.574**	.229*	.456**	1.00	
Comp. self eff.	0.05	0.19	-0.14	.368**	0.20	0.10	.265*	0.20	0.18	1.00

** Correlation is significant at the .01 level * Correlation is significant at the .05 level N=80

4.4 Individual Differences and Attitudes toward Facebook Use for Academic Purposes

We also looked at the relationship between attitudes toward Facebook use for academic purposes and other variables that are covered in the literature review, including attitudes toward blended learning, perceived ease of use, usefulness, computer self-efficacy, privacy, and so on. After running a correlation analysis, we concluded that attitudes toward Facebook use may be related with satisfaction with class Facebook page ($r=.6$, $p<.05$), attitudes toward blended learning ($r=.35$, $p<.05$), privacy concerns ($r=.24$, $p<.05$), perceived easiness ($r=.36$, $p<.05$) and perceived usefulness ($r=.3$, $p<.05$).

Insert Appendix VIII here

Conclusions and future work

In this study, we tried to identify some antecedent variables of attitudes towards social media for academic purposes suggested by the past studies about eLearning adoption. As one can expect, satisfaction with the Facebook class page had a strong relationship with attitudes towards social media use. Additionally, attitudes towards blended learning, perceived ease of use, and perceived usefulness of online education also had high correlations with attitudes toward social media use. Interestingly, privacy had a positive correlation with attitudes towards social media. We think it is because people who are concerned about privacy take precautions and do not share private information openly on the internet, so they feel more secure and they think they can safely use social net-

works. That is why they are open to the idea of using social media for learning even though they score high on privacy concerns.

Of course, correlation does not mean causation and attitudes toward social media for education may be the result of attitudes toward eLearning. However, we now know that these concepts are very likely to be related, and educators and practitioners may focus on increasing positive attitudes toward eLearning to drive attitudes toward social media use or vice versa. For instance, as can be seen in Appendix 8, computer self-efficacy has a high correlation with attitudes toward blended learning but almost have zero relationship with attitudes toward social media for academic purposes. This means by encouraging social media use in class, we may be able to improve attitudes toward eLearning.

Another important contribution of this paper is the perceived differences between blended learning, online classes, online degrees, and social media for education. There are a number of studies which measured participants' attitudes towards "eLearning systems" (Ong & Lai, 2006) or "multimedia instruction" (Liaw *et al.*, 2007). Although these studies are very helpful, future studies should make sure that people have a clear understanding of what eLearning is, as apparently attitudes toward online degrees, attitudes towards blended learning, and attitudes toward taking an online class are different.

Perhaps the most interesting finding to emerge from this study was that getting an online degree was evaluated more positively than taking an online class. This does not make much sense because one has to take many online classes to get an online degree. On the other hand, we think students may find getting an online degree a nice way to polish their resume after they graduate, but while in college they do not want to take online classes. This finding may also have to do with the wording, as we explained taking online classes and getting online degree in a slightly different way (see Table 1). Nevertheless, this is a noteworthy finding that shows how important verbal presentation is when it comes to introducing new online and blended programs to students.

Additionally, this study found that, overall, Japanese students have favorable attitudes towards social media for academic purposes. Although the sample size was very small, it was necessary to measure how Japanese students felt towards social media use for academic purposes because Acar *et al.*(2012) observed that more than 80% of Japanese college students feel uncomfortable using their real names and real pictures in social media. In the same vein, Barker and Ota (2011) also indicated that Japanese social media users have smaller social networks and value privacy more than Western social media users. Regardless, it seems

like Japanese users are getting more comfortable with using social media and are ready to adopt social media in classroom.

The results also implied that attitudes toward social media can be directly related with how professors use the medium. We observed that students from classes where posting was a requirement had more positive attitudes towards social media use for education compared with the largest class where posting was not a requirement. Additionally, when we asked about the problems of using Facebook in the class where the attitudes towards Facebook use was low, we saw that the lack of communication on the Facebook page was as much of a concern as privacy. This finding suggests that the more Facebook is used for class, the more students tend to like it.

As can be seen in Table 8, attitudes toward social media for academic purposes are likely to be associated with attitudes toward blended learning. We think this is because students who are open to the idea of using virtual learning environments and online tools are also open to using a Facebook class page. After all, it may not be perceived differently than using a separate online discussion board or a learning management tool. However, attitudes toward online degrees and attitudes toward taking an online class with no F2F (face to face) instruction were not related to use of Facebook for classes. Thus Facebook can be used to change the potential negative attitudes towards online classes since students are more open to the idea of using Facebook for classes than to taking a class without no F2F instruction.

It was previously known that Facebook could be used as an effective tool to foster an online learning community and have class discussions; however, there were concerns that introducing Facebook was invasion of students' privacy, and some scholars recommended it should be optional (see Munoz & Towner, 2011). This study has shown that requiring students to use Facebook did not lower their attitudes towards the medium. We found that when used effectively and in an interactive way, students find Facebook quite helpful and useful. More importantly, this study implied that attitudes toward blended learning and attitudes toward social media use for education may be related. So, scholars should try to incorporate Facebook into their hybrid classes since students seem to be quite open to the idea of using Facebook as part of class.

Limitations

The study has several limitations including the low sample size and, as mentioned above, the lack of control of the class size and class content. Although

we found that students from Statistics and Global Business had better attitudes toward social media use for education, we cannot be 100% sure that the difference is due to the requirement of posting. Students in these classes may have had better attitudes because of several other reasons, including but not limited to a) the class content was interesting; b) the fact that they were senior students and knew each other; and c) the small class size made them feel more comfortable about posting. So, experiments that control for all these factors should be conducted in different contexts and in different countries to understand more about student activities in social media environments.

REFERENCES

Acar, A. (2008), *Antecedents and consequences of online social networking behavior: The case of Facebook*. Journal of website promotion, 3(1-2), 62-83.

Acar, A., Nishimuta, A., Takamura, D., Sakamoto, K., & Muraki, Y. (2012), *Qualitative Analysis Of Facebook Quitters In Japan*. In Proceedings of the Eight International Conference on eLearning for Knowledge-based Society (pp. 23-24).

Barker, V., & Ota, H. (2011), *Mixi diary versus Facebook photos: Social networking site use among Japanese and Caucasian American females*. Journal of Intercultural Communication Research, 40(1), 39–63.

Buchanan, T., Paine, C., Joinson, A. N., & Reips, U. D. (2006), *Development of measures of online privacy concern and protection for use on the Internet*. Journal of the American Society for Information Science and Technology, 58(2), 157-165.

Bullas, J. (2012), *48 Significant social media facts, figures and statistics plus 7 infographics*. Social Media Marketing and Blogging.

Craik, F. I., & Lockhart, R. S. (1972), *Levels of processing: A framework for memory research*. Journal of verbal learning and verbal behavior, 11(6), 671-684.

Davis, F. D. (1989), *Perceived usefulness, perceived ease of use, and user acceptance of information technology,* MIS Quarterly, 13, 319-339.

Estus, E. L. (2010), *Using Facebook within a geriatric pharmacotherapy course*. American journal of pharmaceutical education, 74(8).

Fox, B. I., & Varadarajan, R. (2011), *Use of Twitter to encourage interaction in a multi-campus Pharmacy Management course*. American journal of pharmaceutical education, 75(5).

Greenhow, C. & Robelia, E. (2009), *Old communication, new literacies: Social network sites as social learning resources*, Journal of Computer–Mediated Communication, volume 14, number 4, pp. 1,130–1,161.

Greenhow, C., Robelia, E. & J. Hughes (2009), *Web 2.0 and educational research: What path do we take now?* Educational Researcher, volume 38, number 4, pp. 246–259.

Gross, R., & Acquisti, A. (2005, November), *Information revelation and privacy in online social networks*. In Proceedings of the 2005 ACM workshop on Privacy in

the electronic society (pp. 71-80). ACM.

Hewitt, A., & Forte, A. (2006), *Crossing boundaries: Identity management and student/faculty relationships on the Facebook*. Poster presented at CSCW, Banff, Alberta.

Kaplan, A. M., & Haenlein, M. (2010), *Users of the world, unite! The challenges and opportunities of Social Media*. Business horizons, 53(1), 59-68.

Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011), *Social media? Get serious! Understanding the functional building blocks of social media*. Business Horizons, 54(3), 241-251.

Kirschner, P. A., & Karpinski, A. C. (2010), *Facebook and academic performance*. Computers in Human Behavior, 26(6), 1237-1245.

Lampe, C., Wohn, D. Y., Vitak, J., Ellison, N. B., & Wash, R. (2011), *Student use of Facebook for organizing collaborative classroom activities*. International Journal of Computer-Supported Collaborative Learning, 6(3), 329-347.

Li, L., & Pitts, J. P. (2009), *Does It Really Matter? Using Virtual Office Hours to Enhance Student-Faculty Interaction*. Journal of Information Systems Education, 20(2), 175-185.

Lipka, S. (2007), *For professors, 'friending' can be fraught*, Chronicle of Higher Education. 54 (15)

Madge, C., Meek, J., Wellens, J., & Hooley, T. (2009), *Facebook, social integration and informal learning at university: 'It is more for socialising and talking to friends about work than for actually doing work'*. Learning, Media and Technology, 34(2), 141-155

Maranto, G., & Barton, M. (2010), *Paradox and promise: MySpace, Facebook, and the sociopolitics of social networking in the writing classroom*. Computers and Composition, 27(1), 36-47.

Mazer, J. P., Murphy, R. E., & Simonds, C. J. (2009), *The effects of teacher self-disclosure via Facebook on teacher credibility*. Learning, Media and Technology, 34(2), 175-183.

McKiel, A. (2012), *2011 Global Student E-book Survey*.

Mendez, J. P., Curry, J., Mwavita, M., Kennedy, K., Weinland, K., & Bainbridge, K. (2009), *To friend or not to friend: Academic interaction on Facebook*. International Journal of Instructional Technology & Distance Learning, 6(9), 33-47.

Mickes, L., Darby, R. S., Hwe, V., Bajic, D., Warker, J. A., Harris, C. R., & Christenfeld, N. J. (2013), *Major memory for microblogs*. Memory & cognition

Moran, M., Seaman, J., & Tinti-Kane, H. (2011), *Teaching, Learning, and Sharing: How Today's Higher Education Faculty Use Social Media*. Babson Survey Research Group.

Muñoz, C. L., & Towner, T. (2011), *Back to the "wall": How to use Facebook in the college classroom*. First Monday, 16(12-5).

Nagi, K., & Vate-U-Lan, P. (2009), *Using emergent technologies for facilitating engaged learning in a virtual learning environment*. International Journal of the Computer, the Internet and Management, 17(1), 61-66.

Ophus, J. D., & Abbitt, J. T. (2009), *Exploring the potential perceptions of social networking systems in university courses*. Journal of Online Learning and Teaching, 5(4), 639-648.

Riddle, E. M., & Dabbagh, N. (1999), *Lev Vygotsky's social development theory*. Retrieved June, 6, 2005.

Roblyer, M., McDaniel, M., & Webb, M. (2010), *Findings on Facebook in higher education: A comparison of college faculty and student uses and perceptions of social networking sites*. Internet High.Educ., 13, 134–140.

Schroeder, J., & Greenbowe, T. (2009), *The chemistry of Facebook: using social networking to create an online community for the organic chemistry laboratory*. Innovate: Journal of Online Education, 5(4).

Selwyn, N. (2009), *Faceworking: exploring students' education-related use of Facebook*. Learning, Media and Technology, 34(2), 157-174.

Tasir, Z., Al-Dheleai, Y.M.H., Harun, J., and Shukor, N.A. (2011), *Student's Perception towards the Use of Social Networking as an eLearning Platform* in Proceedings of the 10th WSEAS International Conference on Education and Educational Technology (EDU'11). Penang, Malaysia, 2011.

Third, A., Richardson, I., Collings, P., Rahilly, K., & Bolzan, N. (2011), *Intergenerational attitudes towards social networking and cybersafety: A living lab*.

Valenzuela, S., Park, N., & Kee, K. F. (2009), *Is there social capital in a social network site? Facebook use, and college students' life satisfaction, trust, and participation*. Journal of Computer-Mediated Communication, 14(4), 875–901.

Welch, B. K., & Bonnan-White, J. (2012), *Twittering to increase student engagement in the university classroom*. Knowledge Management & E-Learning: An International Journal (KM&EL), 4(3), 325-345.