

Facebook as a Better and Preferred Learning Support Tool as Compared to Moodle: Students' Perspectives

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Abstract: Students' perspectives with regard to the relative effectiveness and preference of Moodle and FB for the support of their learning in an undergraduate engineering class were examined. Data collected from a group of 38 undergraduates found that more than 90 percent of the participants (94.74%) thought that FB better supported their learning of this course, and more than 85% of the participating students (86.84%) preferred using FB over Moodle, highlighting their already established use habit, familiarity of the operational procedures and environments, and the system's affordances. One-group χ^2 tests further found that the participants' perspectives with regard to the effectiveness and preference of the two platforms were both significant. The results obtained from this study were discussed with reference to technology acceptance model and technology adoption theory.

Keywords: learning support, technology acceptance, technology adoption, undergraduate engineering course

1. Introduction

In a knowledge economy society which puts 21st century skills at the core of education for cultivating citizens of the future, it is of paramount importance for educators to designing enticing learning and assessment activities that support participatory and constructivist experiences for students. Activities that highlight active building of dynamic links between prior and existing learning experience for knowledge construction on the part of the learner (Barr and Tagg, 1995) while attend to continuous, formative assessment during the process of learning (Birenbaum and Dochy, 1996) reflect well with contemporary education paradigms. In consideration that many students are accustomed to passive learning mode during lectures, interventions to help and induce learners to actively construct knowledge representations and structures to bypass inert learning mode is imperative.

While the use of online classroom management system (CMS) to support teaching and learning has been prevalent at the higher education level, research on its adoption and use by undergraduates are not all supportive and promising (Deng and Tavares, 2013). With 1.31 billion monthly active users, 22% increase in users from 2012 to 2013, and 45 percent of all users logging onto the system in any given day (Facebook, 2015), how undergraduate engineering students perceive Facebook (FB), the largest online social network, as a learning tool as compared to Moodle (i.e., an online CMS) was the focus of this study.

2. Methods

A total of 42 undergraduates enrolled in a "Transportation Engineering" course (three-credit, 18 weeks) from a university in central Taiwan participated in this study. To support teaching and learning, a space on Moodle was reserved for this course. Moreover, in view of the fact that FB is the most popular social networking site used in instructional settings (Mallia, 2014), a group was created in FB to be used exclusively by this study's participants. During the course, the instructor used Moodle and FB mainly

for the following three purposes: (1) to give students access to class announcements and supplemental teaching materials (e.g., references, access links to video-recording of each class), (2) to let students submit assignments online, and (3) to allow students to participate in online discussion and information exchange.

To understand how students perceived the relative effectiveness of the use of FB versus Moodle as a learning tool and their relative preference to the two online systems, the participating students were asked to respond to the following two questions at the last instructional session:

Q#1 Generally speaking, which of the following two online platforms (Moodle versus FB) do you think better support your learning of this course?

Q#2 Generally speaking, which of the following two online platforms (Moodle versus FB) do you prefer using for the support of your learning of this course? It is because (a) I have been using it for some times; (b) I am already familiar with the interface design and operational procedures of the system; (c) The distinct advantages and functions afforded by the system (mark all that apply)

Also collected were students' FB frequency use (several times per day, once per day, once every 2-3 days, once per week, seldom), and their prior experience in FB use in formal classroom settings (no, yes)

3. Results

Thirty-eight students attended the last class and responded to the questions (response rate = 90.48%). Among those, 84.21% participants logged onto FB several times per day, and 15.79% logged onto FB once per day (Table 1). That is, all participants logged onto FB at least once per day. In addition, all participants revealed that this was their first time to experience FB use in formal educational settings.

Table 1. Descriptive statistics on students' FB frequency use

	1*	2*	3*	4*	5*
	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Your normal FB frequency use	32 (84.21)	6 (15.79)	0	0	0

*1: several times per day; 2: once per day; 3: once every 2-3 days; 4: once per week; 5: seldom

Data from Q#1 showed that more than 90 percent of the participants thought that FB better supported their learning of this course (Table 2). A one-group χ^2 test further found that participants' perspectives regarding the effectiveness of the two platforms were significantly different ($\chi^2 = 30.42$, $p < .05$).

Table 2. Students' perspectives toward Moodle and FB regarding their preference and perceived effects for promoting their learning of this course

	Moodle <i>f</i> (%)	FB <i>f</i> (%)	χ^2
Q#1 Perceived as better promote your learning of this course	2 (5.26%)	36 (94.74%)	30.42*
Q#2 Prefer using for the support of your learning of this course	5 (13.16%)	33 (86.84%)	20.63*

* $p < .05$

Data from Q#2 indicated that more than 85% of the participating students preferred using FB over Moodle for the support of their learning. A one-group χ^2 test further showed that participants' preferences of the two platforms were statistically significant ($\chi^2 = 20.63$, $p < .05$). Among the three listed reasons for their revealed preference: 86.84% highlighting their already established use habit, 78.95% pinpointing their familiarity of the operational procedures and environments, and 50% stressing the respective system's affordances.

4. Discussion and Conclusions

In addition to the many advantageous features of online platforms and tools (such as multiple access points with less time and place constraints, high processing speed, immediacy, ease of updating and maintenance, immense storage space, multi-media capability, anonymity, flexibility, and so on) (Smaldino, Lowther, Mims and Russell, 2014), the affordances distinct of FB—automatic notification of updates of one's affiliated groups or friends, ease of access to posted updates (via the built-in hyperlink in notification), easily expressing one's agreement/response to any post via like, and ease of sharing and tagging, among others, have made it the communication tool of choice for many students (Hogg, 2014). To examine the relative perceived effectiveness and preference of Moodle versus FB for the support of students' learning, the perspectives of a group of undergraduates majoring in engineering were collected.

Technology acceptance model (TAM) indicates that perception of the usefulness (PU) and ease of use of the technology (PEU) collectively affect attitude formation towards any introduced technology, which impacts behavioral intention to use (BI) and later actual system use, whereas external variables influence PU and PEU (Davis, 1989). Furthermore, the diffusion theory proposed by Rogers (2003) suggested that users' adoption behavior is contingent on several predictors. Five perceived attributes of the innovation identified by Rogers (2003) are: relative advantages, compatibility, complexity, trialability and observability. From the data collected, with the technical design characteristics of FB (i.e., part of the external variables suggested by TAM to influence PU and PEU) highlighting its distinct advantages for learning and communication, on top of participants' already established use habit and familiarity with the operational procedures and environments (which, individually or in combination, affect compatibility and complexity), with reference to TAM and technology adoption theory, it is understood why FB was preferred and perceived as a better learning support tool by most respondents in this study.

Looking at some of the latest statistics updated by FB (2015)—among the 1.31 billion monthly active FB users, nearly half of all users aged between 18 and 34 year olds access FB when they wake up; for every 20 minutes, there are 1 million links being shared, 2 million friend requests being sent, and 3 million messages being sent on FB, the prevalent of FB use is obvious. As suggested by both TAM and technology adoption theory and on the basis of the findings of this study, instructors interested in actively involving their students in course-related materials and activities are advised to consider the integration of FB for communication and access to learning content besides Moodle.

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