

ONLINE INTERACTION TO INCULCATE MEANINGFUL TEACHING AND LEARNING IN FACEBOOK

Noor Dayana Binti Abd Halim & Nur Izzati Binti Mohamed Nasir

Department Educational Sciences, Mathematics and Creative Multimedia,

Faculty of Education, UTM Johor Bahru, Malaysia

noordayana@utm.my

Abstract

This research aimed to investigate types of online interaction that contributed most to meaningful learning in Facebook. From the literature, there are 5 types of online interaction in Facebook which are learner-content interaction, learner-self interaction, learner-learner interaction, learner-interface interaction and learner-instructor interaction. A total of 120 undergraduates students from one of university in Malaysia was chosen using convenience sampling. This study was quantitative study whereby descriptive analysis was being conducted by finding the mean using Statistical Social Science Package (SPSS). Result shows that online interaction that contributed most to meaningful learning in Facebook was learner-self online interaction with overall mean score of 4.40. Second online interaction that contributed most to meaningful learning in Facebook was learner-learner online interaction followed by learner-interface online interaction, learner-instructor online interaction and lastly learner-content online interaction. It is hopeful that the discussion of finding will be able to assist students and teachers in participating in teaching and learning activity in Facebook as well as inculcating meaningful learning to the learning environment.

Keywords: Online Interaction; Teaching and Learning in Facebook; Types Online Interaction

INTRODUCTION

In this 21st century, the medium of learning has been widely increasing. There is no need for people to depend on books and attend classes but they can attain knowledge through the internet. Bernama (2014) reported a statement made by Finance Ministry of Malaysia in National Undergraduates Leadership Conference with claimed that “11.8 million of Malaysian users have Facebook account and 80 percent of them browse internet to use Facebook”. Thus as mentioned by Cheung et al., (2011) the high number of users shows the high popularity of that sites.

Facebook was first developed by Mark Zuckerberg in February 2004 and initially used as Harvard social networking sites, then after two years which is in 2006, it was opened to the public (Markoff, 2007). The main role of social networking sites is in terms of communication, which allow people to connect and interact with each other in virtual communities (Murray & Waller, 2007; Cheung et al., 2011; Boyd & Ellison, 2008; Chang & Liu, 2011). Other than communication, social networking sites are well known for its function in sharing things such as in terms of sharing their daily activities (Chang & Liu, 2011), information (Junco, 2012) and learning experiences (Hussain, 2012). Users share their daily activities by posting statuses, photos, videos and chatting with friends.

In addition, Hamat et al., (2012) stated that students of higher institutions in Malaysia spend most of their time socialising in social networking sites rather than learning. This is a great opportunity for educators to grab this chance and make full use of social networking sites as a learning medium. In fact, nowadays many educators start to use Facebook in their teaching and learning process (Hanley et al., 2013; Hew, 2011).

Facebook in Teaching and Learning

The popularity of social networking sites have emerged across the world as it has been used in many fields including education. As an example, we can see many educators choose to use Facebook group as it brings many benefits to the process of learning. Wang et al., (2012) in their study use Facebook as learning management system (LMS) to deliver information to students such as news, sharing resources with students and arranging session for weekly tutorial as well as having discussion online.

According to Pempek et al., (2009) students' daily routine is surfing Facebook for at least 30 minutes. Therefore by using Facebook frequently, it is believed that the students will not miss any updated information that was posted at the Facebook. Gray et al., (2010) stated medical students also use Facebook groups to enhance knowledge and discuss about anything related to hospital and clinical examinations. It is extremely important for educators to know the interaction their students engage in teaching and learning process. Jingwei (2011) said interactions become crucial in online learning environment. Besides, by learning what types of interactions students use, educators can discover how the students built up their knowledge (Choo et al., 2014).

RESEARCH BACKGROUND

Facebook for Education

A few studies have used Facebook for subject EFL (Aydin, 2014), English Language Teaching (Dogoriti et al., 2014; Muhammad Kamarul et al., 2010), Justice (Staines & Lauchs, 2013) and Medical (Gray et al., 2010). This indicates that various subjects can be applied in Facebook and the preference of educators towards social networking environment is Facebook. Following the suggestion of Bicen and Cavus (2011) to investigate how the social networks work in education, the aspect interaction will be further explored.

Interactions in online learning

Interactions in online learning involves process of exchanging information from different perspective between two or more individuals in a two way communications from a far distance situation (Moore, 1989). Interaction was first described in terms of distance education by Moore (1989) who listed three types of interaction in online distance education which is learner-content interaction, learner-instructor interaction and learner-learner interaction. Nevertheless, Hillman, Willis and Gunawardena (1994) added relationship learner-interface as Moore's three relationships do not consider for interactions occur between learner and medium of technology. In their view, technology medium is important to be included as it is related to content, instructor and learner. Chou et al. (2010) and Soo and Bonk (1998) had included learner-self interaction as another type of interaction. After comparing to all the types of interaction and pattern listed by Chou et al. (2010) and Soo and Bonk (1998), the researcher added self-interaction to be the fifth type of interaction in Facebook. Thus making all total of types of interaction to be five.

Su et al. (2005) listed instructional activity that that can be used by instructor to get students engage with the learning to be asking students questions, asking them to summarize key points and giving response to the students' answer. However, teacher face the challenge to provide timely feedback to each of the students as has been mentioned by Johana et al. (2011) study on using Facebook notes as academic writing process. To overcome this, the teacher in the study used the "LIKE" tools instead of giving comment as response to the students writing in which has been considered to be helpful for students in improving their writing (Johana et al., 2011). Besides, Facebook group can be created in order to promote learning through collaboration, as it is easier for students to interact with their friends in more specific learning medium. Data given by Ventura & Quero (2013) support this statement. From the study, it indicates that 85% of topics or new entries in the Facebook group were created by the students. This proves that students feel more free to join the learning activity conducted in Facebook. Therefore, it is advisable for instructor to search for the effective instructional strategies (Hamat et al., 2012) in order to overcome all the challenges and as well as creating meaningful learning in Facebook.

METHODOLOGY

Sampling used in this study was convenience sampling. In convenience sampling, participants come from individuals who are easy to get and have willingness to give respond (Gravetter and Forzano, 2015). Thus in this study the sampling used was 120 first year undergraduate students of one of universities in Malaysia. The questionnaire was distributed in form of internet link (Google form). The questions in the questionnaire was based on Chou at al.,(2010);Chou(2003) and Sun and Hsu (2013) with some modifications to suit with this study. The questionnaire consists of 107 items and six sections. Section A was about respondents' background, section B was about learner-content interaction in Facebook, section C was about learner-interface interaction in Facebook, section D was about learner-instructor interaction, section E was about learner-learner interaction and lastly section F was about learner-self interaction in Facebook.

RESULT

The result of this study was based on the objective which was to investigate types of interactions that contributed most to meaningful learning in Facebook. The data was analysed through descriptive analysis by which it will be determined by overall mean.

Learner-content online interaction

There are 22 items for learner-content online interaction. Based on Table 1, the overall mean for interaction pattern learner-content online interaction was 4.11. This indicates the mean score was in high level interpretation. Table 1 shows mean and standard deviation for learner-content online interaction.

Table 1:Mean And Standard Deviation for Learner-Content Online Interaction

No.	Item	Mean	SD
1	I can choose to mark post as spam	3.80	1.01
2	I can choose to hide post that I do not want to see	4.37	0.82
3	I can create poll question	3.56	0.96

4	I can create photo album	4.44	0.73
5	I can upload document in group	4.08	0.89
6	I can download document in group	4.04	0.91
7	I can edit documents in group	3.58	1.03
8	I can preview documents in group	3.91	0.91
9	I can create advertisement	3.70	1.00
10	I can use featured ads	3.41	1.01
11	I can send attachment(file) in message	4.04	0.92
12	I can list family members on my profile page	4.33	0.79
13	I can upload video on my status	4.28	0.75
14	I can view who have seen post in group	4.08	0.89
15	I can review the post when someone tagged me	4.34	0.69
16	I can download pictures	4.50	0.69
17	I can upload pictures	4.48	0.71
18	I can see mutual friend	4.48	0.69
19	I can use frequently asked question	3.91	0.92
20	I can play games	3.98	1.02
21	I can change privacy of photo/photo album	4.52	0.69
22	I can change privacy setting of my profile	4.54	0.70
	Overall mean	4.11	

Learner-interface interaction

Based on Table 2, it was observed that overall mean for 28 items in learner-interface interaction was 4.32 which interpret as high mean score. Table 2 shows mean and standard deviation for learner-interface online interaction.

Table 2: Mean and Standard Deviation for Learner-Interface Online Interaction.

No	Item	Mean	SD
23	I get notification reminder on event invited	4.40	0.72
24	I get notification reminder on friend's birthday	4.48	0.70
25	I can navigate through any menu (such as home, profile)	4.24	0.76
26	I can mark post as spam so the post will not be on the FB newsfeed	4.10	0.85
27	I can hide post, so the post will not be seen on the FB newsfeed	4.44	0.78
28	I can click to view notification	4.48	0.66
29	I can click 'seen this' in group's post	4.01	0.87
30	I can click to review posts people tagged me	4.32	0.69
31	I can view language choice	4.20	0.80
32	I can insert link in my status	4.26	0.76
33	I can use keyword search in group	4.10	0.86
34	I can search people	4.49	0.67
35	I can click on download photo	4.37	0.80
36	I can click on upload photo	4.41	0.74
37	I can pin post in group	3.99	0.83
38	I can upload profile picture	4.43	0.70
39	I can click on user guidance for help	4.00	0.86
40	I can click on frequently asked question(FAQs)	3.89	0.89
41	I can click 'update my status'	4.40	0.74
42	I can click to upload photo in my status	4.37	0.73
43	I can click to insert emoticon in status	4.32	0.83
44	I can remove profile picture on my own	4.46	0.83
45	I can change profile picture on my own	4.48	0.72

46	I can change privacy of photo/photo album on my own	4.53	0.72
47	I can deactivate Facebook on my own	4.48	0.71
48	I can change privacy setting of my profile page on my own	4.49	0.77
49	I can change account setting on my own	4.45	0.75
50	I can update info about myself	4.43	0.74
	Overall mean	4.32	

Learner-instructor Interaction

Learner-instructor interaction consists of 22 items. Thus, Table 3 shows the overall mean for learner-instructor interaction was 4.12 which marks high interpretation for level of mean score. Table 3 shows mean and standard deviation for learner-instructor online interaction.

Table 3:Mean and Standard Deviation for Learner-Instructor Online Interaction

No	Item	Mean	SD
51	I can reply my instructor's comment	4.32	0.70
52	I can 'like' my instructor's comment	4.26	0.76
53	I can reply my instructor's comment by posting photo	4.13	0.84
54	I can post link on comment box to reply my instructor's post	4.21	0.79
55	I can post emoticon in my instructor's comment box	4.26	0.74
56	I can send message to my instructor	4.29	0.75
57	I can share photo album to my instructor	4.07	0.92

58	I can send photo in message to my instructor	4.17	0.83
59	I can send link in message to my instructor.	4.23	0.75
60	I can send attachment in message to my instructor	4.17	0.81
61	I can record voice to send message to my instructor	3.70	1.02
62	I can request video call from the instructor in message box	3.85	0.98
63	I can add person in group message if my instructor asked	4.16	0.78
64	I can send emoticon in message box to my instructor	4.17	0.81
65	I can send attachment in message box to my instructor	4.14	0.82
66	I can poke my instructor	3.90	1.05
67	I can tag my instructor in photos, video, status, note and comment	4.13	0.85
68	I can send friend request to my instructor	4.17	0.86
69	I can accept friend request from my instructor	4.20	0.82
70	I can suggest friend to my instructor	4.06	0.92
71	I can invite instructor to join event	4.09	0.90
72	I can block my instructor	3.87	1.10
	Overall mean	4.12	

Learner-learner interaction

There is 24 items in learner-learner online interaction on Facebook. From Table 4, the overall mean for learner-learner interaction was 4.35 which shows high interpretation for level of mean score. Table 4 shows mean and standard deviation for learner-learner online interaction.

Table 4: Mean and Standard Deviation for Learner-Learner Online Interaction

No.	Item	Mean	SD
73	I can reply my friend's comment.	4.53	0.66
74	I can like my friend's comment.	4.52	0.70
75	I can post photo in my friend's comment box.	4.47	0.70
76	I can send message to my friend.	4.54	0.66
77	I can send message to more than one friend in group message.	4.43	0.68
78	I can share photo album with my friends.	4.40	0.76
79	I can send photo in message to my friends.	4.40	0.69
80	I can add friends into group.	4.43	0.74
81	I can send link in message box to my friend.	4.40	0.69
82	I can record voice in message box and send to my friends.	4.03	0.96
83	I can request video call in message with my friends.	4.21	0.81
84	I can add friend(s) into group message.	4.26	0.82
85	I can tag friend(s) in status, video, photo, note and comment.	4.40	0.73
86	I can post link in friend's comment box.	4.31	0.77
87	I can post emoticon to my friend's comment box.	4.40	0.76
88	I can invite my friend(s) to play games.	4.23	0.91
89	I can send emoticon in message to my friend.	4.40	0.72
90	I can poke my friend.	4.27	0.87
91	I can invite friend to join event.	4.40	0.72
92	I can send friend request.	4.45	0.70
93	I can unfriend my friend.	4.28	0.89
94	I can suggest new friend to my existing friend.	4.26	0.82

95	I can leave conversation in message group between my friends.	4.21	0.85
96	I can block my friend.	4.09	1.09
	Overall mean	4.35	

Learner-self interaction

Based on Table 5, it was observed that the overall mean for total of 6 items in learner-self interaction was 4.40 which shows high interpretation for the level of mean score. Table 5 shows mean and standard deviation for learner-self online interaction.

Table 5: Mean and standard deviation for learner-self online interaction

No.	Items	Mean	SD
97	I can create note.	4.38	0.76
98	I can update status.	4.50	0.61
99	I can upload photo in my status.	4.03	0.97
100	I can post in group.	4.52	0.61
101	I can insert emoticon in my status.	4.48	0.71
102	I can insert link in my own status.	4.46	0.72
	Overall mean	4.40	

ANALYSIS COMPARISON OVERALL MEAN BETWEEN EACH TYPE OF ONLINE INTERACTION

Lastly, the overall mean for each type of online interaction was being summarized. In addition, the overall mean for all types of online interaction was ranked accordingly from the highest to the lowest. From Table 6 it can be observed that the highest overall mean started by online interaction learner-self with overall mean of 4.40 . Second highest overall mean was 4.35 by online interaction learner-learner, followed by learner-interface with overall

mean of 4.32, learner-instructor with overall mean of 4.12 and the lowest overall mean was learner-content online interaction with overall mean of 4.11 . There was only a slight difference between overall mean for each ranking of online interaction. Table 6 shows the overall mean for online interactions in Facebook.

Table 6: The Overall Mean For Online Interactions In Facebook

Rank	Type of online interaction in Facebook	Overall Mean
1	Learner-self interaction	4.40
2	Learner-learner interaction	4.35
3	Learner-interface interaction	4.32
4	Learner-instructor interaction	4.12
5	Learner-content interaction	4.11

Thus, in figure 1 the type of online interaction that contributed most to meaningful learning in Facebook was arranged in a rank from least contributing to the most contributing according to the overall mean score as show in Table 6 above.

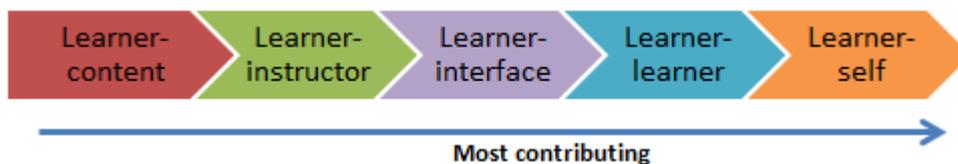


Figure 1: The ranking on online interaction on Facebook from least contributing to the most contributing

DISCUSSION

Learner-self interaction was the interaction that was mostly used by students because when using Facebook as the platform , students can do the learning activity according to their own pace. Besides, Ventura and Quero (2013) stated that social network promotes learning to be revolving around in the 24 hours per day instead of just a few hours in the physical class by having students shared any learning materials at any time. The result from this study was consistent with a study by Ekwunife-Orakwue and Teng (2014) that even without interactions with other learner and teacher, students still manage to explore the website by their own self.Learner-learner. The same finding applied with the study Dogoriti et al. (2009) in which

students enjoyed to interact with other learners on Facebook as a medium for discussion and use it like a forum. Hanley et al., (2013) stated that in their study students were seen to have strong relationship at early participation during the activity.

Learner-interface was ranked as the third online interaction that contributes to teaching and learning activity on Facebook. As mentioned by Chou (2003), good interaction between learner and interface makes the process of accessing website become easier. Because of that it is important to have interaction between learner and interface. Learner-instructor interaction was ranked as the fourth online interaction that contributes to teaching and learning activity on Facebook. This result supports Aydin (2014) findings, which found out that students act passively when they interact with their teacher on Facebook. The students act like a stalker, read most of the updates by teacher such as photo and status but did not give comment or send message to the teacher. Because of that, there should be some proper guideline or ways to encourage interaction between the learner and the instructor. (Gray et al., 2010) suggested instructor to advise and monitor students as they were engaged in learning activity on Facebook.

The last one on the ranking was learner-content interaction. There was not much concern on learner-content interaction as it was lack of previous research for this topic (Su et al., 2005). However, according to Bernard et al., (2009), strong interaction between student and content can enhance learning achievement and give effect to asynchronous settings compared to other settings.

CONCLUSION

From the research, online interaction that contributes most to teaching and learning on Facebook had been identified to be learner-self interaction. Second highest in the ranking is learner-learner interaction, third highest in the ranking is learner-interface interaction, fourth highest in the ranking is learner-teacher interaction and the last one in the ranking is learner-content interaction. There is only a few point differences on overall mean for learner-self interaction and learner-learner interaction. Learner-self interaction as the first in ranking showed that students were able to manage their own schedule to participate in learning activity on Facebook. Dogoriti et al., (2014) stated that Facebook was easily accessible such as using our mobile phone and no time constrains as user can access it anytime as long as there is an internet connection. Learning becomes more meaningful as it involves discussion between each of the learner. This is shown in the previous study by (Nurul Farhana & Zaidatun, 2013) in which students like to share opinion with the classmates during

involvement in learning activity on Facebook. Therefore, learning can become meaningful as the instructor knows the importance of all types of online interaction.

To conclude, with all these findings, it can be used as a guideline for the teacher to conduct the teaching and learning activity on Facebook and as well for the students to participate in learning activity conducted in Facebook.

REFERENCES

- Aydin, S. (2014). Foreign language learners' interactions with their teachers on Facebook. *System*, 42, 155–163. <http://doi.org/10.1016/j.system.2013.12.001>
- Bernard, R. M., Abrami, P. C., Borokhovski, E., Wade, C. a., Tamim, R. M., Surkes, M. a., & Bethel, E. C. (2009). A Meta-Analysis of Three Types of Interaction Treatments in Distance Education. *Review of Educational Research*, 79(3), 1243–1289. <http://doi.org/10.3102/0034654309333844>
- Bicen, H., & Cavus, N. (2011). Social network sites usage habits of undergraduate students: case study of Facebook. *Procedia - Social and Behavioral Sciences*, 28, 943–947. <http://doi.org/10.1016/j.sbspro.2011.11.174>
- Boyd, D. M., & Ellison, N. B. (2008). Social Network Sites : Definition , History , and Scholarship. *Journal of Computer-Mediated Communication*, 13, 210–230. <http://doi.org/10.1111/j.1083-6101.2007.00393.x>
- Chang, S., & Liu, P. (2011). Using focus group to investigate why people use Facebook: The case of Taiwan. In ... *Management in the Energy Smart World* (... (pp. 1–6). Retrieved from http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6017728
- Cheung, C. M. K., Chiu, P.-Y., & Lee, M. K. O. (2011). Online social networks: Why do students use facebook? *Computers in Human Behavior*, 27(4), 1337–1343. <http://doi.org/10.1016/j.chb.2010.07.028>
- Choo, L. P., Kaur, G., Fook, C. Y., & Yong, T. C. (2014). Patterns of Interaction among ESL Students During Online Collaboration. *Procedia - Social and Behavioral Sciences*, 123, 307–314. <http://doi.org/10.1016/j.sbspro.2014.01.1428>
- Chou, C. (2003). Interactivity and interactive functions in web-based learning systems: a technical framework for designers. *British Journal of Educational Technology*, 34(3), 265–280.
- Chou, C., Peng, H., & Chang, C.-Y. (2010). The technical framework of interactive functions for course-management systems: Students' perceptions, uses, and evaluations. *Computers & Education*, 55(3), 1004–1017. <http://doi.org/10.1016/j.compedu.2010.04.011>
- Dogoriti, E., Pange, J., & Anderson, G. S. (2014). The use of social networking and learning management systems in English language teaching in higher education. *Campus-Wide Information Systems*, 31(4), 254–263. <http://doi.org/10.1108/CWIS-11-2013-0062>
- Dogoriti, E., Pange, J., & S. Anderson, G. (2014). The use of social networking and learning management systems in English language teaching in higher education. *Campus-Wide Information Systems*, 31(4), 254–263. <http://doi.org/10.1108/CWIS-11-2013-0062>
- Ekwunife-Orakwue, K. C. V., & Teng, T.-L. (2014). The impact of transactional distance dialogic interactions on student learning outcomes in online and blended environments. *Computers & Education*, 78, 414–427. <http://doi.org/10.1016/j.compedu.2014.06.011>
- Gravetter, F. J., & Forzano, L.-A. B. (2015). *Research Methods for the Behavioral Sciences*

- (5th ed.). Cengage Learning.
- Gray, K., Annabell, L., & Kennedy, G. (2010). Medical students' use of Facebook to support learning: Insights from four case studies. *Medical Teacher*, 32, 971–976. <http://doi.org/10.3109/0142159X.2010.497826>
- Hamat, A., Embi, M. A., & Hassan, H. A. (2012). The Use of Social Networking Sites among Malaysian University Students. *International Education Studies*, 5(3), 56–66. <http://doi.org/10.5539/ies.v5n3p56>
- Hanley, L., Ong, T., Aik, C., Wee, R., Kheng, K., & Yew, L. S. (2013). A STUDY ON THE ACADEMIC USES OF FACEBOOK IN VOCATIONAL EDUCATION. In *63rd Annual Conference International Council for Educational Media (ICEM)* (pp. 1–8).
- Hew, K. F. (2011). Computers in Human Behavior Students' and teachers' use of Facebook, 27, 662–676. <http://doi.org/10.1016/j.chb.2010.11.020>
- Hussain, I. (2012). A Study to Evaluate the Social Media Trends among University Students. *Procedia - Social and Behavioral Sciences*, 64, 639–645. <http://doi.org/10.1016/j.sbspro.2012.11.075>
- Jingwei, Z. (2011). Empirical study on online interaction based on learning style differences. *2011 6th International Conference on Computer Science & Education (ICCSE)*, (Iccse), 1023–1026. <http://doi.org/10.1109/ICCSE.2011.6028810>
- Johana, Y., Nor Ashikin, A. M., & Ahmad Ashaari Alias. (2011). Guided Peer Feedback on Academic Writing Tasks using Facebook Notes: An Exploratory Study. In *The 3rd International Conference in E-learning* (Vol. 67, pp. 216–228). Elsevier B.V. <http://doi.org/10.1016/j.sbspro.2012.11.324>
- Junco, R. (2012). Too much face and not enough books: The relationship between multiple indices of Facebook use and academic performance. *Computers in Human Behavior*, 28(1), 187–198. <http://doi.org/10.1016/j.chb.2011.08.026>
- Markoff, J. (2007). Who Founded Facebook A New Claim Emerges - New York Times. *The New York Times*. Retrieved from http://www.nytimes.com/2007/09/01/technology/01facebook.html?_r=0
- Muhammad Kamarul, K., Norlida, A., & Mohamad Jafre, Z. A. (2010). Facebook: An online environment for learning of English in institutions of higher education? *Internet and Higher Education*, 13(4), 179–187. <http://doi.org/10.1016/j.iheduc.2010.07.003>
- Nurul Farhana, J., & Zaidatun, T. (2013). Students' Types of Online Interaction through Facebook Discussion. *Procedia - Social and Behavioral Sciences*, 97, 353–360. <http://doi.org/10.1016/j.sbspro.2013.10.245>
- Pempek, T. a., Yermolayeva, Y. a., & Calvert, S. L. (2009). College students' social networking experiences on Facebook. *Journal of Applied Developmental Psychology*, 30(3), 227–238. <http://doi.org/10.1016/j.appdev.2008.12.010>
- Staines, Z. R., & Lauchs, M. (2013). The use of Facebook in tertiary education. *Interactive Technology and Smart Education*, 10(4), 285–296. <http://doi.org/10.1108/ITSE-05-2013-0008>
- Su, B., Magjuka, R. J., & Lee, S. (2005). The Importance of Interaction in Web-Based Education: A Program-level Case Study of Online MBA Courses. *Journal of Interactive Online Learning*, 4(1), 1–19.
- Sun, J., & Hsu, Y. (2013). Effect of interactivity on learner perceptions in Web-based instruction. *Computers in Human Behavior*, 29(1), 171–184. <http://doi.org/10.1016/j.chb.2012.08.002>
- Ventura, R., & Quero, M. J. (2013). Using Facebook in University Teaching: A Practical Case Study. *Procedia - Social and Behavioral Sciences*, 83(2008), 1032–1038. <http://doi.org/10.1016/j.sbspro.2013.06.192>
- Wang, Q., Woo, H. L., Quek, C. L., Yang, Y., & Liu, M. (2012). Using the Facebook group

as a learning management system: An exploratory study _1195 428..438. *British Journal of Educational Technology*, 43(3), 428–438. <http://doi.org/10.1111/j.1467-8535.2011.01195.x>