Achieving Better Learning Performance through the Discussion Activity in Facebook

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ABSTRACT
This study was conducted to see the effectiveness of using Facebook for expressing opinions on given topics to improve students' oral proficiency and critical thinking skills in an English class at a private university. The participants were 80 students enrolled in a course which emphasized the use of English for expressing ideas. Three research questions were formulated to evaluate the effectiveness of teaching and learning. Data were collected by two small group discussion tests, a questionnaire and postings in Facebook. The results indicated that students achieved better performance in the second small group discussion test. There were positive correlations between students' final score and their participation while satisfaction was not found to be correlated to both final score and number of postings. Also, they had a high level of satisfaction with the discussion activity they did in Facebook. The findings suggest that different learning activities be included in future courses to allow students to practice more on discussion, making them improve not only their critical thinking, but language skills as well, and in evaluating those activities, we need to take students' participation into consideration.

Keywords: oral proficiency, Facebook, critical thinking, social media, language teaching

INTRODUCTION
The ability to think critically features prominently in terms of education. Lang (2000) defines it as a process that results in rational and substantiated comprehension of a subject matter. People with critical thinking abilities thoroughly analyze and augment their thoughts, present them with graphically and convincingly, and scrutinize and dare to contradict other people's ideas. According to Paul and Elder (2008), people with critical thinking abilities are those who pose significant questions in a well-defined and unambiguous manner, collect and apply abstract ideas to evaluate the information in order to reach well-thought-out deductions. They check the accuracy and validity of the deductions, consider other relevant ways of thinking, acknowledge suppositions and outcomes, and interact well with other people.

Even though students are able to learn and practice how to utilize the ability to think critically in various different situations, it is still necessary to instill into them the attitude that there is always a risk of errors and that they should learn from those errors and failures (Nelson, 2005). The teacher may have the students discuss a particular topic among team members so as to reach a definite solution to that issue. This will broaden their thinking approaches and provide an opportunity for other team members to carefully examine or analyze each other's way of thinking (Sweet & Michaelsen, 2012). Today, acquisition of knowledge is no more the sole objective of education. Other skills such as interpersonal relationships and the ability to think critically have become vitally important. Yet honing the critical thinking abilities visa classroom activities takes up a lot of class time. On top of that, as students have the four basic skills to master, the teacher can ill afford to spend class time on other skills.

Using Technologies to Promote Critical Thinking
At present the popularity of technology has rendered it an efficient instrument to develop the skills to think critically. Interrelation characterizes today's society, and cooperation and the skills to think critically, which greatly help with online learning, have undeniably become significant (Nagi & Vate U-Lan, 2009). According to Maurino (2006-2007), since online communication allows students more time to read, think, form ideas, analyze, and comment, they are more likely to produce considerably better analytical comments online than they tend to in a classroom learning environment. Ladyshewsky (2006) also points out that another added benefit is that different learners may adopt different approaches to a particular issue, thus creating varied reactions and

feedback. Chen, Liu, Shih, Wu, and Yuan (2011) propose that a learner who has posted an idea or a comment receives a number of responses or comments from other learners or instructors, and this shows the social impacts of online communication. Online team interaction can also help shy students or team members who rarely speak up in the class or discussion activities (Chang, Chen, & Hsu, 2011). Many studies have shown that many instructors incorporate and encourage learning via online conversation (Baran & Correia, 2009; Barnett-Queen, Blair, & Merrick, 2005; Thormann, 2008). There are quite a few ways (for example discussion forums) to carry out online discussion, and researches on critical thinking have proved that online discussion are conducive to honing the abilities to think critically, resolve problems, and to contribution and involvement (Al-Fadhli & Khalfan, 2009; Ekahitanond, 2013). Online forums are another main source where researches on critical thinking can be found. Ekahitanond (2013) and Kitchakarn (2013) found that the websites, applications and activities on the Internet create positive ways of thinking about learning in the students.

The Use of Facebook as a Learning Tool

Social media provides ample room and leeway for learners to form their own learning groups, with Facebook at the forefront. Facebook serves as a platform for college students to air opinions and share pictures with other people. According to Jones and Fox (2009), around 85-99 per cent of college students are on Facebook. Given its decided popularity, Facebook is fast becoming another channel for learning. Wang, Lin, Yu and Wu (2012) had been successful with the use of Facebook as a learning tool, resulting in the learners' eager participation, higher academic achievements, and contentment with their learning. According to Kaliban, Almad, and Zainol (2010), students were convinced that Facebook could make it easier to learn English. DeSchryver, Mishra, Koehler and Francis (2009) noted that it was agreeable for students to use Facebook as a learning tool in class. Pascarella and Terenzini (2005) support that environments that emphasize close interactions between faculty and students are related to improved critical thinking, knowledge acquisition, analytic competencies, and intellectual development. Therefore, social media can serve as a venue for learners to hone their ability to think critically through conducting "small group discussion", which serves as an incentive and a vehicle for learning. Students learn how to carry out small group discussion, express their personal opinions, work with theories and premises and resolve problems by discussing, arguing, brainstorming, and adjusting the input. One thing teachers should do to help guide the learners is to show how to utilize the materials for discussion. The learners' level of success largely depends on clearness, actual exercise, and teachers' guidance. One major limitation is that the larger a class, the less time and attention a teacher can devote to each group. In that case, group leaders play a vital role in conducting the discussion, particularly where complex and creative issues are involved. As such, the current study employed social media as a platform for students to do the activity.

Learners' Participation

Facebook is one of the best ways of promoting peer interaction and collaborative learning. As Miyazoe and Anderson (2010) put up, constructivism and knowledge building, involving reflective and collaborative learning supported by scaffolding can make a quality online learning environment. That is, peer interaction can build a quality discussion learning experience. In this sense, it is necessary that the problems of student isolation and disconnection in online learning be solved to actively promote participation. Rovai (2007) suggests that courses need to be well-designed so that they provide motivation for students to engage in productive discussions. This productive and effective engagement can be ensured by identifying what is expected from students, and one of the key ways is a discussion rubric (Rovai, 2007). Likewise, Gikandi, Morrow and Davis (2011) found formative feedback and authentic assessment to be excellent ways to encourage quality participation and interaction that facilitates the sharing of knowledge and creates a community of inquiry. A previous study revealed a positive correlation between students' visible learning behaviors, such as participating in online activities, and their learning outcomes (Wang, 2004). Another study conducted by Cheng, Paré, Collimore and Joordens (2011) found students who voluntarily engage in online discussion forums achieve better examination results than those who do not. The results suggest that if students actively engage in discussing with their peers, they will gain a lot of benefits. On the contrary, those who do not participate in an online learning environment may be missing a good opportunity for quality interaction with their peers.

Learners' Satisfaction

This study set a premium on satisfaction as the key aspect. The level of a learner's satisfaction is directly proportional to the level of participation. The more satisfied students are, the more willing they are to learn, and they stand a better chance to succeed (Allen et al. 2007; Puzziferro 2008). Palmer and Holt (2009) found that the more students participate frequently online, the more satisfied they feel with online courses. Satisfaction is described as the students' impression that their learning process proved advantageous to them. It is also indicative of how effective the learning process was. Students' comments and criticisms can reflect and decide what adjustments should be made so that class time and online time are well-proportioned. Such feedback from students together with their course assessments provides a great deal of help to people who make decisions about

how each course should be planned and conducted (Wong & Yeung, 2003). According to Pena and Yenug (2011), conducting surveys is a major tool used to find out the level of learners' satisfaction with a certain course, which is one of the crucial ingredients of course assessments. In their research, Xie, Durrington, and Yen (2011) find that the close correlation between how motivated a student is and how actively involved that student is online is that one is proportionate to the other.

Based on the principle that students can hone the ability to think critically even via online education through the student-centered approach, this study incorporated Facebook, arguably the most widely used site of its kind, into the learning process so that students were able to improve their critical thinking skills. The purposes of the study were to examine how students' oral proficiency and critical thinking skills were affected by the debates and discussions in Facebook, how they felt about small group discussions in terms of satisfaction and what factors are related to their learning performance. Although students tend to discuss and express ideas more openly when they interact with other students (Seo, 2007), in this study students had an opportunity to interact with other students as well as with instructors because instructors are better able to put in order, clarify, and integrate all the information (Wang, 2009). Three research questions were addressed as follows:

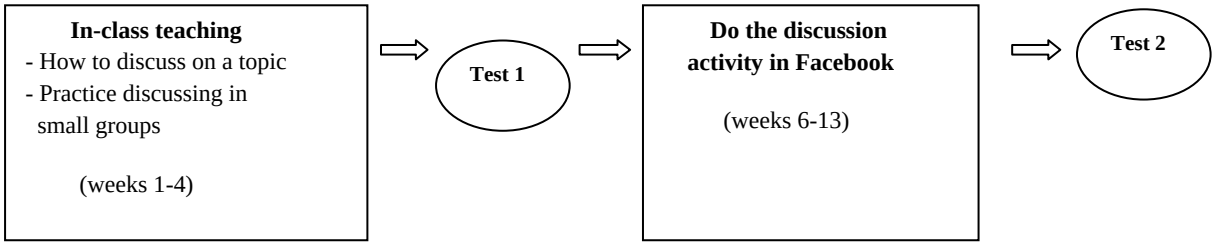
- Research Question 1: To what extent do the students improve critical thinking skills and language proficiency after joining the discussion activity in Facebook?
- Research Question 2: What is the students' satisfaction with the discussion activity in Facebook?
- Research question 3: Are there any relationships among the frequency of students' postings, satisfaction and their final score?

METHODOLOGY

The participants in the research were 82 students who registered for English for Expressing Ideas in semester 1 of the academic year 2014. They were from two sections. The course carried 3 credits and lasted 14 weeks. The class met 2 periods a week (140 minutes). The participants also had to attend a one-period (70 minutes) language lab each week for listening and speaking. This course required students to perform many tasks and tests. One of the tasks they had to perform was small group discussion.

The ability being a stated goal of the course, it therefore integrated Facebook as a platform for discussion in order to enhance the students' oral proficiency and critical thinking abilities. This English course took advantage of it as a platform for students to practice their critical thinking skills. This activity is called the "discussion activity." Students formed their own groups (5 in each group) to discuss certain topics. They made use of various techniques to express their opinions. For instance, they described, elaborated, and showed whether they were in favor of or against what other students had posted. The students took part in the activity by discussing and giving their opinions on the topics posted by the teacher on Facebook. They were to conduct discussions in such a way that they encouraged more discussions from other students. The expressed ideas, opinions or discussions by the students should reflect their ability to think critically. The role of the teacher was to oversee the activity, to read the discussions and offer comments and advice, and to make sure that the discussion went on smoothly. This activity allowed students to know what "good input" is through their reflections by describing, explaining, expressing their likes or dislikes of what others had posted, interpreting, and showing their agreement or disagreement with other students' thoughts.

Figure 1: Stages of the Experiment



The first instrument was two discussion tests assessing students' performance which focused on both oral proficiency and critical thinking skills. One test was given as the pre-test and the second one as the post-test. As a performance-based assessment of speaking and critical thinking ability, students in groups of 5 conducted a 5-10 minute discussion on a controversial topic of their interest. Teachers gave marks using scoring rubrics. The small group discussion assessment was conducted two times, each worth 10 points. A list of controversial topics for the tests was given on the test date.

Topics for the First Test

- What is more desirable - love marriage or arranged marriage?
- Corruption will never disappear from Thai society.
- Life is not easy when there is no money.
- Plastic surgery is the best way to beauty.
- Parents should not allow their kids to play computer games.

Topics for the Second Test

- Forgiveness is better than anger.
- Skipping classes is not always a bad thing.
- Actions speak louder than words.
- It is not good to have a boyfriend or girlfriend when you are studying.
- Which is the most valuable – love, friendship, and good health?

After they chose the topic they preferred, they had ten minutes to prepare with the team members. The scoring rubric was used to grade students' performance as follows:

Criteria	0 point	1 points	2 points	3 points
Fluency	Speak slowly with long pauses and/or a lot of incomplete thought	Speak with frequent pauses, a few incomplete thoughts	Speak with frequent pauses, no incomplete thought	Speak continuously with a few pauses or stumbling
Discussion Ability	The student does not participate in the discussion.	The student participates by answering discussion questions with limited details. The student agrees/disagrees with something said, but offers no additional new information regarding the topic.	The student participates in each discussion question. The student follows the directions for making sure everyone participates fairly.	The student fully participates in each discussion question and adds additional insight to prompt further discussion amongst the members of the group.
Reflection of Creative Thinking	There is no attempt at reflection, or only superficial comments apparent.	The student makes a few substantive reflective statements.	The student comments in a structured and insightful way.	
Logical Ideas	Few ideas are presented, and they are not logical.	Some logical ideas are presented.	Adequate logical ideas are presented.	

The second instrument was a questionnaire which was designed to assess students' satisfaction with the discussion activity in Facebook. They were asked to fill out a 10-item questionnaire, whose validness had been certified by three experts. This questionnaire was used to find out the students' acceptance of the activity by asking how satisfied they were with the activity they did in Facebook. It was in a form of Likert five-rating scale. The acceptable IOC index for each item was above 0.6. In order to ascertain that the questionnaire was reliable, it had been tried out by 40 students from semester one of the 2014 academic year who had taken part in a trial study course for six weeks. Cronbach's Coefficient Alpha was applied and the values were 0.86 for the first part, and 0.82 for the second part. In addition, the current study placed a lot of importance on joining the activity in Facebook, so it is necessary to investigate how much students joined the activity in Facebook. Since they were required to post their opinions on the topics provided, participation was, therefore, measured by the number of their posts on Facebook.

DATA ANALYSIS

The sources of data were the students' posts, evaluations of their performance and the questionnaires. The students' involvement with the activity was measured by the number of their postings. The students'

performances in both tests were compared using a paired-samples t-test. The satisfaction with doing the discussion activity in Facebook was evaluated by means and standard deviations. A mean score of 1-1.50 indicates having satisfaction at a very low level, 1.51-2.50 at a low level, 2.51-3.50 at a moderate level, 3.51-4.50 at a high level, and 4.51-5.00 at a very high level. The relatedness of the students' final marks, frequency of their postings and satisfaction was scrutinized with Pearson Correlation Coefficients.

RESEARCH RESULTS

Research Question 1: To what extent do the students improve critical thinking skills and language proficiency after joining the discussion activity in Facebook?

Table 1 shows that the pre-test mean score was 6.63 and the post-test mean score was 7.93. The result from the one-tailed test revealed that the mean score of the post-test was significantly higher than that of the pre-test. This means that the discussion activity was most likely to improve the students' thinking skills and language proficiency.

Table 1: Mean Scores of the Pre-Test and Post-Test of the Students

Score	Mean	S.D.	df	t	p
Discussion Test 1	6.63	1.13	81	12.94	.000
Discussion Test 2	7.93	1.03			

Research Question 2: What is the students' satisfaction with the discussion activity in Facebook?

Table 2 showed that the overall mean scores of satisfaction with the discussion activity in Facebook were at a high level ($\overline{X}$ = 3.76). Nearly all of the items were also rated at high levels except item no.2 and no.9. The three highest mean scores fell on item no. 1 (having more motivation to learn/ $\overline{X}$ = 4.09), followed by item no. 10 (having a good learning experience/ $\overline{X}$ = 4.01), and item no. 6 (having efficient communication and interaction with peers/ $\overline{X}$ = 3.84). Meanwhile, item no. 9 was rated the least (increasing learning autonomy / $\overline{X}$ = 3.33).

Table 2: Students' Satisfaction with the Discussion Activity in Facebook

Statement	Mean	SD	Level
1. With this activity, I am more motivated to learn than usual.	4.09	.78	high
2. I can improve my oral proficiency through the discussion activity in Facebook.	3.41	.67	moderate
3. The discussion activity in Facebook enhances my critical thinking skills.	3.54	.74	high
4. During the discussions in Facebook, I discover faults in what I had previously believed to be right.	3.72	.71	high
5. The discussion activity in Facebook helps me explore issues, take and discuss positions in an argumentative format.	3.67	.67	high
6. The discussion activity in Facebook allows efficient communication and interaction with peers.	3.84	.76	high
7. I find the discussion activity in Facebook very useful.	3.79	.70	high
8. The discussion activity in Facebook facilitates active learning.	3.71	.82	high
9. The discussion activity in Facebook increases learning autonomy.	3.33	.79	moderate
10. The discussion activity in Facebook provides a good learning experience.	4.01	.68	high
Total	**3.76**	**.31**	**high**

Research question 3: Are there any relationships among the frequency of students' postings, satisfaction and their final score?

Data of final score were derived from the post-test of small group discussion, while participation was calculated based on the number of posted messages in Facebook. The primary purpose of this study was to examine the relationship among three factors to see the effectiveness of the activity that was deployed. A Pearson product-moment correlation was computed to determine the relationship between the students' number of postings and their final results. As indicated in Table 3, there was a positive, medium correlation between postings and results, which was mildly statistically significant ($r = .455$, $n = 82$, $p < .001$). That is, the more students participated in the activity, the higher their learning performance was. However, satisfaction was not found to be correlated to both final score and number of postings.

Table 3: Intercorrelations among Final Score, Number of Postings and Satisfaction

	No. of postings	Satisfaction
Final score	.455*** (.000)	.101 (.368)
No. of postings		-.014 (.902)

*** Correlation is significant at the 0.001 level (2-tailed)

DISCUSSION

The first discussion point is that learners accomplish more in terms of language learning. The study results point out that discussion among group members is conducive to enhancing learners' language proficiency and ability to think critically due to the fact that they have an opportunity to learn to communicate their personal ideas and thoughts. Sweet and Michaelsen (2012) indicate that learners can enrich and expand the scope of their thoughts and study and evaluate what other group members have put forward and their thought processes when they debate a certain problem in order to find how best to resolve it. This also corresponds with the statement of Pascarella and Terenzini (2005) that learning surroundings that encourage interrelation between instructors and learners are closely linked with learners' increased ability to think critically, to learn, to analyze, and to improve themselves intellectually.

Social networking sites are advantageous in that they provide learners with opportunity and space for expression. Students learn collectively via these websites when their ideas or thoughts are analyzed and commented on by others. Unlike a normal classroom where students feel restricted and withdrawn, these websites serve as a place where they feel free and unafraid to air what they think (Cheung, Chiu & Lee, 2011). Estus (2010) points out the effectiveness of learning through Facebook when he shows that students feel more comfortable expressing what they think about various issues on Facebook. This accords with the finding that Facebook has effectively served as a platform for debate (Khalfan, 2009; Estus, 2010; Selwyn, 2009; Schroeder & Greenbowe, 2009). These study results help to substantiate other study results concerning the ability to think critically and social networking sites as an avenue to improving the ability to think critically, resolving problems, and encouraging team involvement (Al-Fadhli & Khalfan, 2009; Ekahitanond, 2013; Marra, Moore, & Klimczak, 2004).

The second point to be discussed is students' satisfaction with the discussion activity on Facebook. One essential aspect is that not only does it reinforce students' learning, but it also brings about a high level of satisfaction. Students showed that they were highly satisfied with the activity overall and with each item. Therefore, it can be concluded that students perceive the online activity as an effective or satisfactory way of learning. One of the reasons may have been the use of Facebook, which is undeniably the most popular social networking site they use in daily life. As a result, they find it rather easy to communicate with one another on Facebook. Apart from that, there are many other elements of the learning context involved that they may consider such as subject content, communication, and learning tasks. This is in accordance with previous studies (Ekahitanond, 2013; Kitchakarn, 2012) in that students had positive attitudes toward learning with online tools.

The next discussion point concerns frequency of participation in this course. It is noticed that most students intended to participate in the discussion activity because they wanted to improve their skills in expressing their ideas, thoughts, and good reasons to convince others. For them, unless there is much practice, group discussion proves to be rather difficult. The results clearly showed that their post-test performance was related to the amount of participation. The reason might be that the course allowed the flexibility and efficiency of the online environment. The activity offers students an opportunity to practice discussion and they can choose to access the activity at their own convenience. In this way, the blending of face-to-face and technology-supported out-of-class activities becomes a "mechanism through which students engage in existing effective educational practices" (Laird &Kuh, 2005).

Based on the finding, there was a positive, medium correlation between postings and the final score, which was mildly statistically significant ($r = .455$, $n = 82$, $p < .001$). This shows that the more students participated in the activity, the higher their learning performance was. This might be because the discussing activity allowed them to know what "good input" is through their reflections by describing, explaining, expressing their likes or dislikes of what others had posted, interpreting, and showing their agreement or disagreement with other students' thoughts. The finding reveals that participation is an important variable to be considered, so there should be a strategy to motivate students to participate more in the activity. For example, the more they

contribute to the activity, the more they will get the extra points. The current study was consistent with one study which revealed a positive correlation between students' learning behaviors, such as participating in online activities, and their learning outcomes (Wang, 2004). Another study conducted by Cheng, Paré,Collimore and Joordens (2011) also asserted that students who participated in discussion activity outdid those who did not in terms of examination results. Students gained a lot of benefits if they actively engaged in discussion activity with their peers.

The last discussion point is that there was no relationship between satisfaction and participation. This is probably because they knew that participation in discussion activity was part of the course requirement. Even though some students were not satisfied with taking time in doing the activity, they were able to complete it in a given time. One of the reasons used to support their willingness to participate in it was a group activity. When discussing a given topic, all of them had to express ideas. They did not want to disappoint their peers. However, the finding of this study was contradictory to previous studies by Allen et al. (2007) and Puzziferro (2008), where the level of a learner's satisfaction was found to be directly proportional to the level of participation. The more satisfied the students were, the more willing they were to learn and they stood a better chance to succeed.

REFERENCES

Al-Fadhli, S., & Khalfan, A. (2009). Developing critical thinking in e-learning environment: Kuwait University as a case study. Assessment & Evaluation in Higher Education, 34(5), 529-536.

Allen, M., Burrell, N., Bourhis, J., & Timmerman, E. (2007). Literature of satisfaction. In Handbook of distance education, 2nd ed., ed. M. G. Moore, 149–156. Mahwah, NJ: Erlbaum.

Baran, E., & Correia, A-P. (2009). Student-led facilitation strategies in online discussions. Distance Education, 30(3), 339-361. doi: 10.1080/01587910903236510

Barnett-Queen, T., Blair, R., & Merrick, M. (2005). Student perspectives on online discussions: Strengths and weaknesses. Journal of Technology in Human Services, 23(3/4), 229-244.

Chang, C. K., Chen, G. D., & Hsu, C. K. (2011). Providing adequate interactions in online discussion forums using few teaching assistants. Turkish Online Journal of Educational Technology, 10(3), 193-202.

Chen, Y., Liu, E., Shih, R., Wu, C., & Yuan, S. (2011). Use of peer feedback to enhance elementary students' writing through blogging. British Journal of Educational Technology, 42(1), E1-E4.

Cheng, C. K., Paré, D. E., Collimore, L. M. & Joordens, S. (2011). Assessing the effectiveness of a voluntary online discussion forum on improving students' course performance. Computers & Education, 56(1), 253-261.

DeSchryver, M., Mishra, P., Koehler, M., & Francis, A. (2009). Moodle vs. Facebook: Does Using Facebook for Discussions in an Online Course Enhance Perceived Social Presence and Student Interaction? Paper presented at the Society for Information Technology& Teacher Education International Conference, Chesapeake, USA, March 2-6, 2009.

Ekahitanond, V.(2013). Promoting undergraduate students' critical thinking skills through peer feedback activity in an online discussion forum. Alberta journal of Educational Research, 59(2), 247-265.

Gikandi, J. W., Morrow, D. & Davis, N. E. (2011). Online formative assessment in higher education: A review of the literature. Computers & Education, 57(4), 2333-2351.

Jones, S., & Fox, S. (2009). Generations Online in 2009. Retrieved April 14, 2011 from http://www.pewinternet.org/w/media//Files/Reports/2009/PIP_Generations_2009. pdf

Kabilan, M., Almad, N., & Zainol, M. (2010). Facebook: An online environment for learning of English in Institutions of Higher Education. Internet and Higher Education, 13(4), 179-187.

Kitchakarn, O. (2013). Peer feedback through blogs: An effective tool for improving students' writing abilities. Turkish Online Journal of distance Education. 14(3), 152-164.

Ladyshewsky, R. K. (2006). Peer coaching: A constructivist methodology for enhancing critical thinking in postgraduate business education. Higher Education Research & Development, 25(1), 67-84.

Lang, D. (2000). Critical thinking in web courses: An oxymoron? Syllabus, 14(2), 20–24.

Maurino, P. S. M. (2006-2007). Looking for critical thinking in online threaded discussions. Journal of Educational Technology Systems, 35(3), 241-260.

Miyazoe, T. & Anderson, T. (2010). Learning outcomes and students' perceptions of online writing: Simultaneous implementation of a forum, blog, and wiki in an EFL blended learning setting. System, 38(2), 185-199.

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. Neslon, J. (2005). Cultivating judgment: A sourcebook for teaching critical thinking. Stillwater, OK: New Forums Press.

Palmer, S. R., & Holt, D. M. (2009). Examining student satisfaction with wholly online learning. Journal of Computer Assisted Learning, 25(2), 101-113.

Pascarella, E. T., & Terenzini, P. T. (2005). How college affects students: A third decade of research. San Francisco, CA: Jossey-Bass.
Paul, R., & Elder, L. (2008). The miniature guide to critical thinking: Concepts and tools. Tomales, CA: Foundation for Critical Thinking Press.
Pena, M.I., & Yeung, A.S. (2011). University students' satisfaction with online and face-to-face Spanish learning. The International Journal of Learning, 16(9), 637-647.
Puzziferro, M. (2008). Online technologies self-efficacy and self-regulated learning as predictors of final grade and satisfaction in college-level online courses. The American Journal of Distance Education, 22 (2): 72–89.
Roblyer, M. D., McDaniel, M.,Webb, M., Herman, J., & Witty, J. V. (2010, June). Findings on Facebook in higher education: a comparison of college faculty and student uses and perceptions of social networking sites. The Internet and Higher Education, 13(3), 134–140.
Rovai, A. P. (2007). Facilitating online discussions effectively. The Internet and Higher Education, 10(1), 77-88.
Sweet, M., & Michaelsen, L. (2012). Critical thinking and engagement: Creating cognitive apprenticeships with team-based learning. Retrieved May 6, 2012, from https://mailman.stanford.edu/mailman/listinfo/tomorrows-professor
Thormann, J. (2008). Student moderators in an online course. Online Classroom, 1, 7.
Wang, J., Lin, C., Yu, W. & Wu, E. (2012). Meaningful engagement in Facebook learning environments: Merging social and academic lives. Turkish Online Journal of Distance Education. 14(1), 302-322.
Wang, M. J. (2004). Correlational analysis of student visibility and learning outcomes in an online setting. Journal of Asynchronous Learning Networks, 8(4), 71–82.
Wang, Q. (2009). Design and evaluation of a collaborative learning environment. Computers & Education, 53, 1138–1146.
Wong, E. K., & Yeung, A. S. (2003). Evaluation of teacher development programs: Participant satisfaction and recommendation. Studies in Educational Evaluation, 29, 57-66.
Xie, K., Durrington, V., & Yen, L. (2011). Relationship between students' motivation and their participation in asynchronous online discussions. MERLOT Journal of Online Learning and Teaching, 7(1), 17-29.