

ENHANCING STUDENTS' VOCABULARY KNOWLEDGE USING THE FACEBOOK ENVIRONMENT

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Abstract

This study investigates the effectiveness of using Facebook in enhancing vocabulary knowledge among Community College students. Thirty-three (33) Community College students are exposed to the use of Facebook as an environment of learning and enhancing their English vocabulary. They are given a pre-test and a post-test and the findings indicate that students perform significantly better in the post-test compared to the pre-test. It appears that Facebook could be considered as a supplementary learning environment or learning platform or a learning tool; with meaningful and engaging activities that require students to collaborate, network and functions as a community of practice, particularly for introverted students with low proficiency levels and have low self-esteem.

Keywords: interactive learning environments; learning communities; collaborative learning, vocabulary learning

Of late, social networking sites (SNS) such as Facebook and MySpace have gained surging popularity, particularly among young adults who use new technologies to create instant communities of practice (Castells, 2007). Facebook and other similar SNS have the potentials to become valuable resources that could be used for academic purposes (Grosbeck, Bran, & Tiru, 2011), especially in the higher educational settings. In terms of educational research, many studies have been conducted with the intention of identifying the benefits of Facebook (Ellison, Steinfield & Lampe, 2007), its impact on higher educational institutions (HEI) students' academic and social life (Roblyer et al., 2010; Haverback, 2009; Selwyn, 2009; Yancey, 2009; Ellison, Steinfield, & Lampe, 2007), and the use of Facebook for language learning (Kabilan, Ahmad & Abidin, 2010; Mills, 2009). Researchers have contemplated the possibilities of using Facebook for language learning in higher education and how Facebook could be efficiently used for language teaching and learning. For example, Kabilan, Ahmad and Abidin (2010) raised the following questions, "would Facebook (FB) be an efficient learning environment for university students to facilitate their learning of English? What are the views of university students of learning English through FB? Can FB truly augment and support students in terms of learning English?" (p. 179). Despite these critical questions, there are initial indications that time spent on Facebook is negatively related to student grades and how Facebook is used is also a stronger predictor of grades (Junco, 2012).

Currently, not many research have been done on the use of Facebook for teaching and learning of languages, as compared to the studies pertaining to teachers' and students' uses of Facebook (Khe, 2011); academic activities and faculty-student relationships (Selwyn, 2009) and; self-identity, interaction and relationships (e.g. Viswanth et al., 2009; Shanyang, Grasmuck & Martin, 2008; Madge et al., 2009). In terms of empirical studies on Facebook and language proficiency and competency, our literature review finds that no studies have been conducted to determine to what extent Facebook contributes, or otherwise, to learners' actual improvement of language knowledge and skills. Most probably, the lack of studies on the use of Facebook for learning is due to that fact that it is mainly considered by teachers as a social media platform that augments the socialization process among its users (Lee, Lee & Kim, 2015). Therefore, a study was carried in the Malaysian HEI context to investigate and determine if Facebook can be used to improve learners' language knowledge, specifically their vocabulary knowledge, understanding and use in English.

In this study, the focus is given to vocabulary knowledge because, first and foremost, in the context of HEI, vocabulary knowledge of learners is "closely and positively associated" with learners' performance on readings tasks for basic understanding and comprehension (Qian, 2002, p. 532), and thus, is a critical factor that contributes to reading development and skills of learners who are not native speakers of English (Carlisle et al, 1999). Lack of reading skills may lead to HEI students to

perform poorly in their studies because in HEI, the emphasis is on reading to acquire subject matter, and also to comprehend learning that can be very abstract (Ediger, 1991). Studies from around the world implicate that HEI students who lack vocabulary knowledge tend to struggle in their reading for academic purposes a lot more than students who have a considerable amount of vocabulary knowledge (See Qian, 2002; Barrow, Nakanishi & Ishino, 1999; Ari & Read, 1999).

In Malaysia, it is found that HEI students are not interested in reading due to their insufficient knowledge of vocabulary, and this ultimately contributes to their inability to communicate effectively (Noorizah & Zaini, 2009; Nor Shahrizah & Amelia, 2007). In the context of this study, the community college students, who are the participants in this research, lack the required reading skills (in English) for academic purposes, and this continuously affects their overall academic performance since they are unable to comprehend the materials that they have to read for assignments, quizzes and tests in English. The researchers' interactions with the community college students reveal that the students' inability to understand what they read and their failure to communicate effectively are mainly connected to their insufficient relevant vocabulary knowledge. Huge vocabulary knowledge will assist students to cope up with their academic requirements, as it has been identified as the "most important indicator of oral language proficiency, which is particularly important for the comprehension of both spoken and written language" (White & Kim, 2009, p. 1), while lack of appropriate vocabulary knowledge may significantly lead to miscommunication, even in the context of HEI (Toyoda & Harrison, 2002).

Because studies on the effectiveness of multimedia on incidental vocabulary learning have shown positive impact on the learners' vocabulary learning (see Knight, 1994; Chun & Plass, 1996; Akbulut, 2007; Shahrokni, 2009, Lin 2010), the idea of learning vocabulary through SNS (in particular Facebook) is a possible novelty that has not been explored enough and should be thoroughly examined. This study, with the aim of determining if learning activities via Facebook can contribute meaningfully and enhance HEI students' vocabulary knowledge and skills, would help us provide the necessary evidence.

Therefore, the main research question for this study is, "Is there a significant difference in the English language vocabulary knowledge, understanding and use before and after instruction through Facebook as measured by the students' pre-test and post-test mean scores?" In addition, another research question is developed to seek and understand the students' practices of vocabulary learning in the Facebook environment. This research will be an important one in terms of tapping into

students' technological interest and trend of using Facebook, with the idea of enhancing their vocabulary knowledge. It will also address the current research interest in literature of using Facebook for language learning and teaching, paving the way for other fresh and novel research opportunities that would deepen our knowledge of how SNS could contribute and positively impact on teaching and learning of English in HEI.

Literature indicates that new digital media and technologies affect language teaching and learning and therefore, teachers need to be well-versed with new pedagogies that are needed in ensuring effective use of the technologies in the classroom. SNS environments such as Twitter has been used as a new form of technology for language teaching and learning – for example, Antenos-Conforti (2009) uses Twitter to teach a foreign language (in this case, Italian). In terms of Facebook, Godwin-Jones (2008) postulates that this form of SNS enhances communication and human interaction that can "be harnessed for language learning" (p. 7) and research (Bloch, 2008). SNS may well facilitate an informal and unstructured form of learning that engages students with learning and encourages them to critically think about their learning, to discuss and share on academic and social issues and, to address dilemmas and disappointments faced while pursuing university education (Selwyn, 2009).

Nevertheless, the social tenets and dimensions of Facebook have dominated research – the focus has been on how users perceive, interact and function as social entities in their virtual communities. For instance, Ellison, Steinfield and Lampe's (2007) study suggests how Facebook can function as a strong platform to "maintain relations as people move" from different offline community to another such as from a school community to a college community and finally to the workforce community (p. 1164), and imply that Facebook can be used to "support relationships and keep people in contact, even when life changes move them away from each other" (p. 1165). Establishing oneself within an online community using Facebook is also as equally important to HEI students, as Madge et al. (2009) find HEI students use Facebook as a vital social tool to settle-in and adjust to university life, and maintain communication for social events. However, communication that involves teachers or faculty is a bit more complicated. Cheung and Vogel's (2011) study points to the fact that students are more than willing to communicate with their teachers via Facebook but only through the groups established in Facebook, rather than as 'friends'. This is understandable because students tend to display a sense of anxiety when interacting with faculty as the "student/faculty relationship should remain professional and should not be familiar or sociable" (Hewitt & Forte, 2006, p. 2). In this study, i.e. the Malaysian context, there appears to be a barrier when

it comes to student-faculty relationships in Facebook; a barrier that helps maintain professionalism between the student and the faculty. At large, teachers are respected in the Malaysian society – a teacher is perceived as knowledgeable and holds a high social status and therefore, students tend to keep the relationship at a professional level, even in the online environment that uses SNS.

A literature analysis by Khe (2011) identifies the three main areas of educational research pertaining Facebook that have been investigated so far:

- (a) students' Facebook usage profile or extent of Facebook use (e.g., time students spend on Facebook each day, students' motives for using Facebook, as well as various factors that may affect these usage profiles), (b) the effects of Facebook use (e.g., effects of Facebook self-disclosure on teacher credibility, effects of Facebook use on student social presence and discussion, and effects of Facebook on students' academic performance), and (c) students' attitudes toward Facebook (p. 662).

Many researchers are quite skeptical of Facebook, in terms of its ability to support teaching and learning, and its positive educational values. They tend to take 'on-the-fence' stand, questioning Facebook's usability for effective educational outcomes, at the same time 'keeping their fingers crossed', indicating that more research ought to be carried out as the "empirical evidence to support the suggestions that the effectiveness of Facebook is still very limited at this moment" (Khe, 2011, p. 668). For example, Khe (2011) concludes that Facebook has "very little educational use" (p. 668) but encourages more future research to facilitate the building of knowledge base of Facebook use for educational purposes. Quite similarly, according to Roblyer et al. (2010, p. 138), "it is still unclear whether or not Facebook and similar resources have a future as a mainstream communication tool in our society, let alone as supports for education" but then also reiterate that "it remains a trend worth watching and tracking with future research 'snapshots' " (p. 138). Selwyn (2009) postulates that Facebook "does not merit any particular laudation from educators" and therefore, attempts should not be made to appropriate Facebook for educationally 'appropriate' or 'valid' uses" (p. 172) but agrees that students should be allowed to use Facebook for whatever purposes they like. The above conclusions clearly indicate that more baseline data and evidence are needed to really understand the nature and impact of Facebook on teaching and learning in various educational areas, levels, settings and contexts.

In the context of this paper, there is a need to carry out more research on Facebook and language teaching and learning, as not many research on the

use of Facebook for language learning and teaching have been done. In an empirical study of university students, Kabilan, Ahmad & Abidin (2010) find that students do consider Facebook as a "useful and meaningful learning environment that could support, enhance and/or strengthen their learning of the English language" (p. 179). From the perspective of incidental learning, Kabilan, Ahmad & Abidin (2010) realize that learning English in the Facebook environment is possible mainly because "the technologies that support FB and features that characterize FB are able to engage students in meaningful language-based activities" (p. 185). In addition, Blattner and Fiori (2009) point out that Facebook encourages and facilitates authentic language interaction because it has "unique features that offer constructive educational experiences while maintaining privacy and safety" and that its potential is "growing everyday with new applications" (p. 8). This tenet of interaction in an authentic setting is key to language learning and teaching via SNS that cannot and should not be ignored. Mills (2009), for instance, with the aid of Facebook, is able to achieve the objectives of her French language course that focused on grammar, language and linguistic functions. The focus on authentic interaction via the Facebook environment is a vital factor that eventually motivates and enables her learners to use accurate French in their discourses.

Authentic language learning tasks and activities via Facebook are significant, as they ease, facilitate and strengthen relationships and interactions between the members of a Facebook community. In a study of Japanese university students studying English, Promnitz-Hayashi (2011) finds that meaningful yet simple activities in Facebook greatly assist a group of lower language proficient students to become more "comfortable participating in online discussions, giving their opinions and forging closer relationships with their fellow classmate" (p. 309), as "many of the more introverted students became more motivated in class and were actually talking more with their classmates" (p. 315). This is because computer mediated communication (CMC) environment is highly interactive and is of supporting complex processes of interaction between learners since they combine the "permanent nature of written communication with the speed and to some extent the dynamism of spoken telephone communication" (Romiszowski & Mason, 1996, p. 439). These features, which Facebook promotes, give learners the opportunity to "manage their terms of interpersonal linguistic engagement" (Baron, 2010, p. 84) and lead to greater language production (Kern, 1995).

In our review, we did not find any published studies on the use of Facebook for vocabulary learning or teaching per se. Nonetheless, many studies on the use of CMC and ICT (information

communication technology) for vocabulary teaching and learning reveal that CMC and ICT contribute to a considerable level of learning new vocabulary and enhance students' vocabulary knowledge. Based on his study of vocabulary learning with word lists, word cards, and computers, Nakata (2008) discovers that high school students experience a far more effective spaced learning of second language vocabulary via computers due to their higher retention rate of words learnt than lists, as well as the positive effect exerted by the computers on the students' motivation to learn vocabulary. As for CMC environments, they allow teachers to "tailor guidance and feedback to individual learner's needs and scaffold the use of new forms, vocabulary items, and language functions when the opportunity to do so presented itself in online conversations" (Meskil & Anthony, 2005, p. 102). Many other ICT and CMC reviews and studies related to vocabulary teaching and learning indicate significant and positive outcomes such as enhancement of vocabulary knowledge (see Stockwell, 2007; Zapata & Sagarra, 2007; Liu et al., 2002) and vocabulary recall and recognition (see Chen & Chen 2009; Jones, 2006). Based on these studies and reviews, it is possible that Facebook may also lead to similar positive outcomes in terms of HEI students' vocabulary learning. The current study may well provide us with more information and a deeper understanding of how students enhance their vocabulary knowledge in the SNS environment with the integration of SNS, in particular Facebook. Such practices could augment the learning of language through social interactions (Lantolf, 2000). Social cultural theory emphasizes the importance of learner interaction, but it is within the relationship between learners and the socio-cultural context where learning takes place (i.e. Facebook).

In explaining how vocabulary learning transpires in the Facebook environment, the researchers draw on previous studies (e.g. Knight, 1994; Chun and Plass, 1996; Akbulut, 2007; Shahrokni, 2009) that examined vocabulary learning using ICT applications and multimedia tools based on the principles of incidental learning. In incidental learning the main principle is the unintentional or unplanned learning that results from other activities, whether they are academic or non-academic (Kerka, 2000). Many researchers concur that incidental learning is effective when computer or ICT applications are integrated in the learning process (see Pennington, 1989; Cahoon, 1995; Holzinger et al. 2001), further implying that learning may occur incidentally, rather than intentionally and therefore, teachers should be aware of the unintended learning outcomes that may have positive or/and negative impacts on learners. In addition to the incidental learning, in the present study, integration of ICT is intended and learning outcomes are focused on enhancing students' vocabulary knowledge. In

addition, Roth's (2009) suggestion is followed - "the teaching and learning should be interactive, personalized and holistic" so that that it will aid students to "move away from the passive realm of reading and into the interactive world of digital pedagogy" (p. 127). Hence, interaction between the students in the Facebook environment is seen as a means of facilitating learning of new vocabulary and enhancing their vocabulary knowledge, because, as implied by Roblyer et al. (2010), Facebook provides "additional avenues and purposes for communications among students" by increasing the "overall quality of engagement" between learners and, thus, create a "more effective learning environment" (p. 137).

In relation to the above excerpt, Fox (2002) makes the connection between networked learning and the social situated learning theory that intersect, which then "draws our attention away from all formal educational attempts to manage learning towards the many social spaces where learning takes place 'naturally,' so to speak" (p. 81). This means that learning may occur in formal and informal settings, "as long as there are meaningful interactions between learners that lead to knowledge construction" (Kabilan, Ahmad & Abidin, 2010, p. 181). Clearly, incidental learning is unable to explain all forms of learning and social networking practices that happen in the Facebook environment since there also exists community building and inter-personal relationships, whereby its users are constantly "constructing knowledge in a community of practice, learning together and from each other, working collaboratively, and in the process, build learning communities" (Kabilan, Ahmad & Abidin, 2010, p. 181). Thus, constructivism is needed to unravel the intricacies and complexities of interaction and relationships between members of a community of practice, i.e. Facebook users. To exemplify this phenomenon, there is a huge quantity (and is of quality) of informal synchronous or/and asynchronous interactions with "speakers of different languages" who have "access to an incredible amount of valuable and authentic information on a variety of topics" (Blattner & Fiori, 2009, p. 22) in Facebook, which then can be analogized as an oasis of resources for vocabulary learning, specifically, and language learning, broadly. The above construction of knowledge that takes place in the Facebook environment lead users to formulate "ideas into words that are shared with and built upon through the reaction and responses of others" (Harasim et al., 1997, p. 4).

The above interactions and communications are embedded in Wenger's (1998) social theory of learning that demands participants to be actively engaged in social communities for learning to occur in Facebook. From the lenses of Wenger (1998), it is quite easy to comprehend how Facebook can function and act as an online platform or

environment to create and develop an online community of learners, whereby participants' experiences and competencies are crucial and valued (Wenger, 2000). In this kind of communities, the learning that ensues is inclined towards discovering and negotiating meanings, mutual engagement of learners in action, and building of communities and constructing identities. As from the perspective of language learning, particularly vocabulary learning, Wenger's (1998) definition of 'practice' is related to the meaning of participants' experience of everyday life, and that meaning is located in a process called 'negotiation of meaning', which also includes aspects of how one community learns from another community (Wenger, 2000).

METHOD

Participants and contexts

The participants for this study were 33 students (23 males and 10 females) from a single class in a community college in the northern region of Peninsular Malaysia, with an average age of 19. The community college in Malaysia is a non profit institutions administered by the Ministry of Higher Education (MOHE) and its focus is on providing the appropriate educational platform and opportunities for Malaysians, improving communication skills of the local community, and assisting them in enhancing their skills and knowledge. All 33 students were full time students, who were enrolled in various short courses and programmes, which upon completion will be awarded the Community College Certificate (CCC). CCC is recognized by Malaysian Ministry of Higher Education and is approved nationally and benchmarked against international best practices according to the Malaysian Qualifications Agency (2012).

Apart from the content subjects that the students had to take in order to qualify for the CCC, they were also required to take two compulsory English language subjects – English for Communication I (SPA103) and English for Communication II (SPA203). The students needed to pass both SPA103 and SPA203 if they were to be awarded the CCC. SPA203 is a 15-weeks course that aims to “help learners to increase their ability to use the English language communication in various situations in the social and work environment” (Community College, 2002, p. 1). This course, which was scheduled for a 120-minute class per week, emphasized on language aspects that very much needed the students to be well versed and equipped with vocabulary knowledge (McKeown & Beck, 1988), as they were required to (1) “describe briefly and compare people and objects of their physical appearance”; (2) “give and respond appropriately to directive language, such as instructions and warning”; (3) “perform various communication purposes over the telephone using

appropriate language forms” and, (4) “make and respond to enquiries in various situations using appropriate language forms” (Community College, 2002, p. 1). In terms of English language proficiency, most of the students had low proficiency levels, based on their Sijil Pelajaran Malaysia or SPM, which is a national examination for secondary school students who wish to pursue tertiary education. Majority of the students in this study obtained C or D grades, while only 10% obtained A or B grades in the national examination. Based on the discussion with their teacher, the 30 students were considered introverted students and had low self-esteem, especially in terms of learning English and using it for daily interactive and communicative purposes. The 30 students were avid Facebook users and have had Facebook accounts for at least two years. The other three students created their Facebook account before phase three began. However, all 33 students have never used Facebook for any learning purposes or activities.

Design and procedures

This study is based on the pre-experimental design, that is, the one group pre-test – posttest (O-X-O). Since, pre-experimental design threatens the validity of the findings (Cohen, Manion & Morrison, 2000), an embedded mixed method research design was planned, where “more meaningful information results when the qualitative second phase of this study builds on significant predictors rather than on simple group comparisons” (Creswell & Park, 2007, p. 146). The use of qualitative methods strengthened and reinforced validity of the quantitative data and also its meaning. The experimental element in this study was aimed at determining if the 33 students perceived that they had learned and gained vocabulary knowledge and skills (usage and practices) via learning activities using the Facebook platform.

By combining quantitative and qualitative approaches, the phenomena of using Facebook for vocabulary learning and knowledge can be understood in detail than is possible using either quantitative or qualitative methods alone (Gay, Mills & Airasian, 2009). The quantitative data were collected first using the pre and post tests and were more scrutinized and weighted than the qualitative data. The qualitative data served as an interpretation to help explain or elaborate on the quantitative results. Qualitative data were gathered through a semi-structured interview that was conducted with six students (three males and three females). The study was carried out in five phases:

Phase One: Initial Planning

In this phase, a discussion between the researchers and the teacher teaching the students was carried out in the second week of October 2011. The discussion was important in briefing and explaining to the

teacher of the aims, objectives and procedures of the study as well as outlining her roles and responsibilities based on the SPA203 syllabus.

Phase Two: Pre-test

Students were given the pre-test by the teacher in the third week of October 2011 to identify and determine their vocabulary knowledge. They were given 60 minutes to complete the pre-test.

Phase Three: Pedagogical Use of Facebook

For each student, a computer with Internet connection was assigned during the 120 minutes lesson, whereby the teacher closely monitored and facilitated the students' learning activities using Facebook. In this treatment phase, the teacher taught English using the course module via the Facebook environment in the computer lab. Oral instructions and guidance were given where necessary, particularly when the students didn't know or understand what to do. The teaching and learning activities in the Facebook environment include:

- i. Discussion sessions in the Facebook environment that were not only confined during the lessons but also outside classroom time. After each face to face lesson, the teacher would go online and chat with the students via Facebook outside the classroom time to explain or discuss further on the topics that were taught in the classroom. Most of the discussions in the Facebook (after classroom) discussion lasted up to 15 minutes.
- ii. Web links to videos, online dictionaries and other websites related to the topics slotted for each week were posted in the teacher's Facebook to assist the students' learning. For the topic 'Instructions', the teacher posted video web links on various types of instructions (for example, "How to make a sandwich" or "How to make a cake") on the Facebook 'Wall'. Students were asked to watch the videos and analyze the instructions that were presented in the videos, as well as focusing on the relevant vocabulary used in the video. The students used the online dictionaries, which were posted on the Facebook 'Wall' by the teacher, to refer and look up the meaning of words used in the video that they did not understand. Some of the students also discussed these words and posted their meanings on their Facebook 'Wall'.
- iii. After viewing the videos, the students posted their own written version of the instructions (in the form of an essay) on their Facebook 'Wall'. The students' versions of the instructions were not the same as the one demonstrated in the posted video, but were a different version based on their understanding and interpretation of the instructions provided in the video. The students

used different words or phrases, especially the meaning of the words that they looked up in the online dictionaries, to depict the original instructions. All students read others' written instructions, and were asked to critique, evaluate, comment and give feedback on each others' versions of instructions that they posted on their Facebook 'Walls'

Phase 3 continued for four weeks, and various forms of English vocabulary exercises based on the module on description of people and objects, instructions, telephone skills and enquiries were posted on the Facebook environment, as well as given to the 33 students during and after the lessons. During this phase, initial interview questions were also posed to the students to gauge their practices related to learning of vocabulary using the Facebook environment. The questions were: (1) What did you learn from the links that were posted on your Facebook 'Wall'? and (2) Did you use the words that you had learned from the learning activities in Facebook?

Phase Four: Post-test

The students underwent a post-test given by the teacher in the last week of November 2011. As in the pre-test, the students were given 60 minutes to complete the post-test.

Phase Five: Interview

A semi-structured interview was conducted to explore and understand the students' learning of vocabulary through Facebook and their opinion on the usefulness of Facebook. Six students (three males and three females) were interviewed during their experiences with Facebook and after their post-test. They were interviewed in Bahasa Melayu to ensure a smooth flow of views and thoughts since they have low English language proficiency. The data were then translated into English for the purposes of documentation and analysis.

Research instruments and data analysis

Prior to the actual study, a pilot study was conducted in another community college in the same northern region, using 10 of its students. They were given the pre-test and post-test, vocabulary exercises, and were also interviewed. The multiple-choice questions for the pre-test and post-test were pilot-tested for their content validity and language ambiguity. The students' responses to the multiple choice items and gap-fill items in both the pre-test and post-test were treated as either right or wrong items, and therefore, the KR-20 was appropriate (Black, 1999) and used to determine the reliability of the tests. For both pre-test and post-test, a reliability of 0.80 and 0.78 respectively were achieved, surpassing the minimum value of 0.40

that was suggested by Mehrens and Lehmann (1989).

The instruments used for actual study were: (1) A pre-test (30 multiple choice questions and 10 gap-fill exercises. (2) A post-test (30 multiple choice questions and 10 gap-fill exercises. and (3) Semi-structured interview. The items in the pre-test and post-test to gauge students' vocabulary knowledge, understanding and use were adopted and developed based on the SPA203's syllabus and course modules, and also from a previous final examination assessment of the course. The content validity of the pre-test and post-test were determined by two English language teachers from the Community College with more than ten years of experience in teaching SPA203. Web links and questions posted in Facebook were also based on the Community College syllabus. During the data collection process, semi-structured interviews were administered to gauge students' vocabulary knowledge and support the quantitative data. The six students were interviewed based on their experiences of using Facebook for learning vocabulary and were identified and coded as S1, S2, S3, S4, S5 and S6.

Results from the pre-test and post-test were collected and then coded, computed and processed using SPSS version 15 software, whereby descriptive statistics were used to describe the performance of the students. The paired samples T-test was used to compare the differences in the students' pre-test and post-test means scores of vocabulary knowledge gained and learned through the Facebook platform.

Thematic data analysis was used to analyse data obtained from the semi-structured interviews, as well as data retrieved from the students' Facebook environment. Bogdan & Biklen's (1992) coding strategies i.e. activity codes and situation codes were used to help categorize the emerging themes from the qualitative data. The situation codes were allotted to units of data that explain and clarify the students' practices in terms of learning vocabulary using Facebook. The activity codes were allotted to units of data that depict the students' regularly occurring behaviour like chatting that took place as a result of their activities in Facebook (Bogdan & Biklen, 1992) (Table 1). The qualitative data obtained were used to support and explain the quantitative data.

Table 1. Sample schema to code, arrange and organize data according to situation and activity codes

Example excerpts	Analyses (Note /comment)	Themes
I now know the meaning of 'chopped', 'sieve' and....heard these words mentioned in Facebook video...(S1)(Situation code)	Students learned words heard in video links and use the dictionary links to get the meaning	New vocabulary and online learning : Facebook as an online platform to improve vocabulary
I prefer using the dictionary link given rather than the book dictionary because you can hear the pronunciation, whereas in a book you can't... (S4) (Activity code)		
Facebook is better...am able to talk in a more relaxed manner in English, I get to talk to everyone as well (S3) (Activity code)	Students perceive Facebook as an informal platform and therefore feel more comfortable to communicate with the teacher who shares the same learning environment	Instruction preferences on learning vocabulary
prefer 50-50...I like learning in class and use Facebook at the same time (S4) (Situation code)	Students still wish to be exposed to the knowledge, familiarity and authority of the teacher, whether face-to-face or online – blended learning	
Since watching the video, I tried chatting with a friend from U.S in Facebook. It's fun when when you have many friends to chat with now. (S4) (Activity code)	Students are more motivated to use English because are now equipped with the necessary vocabulary to communicate	The increase of motivation and confidence in communication skills
In a conventional classroom, I'm shy to ask any question because there are so many in a class...but in Facebook, it doesn't matter, I can directly ask either in B.M. or English (S2) (Situation code)	Facebook provided an anonymous alternative to contribute and collaborate in a way that drew less immediate attention. It relieved some of the face-to-face communication pressure that shy students face.	

FINDINGS AND DISCUSSIONS

Main Findings

Table 2 shows the students' scores in the pre-test and post-test. Thirty students improved in terms of their test scores, whereby the biggest percentage

increase is 65% (Student 32) and the smallest percentage increase is 2.5% (Students 2, 5, 19 & 30). Three students' scores (Students 3, 16 & 25) in the post tests show decrease, but they are very minimal, ranging from 5% – 10%. Only 4 students

(Students 3, 5, 16 & 20) obtained a score of 30 and above in the pre-test, but in the post test, 17 students achieved that score, implying that the students have gained a significant level of vocabulary knowledge,

understanding and use after experiencing learning activities and engagements in the Facebook environment.

Table 2. Pre-test and Post-test Scores

Student	Pre-test	Post-test	% of Increase / Decrease
1	27	30	7.5
2	28	29	2.5
3	32	28	-10.0
4	26	30	10.0
5	31	32	2.5
6	12	26	35.0
7	21	29	20.0
8	22	31	22.5
9	21	29	20.0
10	27	30	7.5
11	28	33	12.5
12	28	32	10
13	23	31	20
14	24	29	12.5
15	23	32	22.5
16	33	31	-5.0
17	26	32	15.0
18	7	32	62.5
19	29	30	2.5
20	30	32	5.0
21	15	31	40.0
22	13	31	45.0
23	10	26	40.0
24	15	24	22.5
25	17	14	-7.5
26	10	31	52.5
27	4	26	55.0
28	6	12	15.0
29	12	24	30.0
30	19	20	2.5
31	7	31	60.0
32	5	31	65.0
33	13	22	22.5

Note: The full mark for both tests is 40

A paired sample t-test was conducted to discern the students' vocabulary knowledge, understanding and use (represented by the students' test scores) after experiencing a 5-week of learning activities and engagements in the Facebook environment. There is a statistically significant increase in the test scores from pre-test ($M = 19.52$, $SD = 8.86$) to post-test ($M = 27.61$, $SD = 6.03$), $t(32) = 4.8810$, $p < .0001$ (two tailed) (Table 3 and Table 4). The mean increase in the test scores is

8.09 with a 99% confidence interval ranging from 3.55 to 12.63. The eta squared statistics calculated is 0.4267, which indicates a large effect size (Cohen, 1988). Therefore, the t-test reveals that students have benefitted in terms of enhancing vocabulary knowledge, understanding and use in the Facebook environment, and concurs with the conclusion from previous research that using multimedia helps learners in their incidental vocabulary learning (Lin, 2010; Shahrokni 2009).

Table 3. Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
PRETEST	19.52	33	8.86	1.54
POSTTEST	27.61	33	6.03	1.05

Table 4. Paired Samples Test

	Paired Differences				t	df	Sig. (2-tailed)	
	Mean	Std. Deviation	Std. Error Mean	99% Confidence Interval of the Difference				
				Lower				Upper
PRETEST - POSTTEST	8.09	9.52	1.66	12.63	3.55	4.880	32	.000

Qualitative data from the interviews confirm the above quantitative data. When asked whether the students are aware of any improvements of their vocabulary knowledge, S1, S2, S4 and S5 report that they have learned new words in the Facebook environment, assisting them in answering the post-test questions.

I now know the meaning of ‘chopped’, ‘sieve’ and... can’t remember the other word...heard these words mentioned in the Facebook video. So it’s not that difficult to answer the questions (S1)

Apart from the video links, the students also add that they find the dictionary links given in Facebook very useful and they use them extensively. S4 explains,

I prefer using the dictionary link given rather than the book dictionary because you can hear the pronunciation, whereas in a book you can’t... anyway, it’s cumbersome to open up a book one page at a time...time-consuming

S1, S2, S5 and S6 concur and further elaborate that from the links given in Facebook, they were able to listen to the correct pronunciation, were exposed to a more colourful interface and it was easier to look up for meanings. These features of Facebook support vocabulary learning of the students. The students discover new words, learn new words, look up meanings of new words found or learned in Facebook and use the new words learned from Facebook. The Facebook environment presents itself as a meaningful platform and context for community college students to learn new vocabulary and eventually enhance their vocabulary knowledge, and use, practice and reinforce the new words correctly and authentically.

The six students interviewed emphasize that their experience in the Facebook environment was useful and it functioned as an informal learning platform to enhance their vocabulary knowledge. All six students agreed that they preferred learning English vocabulary via Facebook compared to the conventional instruction in a classroom set-up, as some students were not “comfortable talking face to face” (S4). In addition, the Facebook environment

was informal and encouraged interaction as the participants were “able to talk in a more relaxed manner in English, and allowed conversation with everyone” (S3) and used the words and sentences learned. S5 explains,

The links and videos provided in the Facebook help me understand the words better. Now, I try to use the words and sentences learned when I chat online with friends in Facebook. It is quite interesting to learn from each other, and correct each others’ mistakes.

The preference for Facebook as a learning environment is due to the higher degree of social presence of Facebook (Baran, 2010), whereby learning is centred on the need of meaningful and comprehensible input to the learner and the discourse in which the learners and their interlocutors jointly construct (Long, 1996). Added by the fact that in Facebook social interaction is active and vigorous, informal learning of language takes place momentarily (Lantolf, 2000). From the perspective of the second language acquisition (SLA) hypothesis, if a student is more actively involved in the negotiated interaction (in the Facebook environment), he or she is more likely to make greater development in language learning (Mackey, 1999). In this study, the students perceived Facebook as an informal learning platform and therefore, felt more comfortable to communicate with the teacher, who shared the same learning environment. It was a form of community of practice through which there was interconnecting of learning experiences and the students felt closer to the teacher who was in their social domain. In other words, both the student and the teacher gained experience and aptitude in a common zone, in which they met and thus, developed and enriched together (Mazer, Murphy, & Simons, 2009).

Qualitative data indirectly confirm the above quantitative data, as the six students interviewed did not favour the conventional method if it was solely used. For instance, S1, S2 and S4 felt that if Facebook was integrated in the classroom environment, the existing conventional instruction would be enriched, and this form of blended learning, where one instruction complemented the other, would be more meaningful. S1 would like to “have both Facebook and teacher teaching in front” that would enable face to face classroom learning

and the use of Facebook (S4). It appears that the students are in favour of a blended or hybrid learning in order to increase the effectiveness and efficiency of enhancing their vocabulary knowledge (Garrison & Kanuka, 2004; Bonk & Graham, 2005). In the context of Malaysia, students prefer blended learning i.e. they wish to be exposed to the knowledge, familiarity and authority of the teacher (Alias & Rahman, 2005), whether face-to-face or online as suggested by Baran (2010), and mentioned by S1 and S4. Hence to these students, using Facebook is basically to complement the existing patterns of teaching and learning where there is only a slight change in a teacher's role, which is now more towards facilitating, encouraging and providing the environment of self-organizing for learning and creativity to emerge (Poutanen, Parviainen, & Aberg, 2011).

In addition, the 'casual' and 'relaxed' nature of Facebook means that shy and introverted students like S2 and S6 are catered to, as it can act as an anonymous alternative platform that draws less immediate attention to learners but simultaneously cajoles, encourages and facilitates the students to collaborate and learn together and from each other in a less obvious manner. Most likely, the Facebook environment manages to relieve some of the face-to-face communication pressure and anxiety that these students are unable to bear previously, and help them make their own contribution to their own learning, especially when SNS such as Facebook, compensates introvert students' "lack of real life social networks" (Kuss & Griffiths, 2011, p. 3544) and help lower self-esteem students to share and express "more of their facets online" (Zywica & Danowski, 2008, p. 19). Previous research strongly supports the notion that low self-esteem students are more likely to be comfortable in revealing their true selves online rather than offline (Amichai-Hamburger & Ben-Artzy, 2002; Bargh, McKenna & Fitzsimons, 2002; McKenna, Green & Gleason, 2002). In the Facebook environment, students' true selves include their language ability, and more precisely their vocabulary knowledge that is used in their communication and interaction with other students (Chih-Hsiung & McIsaac, 2002). The above reverberates S2's feelings and attitudes towards learning English in the classroom and in the Facebook environment,

In a conventional classroom, I'm embarrassed to ask any question because there are so many in a class...but in Facebook, it doesn't matter, I can directly ask either in Malay or English.

Other Findings – Confidence and motivation

The students also mentioned elements of confidence and motivation while engaging in various related activities in Facebook, though the elements of confidence and motivation are not investigated in this study. S3, for example, points out that she has

gained confidence to speak after experiencing learning in the Facebook environment – "After watching the video, I tried introducing myself to my friends... it was sort of funny but at least I know now that I can speak proper English (using the words that I have learned)". Quite similarly S4 also reports that she is now encouraged to test her communication skills with her Facebook friends – "Since watching the video, I tried chatting with a friend from U.S in Facebook. It's fun when you have many friends to chat with now". The elements of confidence and motivation are crucial in encouraging students to use new vocabulary learnt from the Facebook environment in their interaction with their friends in their Facebook community. It is during the students' casual discussions and chats in the Facebook environment, they are able to learn new words, and reuse the words in their conversations authentically for the purpose of communication and interaction, and not examination. This practice would certainly reinforce their learning and understanding of the new words.

The interactions that the above students experienced with the proficient native speakers can be described as the "neo-apprenticeship style learning, similar to that proposed by Vygotsky" (Gannon-Leary & Fontainha, 2007, p.3). The above statements show and imply that the students are able to incorporate themselves into the socio-cultural custom of Facebook communities, acquire the knowledge and skills from the native and/or proficient users of English language and engage in authentic written dialogues and conversations with them (Wenger, 1998). These practices are driven by motivation, which has a strong positive impact on the success of learning in a language classroom (Gass & Selinker, 2008). It also forms a community of practice where students with the same learning abilities and experiences share ideas and give comments, exemplifying a sense of belonging to each other. S6, for instance, suggests "I like listening to English songs...so I learned English from that. How about the next time around, you put in English songs in Facebook for us to learn English? I bet the rest will love it".

In a nutshell, learning using the Facebook environment does have a positive impact on the students' affective domain of motivation and confidence, thereby, facilitating In terms of understanding learning, Wenger (1998) argues that "when the meanings of learning are properly attended to, the mechanics take care of themselves" (p. 266) – implying that students can effectively learn vocabulary in the SNS environment because "they are focused on the experience of meaning making rather than on the mechanics of language learning" (p. 184) and as such, they become more confident to use the new words learned for communication and interaction.

CONCLUSION

Interactions between the students and teacher and between students and students in the Facebook environment have created a community of learners, and enhanced the students' levels of motivation and confidence to interact, discuss, communicate and share/exchange ideas, views and opinions with each other. The ambience of Facebook, which is relaxed and focused more on the social dimensions of interaction and of a community, means that the students, particularly those who are introvert, with low self-esteem and lack language proficiency, would be able to learn language aspects within the community of practice (i.e. Facebook environment) quite successfully without embarrassing themselves, without pressure but with motivation and confidence (Gass & Selinker, 2008).

In the Facebook environment, the students are given the freedom to manage their own learning of vocabulary, where they explore and view the links (online dictionary) and the instructional videos on their own and during their own free time. The presentation of authentic input is made more comprehensible with authentic images and settings of the world. Students are not only presented with authentic use of English words, but also with original means to deal with the authentic language (i.e. words), produced in communications by proficient and competent users of the language (including both native and non-native speakers).

Though the teacher facilitates learning and discussions from time to time, most of the students' learning also transpired through interacting and socializing with fellow students, as well as with other Facebook users (outside the community college circle) who are native speakers of English. Such interactions allow the students to access to an incredible amount of valuable and authentic words that are related to a variety of topics. This could enhance vocabulary learning, as vocabulary learning is more than just individual word meaning. By learning words in context, the students acquire not only linguistic knowledge of a word but also the knowledge of how to use the word properly in a context. Simply, Facebook has fostered incidental vocabulary learning which proved to be more motivational and enjoyable for the students (Northcote & Kendle, 2010). Hence, learning new vocabulary using the Facebook environment should critically consider authentic language use and materials, which could be gained by engaging with competent users of the language (not necessarily native users/speakers), for effective learning to reify. Blattner and Fiori (2009) conclude similarly saying that it is imperative for educators to take advantage of technological tools such as Facebook "to enhance autonomous language education" (p. 25) that would allow students to grow as confident users and speakers of the language.

Though the outcomes of this study are encouraging, there are a few limitations that should be considered and critically taken into account when interpreting the results of this study. Foremost, in terms of the time frame of the study, the study was conducted for only five weeks due to the researchers' concerns of students' limited time available for learning in the Facebook environment, as well as their busy schedules that include family commitment. The researchers certainly feel that the duration of the experiment should have been longer, which would have then given a more clear picture of the students' experience in learning vocabulary in the Facebook environment. Therefore, it is recommended that a longer experimental period of at least two semesters be carried out for future research. Nevertheless the quantitative and qualitative data from the five-week experiment do point to the fact that Facebook, if utilized in context and purposively for poor learners, their vocabulary learning experiences would be meaningful and to a certain extent, a successful language learning experience. The sample of this study consisted of beginners and intermediate English language students attending a four-semester course in a Community College. This study should be replicated in other different HEI contexts with students from advanced or of other different proficiency levels to generalize findings to a larger population and to different learning milieus. Khe (2011) suggests that future research concerning Facebook should also explore the school context, focusing on "students and teachers from different countries in order to better understand whether and how different sociocultural and geographical contexts may influence the use of Facebook compared to the Anglo-American focus of many research to date" (p. 669).

It appears that Facebook could be used as a supplementary learning environment or learning platform or a learning tool; with meaningful and engaging activities that require students to collaborate, network and functions as a community of practice, particularly for students with low proficiency levels, introverted and have low self-esteem. The use of SNS such as Facebook may enhance their confidence and motivation to be more participative and actively involved in the learning activities. For the students who did not have the confidence to interact or communicate using the English language, Facebook provided them the space, opportunity and freedom to engage in collaborative learning – learning from others, as well as learning with each other and learning together, using the tools within the Facebook environment and thus, in amalgamation, enhanced their vocabulary knowledge to some extent.

REFERENCES

- Akbulut, Y. (2007). Effects of multimedia annotations on incidental vocabulary learning and reading comprehension of advanced learners of English as a foreign language. *Instructional Science*, 35(6), pp. 499–517.
- Alias, A.N. and Rahman, N.S. (2005). The supportive distance learning environment: A study on the learning support needs of Malaysian online learners. *European Journal of Open, Distance and E-learning*, 2005/II, pp. 1–8.
http://www.eurodl.org/materials/contrib/2005/Alias_Rahman.pdf
- Amichai-Hamburger, Y. & Ben-Artzy, E. (2000). The relationship between extraversion and neuroticism and the different uses of the Internet. *Computers in Human Behavior*, 16, pp. 441–449.
- Antenos-Conforti, E. (2009). Microblogging on Twitter: Social networking in intermediate Italian classes. In L. Lomicka, & G. Lord (Eds.), *The Next generation: Social networking and online collaboration in foreign language learning*, (pp. 59-90). San Marcos, TX: CALICO
- Ari, N. & Read, J. (1999). The English vocabulary knowledge of Indonesian university students. *English for Specific Purposes*, 18(2), pp. 161-175.
- Bargh, J., McKenna, K. & Fitzsimons, G. (2002). Can you see the real me? Activation and expression of the “true self” on the Internet. *Journal of Social Issues*, 58(1), pp. 22–48.
- Barrow, J., Nakanishi, Y. & Ishino, H. (1999). Assessing Japanese college students' vocabulary knowledge with a self-checking familiarity survey. *System*, 27(2), pp. 223-247.
- Baran, B. (2010). Facebook as a formal instructional environment. *British Journal of Educational Technology*, 41(6), pp. 146-149.
- Baron, N. (2010). *Always on. Language in an online and mobile world*. New York: Oxford.
- Black, T. R. (1999). *Doing quantitative research in the social sciences: An integrated approach to research design, measurement and statistics*. London: Sage.
- Blattner, G., & Fiori, M. (2009). Facebook in the language classroom: Promises and possibilities. *Instructional Technology and Distance Learning (ITDL)*, 6(1), 17–28.
- Bloch, J. (2008). From the special issue editor. *Language Learning & Technology*, 12(2), pp. 2-6.
- Bogdan, R., & Biklen, S. (1992). *Qualitative research for education*. Boston: Allyn & Bacon.
- Bonk, C. & Graham, C. (Eds.) (2005). *Handbook of blended learning: Global perspectives, local designs*. San Francisco, CA: Pfeiffer Publishing.
- Cahoon, B. (1995). *Computer skill learning in the workplace: A comparative case study*. (Unpublished Ph.D. Dissertation). University of Georgia, United States.
- Carlisle, J., Beeman, M., Davis, L. & Spharim, G. (1999). Relationships of metalinguistic capabilities and reading achievement for children who are becoming bilingual. *Applied Psycholinguistics*, 20, pp. 459-478.
- Castells, M. (2007). *Mobile communication and society: A Global perspective*. Cambridge: The MIT Press.
- Chen, C. & Chen, Y. (2009). *Effectiveness of constructed responses and multiple-choice questions on recall and recognition in a web-based language learning environment*. In Kong, S.C., Ogata, H., Arnseth, H.C., Chan, C.K.K., Hirashima, T., Klett, F., Lee, J.H.M., Liu, C.C., Looi, C.K., Milrad, M., Mitrovic, A., Nakabayashi, K., Wong, S.L., Yang, S.J.H. (Eds.) Proceedings of the 17th International Conference on Computers in Education [CDROM] (pp. 915-919). Hong Kong: Asia-Pacific Society for Computers in Education.
- Cheung, R., & Vogel, D. (2011). Can Facebook enhance the communications between teachers and students? *The International Journal of Learning*, 17(11), pp. 385-397.
- Chih-Hsiung, T. & McIsaac, M. (2002). The relationship of social presence and interaction in online classes. *American Journal of Distance Education*, 16(3), pp. 131-150.
- Chun, D. M., & Plass, J. L. (1996). Effects of multimedia annotations on vocabulary acquisition. *The Modern Language Journal*, 80(2), pp. 183–198.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, N.J.: Erlbaum.
- Cohen, L., Manion, L., & Morrison, K. (2002). *Research methods in education* (5th ed.). London: Routledge/Falmer.
- Community College (2002). *SPA 203 English for Communication 2*. Malaysian Ministry of Higher Education.
- Creswell, J., & Park, V. (2007). *Designing and conducting mixed methods research*. London, England: Sage Publications.
- Ediger, M. (1991). Reading on higher education level. *ERIC Digest*, ED 336725.
- Ellison, N., Steinfield, C. & Lampe, C. (2007). The benefits of Facebook “friends:” Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication*, 12(4), pp. 1143–1168.
- Fox, S. (2002). Studying networked learning: Some implications from socially situated learning theory and Actor network theory. In Christine Steeples & Chris Jones (Eds.), *Networked*

- learning: Perspectives and issues* (pp. 77-92). London: Springer.
- Gannon-Leary, P., & Fontainha, E. (2007). Communities of practice and virtual learning communities: Benefits, barriers and success factors. *eLearning Papers*, 5, pp. 1-14.
- Garrison, R., & Kanuka, H. (2004). Blended learning; Uncovering transformative potential in higher education. *Internet & Higher Education*, 7(2), pp. 1-14.
- Gass, S., & Selinker, L. (2008). *Second language acquisition*. New Jersey: Lawrence Erlbaum Associates.
- Gay, L. R., Mills, G. E., & Airasian, P. (2009). *Educational research: Competencies for analysis and applications (9th ed.)*. New Jersey: Pearson Education Inc.
- Godwin-Jones, R. (2008). Mobile computing technologies: Lighter, faster, smarter. *Language Learning and Technology*, 12(3), pp. 3-9.
- Grosbeck, G., Bran, R., & Tiru, L. (2011). Dear teacher, what should I write on my wall? A study on academic uses of Facebook. *Procedia Social and Behavioral Sciences*, 15, pp. 1425-1430.
- Harasim, L., Hiltz, S., Teles, L., Turoff, M. (1997). *Learning networks*. Cambridge: The MIT Press.
- Haverback, H. (2009). Facebook: Uncharted territory in a reading education classroom. *Reading Today*, October/November, 1.
- Hewitt, A. & Forte, A. (2006) *Crossing boundaries: Identity management and student/faculty relationships on the Facebook*. Paper presented at the Computer Supported Cooperative Work Conference., Alberta Canada, 4-6 November.
- Holzinger, A., Pichler, A., Almer, W., Maurer, H. (2001). *TRIANGLE: a multi-media test-bed for examining incidental learning, motivation and the Tamagotchi-effect within a game-show like computer based learning module*. In Proceedings of: Educational multimedia, hypermedia and telecommunication 2001, Tampere, Finland.
- Jones, L. (2006). Effects of collaboration and multimedia annotations on vocabulary learning and listening comprehension. *CALICO*, 24(1), pp. 33-58.
- Junco, R. (2012). The relationship between frequency of Facebook use, participation in Facebook activities, and student engagement. *Computers & Education*, 58(1), pp. 162-171.
- Kabilan, M.K., Ahmad, N. & Abidin, M.J.Z. (2010). Facebook: An online environment for learning of English in Higher Education? *The Internet and Higher Education*, 13, pp. 179-187.
- Kerka, S. (2000). Incidental learning. *Trends and Issues*, 18. Ohio State University: Center on Education and Training for Employment.
- Kern, R. G. (1995). Restructuring classroom interaction with networked computer: Effects on quantity and characteristics of language production. *The Modern Language Journal*, 79(4), pp. 457-476.
- Khe, F.H. (2011). Students' and teachers' use of facebook. *Computers in Human Behaviour*, 27(2), pp. 662-676.
- Knight, S. (1994). Dictionary: The tool of last resort in foreign language reading: A new perspective. *The Modern Language Journal*, 78, pp. 285-299.
- Kuss, D. & Griffiths, M. (2011). Addiction to social networks on the internet: A literature review of empirical research. *International Journal of Environment and Public Health*, 8, pp. 3528-3552.
- Lantolf, J. P. (2000). Introducing socio-cultural theory. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning*. (pp. 1-26). Oxford: Oxford University Press.
- Lee, J., Lee, Y., & Kim, M. H. (2015). Perceptions of Teachers and Students towards Educational Application of SNS and its Educational Effects in Middle School Class. *Turkish Online Journal of Educational Technology*, 14(4), pp. 124-134.
- Lin, L.F. (2010). English learners' incidental vocabulary acquisition in the video-based CALL program. *Asian EFL Journal*, 12(4), pp. 81-108.
- Liu, M., Moore, Z., Graham, L., & Lee, S. (2002). A look at the research on computer-based technology use in second language learning: Review of literature from 1990-2000. *Journal of Research on Technology in Education*, 34(3), pp. 250-273.
- Long, M. H. (1996). *The role of linguistic environment in second language acquisition*. San Diego: Academic Press.
- Malaysian Qualifications Agency. (2012). *Malaysian Qualification Framework*. Retrieved from <http://www.mqa.gov.my> (February 14, 2012).
- Madge, C., Meek, J., Wellens, J. & Hooley, T. (2009). Facebook, social integration and informal learning at university: "It is more for socializing and talking to friends about work than for actually doing work". *Learning, Media & Technology*, 34(2), pp. 141-155.
- Mazer, J., Murphy, R. & Simons, C. (2009). The effects of teacher self-disclosure via Facebook on teacher credibility. *Learning, Media & Technology*, 34(2), pp. 175-183.
- Mackey, A. (1999). Input, interaction and second language development: An empirical study of question formation in ESL. *Studies in Second Language Acquisition*, 21, 557-587.
- McKenna, K., Green, A. & Gleason, M. (2002). Relationship formation on the Internet: What's

- the big attraction? *Journal of Social Issues*, 58(1), pp. 9–31.
- McKeown, M. & Beck, I. (1988). Learning vocabulary: Different ways for different goals. *Remedial and Special Education*, 9(1), pp. 42–52
- Mehrens, W. & Lehmann, I. (1989). *Measurement and evaluation in education and psychology* (3rd ed.). New York: Holt, Rinehart and Winston.
- Meskil, C. & Anthony, N. (2005). Foreign language learning with CMC: Forms of online instructional discourse in a hybrid Russian class. *System*, 33(1), pp. 89–105
- Mills, N. (2009). *Facebook and the use of social networking tools to enhance language learner motivation and engagement*. Paper presented at the Northeast Association for Language Learning Technology (NEALLT) Conference, Yale University, New Haven, CT, 30-31 October.
- Nakata, T. (2008). English vocabulary learning with word lists, word cards and computers: Implications from cognitive psychology research for optimal spaced learning. *ReCALL*, 20(1), pp. 3-20.
- Noorizah, M.N. & Zaini, A. (2009). *Exploring the vocabulary learning strategies of EFL learners*. Paper presented at the SoLLs International Conference 2009, Putrajaya, 5-6 May.
- Nor Shahriza, A. K., & Amelia, H. (2007). Reading habits and attitude in the digital age. *The Electronic Library*, 25(3), pp. 285-289
- Northcote, M., & Kendle, A. (2001). *Informal online networks for learning: Making use of incidental learning through recreation*. Paper presented at the International Education Research Conference, December 2–6, Fremantle, Australia.
- Pennington, M. (1989). *Teaching languages with computers: The state of the art*. La Jolla, CA: Athelstan.
- Poutanen, P., Parviainen, O. & Aberg, L. (2011). Conditions for self-organizing and creativity in blended learning environments. *On the Horizon*, 19(4), pp. 286-296.
- Promnitz-Hayashi, L. (2011). A learning success story using Facebook. *Studies in Self-Access Learning Journal*, 2(4), pp. 309-316.
- Qian, D. (2002). Investigating the relationship between vocabulary knowledge and academic reading performance: An assessment practice. *Language Learning*, 52(3), pp. 513-536.
- Roblyer, M. D., McDaniel, M., Webb, M., Herman, J., & Witty, J. V. (2010). Findings on Facebook in higher education: A comparison of college faculty and student uses and perceptions of social networking sites. *Internet and Higher Education*, 13, pp. 134-140.
- Romiszowski, A. & Mason, R. (1996). Computer-mediated communication. In David Jonassen (Ed.), *Educational Communications and Technology* (pp. 438-456). New York: Simon & Schuster Macmillan.
- Roth, A. (2009). Following Plato's advice: Pedagogy and technology for the Facebook generation. *Journal of Philosophy and History of Education*, 59, pp. 125-128.
- Selwyn, N. (2009). Faceworking: exploring students' education-related use of Facebook. *Learning Media and technology*, 34(2), pp. 157-174.
- Shahrokni, S. (2009). Second language incidental vocabulary learning: The effect of online textual, pictorial, and textual pictorial glosses. *TESL-EJ*, 13(3), pp. 1–17.
- Shanyang, Z., Grasmuck, S. & Martin, J. (2008). Identity construction on Facebook: Digital empowerment in anchored relationships. *Computers in Human Behavior*, 24, pp. 816–1836.
- Stockwell, G. (2007). A review of technology choice for teaching language skills and areas in the CALL literature. *ReCALL*, 19(2), pp. 105-120.
- Toyoda, E. & Harrison, R. (2002). Categorization of text chat communication between learners and native speakers of Japanese. *Language Learning & Technology*, 6(2), pp. 88-99.
- Viswanth, B., Mislove, A., Cha, M. & Gummadi, K. (2009). *On the evolution of user interaction in Facebook*. WOSN '09 Proceedings of the 2nd ACM workshop on online social networks, pp. 37-42.
- Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge, UK: Cambridge University Press.
- Wenger, E. (2000). Communities of practice and social learning systems. *Organization*, 7(2), pp. 225-246.
- White, C. & Kim, J. (2009). *Putting the pieces of the puzzle together: How systematic vocabulary instruction and expanded learning time can address the literacy gap*. Washington: Center for American Progress.
- Yancey, K. (2009). Writing by any other name. *Principal Leadership*, 10(1), pp. 26-29.
- Zapata, G. & Sagarra, N. (2007). CALL on hold: The delayed benefits of an online workbook on L2 vocabulary learning. *Computer Assisted Language Learning*, 20(2), pp. 153-171
- Zywica, J. & Danowski, J. (2008). The faces of Facebookers: Investigating Social Enhancement and Social Compensation Hypotheses; predicting Facebook and offline popularity from sociability and self-esteem, and mapping the meanings of popularity with semantic networks. *Journal of Computer-Mediated Communication*, 14(1), pp. 1–34.