Abstract
This paper aimed to examine Thai EFL learners’ reading comprehension ability through a blended language learning environment: the integration of regular face-to-face teaching method and the implementation of online reading activities. In this experimental research study, the participants were Thai EFL undergraduates randomly selected and assigned into two groups, namely a control group and an experimental group. The participants in the control group were taught by way of regular face-to-face classroom teaching while the blended approach, which integrated face-to-face classroom teaching with online reading activities, was used with the experimental group of learners. Following the principle of content-based instruction, the learners were allowed to select the article with contents in which they were interested, read, and post them to a Facebook group specifically created to serve as a learning tool. This study was conducted over the course of 16 weeks. The data were collected from a pre-test and a post-test on the learners’ reading comprehension. Each test consisted of five reading comprehension skills, namely finding the main idea, scanning for specific details, pronoun reference, making inferences, and using vocabulary in context. The scores from both groups were then compared. The overall findings suggested that the blended language learning environment and learners’ reading comprehension complement each other.

Keywords: blended language learning, reading comprehension, second language reading, authentic materials
Introduction

Technology has become largely accessible in Thailand, and many Thai teachers who teach English as a foreign language (EFL) have integrated it into their pedagogical plans for English language teaching (ELT). It is inevitable that social media, such as Facebook and Twitter, have significantly influenced most Thai students’ learning styles, particularly in the area of authentic materials available for second language learning. In particular, Thai students are nowadays more likely to rely on Information and Communication Technologies (ICTs) like social networking in communicating with other people, thus spending more time online via different websites and applications. One of the online activities students tend to give their interest to is reading various types of online articles. It would thus be beneficial to better understand how well Thai EFL students comprehend the English content, which many Thai EFL students find difficult.

At Rajamangala University of Technology Suvarnabhumi, Thailand, all undergraduates are enrolled in English courses as part of their bachelor's degree study requirement. One of the general education courses concerns English reading skill enhancement. The course aims at enhancing students’ ability to read information necessary for life, e.g. announcements, news, leaflets, and other written forms of English.

With this study and its methodology—integrating content-based instruction (CBI) into blended language learning (BLL) using authentic Internet-based materials – it was anticipated that the students would actively learn how to read articles of interest in English more effectively, and have a better attitude towards reading English articles both in and outside of the classroom.

Numerous research has been carried out to stress the benefits of incorporating technology in language education and attempt to prove the efficiency of blended learning in the recent years. The findings were both positive and negative (e.g. Banyen, Viriyavejakul & Ratanaolarn, 2016; Stracke, 2007; Trinder, 2016). Poon (2013) pointed out that no assumptions should be made as an approach that works well for one module may not work for another. For this reason, it was essential that a detailed study be conducted to better identify how successfully the blended language learning environment could support students' learning throughout the course, particularly in tertiary education. Therefore, this study aimed at exploring the learners’ reading comprehension skill development with the blended language learning environment through Internet-based reading materials of their selection.

Objectives of the Study

The objectives of the present study were as follows:

1. To compare the effectiveness of the use of Facebook as a pedagogical tool to enhance Thai EFL learners’ reading comprehension in blended language learning environment with traditional face-to-face learning environment in Thai EFL classes.
2. To examine whether the blended language learning environment with Internet-based reading materials can enhance Thai EFL learners’ reading comprehension skills.

**Research Questions**

The present research study attempted to answer the following questions.

1. Are there any differences in traditional face-to-face language learning environment and blended language learning environment in Thai EFL learner’s reading comprehension performance?

2. Are there any particular reading comprehension skills that can be enhanced when Thai EFL learners are taught in the blended language learning environment?

**Hypotheses**

The present study’s statements of hypotheses were formulated as follows:

Hypothesis 1:
Thai EFL learners in the experimental group will show evidence of better English reading comprehension than Thai EFL learners taught in traditional face-to-face language learning environment.

Hypothesis 2:
Thai EFL learners’ English reading comprehension skills, namely skimming and scanning, will improve significantly in blended language learning through Internet-based reading materials.

**The Conceptual Framework**

![Figure 1: The conceptual framework in the present study](image)

As shown in figure 1, the investigation into Thai EFL learners’ English reading comprehension development in blended language learning using Facebook group as a pedagogical tool to enhance Thai EFL learners was conducted in two different sessions, one with a control group within a traditional face-to-face learning environment, and the other with an experimental group who received a treatment. The
two approaches were considered independent variables in this study while the learners’ English reading comprehension was the dependent variable being examined.

Review of Literature

Blended Language Learning

Blended learning, which refers to face-to-face and online instructions combined, is considered one of the most important recent advances in education (Thorne, 2003). Blended learning can be applied in various subjects including language learning. Blended language learning (BLL) can be defined as an approach consisting of both web-based instruction and traditional face-to-face teaching methods. The ratio of the blend could vary depending on appropriateness. In BLL, according to Graham (2006), learners of English as a second language (L2) will be able to access various kinds of authentic resources made available online.

Blended learning is about effectively integrating Information and Communication Technologies (ICTs) into the process of teaching and learning with a view to enhancing students’ learning experience and performance, while enabling teachers to efficiently manage their courses and teaching. Blended learning allows L2 learners to have access to numerous resources made available online (Graham, 2006). Since blended learning is an approach comprising both web-based instruction and non-web based instruction, e.g. face-to-face teaching methods, the ratio that can be adopted in the pedagogical plan could vary depending on suitability. Adopting this approach, teachers teaching English as a foreign language design their class to provide students with what is best done in a face-to-face environment and what would work better online.

Internet-Based Materials

Uses of authentic materials are seen as effective tools in fostering EFL learners’ language proficiency development. The Internet inarguably offers a more dynamic learning experience compared to general EFL exercise papers. EFL learners can benefit from using the Internet to improve all four skills. Available resources on the Internet include multi-media and interactive materials which can support learners in learning a new language.

Content-Based Instruction

Content-Based Instruction (CBI) is an approach to language teaching that concentrates on what is being taught – the content rather than the language itself (Brinton, Snow & Wesche, 1989). This means that the language is considered the medium through which new content is learned. While learning, learners will acquire competency through CBI naturally. That is, the language being learned is taught within the context of the content. The content is not necessary academic; rather it can be any topic or theme of interest (Genesee, 1994). With great interest in the content, language learners will presumably be able to use more advanced thinking skills as they try to gain new knowledge, thus mastering the second language efficiently. CBI has gained considerable interest in ELT. Among several language learning approaches, CBI is distinct in facilitating language learners to learn about the content.
The learners, meanwhile, can improve their language learning alongside learning about the content in which they are interested. This approach places greater emphasis on the content being learned than on the language or linguistic forms (Brinton et al., 1989).

**English as a Foreign Language**

English as a foreign language (EFL) is learning English in countries where the majority of people do not speak English as their first language (L1). EFL Learners have little exposure to English due to the fact that English is not their official language. They have only one official language which is their native language, and English is learned mostly in the classroom (Ellis, 2008).

Examples of countries where English plays little role in everyday life and is mostly learned in classroom environment include, for instance, Japan, China and Thailand. In contrast, the term English as a Second Language (ESL) is different from EFL in that the learners in those countries use English as a major means of communication in their everyday communication. Examples of such countries are Malaysia, Singapore and India (Ellis, 2008). The present study placed an emphasis on Thai learners of English as a foreign language (EFL). Their general exposure to English learning was mainly in a classroom environment where teachers generally gave instructions and explanations of the lessons by means of their L1, Thai. The college at which the research participants were studying is Rajamangala University of Technology Suvarnabhumi. This university is one of nine universities under the Rajamangala University of Technology nationwide. On the average, there are approximately 30 students in each class. It is located in the province of Phranakhon Si Ayutthaya, in the central region of Thailand. The research subjects representing Thai EFL learners were randomly selected from the university’s faculties and their English proficiency was considered low to intermediate.

**Relevant Research**

With a recent attempt to establish a blended model for learning achievement enhancement of Thai undergraduate students, Banyen et al. (2016) found that Thai tertiary-level students were satisfied with the blended learning when they were assigned to do their assignment using computer-based lessons outside class. Incorporating this approach, the teachers acted as facilitators making summaries of the lessons in face-to-face instruction. With this approach, students were allowed to learn things more independently and comprehensibly. In addition, Lin, Chung, Yeh, and Chen (2016) carried out an empirical study to investigate factors that influenced Taiwanese EFL undergraduate students’ learning satisfaction and continuance intention to stick with blended e-learning. In determining the students’ behaviors in blended e-learning, a questionnaire was administered to 313 students. It was revealed that the students displayed their satisfaction and expressed positive continuance intention to stick with this approach to improve their English skills. Blended e-learning was also advised to be adopted in other fields of education. Furthermore, Ghazizadeh and Fatemipour (2017) carried out a study to examine 60 intermediate Iranian EFL students’ reading proficiency in blended learning. It was suggested that the blended learning in the experimental group had positive effects on the learners’
reading ability. It was thus stressed in the study that blended learning was useful especially for improving reading skills.

Adopting the blended approach in language learning, however, is not always the best choice. Stracke (2007) conducted research to better understand the perceptions of three participants who dropped out of blended language learning (BLL) environment. As the data elicited from the three students who abandoned the course revealed, three potential drawbacks of blended language learning were found to show the reasons the students left the BLL environment: 1) a perceived lack of support, connection and complementarity between the face-to-face and computer-assisted components of the ‘blend’, 2) a perceived lack of usage of the paper medium for reading and writing, and 3) the rejection of the computer as a medium of language learning.

Research Methodology

Research Design

To investigate and compare Thai EFL learners’ reading comprehension in a blended language learning environment including the learners’ selection of Internet-based materials with that of a face-to-face learning environment, an experimental research design was employed. There were two groups of Thai EFL learners, an experimental group and a control group, with members randomly selected to participate in this study. Pre-test and post-test with randomization of groups were manipulated for the purpose of preventing bias in the assignment of subjects for the two groups and to equally intersperse any effects of extraneous variables between the two groups (Seliger & Shohamy, 1989).

Research Participants

The participants of the present study were recruited randomly from the four campuses of Rajamangala University of Technology Suvarnabhumi. The target groups of the present research were students enrolled in the elective English reading course in the first semester of academic year 2016. The participants were then divided into two groups, namely the control group and the experimental group. The two groups each consisted of an equal number of participants, which were 20 research participants in each group. The participants were all accounting majors. A pre-test was conducted to ensure homogeneity and the independent samples t-test scores showed no significant differences in reading comprehension between the two groups. Thus, the two groups were appropriate for the present study’s investigation.

Research Procedure

In this study, the researcher designed a 16-week course plan consisting of four stages in the blended learning process.
The Implementation of Blended Language Learning

**Stage 1: Division of groups**
The participants in the experimental group were divided into five groups of four students. They were assigned to take charge of the ownership of the discussion on a Facebook group created specifically for the purpose of the study.

**Stage 2: Selecting and creating topics of interest**
The subjects were allowed to research their topics of interest and submit the articles to the researcher one week prior to the date on which they started their blog. This process was to ensure the appropriateness of the articles for reading.

**Stage 3: Discussion on posts**
Having read the articles posted by other class members, students were encouraged to discuss or give opinions to express their points of view on the articles posted. This process was to ensure that every student had practiced reading and participated in the online reading prior to the face-to-face session.

**Stage 4: Face-to-face discussion**
At this stage, students had read the articles at their own pace and reflected on the articles posted online. Face-to-face classroom discussions were then conducted in order to provide feedback to students.

All of these four aforementioned stages were repeated until the 16th week in which the participants were asked to sit for the post-test to determine the extent of their improvement of English reading comprehension and compare the results with that of the control group, who were taught in a traditional face-to-face environment for 16 weeks without the treatment.

**Data Collection in the Present Study**

There were two types of research instruments adopted in this study.

**Research Instruments**

To answer research questions 1 and 2, pre-reading and post-reading tests were employed. The tests each consisted of 40 items particularly formulated to test Thai EFL learners’ reading comprehension, namely finding the main idea, scanning for specific details, pronoun reference, making inferences, and using vocabulary in context. The justification for which these five aspects of reading comprehension were selected was that they served the objectives of this investigation and were most frequently found in the core textbooks used for this course. The tests were administered to both groups in the first week and the sixteenth week. At the end of the course, the participants were asked to sit for a post-test in order to compare the effectiveness of the two types of learning environments.

**Data Analysis**

After the data from the pre-test and post-test were elicited, they were analyzed quantitatively. Since the present investigation was conducted with two different
groups of learners, one group performing in one aspect of the experiment, and the other group performing the other, an independent measures t-test was employed in the quantitative data analysis in order to decide whether the blended language learning environment statistically outperforms the face-to-face instruction.

To answer research question 1 on the effectiveness of blended language learning environment, the data gained from the pre-test and post-test of control and experimental groups were analyzed to reveal the means and the standard deviation. To determine which reading comprehension skills can be improved when the learners are taught in blended language learning environment as guided by research question 2, the independent-means t-test was employed to find whether there was a significant difference between the results of the pre-test and those of the post-test for each reading comprehension skill.

**Major Findings**

With regards to the research participants’ reading comprehension performance, the results from the pre-reading tests revealed by the independent samples t-test that there was no significant difference between the two mean scores of both control and experimental groups (t = -0.946, p > 0.05). Therefore, it can be presumed that the Thai EFL learners’ reading comprehension of the control group was comparable to that of the experimental group (p = 0.350).

In the post-test, the mean scores from both control and experimental groups were significantly different. From the total number of 40 test items on the five aforementioned reading comprehension skills, the control group’s mean score was 25.25 while the experimental group gained a significantly higher mean score of 28.15. The post-reading test scores from both groups were then measured by the independent samples t-test. The results showed that the learners’ reading comprehension in the experimental groups was significantly higher than that of the control group (t = -2.791, p = 0.008).

When comparing the two groups by the independent samples test, it was found that blended language learning as an intervention in this study had comparatively positive effects. The results from the post-test overall indicate that both groups’ reading comprehension greatly improved. This could indicate that while traditional face-to-face learning environment remains a valid approach to language learning, the blended language environment is a more dynamic approach to the way lessons concerning reading English in EFL classes should be managed.

As regards the Thai EFL learners’ particular reading skill development, the comparison of the pre-test and post-test scores on each reading comprehension skill, namely finding the main idea, scanning for specific details, pronoun reference, making inferences, and using vocabulary in context between the control group and the experimental group, were drawn. As guided by research question 2, the results from the independent samples t-test show that the learners from both groups were similarly proficient in their English reading comprehension skills as the pre-test scores of all five aspects showed no significant differences between the two groups. Nevertheless, the post-test results revealed that the learners from both groups could develop their reading comprehension skills. To be specific, in the blended language learning
environment, the learners in the experimental group performed significantly better in scanning for specific details than the control group ($t = -4.119, p < 0.05$). Furthermore, the mean scores for the scanning for specific details in the experimental group increased significantly from 5.55 to 6.95 out of 8 items ($p = 0.000$), whereas additionally, the mean scores for the other four reading skills showed some improvements.

Making inference was the reading skill that showed the least improvement. This may be due to the learners’ low English proficiency as making inferences usually requires deeper understanding of the text than the other reading skills.

Scanning for specific details is one essential reading skill EFL learners should possess. The fact that the learners performed better in their scanning for specific details could be attributed to the obvious details presented in the text, such as online news articles. This indicated that authentic online reading materials could be useful when selected to help improve the learners’ scanning for specific details. It can be concluded that Thai EFL learners can considerably benefit from online reading activities with Internet-based reading materials of interest through the group discussion feature made available on the well-known social network, Facebook.

**Implications**

Pedagogically speaking, the findings in this research indicated the feasibility of reading comprehension improvement among Thai EFL learners in blended language learning. Thus, as the findings suggested, it would be beneficial for learners of English as a foreign language when they are taught in the blended learning environment. It should be pointed out that the traditional face-to-face learning environment remains vital to facilitate the learning process, while a totally online course could pose some obstacles to learning English. It is recommended that a well-balanced proportion of face-to-face and web-based instructions in the blended language learning environment be taken into account and promoted to strengthen the process of learning with dynamic materials available online. Individual differences could play a role when considering the proportion of face-to-face and online learning time. Furthermore, the importance of learning materials can also play a role in the learners’ motivation in learning a new language. Allowing students to select topics of interest and integrating them properly in the lessons is another essential part for providing the utmost learning environment.

**Conclusion and Recommendations**

This paper showed how a blended language learning environment played a crucial role in enhancing Thai EFL learners’ reading comprehension performance. As the results showed, a blended language learning (BLL) can be seen as facilitating pedagogy fostering their reading comprehension ability. Providing a flexible learning environment for students can enable them to better learn at their own pace—without time constraints, interact more with friends by using English in their discussion, and feel more engaged in the learning process (McCarthy, 2016). As the post-test reading comprehension scores revealed, although both learning environments yielded positive results, the BLL environment outperformed the traditional face-to-face learning environment. Although this investigation provided some insights into reinforcing Thai
EFL learners’ reading comprehension, it should be noted that blended language learning can be beneficial for learners when adopted appropriately. With reference to Thornbury (2016), implementing blended learning or the employment of any types of language learning aid, teachers should consider its appropriateness. It is recommended that language educators carefully balance the use of technology and integration into their pedagogical plan. Several studies suggest different proportions of class time and that of participating in the online learning environment. To organize an effective blended language learning environment, other factors such as age, class size, gender, and the convenience and ability of Internet access should be taken into account (McCarthy, 2016). Consideration of these factors may strengthen the process of learning in the blended language learning environment.
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**Contact email:** reconfirm_22@hotmail.com