The Implementation of Blended Learning to Enhance English Reading Skills of Thai Undergraduate Students

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Abstract

Blended learning is a pragmatic approach to education, combining online and traditional methods, applied extensively in the fields of English as a first, second and foreign language. The present study examined the effectiveness of the blended learning approach for the development of the reading skills of undergraduate students. Participants were 60 Thai students divided into experimental and control groups. Post-tests of each group were used as the main method of data collection, with a t-test being utilized to examine any differences between post-test scores. Statistically significant differences (t = 32.098; sig = .000) were investigated for effect size utilizing a Cohen'd test. Results revealed a significant effect size (Cohen'd = 3.937). The implications of this study suggest that the implementation of blended learning could considerably improve the English language reading skills of undergraduate students studying English as a foreign language.

Keywords: blended learning, reading instruction, blended learning for reading skills

1. Introduction

Reading skills are essential for any language learner as the main means of acquiring information in order to construct meaning (Temur, Kargın, Bayar, & Bayar, 2010). However, the teaching of reading skills can pose significant challenges for educators over a range of different educational levels. Bosuwon and Woodrow (2009) observed that students in Thailand learning in an English as a foreign language setting have a reduced exposure to the English language, and therefore do not effect a productive output of written texts to bolster and develop their reading skills. However, empowering students to better deal with their language learning can overcome this problematic situation, and it is therefore of vital importance that teachers know how to achieve this; such as by setting objectives and learning tasks which shift the focus from the teacher to the student and utilizing technology. The integration of technology into language instruction and learning has been accomplished by many teachers in a principled way (Whittaker, 2014), however, the variety of specific forms of technology available are numerous, and particular choices for which technology is suitable need to made dependent on the uniqueness of a learning environment.

Blended learning environments pose a complex situation for technology integration. One of the most important factors relates to the delivery method, whereby multiple different modes are available; such as open source learning platforms, collaboration software and web-based courses, and various online event-based activities; such as face-to-face classrooms, live e-learning, and self-paced learning (Valiathan, 2002). According to Bataineh and Mayyas (2017), the combination of in-class and online instruction for language learning courses is an effective approach to develop the skills required for better proficiency in English especially receptive skills such as reading skills (Masduqi, 2016). Therefore, the aim of this research was to ascertain as to whether implementing a blended learning approach would be able to development of the reading skills of students studying English as a foreign language.

1.1 Research Question

In order to explore the efficacy of blended learning to enhance reading skills, the following research questions are of central importance:

1) Is there a significant difference to be found in the reading development of students studying with the implementation of blended learning and those without?

2) If a significant difference is discovered, what is the effect size of this difference?

1.2 Review of Literature

This section provides an overview of pertinent literature related to the following topics: the development of reading skill processes and instruction and the implementation of blended learning programs specifically for the development of reading skills. Coinciding with the purpose of the current study, only research about reading skill development was included.

1.2.1 Reading Skills

According to Anderson (2008), reading is an activity which involves an active, fluent, and engaging process, whereby readers engage with reading materials in order to construct meaning from target content. A variety of different models have been proposed, which can be classified into three main categories: bottom-up, top-down, and interactive. According to Grabe (1991), these models contain processes operating at the unconscious level, employed by readers as strategies to manage more complex texts. He also mentions that due to the complexity of processes involved in reading complex texts, these processes can be subdivided into six general component skill and knowledge areas:

1) Automatic recognition skills: identified by cognitive and educational psychologists as being essential for fluent reading.

2) Vocabulary and structural knowledge: a significant marker used to determine reading ability, arguably positing 2,000-7,000 words families for second language English readers.

3) Formal discourse structure knowledge: known as formal schemata, understanding how a text is organized and structured at the level of discourse positively influences the comprehension of the text by readers.

4) Content/world background knowledge: known as content schemata, this includes formality and content knowledge, and also positively influences the comprehension of the text by readers from both first and the second language English milieu.

5) Synthesis and evaluation skills/strategies: an essential component of reading ability, strongly associated with listening and speaking pre-tasks that involve prediction as part of their successful completion.

6) Metacognitive knowledge and skills: a knowledge of specific cognitive processes, such as attention, knowledge about a specific language, synthesizing information, memory, perception and thinking; and specific strategies in which can be selected and utilized to undertake particular tasks and solve problems at various different times for a variety of goals, such as identifying learning styles, task planning, organization of materials, comprehension, monitoring and evaluation.

The component skills and knowledge mentioned above are widely recognized as being a vital and integral component to reading skill development. However, in order to provide effective reading instruction, Anderson (2012) suggested that teachers must ensure that reading activities remain the primary focus during the development of reading skills. More specifically, teachers should regard reading as the core skill to be focused on for development, but then build the component skills and knowledge into and around this for effective reading instruction.
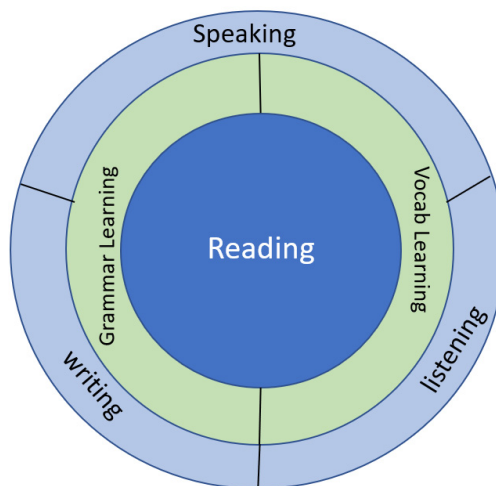
Figure 1. Placing reading at the core of language learning instruction (Anderson, 2012)

Figure 1 illustrates the concept of reading skills being at the center of language learning instruction. However, the notion of reading skills being exclusive in importance must be understood as a cultural change in which students engage with more meaningful texts and realize the value reading holds in their development of the other language skills; such as grammar, vocabulary, speaking and listening skills. Such a change can be increasingly effected as a focus shift takes place from teacher to student centered.

1.2.2 Blended Learning in Reading Instruction

As mentioned above, the use of blended learning to enhance language learning in education has been well established over a significant period of time; however, its evolution has led to its adaptation to a variety of different areas in language learning. Blended learning has been explored in the area of reading skills development, such as improving vocabulary learning and reading skills (Alnoori & Obaid, 2017; Behjat, Yamini, & Bagheri, 2012; Ghazizadeh & Fatemipour, 2017; Hamdan, Mohamad, & Shaharuddin, 2017; Hinkelman, 2013; Kim, 2014) and reading strategies (Alshwiah, 2009; Hamdan et al., 2017; Levy, Dickerson, & Teague, 2011; Pombo, Loureiro, & Moreira, 2010).

Alnoori and Obaid (2017) used a blended learning approach for teaching reading skills to secondary school students. Participants consisted of 50 students studying English as a second language in a secondary school in Al-Rusafa, Iraq. A significant improvement was observed in reading performance scores, including key word confidence, pronunciation and meaning comprehension, which indicated a positive development from the implementation of the blended learning approach.

Behjat et al. (2012) examined the effect of Moodle-enhanced instruction on the reading comprehension and grammar performance of students studying English as a foreign language at Jordan University of Science and Technology, Jordan. Moodle was used to supplement in-class instruction, combined with a quasi-experimental and pre-/post-test design. Reading comprehension skills of skimming, scanning, building ambitious vocabulary, and searching for specific information were also targeted. The findings revealed differences in the posttest adjusted mean scores between the experimental and control groups, indicating an improvement for the experimental group in the specific reading skills and overall reading comprehension ability.

Ghazizadeh and Fatemipour (2017) aimed to explore the effect of blended learning on the reading proficiency of EFL learners. Participants were 60 intermediate-level Iranian EFL learners randomly assigned to control and experimental groups. A quasi-experimental design was implemented, whereby the control group received traditional classroom instruction, and the experimental group received a combination of traditional classroom instruction and blended learning. The results demonstrated that the experimental group receiving a combination of traditional classroom learning and blended learning displayed a statistically significant positive improvement in their reading proficiency.

Hamdan et al. (2017) studied how second language English learners perceived ESL-related hypermedia reading materials. In addition, they also examined how reading comprehension ability was affected, and what factors affected it. Participants in the study comprised 11 English as a Second Language (ESL) third-year undergraduate

students. Data were collected using a Think-Aloud strategy, semi-structured interviews, and reflective notes. The findings of this study indicated that hypermedia improved reading comprehension ability, with the proviso that hypermedia material and content design should be considered. Specific elements deemed helpful towards developing reading comprehension skills were the inclusion of pictures, tables, diagrams, audio materials, videos, hyperlinks and glossaries provided by websites.

Hinkelman (2013) critically examined the use of technology in extensive reading programs, not as a tool for learning, but through the lens of classroom ecology that is constructed by teachers, administrators, and students. Utilizing a case study of a university EFL reading program, paper readers combined with an online entity relationship (ER) management system (MoodleReader), electronic processes, paper media, and face-to-face techniques were investigated as to how they could be blended into existing programs of study to form the best possible learning environment.

Kim (2014) examined how the use of mobile technology in blended learning affected reading comprehension skills. Forty-four participants were allocated to an experimental group (n=23) and a control group (n=21). Experimental group participants were asked to use their mobile phones outside of class each week to discuss reading topics, while those in the control group were asked not to. The results a comparison between pre- and post-test means indicated that the development of reading comprehension skills of the experimental group had significantly improved when compared to the control group. Furthermore, a post test survey highlighted that the majority of participants in the experimental group considered the use of mobile devices for English language learning to be extremely useful and beneficial. The findings of this study offer pedagogical implications and suggestions for utilizing mobile technology as a valuable and flexible learning tool.

2. Methodology

2.1 Research Design

This study employed an experimental design, offering a quantitative method through which to be able to manipulate a single variable whilst controlling others. The treatment applied to the experimental group was a blended learning program, focusing on improving reading skills including reading comprehension, guessing meaning from context, inferring, and summarizing. The dependent variable was the effect observed by the application of the blended learning program.

2.2 Participants

Participants were 60 Thai students studying an undergraduate course in reading at Naresuan University, Phitsanulok, Thailand. Participants were divided into experimental and control groups. The students were separated into an experimental group (n=30) and a control group (n=30). Random sampling was utilized to determine which participants would be in the control and experimental groups.

2.3 Research Instruments and Materials

The research materials are a set of non-fiction readings from www.readwork.org. The texts were allowed to use for a research purpose by the website. The reading strategies were also included in the set in order to enhance the students' ability.

The main research instrument utilized for data collection in this study was a post-test. The blended learning program took six weeks with a brief initial period for instruction on how to use the Learning Management System (LMS), MOODLE. A single post-test was implemented for all participants in both groups 6 weeks after the beginning of treatment. The post-test consisted of 5 reading passages and 30 questions focused on tasks such as scanning, finding the topics of reading passages, guessing meaning from context, comprehension, and pronoun references.

The research instrument and program materials were tested for content validity by three experts teaching English as a foreign language. A Kuder-Richardson Formula 20 (KR-20) test was utilized to ascertain the reliability of the post-test with its binary variables. The test reliability was deemed to be very high (.930).

2.4 Data Analyses

All post-tests were compared to evaluate the effect of blended learning on reading ability. Differences in post-test scores were examined using mean, standard deviation, and pair t-tests, to evaluate the effectiveness of the program. A Cohen's d was then utilized to compare statistically significant differences in means, in order to determine the effect size. The Cohen's d within-subject analysis was performed as the two sets of data were from the same group. The Cohen's d was calculated online at: https://memory.psych.mun.ca/models/stats/effect_size.shtml

3. Findings and Discussions

3.1 Finding 1

To reveal the effectiveness of the blended learning approach for the development of the reading skills of the undergraduate students, an analysis of the post-test scores was performed to investigate any differences. Table 1 demonstrates the mean score of the control group (12.62) and the experimental group (19.77) after implementing the blended learning program. The t-test analysis score (-32.098) with the statistical significance of .01 indicates that the experimental group of students had made significant improvements in their reading skills over the control group after the blended learning program.

Table 1. The analysis of post-test scores

Group	N	M	SD	t	df	Sig (2-tailed)
Control group	60	12.62	2.81	-32.098*	59	.000
Experimental group	60	19.77	3.87			

*p<.01

3.2 Finding 2

To determine the magnitude of the mean differences or effect size from the post-test data, for both experimental and control groups, statistically significant differences were investigated utilizing a Cohen'd test. The Cohen'd test revealed a significant effect size (Cohen'd = 3.937).

3.3 Discussion

The findings obtained during this study were in accordance with conclusions drawn from similar previous studies. Alnoori and Obaid (2017) stated that blended learning appears to be more effective in comparison to traditional methods due to its flexibility, which allows the incorporation of an array of technology. Furthermore, the technology used in blended learning settings can be facilitated and moderated by teachers in the classroom to prevent the technology being misused or being used in an ineffective manner.

Alnoori and Obaid, Ghazizadeh and Fatemipour (2017) also discovered that a blended learning approach significantly improved the reading proficiency of EFL learners. In addition, Alnoori and Obaid also mentioned that blended learning can be used in a variety of different locations, not only in classrooms. Consequently, students can develop their reading proficiency and improve their reading skills in a suitable location and at a convenient time, concurring with the present study.

A comparative study (Bataineh and Mayyas, 2017) examined essential reading skills, consisting of skimming, scanning, looking for main topics, and building ambitious vocabulary, alongside overall reading comprehension levels. A blended learning approach was implemented utilizing MOODLE LMS, and targeting the treatment to the experimental group. Subsequently, differences in the adjusted mean scores between the experimental group and the control group were obtained for the four reading skills and the overall reading comprehension, demonstrating a significant improvement in the experimental group. Similarly, the study of Kim (2014) revealed that although all participants showed improvement in their reading comprehension ability, those exposed to blended learning displayed more significant development when compared to participants studying with traditional approaches.

Hamdan et al. (2017) employed a case study to obtain a qualitative detailed understanding of participants and their interaction with a hypermedia reading process. Findings from their study highlighted the usability and effectiveness of online supplementary materials, such as diagrams, audio, and video, and how students consequently gained a greater understanding of hypermedia reading materials using these resources. However, when a blended learning approach was applied exclusively for the development of vocabulary knowledge, vocabulary test scores did not significantly improve without the accompaniment of a focus on reading skills. Therefore, the reading process should be considered as a core component for developmental improvements in language, with other skills being additional.

Overall, the implementation of blended learning effected significant improvements in the English language reading skills and development of EFL undergraduate students. The blended learning program must be appropriately designed for a specific course or specific set of target skills. Learning objectives are a priority, followed by course content, and subsequently, materials, resources and technology selection. Ensuring these key features are undertaken in order, would prevent the use of blended learning from becoming technocentric, which

may undermine the helpfulness and effectiveness of blended learning for developing reading skills and other language learning skills.

4. Conclusions

The term 'blended learning' became popular in corporate training settings to define a collection of teaching and learning approaches. The term is currently used as an approach to education, combining online and traditional teaching methods. It has been applied extensively in the fields of English as a first, second and foreign language, in order to facilitate the learning processes in language classes required for the development of reading comprehension skills. Hinkelman (2013) emphasized the interaction between online and face-to-face technologies, which are not exclusive of one another. From an ecological perspective, neither can be studied separately or individually, they can only be examined as a complete ecosystem.

The present study investigated the effectiveness of the blended learning approach for the development of reading skills, and has demonstrated that utilizing blended learning programs could significantly better the reading skills of undergraduate students. Combined with previous studies, it can be concluded that a blended learning is appropriate in the current EFL educational context.

Finally, some limitations should be considered by researchers and educators when using blended learning with a focus on reading skills. First, a preference for long hypertexts and specific point-form format texts should be made. Furthermore, integration of audio and video forms of hypermedia are also decisive for successful blended learning program design. In addition, the focus of the program should not become dominated by technology at the expense of reading instruction. Therefore, blended learning program designers should begin with specific learning objectives related to target reading skills before deciding which technologies will be suitable in the learning environment.

Acknowledgement

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