

**School of Education**

**An investigation into the development of English language reading  
comprehension among Thai undergraduate students  
using an online blended learning approach**

**Chayapon Chomchaiya**

*This thesis is presented for the degree of*  
**Doctor of Philosophy**  
of  
**Curtin University**

**September 2014**

## Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

Signature: *Chayapon Chomchaiya* .....

Date: 23/02/2015 .....

**Curtin University of Technology Library Archives Use of Thesis**

This copy is the property of Curtin University of Technology. However the literary rights of the author must also be respected. If any passage from this thesis is quoted or closely paraphrased in a paper or written work prepared by the user, the source of the passage must be acknowledged. If the user desires to publish the paper or written work containing passage copied or closely paraphrased from the thesis, which passages would in total constitute an infringing copy for the purposes of the Copyright Act, he or she need to obtain the written permission from the author.

## **Abstract**

This study is concerned with the development of English reading comprehension among learners of English as an additional language in Thailand, and the role that information and communication technology (ICT) can play in that development.

The importance of reading comprehension in the development of language proficiency has been acknowledged in the scholarly literature on language education. Many studies have identified reading as being a particularly valuable skill, not only for its role in language learning, but also because it fosters learning more generally. Even though reading is a vital skill that learners of English need to develop, there is some evidence that, in the Thai higher education system, students do not generally make adequate progress in language learning, and their levels of reading comprehension are quite weak.

The research literature has identified a number of internal and external factors that impact on the development of learners' English reading comprehension, including background knowledge, motivation, language skills, features of texts, and the learning environment. English reading comprehension strategies used in traditional English reading classrooms have also been identified in the literature.

With regard to ICT, the scholarly literature has tended to show that it can have some positive effects on the learning process, suggesting that instructional media incorporated into new technology can be employed into classroom situations to foster learning effectiveness. Such findings formed the background for the development of this study, which sought to uncover the difficulties associated with reading experienced by one group of learners of English at a Thai university, and identify whether a directed blended learning (BL) program made a difference in terms of learning effectiveness.

The purposes of the study were threefold: to identify the factors that Thai undergraduate language learners in a university perceived as presenting obstacles to the development of their reading comprehension, to investigate whether the delivery

of a reading development program using a BL approach enhances student English reading comprehension, and to investigate how the introduction of a reading development program using a BL approach affects student perceptions of the barriers to developing their English reading comprehension.

The study was divided into three phases. The first phase aimed to identify factors which learners perceived as presenting barriers to the development of their reading comprehension. This phase was divided into two sub-phases. Initially, a focus group was conducted with nine participants who had previously enrolled in an English reading course to identify the possible difficulties faced by Thai learners. The data obtained from this phase were analysed using a content analysis approach and used to enhance the development of a questionnaire used in the second sub-phase. The questionnaire was trialled and then administered to a group of 400 participants from different majors who were enrolled in an English reading course at a Thai university in 2009. The results from the focus group and questionnaires provided the foundations for the second phase of the study.

The second phase involved pre-testing the reading comprehension skills of a group of 199 students who were enrolled in a reading course in 2010, conducting the reading course, and measuring the participants' post-instructional reading comprehension skills. The 199 participants were divided into four groups, three of which experienced a 'traditional' reading course, and one which experienced a specially-designed BL course. This phase was intended to address the question of the impact of such a program on the development of students' reading. A t-test was used to assess learning outcomes attained by each class and calculated by using SPSS and the scores of all classes were analysed by using one way analysis of variance (One-way ANOVA).

The final phase of the study investigated how the introduction of a reading development program using a BL approach affects student perceptions of the barriers to developing their English reading comprehension, using an evaluation questionnaire.

The findings from the first phase revealed that there were both internal and external factors that were perceived by the participants in this study as barriers to the development of their English reading comprehension. The main internal factors were learners' limited background knowledge as it related to the content of the material that they read, their low motivation levels and their lack of adequate language skills. The external factors were related to the lack of advance organisers presented in the textbook or during instruction, the use of textbooks which were not related to learners' interests or their background knowledge, and the classroom environment.

The findings from the second phase regarding the effects of the BL reading program on the enhancement of learners' English reading comprehension revealed that participants in the BL reading program had progressed at a significantly higher rate than those in the two of the control groups using traditional face-to-face approach. However, the scores between the BL class and the third control group were not statistically significant.

With regard to the third phase, the participants' perceptions of the impact of English reading comprehension instruction using BL on formerly identified barriers to learning showed that participants believed that the barriers were significantly reduced in the BL instructional program.

This study found that the use of BL had minimised the barriers to the development of English reading comprehension that students had previously identified, and that BL was at least as effective as 'traditional' forms of instruction in its educational outcomes. While BL was not found to be more effective than traditional face-to-face instruction in this study, a number of specific benefits to its use were identified, including the use of ICT applications to motivate learners, to promote self-directed learning, and to provide more extensive channels of communication between participants. From the experience of this particular case, it can be concluded that BL has at least the potential to enrich and strengthen teaching and learning practices in English language education in Thailand.

## **Acknowledgement**

The thesis could not have been completed without support from many individuals. In particular, my research supervisors, Associate Professor Katie Dunworth and Dr. Chris Conlan, provided useful guidance on my work, and more importantly gave me encouragement which assisted me to go through the hardest period of my life.

I would also like to thank the President of Suan Dusit Rajabhat University, Associate Professor Sirote Pholpuntin, who provided a scholarship and gave me permission to conduct this research at the university.

Thanks, too, to my colleagues who helped me organise a focus group and collect the distributed questionnaires.

Finally, my thesis could not have been completed without support from my family members who gave me love, encouragement, care and financial support.

Chayapon Chomchaiya

## Table of Contents

Declaration.....	i
Curtin University of Technology Library Archives Use of Thesis .....	ii
Abstract .....	iii
Acknowledgement.....	vi
Table of Contents.....	vii
List of Tables .....	xii
List of Figures.....	xv
List of Abbreviations.....	xvi
<b>CHAPTER ONE: Introduction.....</b>	<b>1</b>
1.1 Background .....	1
1.2 Aims.....	9
1.3 Significance .....	10
1.4 Terms and Definitions .....	12
1.5 Chapter content .....	13
1.6 Ethical issues .....	14
1.7 Limitations of the research .....	14
<b>CHAPTER TWO: Reading Comprehension and Instruction .....</b>	<b>16</b>
2.1 Reading comprehension.....	16
2.1.1 Definition of reading comprehension.....	16
2.1.2 The reading comprehension process.....	17
2.2 Factors related to the development of reading comprehension.....	19
2.2.1 Internal factor: background knowledge/schemata .....	20
2.2.2 Internal factor: motivation.....	22
2.2.3 Internal factor: prior language skills and difficulties.....	27
2.2.4 External factor: advance organisers.....	29
2.2.5 External factor: textual context in reading materials.....	31
2.2.6 External factor: learning environment.....	32
2.3 The teaching of skills and strategies related to English reading comprehension .....	34
2.3.1 Vocabulary instruction .....	35



2.3.1.1	Providing definitions.....	36
2.3.1.2	Using contextual clues.....	37
2.3.1.3	Semantic mapping.....	40
2.3.2	Reading comprehension instruction .....	40
2.3.2.1	Scaffolded instruction.....	40
2.3.2.2	Text structure instruction.....	44
2.4	Conclusion .....	48
	<b>CHAPTER THREE: ICT in Language Learning and the BL Approach .....</b>	<b>49</b>
3.1	Applications of technology in education .....	49
3.2	Computer terms used in learning .....	51
3.2.1	A brief history of computers in language learning .....	51
3.2.2	The advantages of computers.....	52
3.2.3	The limitations of computers .....	55
3.3	Blended learning .....	59
3.3.1	Types of BL.....	60
3.3.2	Approaches to BL .....	60
3.3.3	Issues related to the development of blended reading instruction .....	62
3.3.4	The role of BL in skill development.....	65
3.3.5	Role of BL in the development of self-directed learning (SDL) .....	68
3.4	Conclusion .....	70
	<b>CHAPTER FOUR: Research Methodology.....</b>	<b>71</b>
4.1	Phase One: barriers to learning: focus group and questionnaire.....	72
4.1.1	Focus group.....	73
4.1.2	The questionnaire.....	76
4.2	Phase Two: Pre-test/post-test investigation into student learning .....	78
4.2.1	The design of the instructional program.....	78
4.2.1.1	The process of the program implementation .....	84
4.2.2	Test-intervention-retest design.....	87
4.2.2.1	The pre-test and post-test implementation .....	89
4.3	Phase Three: Investigation into the learners' perceptions of learning barriers.....	90
4.3.1	The design of the evaluation questionnaire.....	90
4.3.2	The distribution of the evaluation questionnaire .....	91

<b>CHAPTER FIVE: Results</b> .....	93
5.1 Introduction .....	93
5.2 Focus group .....	93
5.2.1 General attitudes toward reading .....	93
5.2.2 Skills enhancing reading comprehension .....	94
5.2.3 Reading materials .....	94
5.2.4 Reading instruction at a Thai University .....	95
5.2.5 Learning environment .....	96
5.3 Questionnaire.....	97
5.3.1 Internal factors: skills and strategies enhancing English reading comprehension.....	98
5.3.2 External factors: reading materials and topics .....	98
5.3.3 External factors: learning environment .....	100
5.3.4 External factors: English reading instruction.....	100
5.3.5 Perceptions regarding the use of computer and ICT in learning .....	102
5.3.5.1 Computer experience .....	102
5.3.5.2 Advantages of using computers .....	102
5.3.5.3 Disadvantages of using computers .....	103
5.4 Evaluation of BL program.....	104
5.4.1 Pre-test and post-test results.....	105
5.5 Evaluation of the participants' perception in the development of their English reading comprehension using the BL approach .....	109
5.5.1 General information about the participants.....	109
5.5.2 Participants' perceptions of the English reading instruction .....	111
5.5.3 A comparison of the participants' perceptions of different learning aspects, classified by classes .....	116
5.5.4 Other suggestions.....	124
5.5.5 Testing the hypotheses .....	125
5.5.5.1 Hypothesis one: The participants will perceive that the developed BL program minimises the barriers to developing the learners' English reading comprehension .....	125
5.5.5.2 Hypothesis Two: BL enhances the development of the learners' English reading proficiency as traditional F2F instruction .....	126

5.5.6 Conclusion.....	126
<b>CHAPTER SIX: Discussion and Recommendations .....</b>	<b>128</b>
6.1 Undergraduate learners' perceptions of the barriers to developing English reading comprehension .....	128
6.1.1 Internal factors: background knowledge .....	129
6.1.2 Internal factors: motivation .....	130
6.1.3 Internal factors: language skills and strategies .....	130
6.1.4 External factors: advance organisers .....	131
6.1.5 External factors: reading materials .....	131
6.1.6 External factors: learning environment .....	133
6.2 The blended learning (BL) approach and learners' perceptions of the barriers to the development of their English reading comprehension .....	134
6.2.1 Choices in learning .....	134
6.2.2 Background knowledge activation .....	135
6.2.3 Development of learning motivation .....	135
6.3 The influence of the BL approach on the development of English reading comprehension .....	136
6.3.1 Skill development .....	136
6.3.2 Autonomous learning .....	137
6.4 Summary.....	139
6.5 Recommendations for future research .....	142
<b>References.....</b>	<b>144</b>
<b>Appendices.....</b>	<b>166</b>
Appendix A: A letter to the president of SDU .....	166
Appendix B: Letters of invitation and consent forms.....	170
Appendix C: Focus group Questions .....	176
Appendix D: A questionnaire used in Phase One .....	177
Appendix E: Questionnaire reliability.....	184
Appendix F: Pre-test and post-test reliability .....	190
Appendix G: Evaluation form .....	195
Appendix H: A sample of blended English reading comprehension course.....	207

Appendix I:	A sample of traditional face-to-face English reading comprehension course .....	214
Appendix J:	Additional results from questionnaire .....	221

## List of Tables

Table 1	Types of external contextual clues .....	38
Table 2	Components of scaffolded reading instruction and activities .....	44
Table 3	Examples of expository text structure .....	46
Table 4	The implementation of computers in education .....	50
Table 5	Strengths and benefits of the classroom between F2F and e-learning.....	63
Table 6	A comparison between the BL class and traditional class in the study .....	84
Table 7	Control group pre-test-post-test design .....	86
Table 8	Comparison of the pre-test and post-test used in the study .....	88
Table 9	Comparison of reading scores prior to the English reading instruction, classified by classes .....	105
Table 10	One-way ANOVA of participants' English reading scores before receiving the different English reading instructions, classified by classes .....	106
Table 11	Comparison of pre-test and post-test scores, classified by classes...	106
Table 12	Average and standard deviation of the participants' English reading scores before and after receiving the different English reading instructions, classified by classes .....	106
Table 13	One-way ANOVA of the participants' English reading scores before and after receiving the different English reading instructions, classified by classes .....	107
Table 14	Pair-wise comparison of the participants' English reading scores before and after receiving the different English reading instructions using Scheffe's Method, classified by classes.....	107
Table 15	General information about the participants .....	109
Table 16	Difficulties faced by the participants before attending the English reading classes, classified by classes .....	110
Table 17	Overall perceptions of the effects of the English reading instruction on the development of English strategies.....	111

Table 18	Overall perceptions of the learning environment in the English reading classes .....	112
Table 19	Overall perceptions of the reading materials used in the English reading instruction .....	113
Table 20	Overall perceptions of the effects of the English reading instruction on autonomous learning.....	114
Table 21	Overall perceptions of the English reading instruction employed in class .....	115
Table 22	A comparison of perceptions of different learning aspects.....	115
Table 23	A comparison of the participants' perceptions of the effects of the English reading instruction on learning.....	116
Table 24	A comparison of the participants' perceptions about the effects of English reading instruction on the development of their English reading strategies, classified by classes.....	117
Table 25	A comparison of the participants' preferences for English reading, classified by classes .....	118
Table 26	A comparison of the participants' dissatisfaction with the English reading, classified by classes.....	119
Table 27	A comparison of the participants' perceptions regarding the effect of the reading instruction in all learning aspects, classified by class .....	121
Table 28	One-way ANOVA of the participants' perceptions in all learning aspects, classified by classes .....	121
Table 29	Pair-wise comparison of the participants' perceptions in all learning aspects using Scheffe's Method, classified by classes.....	123
Table 30	Suggestions for further development of English reading instruction, classified by classes .....	124
Table 31	Factors perceived by Thai learners to affect the development of their English reading comprehension .....	128
Table 32	The main English reading difficulties, as perceived by the participants .....	221
Table 33	Types of the English reading materials enhancing the development of English reading comprehension, as perceived by the participants .....	221
Table 34	The reading topics preferred by the participants .....	222

Table 35	The preferred learning environment, as perceived by the participants .....	222
Table 36	Useful teaching approaches enhancing the development of English reading comprehension skills, as perceived by the participant .....	223
Table 37	Preferred activities in the English reading classes, as perceived by the participants .....	223
Table 38	Advantages of using computers, as perceived by the participants .....	224
Table 39	Preferred computer activities, as perceived by the participants .....	224
Table 40	Disadvantages of using computers, as perceived by the participants .....	224
Table 41	Other suggestions provided by the participants .....	225

**List of Figures**

Figure 1	Conceptual Framework of the Study .....	72
Figure 2	BL syllabus design process .....	79
Figure 3	The introduction page of the subject .....	82
Figure 4	The learning session page of the English reading subject.....	83
Figure 5	Model of English reading comprehension instruction using the BL approach for L2 learners .....	141



**List of Abbreviations**

ANOVA	: Analysis of variance
BL	: Blended learning
CAL	: Computer assisted/aided learning
CALL	: Computer assisted language learning
CBI	: Computer-based instruction
CMC	: Computer-mediated communication
EFL	: English as a foreign language
ICT	: Information and communication technology
L1	: First language or native language
L2	: Second language
LMS	: Learning management system
SDL	: Self-directed learning
SPSS	: Statistical package for Social Sciences

## **CHAPTER ONE: Introduction**

### **1.1 Background**

The importance of reading comprehension in promoting the development of language proficiency has long been acknowledged in the literature of language education. Several studies have identified reading as being a particularly valuable skill, not only for its role in language learning, but because it has the capacity to develop knowledge and foster learning in other fields of study (Topping & Paul, 1999; Suknantapong et al., 2002; Neufeld, 2005; Snowball, 2006). Learning to read expertly can, therefore, be seen as an important educational objective in itself, whether in a first or second language (White, 1981; Torut, 1984; Jorajit, 2003).

Reading comprehension skills can broadly be described as the strategies used by a reader to understand a text (Neufeld, 2005). Comprehension involves a number of processing functions, which take place at different levels. At the surface level, the phonologic and acoustic properties are processed. At the second level, semantic and syntactic interpretations are made. The third level is where interpretive connections are made (Perfetti, 1979). The strategies that learners bring to decoding a reading text can similarly be categorised as comprising both bottom-up and top-down interpretation techniques. Using a bottom-up model, readers construct meaning from letters, words, phrases, and sentences to form a holistic whole (Anderson, 2003). Using a top-down model, readers hypothesise and predict content, seek confirmation in the text, and bring their own knowledge of the world to the interpretation of the content (Anderson, 2003). If these are the strategies that effective readers use, it follows that some of the key comprehension strategies that learners should be taught include: prediction or prior knowledge use; answering and forming questions about the text; thinking aloud about reading to enhance understanding and create social interaction through discussion (Kucan & Beck, 1997; Snowball, 2006); using text structures and features to make deductions about the text; and visualising and representing such visualisations and summarising (Snowball, 2006). In fact, visual representation enables readers to get a general idea of reading contexts (Haupman, 2000), and summarising trains readers to identify the important ideas of learning contexts (National Reading Panel, 2000 ). This argument is supported by a number of

studies which show that poor reading comprehension is associated with poor development of reading sub-skills, such as making inferences, using contextual clues, interpreting texts, understanding text structures, and finding the main idea in a text (Suknantapong et al., 2002; Sroinam, 2005).

Even though reading is a vital skill that learners of English need to develop, there is some evidence that in the Thai higher education system learners do not generally make adequate progress in language learning, and their levels of reading comprehension are quite weak (Piromruen, 1993; Suknantapong et al., 2002; Intratat, 2004; Pawapatcharandom, 2007; Yimwilai, 2008). Studies in Thailand have strengthened this argument; for example Piromruen's (1993) study shows that almost 54 percent of Thai university learners fail in their English reading courses. In fact, a more recent study in Thailand supports the idea that learners still have problems in English reading comprehension (Yimwilai, 2008). According to that study, although learners' English reading abilities are at an intermediate level, they still have difficulty in identifying topics and main ideas in a text, which are accounted as important skills in enhancing reading comprehension (Yimwilai, 2008). This corroborates another study in Thailand which indicated that undergraduates cannot understand the English idiom or read English magazines (Pawapatcharandom, 2007).

Apart from the lack of adequate reading skills to enhance comprehension, there are other issues related to the slow progress in learning, including the lack of diversity in the English language reading curriculum causing a lack of motivation among learners (Green, 2007), and over-dependence on the lecturer as a main source of learning (Grabe, 2002), which restrict the development of critical thinking, self-confidence, and learner autonomy. The argument corroborates a study in Thailand, Thai learners only spend approximately one to two hours per week reading, and the texts are written in Thai (Yimwilai, 2008). Although a previous study showed that the participants used a computer frequently, it was used for chatting with friends rather than accessing information (Yimwilai, 2008). In addition, learners have little opportunity to practise a foreign language because of the insufficiency of learning materials and resources that allow them to practise the foreign language outside classroom sessions (Khruathong, 2008).

Motivation and learner autonomy are the two critical elements that impact the English language reading development of learners in Thailand (Kaur, 2011). They have been identified as key contributing factors in reading learning (Guthrie, 2004; Guthrie et al., 2006a; Guthrie et al., 2006b). “Motivation” can essentially be divided into two types: intrinsic and extrinsic. Intrinsic motivation can be described as the sense of satisfaction that learners obtain from their performance (Deci et al., 1991; Sweet & Guthrie, 1996). Extrinsic motivation involves those external factors which encourage engagement and participation in the classroom (Deci et al., 1991). Both types of motivation have important roles to play in developing reading comprehension, as extrinsic motivation could increase learners’ attention and focus (Sweet & Guthrie, 1996), while intrinsic motivation promotes lifelong learning (Deci et al., 1991; Sweet & Guthrie, 1996; Ullman, 2012).

The second key factor contributing to language skill development is autonomous learning, also known as self-directed or independent learning (Ciekanski, 2007; Ullman, 2012). It can be defined as the capacity of learners to be involved in their own learning process, and involves self-management and self-monitoring (Little, 2000; Abdullah, 2001). In order to increase intrinsic motivation and foster learning autonomy, instructional practice should provide clear content goals for learners, promote autonomous learning, offer interesting texts, encourage social interaction, sustain a positive relationship between learners and lecturers, and make use of hands-on activities (Guthrie et al., 2006a; Guthrie et al., 2006b).

The introduction of information and communication technology (ICT) into language programs has had some positive effects on the learning process. Rapid technological developments give learners more opportunities to become self-directed language learners (Blin, 2004; Guo & Willis, 2006; Bozzo, 2012; Hernández et al., 2012). This is because ICT provides input materials from a range of sources that suit learners’ needs and interests and promotes collaboration in both internal and external classroom settings (Candy, 2004). In Thailand, this has led to the argument that instructional media that incorporate new technology should be introduced into both internal and external classroom situations to foster learning effectiveness (Boonyaritrungrote, 2004) and this will lead learners to become more self-directed (Sanders, 2008).

Given the evidence that technology is an important medium for learning, the Thai National Education Act has supported its introduction into the Thai educational system through a research and development policy that is intended to create content and models of information technology in schools (Office of the National Education Commission, 2003). Lecturers and educational institutions are encouraged to provide personal development for both producers and users so that they will be able to apply technology in effective and appropriate ways (Office of the National Education Commission, 2002).

The use of ICT, particularly computer-assisted language learning (CALL) as it is generally described, provides a number of benefits which could lead to more successful language learning (Dunkel, 1991; Lai & Kritsonis, 2006). As supported by many studies, CALL can lead to an increase in learner confidence and the development of a positive attitude which, in turn, will result in the motivation to learn (Wheatley et al., 1993; Levy, 1997; Soo, 1999; Liu et al., 2002; Lai & Kritsonis, 2006; Lee, 2006). For example, games, simulations, and problem-solving activities through the ICT medium have been shown to reduce learning stress and anxiety (Liu et al., 2002; Lai & Kritsonis, 2006). The CALL environment also offers a motivating learning environment to learners that have different learning styles by providing instant feedback, flexibility, and large storage capacity for lessons, which enable learners to practise given material until they have a better understanding of it (Johnston, 1999). Moreover, CALL can present learners with a global classroom through the widespread availability of technologies created by the online learning environment such as the Internet or videoconferencing (Singhal, 1997; Liu et al., 2002; Lee, 2006). The development of CALL via web-based instruction provides further chances for learners to interact with other learners or writers by email so that they can practise their language skills (Shiozawa, 2001). As a consequence, the use of CALL in language learning is considered a good medium for encouraging people to create new social relationships with a worldwide community (Singhal, 1997; Egbert, 1999; Turbee, 1999; Warschauer et al., 2000; Liu et al., 2002).

In past decades, many Thai researchers have applied CALL in language classrooms, and this method has been viewed as an effective instructional approach for Thai language learners; some of these related studies are summarised below.

Initially, a comparative study of the use of CALL and traditional English reading instruction showed that the learners that used CALL attained higher learning outcomes than the class taught using traditional English reading methods, with a level of statistical significance of level .01 (Onglumyong, 1992).

A study in Thailand demonstrated that learners with low levels of success that used CALL lessons for vocabulary learning using Authorware Professional Version 2.0 exhibited higher learning attainment after receiving the instruction (Kawichai, 1997). The results are also consistent with a study by Pralubraksa (1998), where the participants that received vocabulary instruction from CALL lessons using Tool Book Software attained higher learning levels and wanted to continue studying using the CALL lessons (Pralubraksa, 1998). The historical background and further details of CALL are discussed in chapter three.

Although, as described above, ICT may deliver several learning benefits, difficulties have been identified with the implementation of technology in learning. These include: the great expense of ICT facilities (Lai & Kritsonis, 2006; Lee, 2006); inappropriate material design (Hubbard, 2005); poor interface design of the e-learning system (Thienmongkol, 2008); and poor classroom management (Fitzsimmons et al., 2002; Intratat, 2007). These and other issues have made the use of technology in education problematic. In Thailand, the ubiquitous use of mass lectures presented via video conferences has not been successful in addressing learners' needs. For example, learners have identified problems with the systems, such as the quality of the sound; the suitability of subjects taught via video conferencing, and their lack of training in learning through video conferencing (Satiman et al., 2004).

Regarding other issues, although Thai education had incorporated the use of computers in learning at the time these studies were conducted, school administrators still have very little experience in the use of computer-assisted instruction; moreover, there is no expert in this field that can provide advice, and the time constraints mean that there is insufficient time for lesson development and lecturers have little interest in using computers (Pralubraksa, 1998). On the other hand, most lecturers that participated in this study maintained that they want to be trained in the use of

computers for learning. They also suggested that more resources for computer-assisted instruction should be provided, including classrooms with a sufficient number of computers, with financial support from the government (Pralubraksa, 1998).

In order to increase the effective use of ICT in learning, it has been argued that online learning instruction should be integrated with other modes of training in order to assist learners in achieving their learning goals (Baldwin-Evans, 2006; Mackay & Stockport, 2006; Zukowski, 2006; Lea & Clark, 2007; Hernández et al., 2012). The effectiveness of a combination of face-to-face (F2F) instruction led by a lecturer, with asynchronous and synchronous media—that is, blended learning (BL), or hybrid or mixed model approaches— has been debated a great deal in higher education scholarship (Robert, 2004; Macdonald, 2006; Mackay & Stockport, 2006). BL can make use of many different channels of communication, for example: multimedia technology, CD ROM, virtual classrooms, voicemail, email, web conferences, online text animation, and video streaming (Thorne, 2003; Hernández et al., 2012). The implementation of a BL program involves at least four methodologies: the blending of technology-based learning, the integration of pedagogies, the combination of different modes of instructional technology, and the mixing of instructional technology with actual job activities (Baldwin-Evans, 2006). In fact, the BL model is a blend of approaches rather than opposing favoured models of learning, as supported by Lea and Clark (2007, p. 12), who stated that BL “... is not some simplistic blend of east and west, global and local, top-down and bottom-up, insourced and outsourced, formal and informal, work and learning. The sooner we dissolve false opposites, the sooner we’ll hit our goals”.

The BL model addresses the deficiencies of both online and traditional modes of instruction by motivating learners and maintaining the quality of the program through instructor-led sessions (Bersin, 2004; Mackay & Stockport, 2006). BL has been shown to provide learners with more flexibility and convenience in terms of meeting learning objectives than other models as learners have more time to work by themselves (Alotaibi, 2012). This is because the role of the lecturer has changed, from a lecturer that mainly directs the instruction, to a facilitator that encourages learners to learn (Alotaibi, 2012).

According to previous BL studies in Thailand, the instructional model has been shown to be beneficial for Thai learners in various aspects. Those studies are as follows:

First, BL was found to promote self-directed learning. In a study by Chantem (2010), the implementation of the BL approach in accounting classes at a private Thai university demonstrated that the participants in BL classrooms can access more knowledge than in two other class types; namely, traditional F2F and online instruction. The participants in the BL class are persuaded to acquire knowledge outside classroom sessions; shy learners are more confident in sharing opinions online.

Second, BL enhances learning outcomes. It has been found that learners can review the learning lessons as many times as they want, and therefore BL assists them to clarify the material they may not understand in the classroom (Bunchua, 2006; Chantem, 2010). In Malaysia, where the education system is similar to that of Thailand, it has also been shown that the BL class, combining 60 per cent F2F with 40 per cent online activities for studying mathematics, was perceived by participants as satisfactory. The participants were pleased with the learning material, the learner interface, and the feedback and assessment (Eng et al., 2008).

Finally, BL provides learners with more channels of communication whereby learners can build personal relationships with others through group tutoring and direct interaction, which is considered a factor in effective learning (Bunchua, 2006; Eng et al., 2008). Also, there are more opportunities for both learners and lecturers to be connected via the enhancement of BL (Chantem, 2010).

Although BL has proven to be beneficial in learning, it is still questionable whether the approach really suits Thai education in all settings, particularly in Thai language classrooms at the undergraduate level. The issues can be classified as follows:

With regard to previous BL studies in Thailand, there have been some delays before the learning material was uploaded on the web. In addition, there were issues regarding the quality of videos and audios on the web used in the BL class (Bunchua,



2006). Regarding another issue, although 40 per cent of the participants joining the BL class agreed that the BL approach was effective, the positive perception of learners towards BL was slightly higher than an approach in which e-learning alone was used (Bunchua, 2006). However, participants from fully online classes were more self-accessed than in the BL classes (Bunchua, 2006).

In addition, there are also some other obstacles which affect the implementation of BL instruction in Thailand, including the following: people are still not convinced of the importance of BL instruction; the ICT facilities limit, and the availability of equipment and staff which limit the application of BL in all courses need to be made available to all areas of Thailand, enabling learners from regional areas to access knowledge; and the government needs to support the application of BL if it is to be used as a standard in all universities in Thailand (Chantem, 2010).

Moreover, previous studies mainly investigated on the use of computer applications or self-developed computer programs in the BL class; meanwhile, the strategy employed in the classroom was not specified by the researchers for example, in Bunchua's (2006) study which only mentioned about the application of computer applications without focusing on the method of instruction employed in the classroom.

Finally, although the results from previous BL studies in Thailand have shown that the approach is effective for learning, it is still questionable that BL is really suitable for all universities and all subjects, especially English subjects in which the learners are not native speakers.

With regard to this, the researcher developed BL English reading instruction using the face-to-face driver mode as classified by Horn and Staker (2011). In this mode of BL, online learning was used to support traditional F2F instruction and was used outside the classroom session. It was mostly suited to Thai education at the undergraduate level because most instruction in Thai universities is conducted on an F2F basis and learners are required to attend classes as components of the evaluation in all enrolled subjects. The model is further addressed in chapter three and four.

This study took place at a university in Bangkok, Thailand, which enrolled a large number of learners from various fields of studies. Also, the university followed the standard curriculum set by the Ministry of Education, which allows universities under its control to apply BL instruction in their English language learning. The selected university was fully equipped with ICT technology and skilled staff that would facilitate the application of BL instruction in English language learning.

The university has four faculties for bachelor degrees, Education, Science and Technology, Humanities and Sociology, and Management Science, and a graduate school for master and doctoral studies. In addition, it has opened Off-Campus Learning Centres enabled by the development of information technology and effective networking management. Since 2004, the bandwidth has been expanded from 768 kbps to 2 Mbps in order to develop better sound and image quality used in the university. In addition, E-learning, a virtual library, and E-administration systems have been used as parts of the learning, enabling faster information access.

In conclusion, although BL has been addressed as an effective approach used in learning by research scholars in other countries, there is a gap in the research into the effectiveness of this technology in helping learners that are studying English as a foreign language. Additionally, previous studies of BL in Thailand mainly focused on the implementation of technology per se (Pralubraksa, 1998). There are not many recent studies that have investigated the implementation of the BL model in the instruction of foreign language, especially with English reading. It is hoped that the findings of this study will assist language lecturers and institutions to come to informed decisions about the instructional processes they use in their second language learning classrooms.

## **1.2 Aims**

The objectives of this research were threefold. Initially, the study sought to uncover the perceptions of a group of Thai undergraduate learners at the university in relation to the difficulties they experienced in developing their English language reading comprehension in their normal instructional environment. The first stage of the research elicited information from the target group about their perceptions as to why

this should be the case. Secondly, using the data obtained from the first part of the project, an instruction program was designed to identify whether English reading instruction using BL would reduce the perceived barriers and enhance the development of reading comprehension skills. Finally, analysis of the results identified the effectiveness of the BL program in improving motivation and self-directed learning (SDL), which were addressed as the key components affecting the development of English reading comprehension for Thai learners.

Given the Thai Education Department's focus on the implementation of technology, and the evidence for the effectiveness of the chosen approach in the literature, the program took the form of "blended" learning, combining traditional F2F learning with synchronous and asynchronous online instruction. The design of the program took into account the learning difficulties identified in the first stage of the project, differing learner approaches to learning, and the particular learning environment that applies in Thai undergraduate programs. The third and most important objective of the research was the evaluation of the program from the dual perspectives of the learners' perceptions of the factors which led them to be self-directed, and the degree to which the program minimised the identified learning barriers. These objectives were expressed in the following research questions:

1. What do undergraduate learners at a Thai university perceive as the barriers to developing their English reading comprehension in the classroom environment?
2. How does the introduction of a reading development program using a BL approach affect the learners' perceptions of the barriers to developing their English reading comprehension?
3. To what extent, if at all, does the delivery of a reading development program using a BL approach enhance English reading comprehension?

### **1.3 Significance**

From the literature, it can be seen that the adoption of technology in language learning has left a number of gaps which need to be addressed. Although ICT has long been acknowledged in language instruction in the form of "CALL", previous

studies have tended to focus on computer-based language testing and computer-based instruction rather than on classroom instruction (Townsend, 1999; Hubbard, 2005). In addition, a great deal of research into CALL focuses on software development without taking into account appropriate pedagogies which may foster learners' learning (Barriere & Duquette, 2002; Liu et al., 2002; Hubbard, 2005). Where studies have been conducted in this area, much of the CALL software development has not been accompanied by the kind of training that supports autonomous learning skills (Reinders & Lewis, 2005). This study, which investigated the development of English language reading comprehension among Thai undergraduate learners using an online BL approach, aimed to fill the current gap that exists in CALL research into second language learning, and provides an alternative perspective, in which the focus is on classroom pedagogy rather than software development or computer instruction per se.

This study will investigate the advantages and disadvantages of combining online and classroom instruction in Thai undergraduate classrooms. It is expected to provide lecturers with the opportunity to apply the use of technology as a supplementary, complementary or comprehensive addition to the development of language programs, those that assist learners in achieving learning goals.

Moreover, although there are some studies in Thailand that have investigated the implementation of ICT in language learning, there is a limited focus on the employment of computer applications rather than the employment of the BL approach. In fact, those studies mainly use ICT applications and the Internet as supplements in F2F instruction or as tools for self-study periods, for example, online exercises or self-study assignments. Also, there is insufficient information on how online learning can be used during the instruction. Therefore, this study will focus on the implementation of BL in the traditional classroom, and also understanding the perception of learners related to their language learning barriers after receiving the BL instruction will help other lecturers select and apply the BL strategies in their classes.

Finally, this study seeks to provide a model for lecturers, and researchers in Thailand and other countries who are seeking to integrate technology into their language

teaching environments. The development and evaluation of a BL program will move forward the debate on appropriate pedagogies in the language classroom, and provide lecturers with a springboard from which they can develop their own practices.

#### **1.4 Terms and Definitions**

Definitions of the terms mentioned in the study and the terms which may have different meanings are provided here for better understanding.

- Reading comprehension: ability to understand the main messages of the writer that may or may not be clear in the written messages.
- English reading comprehension: skills that enable readers to identify the main message of English reading material.
- Background knowledge: the previous backgrounds of learners in relation to the learning material.
- Computer-assisted language learning — the use of computers to help learners develop their language learning.
- Online learning: the implementation of ICT facilities available on the Internet to access information; for example, web-based learning, web browsing, and using learning management systems for self-studying.
- Synchronous online instruction: the use of ICT tools to foster self-learning, including video conferencing, web conferences, and online chatting.
- Asynchronous online instruction: the use of ICT tools to foster self-learning, including multimedia technology, CD ROMs, virtual classrooms, voice mail, email, online text animation, and video streaming.
- Traditional face-to-face instruction: the face-to-face instruction integrating English reading instructional pedagogy. Most of the activities and instruction are based on the material used in the classroom.
- BL instruction: instruction on a face-to-face basis with the support of both synchronous online instruction and asynchronous online instruction during the classroom instruction and outside classroom session while integrating the English reading instructional pedagogy.
- Motivation: the desire that leads learners to participate and cooperate in learning.

- Self-directed learning: autonomous learning, or the involvement of learners in managing and monitoring their own learning.

## **1.5 Chapter content**

The thesis is divided into six chapters, as follows:

Chapter One provides background information for the research regarding the problems discussed and the issue as to why BL should be implemented, the aims of the study, the significance of the study, important terms frequently used, ethical issues, and limitations of the research.

Chapter Two provides further information on the factors related to reading comprehension, the literature and descriptions of the factors related to English reading difficulties faced by learners, the reading comprehension instruction employed in the study, and related research.

Chapter Three provides information on the use of historical perspectives on the employment of technology in language learning, the components of the ICT facilities employed in online learning, a description of BL, the types of ICT facilities used in BL instruction, the instruction approach of the BL model, and research related to the study.

Chapter Four provides further information on all stages of the study, including the design of the evaluation tools, highlighting the process of material development, the reliability of the developed measurement tools, details on how to implement the BL approach in a voluntary class, the method of data collection and evaluation, and the limitations of the research study.

Chapter Five provides the results obtained from all phases of the study, including the identification of learning barriers perceived as learning difficulties in the focus group and responses to the questionnaire, the evaluation of the learning progress between classes under different types of English reading instruction as measured by pre-test

and post-test, and the learners' attitude toward the different English reading instruction methods, measured by the evaluation forms.

Chapter Six discusses the research results obtained from the study, provides arguments and support from other studies previously conducted, and offers suggestions for further research.

## **1.6 Ethical issues**

Participation in the project was entirely voluntary. Participants were informed orally and in writing about the purposes of the study and asked to sign the consent form if they agreed to participate in the study. Also, they were assured that the obtained information would be confidential, and that their responses would be anonymous. Moreover, the participants were told they could leave the session at any time or refuse to answer questions which made them feel uncomfortable.

Written permission was sought from the university to conduct the research. Permission to use the standardised reading tests used in the study was sought from the test developers and publishers prior to administering them. The information obtained from the study was retained in a database and was only available to the researcher and supervisors. Participating learners were able to access their own test results, not those of other learners. All of the data presented in the final report were in aggregated form only; no individuals were identified.

## **1.7 Limitations of the research**

Initially, the researcher tried to avoid bias toward the BL approach by having a voluntary lecturer participate in traditional F2F classrooms. This voluntary lecturer was carefully selected so that the experience of teaching English reading comprehension and the English backgrounds of both lecturers would be as similar as possible. However, there were some inevitable differences between the lecturers, for example, tone and clarity of voice, and other personal characteristics. These differences may have caused a positive or negative bias toward the lecturer and may have affected the results of the study.

Secondly, although it was a concern that the use of one lecturer in BL instruction would have introduced intervening variables caused by the unintentional bias of the researcher on BL, most of the lecturers of English reading at the university, including another English reading lecturer in the study, were not familiar with BL English reading instruction. This was an issue, as the BL implementation required a lecturer that understood how to employ the BL strategy effectively in the classroom and the skills with different kinds of ICT media both inside and outside the classroom sessions. In addition, it would take time to train the voluntary lecturer to be proficient in both the employment of the BL approach and computer literacy.

Thirdly, the researcher attempted to avoid the bias of a specific approach to English reading instruction by controlling for possible intervening variables, for example, selecting another lecturer with a similar background; controlling the processes of both instructional approaches by using the same learning material; following the designed lesson plans; and comparing the effectiveness of the two reading instruction approaches with various aspects of learning, including the scores using standardised tests and evaluation forms to investigate the participants' perception of both reading instructional approaches. However, certain variables, including the personal characteristics of the researcher, may have had an effect on the results of the study.

In addition, although the participants in were not taught using the online BL approach, it was impossible to prevent them from accessing technology such as computers, the Internet, and software, as technology is a part of their daily lives. The issue was taken into consideration as an unavoidable variable affecting the study; therefore, the participants of both groups were measured regarding their perception of BL instruction and traditional English reading comprehension instruction rather than the general technology available on the Internet.

Finally, only a face-to-face driver mode of BL was employed in the study, as most Thai university courses were conducted on a full-time basis and where the learners were required to attend face-to-face. Therefore, the effectiveness of the BL mode which was thought to best fit Thai education and that could be applied at other Thai universities was investigated.



## **CHAPTER TWO: Reading Comprehension and Instruction**

In this section, the literature relating to the study is grouped into three subject categories: a) the nature of and processes involved in reading comprehension; b) the factors that facilitate or inhibit reading comprehension, or which contribute to reading difficulties; and c) the teaching of English reading comprehension, with a particular focus on the strategies used in the intervention component of this study.

### **2.1 Reading comprehension**

This section provides the descriptions and definitions of reading comprehension in order to outline the scope of reading comprehension that is measured in the current study, and examines the processes that need to be considered for the development of English reading comprehension.

#### **2.1.1 Definition of reading comprehension**

The concept of “reading comprehension” has been described in the literature from a number of different perspectives. For example, reading comprehension can be viewed as the understanding of the main messages of the writer in a text that readers are required to interpret and evaluate (Bond et al., 1989). It has been maintained that reading comprehension in an educational context contains two elements: understanding the learning content and learning/remembering it (Lipson & Wixson, 2009). Reading comprehension can be separated into four levels—literal, inferential, critical, and creative (Westwood, 2003). The literal level is the ability of the reader to understand the basic facts from reading a text. At the inferential level, readers are able to add meaning by drawing conclusions that go beyond the identification of facts. At a critical level, readers assess and evaluate the text which they are reading in terms of the clarity and accuracy in the text. The creative level is the highest level of reading comprehension, at which readers draw information from reading texts to develop into new ideas (Westwood, 2003). To be proficient in English reading comprehension, the four levels of comprehension need to be attained by learners (Lewin, 1999; Westwood, 2003).

In the context in which the study was conducted, the minimum requirement set by the Thai National Curriculum, which English reading learners need to attain by the end of the reading course, was at the literal and inferential level.

### **2.1.2 The reading comprehension process**

Reading comprehension has been described as a process which requires a certain amount of background knowledge, as well as several abilities, such as word identification strategies and the ability to use cognitive strategies effectively (Lewin, 1999; Westwood, 2003; Lau, 2006). The reading comprehension process can be facilitated by the presence of factors such as motivation, interest, and perception (Pearson & Johnson, 1978). There is an extensive body of literature which has identified the different processes that contribute to reading comprehension. It has been argued that there are five processes related to comprehension in reading: microprocessing, integrative processing, macroprocessing, elaborative, and metacognitive (Irwin, 1991).

The first of these, microprocessing, is a process which focuses on familiarity of vocabulary, concept difficulty, and the complexity of syntax in the sentence (Irwin, 1991; Richek et al., 2000). The microprocessing elements related to reading comprehension development are: meaning identification, such as contextual clues and pronunciation, which assist learners in understanding difficult vocabulary; the length of sentences; familiar syntactic patterns; and the comprehensibility of the figurative language used in the text (Irwin, 1991; Stahl & Hiebert, 2005; Phunpruek & Mahapontong, 2006). Microprocessing enables reading learners to select the most important part of a text to remember and employ the appropriate skills in word decoding, since the reader may not be able to remember everything they have read (Irwin, 1991; Brown, 2007).

Integrative processing describes the process of identifying elements such as cause-effect relationships, the clear sequencing of the content, and connections with sufficient explanation between the clauses and sentences of a text to obtain a deep understanding of the reading content (Irwin, 1991). To integrate meaning successfully, learners need to have skills in identifying pronoun references and inferring the cause and sequence of the written messages (Irwin 1991).

The third process, macro-processing, focuses on the main point of meaning in the text, and the organisation of the text's structures (Richek et al., 2000). There are two main elements involved: summarising, and using the knowledge of different rhetorical patterns. The knowledge of textual structure enables learners to identify the different rhetorical patterns of reading content and use them for better understanding of the content. Research has shown that readers that use rhetorical patterns and signal cues in both linguistic and non-linguistic texts to construct meaning have better outcomes in recalling content and undertaking guided reading (Zhang, 2008). Thus, readers that employ macro-processing in their reading can recall more information from the text than those that do not. In real life, reading learners usually have to work independently in most reading activities for example, reading a book chapter and completing a written homework assignment. Therefore, those learners that cannot identify the top level structure of a reading text may not be able to perform the task well (Richek et al., 2000).

The fourth reading comprehension process, the elaborative process, describes how the contexts of texts may contribute to the elaboration of the learners' background knowledge, which is addressed in numerous studies as a process reinforcing readers' comprehension (McNeil, 1992; Brown, 2007; Keshavarz et al., 2007). The elaborative processes concern the connections between the content and learners' lives, and the clues in the text that assist the reader in predicting its message (Irwin, 1991). As a consequence, elaborative processing, in particular the learners' familiarity with the reading content used in the classroom, is considered important in helping learners to gain better comprehension when reading texts, as learners can link their personal background knowledge to the reading content.

The fifth reading comprehension process is metacognition (Irwin, 1991; Richek et al., 2000). Metacognition as a general concept can be described as an awareness of the knowledge one possesses, and conscious control over the skills that one has acquired (Stewart & Tei, 1983; Irwin, 1991). With regard to reading comprehension, metacognition enables readers to select appropriate reading strategies to construct meaning at the right time to attain the different goals that they have in reading (Stewart & Tei, 1983). Many studies have found that learners may not be proficient in reading or fully comprehend the reading content without metacognition, as they

cannot integrate the skills they have learnt (Salataci & Akyel, 2002; Graham & Bellert, 2005; AL-Sohbani, 2013).

In summary, the paragraphs above have provided information on the skills related to the development of the English reading comprehension that learners need to attain in order to clearly comprehend the reading content. The factors relating to the development of reading comprehension are discussed in the following section.

## **2.2 Factors related to the development of reading comprehension**

Reading comprehension instruction has become an important issue in education, as can be seen from the extent of the research on reading. Concern about the “unsatisfactory” standard of reading is a key issue in many countries, and there is a push to find solutions for those learners that face reading difficulties (Westwood, 2003). Suggestions include organising literacy programs, issuing particular policies to address the problem, and paying more attention to learners that are likely to have problems (Westwood, 2003).

Slow progress in reading development may be caused by more than one factor (Konza, 2006). The difficulties in English language learning in Thailand, for instance, may be caused by many factors, such as the interference of the Thai language, insufficient time to practice using English in real life, lessons in classrooms which fail to motivate learners, shyness about speaking English, and the failure of learners to take responsibility (Biyaem, 1997).

The factors that relate to the development of reading comprehension can be divided into two main broad categories; internal and external factors. The internal factors arise from the limited knowledge and limited level of language proficiency that the learners have attained prior to the study, while the external factors are related to their learning environment, such as the setting, the reading material, and the lecturer. Those factors related to this study are discussed below.

### **2.2.1 Internal factor: background knowledge/schemata**

The individual language proficiency of readers is not the only important issue to be addressed. Background knowledge or schemata is also important in supporting second language (L2) readers in understanding written messages (Haupman, 2000; Graham & Bellert, 2005; Keshavarz et al., 2007). This knowledge is comprised of the learners' concepts, beliefs, and past experiences that inform their understanding of materials (McNeil, 1992; Christensen, 2009).

Reading research literature has identified two main types of schemata related to the development of English reading comprehension: content and formal schemata (Zhang, 2008). Formal schemata refers to the reader's knowledge of the different types of rhetorical structure in texts, while content concerns the familiarity of readers with the content of written texts (Carrell, 1987; Kitao, 1989). Thus, reading comprehension has a strong relationship between new and known information (Irwin, 1991). For L2 learners, the activation of familiar schemata is a factor that enables them to have better understanding and recall of written texts (Keshavarz et al., 2007; Zhang, 2008). Both types of schemata have been shown to be effective in developing learners' comprehension of reading content (Carrell, 1987).

With regard to formal schemata, it has been argued that material with a clear organisational pattern enables lecturers to emphasise or pre-teach the reading strategies required by learners (Carrell, 1987; Irwin, 1991) and encourage learning (Oh, 2001). For example, a study by Zhang (2008) supports the idea that learners are more able to recall the material from well-structured reading passages than from randomly-ordered passages. In addition, according to a study by Taylor and Samuel (cited in Graham and Bellert 2005), the ability of participants to recall their lexical knowledge, that is, knowledge which assists the learner in knowing and pronouncing the sounds in a word correctly, is activated by formal schemata. This indicates that the reading content used during reading instruction should have a clear organisational pattern to assist in the learner's understanding.

With regard to content schemata, it has been contended that reading materials that are related to a learner's culture may result in a better learning performance (Oh, 2001; Gunning, 2006; Keshavarz et al., 2007). Research in this area has established

that familiar cultural contexts enable learners to absorb both implicit and explicit information to assist with their comprehension (Strangman et al., 2003). For example, a study in which learners were assigned to read material concerning wedding ceremonies revealed that the learners were more able to recall and elaborate information about the wedding culture of their own background than that of others (Steffensen et al., 1979).

In addition, the reading content of an unfamiliar culture may limit the learners' ability to use their existing cultural knowledge in reading comprehension (Gan et al., 2004). To support this argument, it has been suggested that learners that do not have accurate or sufficient knowledge of reading content may not be fully supported by background knowledge activation strategies such as previewing the reading topic before reading, or reading journal or trade books related to the classroom reading material to extend their knowledge (Strangman et al., 2003; Gan et al., 2004). For example, a study by Brown (2007) describes material about cowboys and Indians, which would be familiar to American readers but might not be so for Thai readers, who may not have knowledge of 'Western' cultural items. To activate content schemata, it has been suggested that learning material should incorporate culturally-familiar content that is related to the learners' learning experiences and can be applied to their daily lives (Haupman, 2000; Christensen, 2009).

Although reading culturally-familiar content may enhance background knowledge activation, it is impractical to provide only materials that learners can relate to their background knowledge, as they also need to acquire new knowledge that can be used in their future professions or in their general lives (Haupman, 2000). Lecturers should be aware that some learners may not have enough background knowledge to comprehend the course material adequately (Christensen, 2009). Therefore, it has been suggested that lecturers should provide learners with further information about any unfamiliar content before reading (Christensen, 2009).

In conclusion, background knowledge is an important factor that assists learners in comprehending the messages in materials and needs to be taken into account when considering the implementation of a new form of instruction, such as BL.

### 2.2.2 Internal factor: motivation

Motivation is an essential factor in learning (Rodgers & Withrow-Thorton, 2005) and is one of the key factors targeted by educators to improve learning (Williams & Williams, 2011). Whatever their learning abilities, learners without motivation may not fully engage in idea sharing and understanding learning content (Sibthorp et al., 2011). Motivation can be defined as the process that initiates human behaviour, provides the direction of that behaviour and maintains it, and allows humans to choose their preferred behaviour (Wloodkowski, 1993).

Five important ingredients have been suggested to stimulate learners' motivation: the learner, the lecturer, the learning content, the method/process, and the environment (Williams & Williams, 2011). In relation to this, Keller (2008) developed the ARCS model which describes four principles of motivation including attention (A), relevance (R), confidence (C), and satisfaction (S). The four principles are briefly summarised by Keller (2008) as follows. Learners are motivated when:

1. they want to know the information they are interested in. This can be done through the use of interesting graphics, animation, and tasks which stimulate them to acquire knowledge.
2. they perceive that the learning is useful or related to their goals. This can be done through the implementation of a motivating learning environment, the use of appropriate teaching strategies, and the selection of relevant content.
3. they perceive that they can accomplish the learning tasks they are assigned to do. This can be facilitated by assistance from the lecturer to build confidence in learning—by building the belief that success in learning can be attained when they make an effort rather than assigning them easy tasks (C).
4. they are satisfied with the outcomes attained from the learning tasks. This can be done through the use of extrinsic reinforcements such as rewards and recognition to stimulate motivation. On the other hand, lecturers should be certain that the reinforcement used in the learning tasks will not have a negative effect on intrinsic motivation.
5. they employ self-regulatory strategies, for example, to keep focusing on the learning tasks.

The four principles in the ACRS model indicate that learning motivation is related to both internal and external factors. The external factors such as friends, reading materials, and lecturers may motivate learners to pay attention to classroom instruction and develop a positive attitude toward learning, while intrinsic motivation is later developed when learners have perceived the importance of learning and have developed a positive attitude toward a particular subject.

A study by Guthrie et al. (2006) identified five components which were similar to the ACRS model. These were interest in reading, identification, self-efficacy, involvement, and collaboration. They identified the characteristics of motivated learners as follows:

1. Interest in reading: when learners are interested in English reading, they express positive feeling towards the reading materials and enjoyment obtained from them, and they show the ability to: recall materials or to explain information from reading materials; recall interesting reading topics; show reading preferences such as naming favourite books and authors; and link the reading content to their personal feelings.
2. Perceived control: learners are able to identify English reading content on their own, including selecting the books they are interested in, valuing the books which they select or are given by adults or lecturers, and making reading choices.
3. Self-efficacy: learners believe in their ability to read and comprehend the complex parts of books and have confidence in their English reading comprehension, and have the ability to define difficult or unfamiliar vocabulary. Also, self-efficacy can be noticed in the reading progress reports of learners written by learners or their parents, showing improvement in English reading comprehension compared with other learners or before learning.
4. Reading involvement: learners become involved in reading, as can be noticed from statements that they read a lot of books and read more frequently, and they express enjoyment of language scenes and characters.
5. Collaboration: learners share or discuss their reading with others, borrow books from others, and talk about books with their lecturers.



Motivation can be generally divided into two types: intrinsic and extrinsic (Ryan & Deci, 2000; Keller, 2008). Intrinsic motivation is individual satisfaction or competence with a task which has been performed without external reward (Keller, 1987; Wilson, 1999). Examples of internally-motivated learners are those that have the desire to work, the curiosity to find out more about the information they are interested in, to perform tasks they find challenging, and to socialise with others (Ryan & Deci, 2000; Williams & Williams, 2011). Intrinsic motivation is promoted by positive feedback from a lecturer, the desire to learn, and the ability of learners to control their learning (Keller, 1987). If learners voluntarily spend their time and energy studying something, it means that they are intrinsically motivated (Wilson, 1999). On the other hand, extrinsic motivation occurs when external factors motivate the person to perform the task (Deci et al., 1991; Taylor et al., 1995; Ryan & Deci, 2000). Examples of extrinsic motivation are academic grades, the completion of the learning subject and other rewards, for example, praise from lecturers and friends, gifts, rewards, and peer admiration (Ryan & Deci, 2000; Marinak & Gambrell, 2008).

Both types of motivation are important in reading instruction (Sweet & Guthrie, 1996). Readers may be goal-oriented or performance-oriented in their motivation (Lipson & Wixson, 2009); the former may be motivated to improve their English skills, for instance, and the latter to compete with peers. Learners that are extrinsically motivated pay more attention in the classroom (Sweet & Guthrie, 1996), while those that are intrinsically motivated can be lifelong learners (Deci et al., 1991; Sweet & Guthrie, 1996). Extrinsic motivation may increase learners' interest in learning and reduce learning stress from reading classes, while intrinsic motivation enhances the development of their English reading comprehension, as they tend to acquire knowledge about things they are interested in (Sweet & Guthrie, 1996).

Motivation leads to a positive attitude toward learning. In the early years, children's repeated failures at reading may cause a negative attitude and lack of confidence (Lau & Chan, 2003; Westwood, 2003). They begin to believe that reading is too difficult, and become passive and dependent learners that will not take chances in the classroom (Westwood, 2003; Lau, 2006). Other studies show that learners with positive learning attitudes are intrinsically motivated to read for pleasure, while poor

readers feel strongly antagonistic towards reading, and they only read when they are forced to by extrinsic factors such as rewards (Gan et al., 2004; Lau, 2006).

Motivation is also related to the development of language skills (Gan et al., 2004; Lau, 2006). A study by Lau and Chan (2003) shows that motivational factors are highly correlated with the positive development of learners' reading comprehension, as good readers have a much higher level of intrinsic motivation than poor readers (Lau & Chan, 2003). Moreover, other studies revealed that a low level of intrinsic motivation results in reduced attempts to use reading strategies to comprehend materials (Lau & Chan, 2003; Lau, 2006; Riviera-Mills & Plonsky, 2007). Research by Guthrie and colleagues (2006) supports the argument made in the above studies, as learners make statistically significant progress in their reading when they are intrinsically motivated to read (Guthrie et al., 2006).

In addition, intrinsic motivation is an important factor in learning success, as it engages learners in classroom activities. A study by Suknantapong and colleagues (2002) has shown that extrinsic motivation alone may not develop Thai learners' ability to understand the reading material used in the classroom. Although the learners expressed positive attitudes towards English reading, and they were highly motivated by the English reading instruction, most of them scored poorly in all English reading comprehension tests measured in the study. The reason put forward for this was that they were not intrinsically motivated in learning, as they spent little time practising reading (Suknantapong et al., 2002). The study addressed the notion that learners also need to be internally motivated rather than externally motivated to learn.

In order to engage learners in the classroom, and to encourage them to become autonomous learners in reading, a well-designed instructional program that both internally and externally motivates learners is a primary concern for language teachers. Accordingly, researchers have provided guidelines for instruction that promotes both types of learning motivation. The guidelines relevant to the present study are reviewed below.

Keller (1987) maintains that four characteristics of learners mentioned in the ACRS model need to be taken into account when planning instruction. These are attention, relevance, confidence, and satisfaction. The steps are as follows:

1. Lecturers set challenging tasks or ask interesting questions during classroom sessions. Activities which help the lecturer to maintain learners' attention are games, role-playing, hands-on activities, brain storming, and varied methods of presenting learning materials.
2. Lecturers can employ different strategies to maintain learner's motivation, for example, by choosing content and activities that are related to the learners' experiences or background knowledge, and to their work or interests, and by allowing them to employ different methods.
3. Lecturers need to inform learners about the learning objectives and evaluation criteria of the course, as well as provide feedback and opportunities for them to control their own learning and evaluation.
4. Learners need to be satisfied both intrinsically and extrinsically, for instance, by the offer of rewards for good grades (extrinsic), or through the ability to manage their learning and discover new information (intrinsic). (Keller, 1987)

Apart from awareness of the learners' characteristics during the instruction, it has been suggested that the classroom instruction must accept the diversity of learners, provide a safe and respectful learning environment, include practice material from other disciplines and cultures, and respect all learners' rights such as having fair assessment and treatment for all learners (Wloodkowski & Ginsberg, 1995). Moreover, the lecturer should distribute a preliminary survey to gain information about the learners' beliefs and the learning strategies they use during classroom sessions so that the lecturer can become aware of their gaps in learning and can target instruction to the learners' needs. Finally, discussion of strategies that other learners have successfully employed in classrooms may also motivate learners to use such strategies (Riviera-Mills & Plonsky, 2007).

In summary, motivation can be seen to be an important factor related to the successful development of learners' English reading comprehension. With respect to Thai education, evidence suggests that learners should be guided by the lecturer on

how to become intrinsically motivated in their English reading rather than extrinsically motivated. However, motivation alone may not enhance the development of English reading comprehension; prior skill in English, discussed in the next section, is another factor that affects the development of English reading comprehension.

### **2.2.3 Internal factor: prior language skills and difficulties**

Another factor related to the development of English reading comprehension skills in learners is the level of language skills and strategies that L2 and first language (L1) learners have before receiving instruction. As shown in previous studies, low-level skills in understanding the learning content or lack of participation in classroom activities have a negative effect on reading comprehension for L2 learners (Bond et al., 1989; Phunpruek & Mahapontong, 2006).

It has been argued that English reading skill development is affected by the L1 ability of the learner, so the learners that have higher oral proficiency in their L1 show better progress in English reading comprehension than those learners that have a lower level of oral proficiency in their own language (Klingner & Vaughn, 1996). Other studies have shown that learners with a lower level of proficiency in their L1 have difficulties reading English (Ferrari & Palladino, 2007). The Thai language is very different from English in terms of its alphabet, syntax, and meaning, so a Thai background is not likely to assist students in developing proficiency in English reading comprehension. A study in China corroborates an assumption which showed that L1 reading comprehension proficiency did not contribute to the English reading comprehension proficiency of L2 learners (Jiang, 2011).

Secondly, there are many language difficulties that L2 learners face in English reading learning. These include the inability of learners to present written or oral work in English, to write analytically, and to provide clear English explanations of assigned projects or presentations (Suknantapong et al., 2002). With regard to the investigation of learning difficulties faced by school-age Thai learners, Thais can be seen to face learning difficulties with every macro-skill, particularly in English reading comprehension (Sroinam, 2003). In addition, such Thai learners who have a low level of grammatical knowledge are not able to summarise, for example, so they

can not apply written knowledge to real life situations (Suknantapong et al., 2002). As a result, the average scores of Thai learners obtained in English reading comprehension tests do not meet the criteria set by universities (Sroinam, 2003).

One of the sub-skills that appears to dramatically limit the development of the reading comprehension processes of learners is word decoding (Rasinski, 2004; Graham & Bellert, 2005; Stahl & Hiebert, 2005; Phunpruek & Mahapontong, 2006). Lecturers may be misled into believing that their learners have difficulties with reading comprehension when the issue is really one of difficulty with word decoding (Christensen, 2009). It has been maintained that readers that recognise the meaning of words automatically are more able to develop their reading comprehension than readers that spend a longer time finding the definitions of words from contextual or other clues given in the material (Westwood, 2003). Moreover, readers that spend a lot of time defining words may lose concentration in the reading process, and thus important points from the sentences read can be forgotten (LaBerge & Samuels, 1974; Irwin, 1991). The importance of word decoding in reading comprehension is supported by a study by Klingner and Vaughn (1996), according to which learners whose decoding skills are lower than the average scores have the most difficulty in improving their reading comprehension. In that study, in the above average group, learners who began an intervention trial with adequate decoding skills but lower levels of comprehension and those that have lower decoding skills with high levels of comprehension showed more improvement than the below average group (Klingner & Vaughn, 1996). With respect to Thai education, vocabulary is perceived as an important factor related to English reading comprehension development for Thai learners (Phunpruek & Mahapontong, 2006) as it is in other countries, and vocabulary teaching is included in English reading for Thai undergraduates.

Although these skills enhance the identification of vocabulary, vocabulary recognition between learners differs. This is because some learners may not know the vocabulary at all, while others may be able to identify the origin of the word. For example, a study by Laberge and Samuels (cited in Magno 2010) found that learners that are able to pronounce vocabulary accurately may not be able to identify the meaning if the word is unfamiliar, as it is very difficult for learners to recognise both

the sound and meaning of a word at the same time. This indicates that it is essential to investigate the actual problems in word identification faced by learners and provide the appropriate instruction to minimise them.

Lipson and Wixson (2009) have defined the skills that enhance word decoding as follows:

1. Phonological awareness of segmentation (learners are able to divide a word into phonemes) and blending (learners are able to blend phonemes into a word).
2. Sight word recognition (learners are able to recognise the word immediately when they see it without sounding it).
3. Structural analysis or syllabification (separation of the word into syllables).
4. Meaning-based analysis, divided into contextual analysis (using syntax and semantics to identify meaning) and morphemic analysis (identify meaning from an analysis of morphemes).

In conclusion, the differences in learners' initial language skills are important factors which affect their ability to understand reading materials.

#### **2.2.4 External factor: advance organisers**

Moving on to the consideration of the external factors, a feature that has sometimes been overlooked by language lecturers is the clues or signals, also known as advance organisers or graphic organisers, that appear in reading materials (Haupman, 2000). An advance organiser can be a visual graphic that enables readers to get a general idea of the material when the content and structure are abstract, general and comprehensive (Boothby & Alverman, 1984; Haupman, 2000).

It has been maintained that advance organisers enhance the background knowledge activation of readers (Sabbatino, 2004; Mathes et al., 2007). In the English reading classroom, the advance organiser has been used to assist learners in reading comprehension for more than 20 years, and has been integrated in classrooms by a number of lecturers to help with background knowledge activation (Lapp et al., 2010; Kashani et al., 2013). As shown in a study by Kashani et al. (2013), the

advance organiser can be used effectively to activate learners' existing knowledge of the reading lesson and the information that they need to attain from the reading materials. In another study, it was found that the advance organiser can be effectively used during pre-reading, reading and post-reading sessions to activate background knowledge (Dunston, 1992). The combination of the advanced organiser with guided discussion enables learners to have better recall of up to 70 per cent of the materials (Rinehart et al., 1991).

In addition, the advance organiser enables learners to get more ideas about the learning content (Reiber & Kini, 1991; Griffin et al., 1995; Lin et al., 2006). For example, illustrations are a form of advance organiser that can motivate learners and enhance comprehension by building mental imagery and summarisation (Gambrell et al., 1987). In a study by Sabbatino (2004), the advance organiser has been used in reading classrooms to summarise or highlight the main ideas of material at all stages of reading, including pre-reading, during reading, and post-reading sessions. Another study has shown that reading material with an advance organiser is more effective for reading comprehension than material without it (Dunston, 1992).

It has also been asserted that the use of different forms of advance organisers, including both visual and verbal coding in the language classroom, has been shown to improve learning, as it helps learners remember the retrieved information more than the sole use of one or the other (Lin et al., 2006). Further, while the use of a visual organiser enables the reader to code the retrieved information, the use of verbal material alone is unlikely to help readers activate the verbal and visual information system that supports their cognition and short term memory (Lin et al., 2006). The integration of advance organisers in both visual and verbal formats is more likely to enhance learners' reading comprehension.

In summary, the use of the advance organiser helps learners with their English reading comprehension, as they can grasp more information and recall the reading content. The integration of the advance organiser into reading materials also motivates learners and activates their background knowledge.

### **2.2.5 External factor: textual context in reading materials**

Another external factor that affects English reading comprehension is the reading material used in the language classroom, which learners bring to both L1 and L2 learning (Oh, 2001).

Typically, there are two main types of reading material that learners are faced with in daily life—narrative and expository texts. Their structure differs in the organisation of the ideas and in their form. Narrative texts communicate the meaning in story form, while expository texts have various structural patterns, including description, sequence, enumeration, causation, problem and solution, and comparison and contrast (Hall et al., 2005). In the university context, it is expository texts that are most commonly encountered by learners, and which are used to teach English reading strategies to increase comprehension (Ephraim, 2009; Akhondi et al., 2011; Ray & Meyer, 2011), and which are therefore most relevant to this study. Issues arising from this are identified below.

Apart from the issue of background knowledge which has been described elsewhere in this chapter, a major concern is the selection of materials that have an appropriate level of difficulty for learners. Researchers have found that the ability of readers to recall and understand textual structure is related to the difficulty of reading contexts (Taylor, 1980; McGee, 1982); for example, reading learners are more able to recall information from the written passage when they are assigned materials at a lower level of difficulty (Taylor, 1980; McGee, 1982). On the other hand, if the content is too easy, learners may not fully develop their comprehension skills; for example, materials which contain about ninety per cent of the vocabulary known by learners do not encourage them to learn new words or practise their word decoding skills (Honig, 2001).

It is a challenge to find an appropriate level of reading material suitable for ESL learners (Blau, 1982; Fulcher, 1997).

It has been suggested that lecturers should consider the use of material that contains words already taught in previous sessions, small numbers of words to a page, simple sentence patterns, illustrations and so forth (Honig, 2001). To select a learning



context for students at a higher level, the lecturer should consider material that contains more complex sentence patterns, and fewer illustrations (Honig, 2001).

It has also been argued that authentic materials should be the focus of the classroom, particularly materials that enable learners to activate their background knowledge and increase their learning interests, and that lead them to their learning goals (Haupman, 2000). Materials or activities such as learning from the newspaper or watching TV enable learners to apply knowledge from their daily lives (McGee, 1982).

Further, it has also been suggested that program design should include materials that provide learners with opportunities to practice, review, check their individual comprehension, preview, and spend time identifying the structural relationships of the ideas presented in the context (McGee, 1982).

Although it has been argued that the material should be simplified to suit the learners' reading proficiency, this is not unproblematic. Simplification makes the reading content unnatural, and can obscure meanings and relationships. For example, a study by Blau (1982) showed that about half of the learners perceived that a simplified version of material was more difficult than authentic material.

Moreover, material simplification may not suit all learners and cultures (McGee, 1982; Keshavarz et al., 2007). For example, a study in Iran revealed that the simplification of lexicon and syntax appeared to have only slight effects on the reading comprehension and recall of ESL learners (Keshavarz et al., 2007). Therefore, the simplification of material may not be suitable for all learners.

### **2.2.6 External factor: learning environment**

Some environmental factors, not frequently highlighted in the reading literature, have been considered to be influential in the development of reading comprehension. These need to be taken into account when we consider the external factors that can impact reading comprehension. There are many factors in the learning environment which may influence the effectiveness of instruction, including: lecturer beliefs, classroom interaction, the organisation of the classroom, instructional goals, the

methods of instruction and activities provided in the classroom, and instructional resources such as reading materials and technology (Lipson & Wixson, 2009).

One of the environmental factors affecting the development of learners' reading comprehension is the lecturer (Blair, 2008; Christensen, 2009).

In Thailand, it has been found that some language lecturers do not employ adequate reading instructional strategies in the classroom, and they are unable to use technology to motivate learners (Kitisripanya, 2006). For example, a study by Taylor and colleagues (1995) revealed that although lecturers in the study tried to promote learning interaction and collaboration in classrooms by assigning pair work or group work activities to learners, the selected activities were not always appropriate for learners who had less ability in social interaction, thus they withdrew from the activities (Taylor et al., 1995). Such studies show that instruction in English reading requires appropriate instructional strategies to stimulate learning, and that effective strategies that enhance the development of the English reading comprehension of learners need to be found.

The setting is another environmental factor affecting the development of English reading comprehension. Initially, most L2 learners in Thailand do not use English as their L1 and they rarely use English for communication in their daily life; it is an environment which is unlikely to support learning (Phunpruek & Mahapontong, 2006). Secondly, Thai culture is very different from western culture; hence it is unlikely to support learning (Phunpruek & Mahapontong, 2006). It has been argued that Thai learners of English need extra support and encouragement in terms of reviewing the classroom content, practising English reading comprehension, and acquiring knowledge outside the classroom (Phunpruek & Mahapontong, 2006).

Apart from the lecturer and the setting, overloaded content and tasks required by the curriculum are factors which may not support learning (Allington, 1983; Lipson & Wixson, 2009); this may lead to unsupportive classroom instruction that provides insufficient time for learners to complete the assigned learning tasks, and insufficient teaching time in the language classroom.

Other issues related to the learning environment may include a lack of reading support from family and other sources of information, an environment which may not be appropriate for learners with physical problems, such as hearing problems, visual problems, and general health problems (Richek et al., 2000; Lipson & Wixson, 2009).

To sum up, there are many issues in the learning environment that affect the development of learning; these include the development of a learning environment that provides a channel of communication for learners, practices or activities that enable learners to check for understanding or review learning content, and practices whereby learners get immediate feedback.

### **2.3 The teaching of skills and strategies related to English reading comprehension**

Although there are many skills and strategies considered important for the development of English reading comprehension skills, the struggling reader needs reading instruction that can be combined with the school curriculum and also addresses the differences between learners in terms of their reading, writing, and communication (Alverman, 2002; Mckeown et al., 2009). In order to provide effective English reading instruction, it has been asserted that learners should be taught English reading skills explicitly. This explicit instruction or skill-based instruction is focused on particular strategies to assist learners in reading comprehension, and to provide clearer explanations to support reading comprehension and the composition of written materials (Lipson & Wixson, 2009; AL-Sohbani, 2013). Learners need to be taught how to develop lower-level skills such as decoding, and higher level ones such as the ability to identify different types of text structures and to make inferences (Lipson & Wixson, 2009).

Eight types of research-based reading strategies suggested by the National Reading Panel (2000) have been proven to be effective in reading comprehension instruction (Alverman, 2002). These are described below.

The first strategy is comprehension monitoring, in which readers learn to be aware of their understanding of the learning content. The second strategy is the implementation of cooperative learning, which encourages readers to co-operate with others to learn reading strategies. The third is the use of graphic and semantic organisers to support learning. The fourth is instructing learners about different types of story structures. The fifth uses questions, where readers answer questions provided by the lecturer and then are given the correct answers. The sixth is question generation, where learners ask themselves questions about the reading material. The next strategy is summarising, where readers learn to identify important ideas from the reading content. The final strategy is multiple-strategy teaching, where readers use several of these procedures in interaction with the lecturer. These reading strategies are fully supported by the Thai National Curriculum in all aspects, especially regarding the required English reading skills to be mastered by learners, and also the promotion of collaborative learning.

The literature reviewed in the subsequent sections further highlights the specific instructional strategies related the development of skills enhancing reading comprehension.

### **2.3.1 Vocabulary instruction**

One of the skills that needs to be taught for the development of English reading comprehension is word identification. Vocabulary is an important factor in reading comprehension, as has been acknowledged in many studies (Westwood, 2003; Stahl & Hiebert, 2005; Woolley, 2010). The ability to identify the meanings of words can develop readers' fluency in reading (Blair, 2008). Although the main priority in reading is to comprehend the reading material, the vocabulary in the reading material may be difficult for learners and sometimes the meaning cannot be implied from the context (Pilonieta, 2011). In addition, learners with low-level reading comprehension skills usually have difficulty applying the new meanings of unknown words, and when they encounter them, they do not read efficiently (Woolley, 2010). Therefore, it is suggested that the important vocabulary should be taught to learners before English reading instruction in order to reduce the cognitive load and to help learners acquire new vocabulary and comprehension from the reading content (Pilonieta, 2011).

Studies have shown the effectiveness of vocabulary instruction in the development of English reading comprehension (Alverman, 2002). This strategy assists learners to infer the meanings of unfamiliar words through the enhancement of contextual clues provided in the reading material (Westwood, 2007). Vocabulary instruction employed both before and during the reading has proved effective in helping learners to recall more information from the materials than those learners that have not received such instruction (Davis, 1989).

With regard to the importance of vocabulary in English reading comprehension, it has been maintained that learners should be given explicit vocabulary instruction with an adequate amount of practice, support, and self-monitoring (Pressley, 2002). Vocabulary instruction may include lessons on dictionary usage, and the association of words with their roots, prefixes, and suffixes (Woolley, 2007). Additionally, it has been argued that lecturers should develop their learners' level of vocabulary recognition, beginning at a basic level and moving to a more advanced level (Graves & Prenz, 1986; Pressley, 2002). The steps for such instruction are described in the following section.

#### **2.3.1.1 Providing definitions**

One highly-recognised form of vocabulary instruction is to provide learners with the definitions of unknown words. Jenkins, Matlock, and Slocum (1989) have argued that learners can be instructed using the following steps (Jenkins et al., 1989).

First, the lecturer pronounces the words and provides their definitions. Then, the learners repeat the words after the lecturer. Next, the lecturer asks the learners to provide the definitions of new vocabulary, and after that, the lecturer provides the correct definitions and lets the learners read them out loud. Finally, the learners pronounce the words out loud and provide definitions or synonyms of the words on their own (Jenkins et al., 1989).

Apart from the lecturer providing the definitions of vocabulary, learners can also find the meanings of vocabulary on their own by being instructed in dictionary usage. Researchers consider dictionary usage to be beneficial, as it helps learners to identify the definition and pronunciation of the words appearing in the reading contexts

(Cortina & Elder, 2002). In some classes, college learners may know how to use the dictionary to find the meaning of words according to the alphabet, but they may not be able to identify the functions or forms of the vocabulary; hence, instruction in dictionary usage will extend their knowledge of the skills needed to define the most appropriate meaning of words and how to pronounce these words accurately (Cortina & Elder, 2002).

### **2.3.1.2 Using contextual clues**

Contextual clues are the clues in the sentence surrounding the unknown vocabulary items that enable the reader to identify the meanings of words (Cortina & Elder, 2002). Context clues are another skill that helps learners to identify the meanings of unfamiliar words without the use of a dictionary, and is the technique most employed by readers (Nagy et al., 1989).

Contextual clues are classified into two main categories, internal and external (Sternburg et al., 1983; Cortina & Elder, 2002). In order to identify the meaning of unknown vocabulary through the use of contextual clues, learners must be able to employ both internal and external contextual clues to enhance the identification process. The following sections describe the different types of contextual clues and how participants in the present study were taught to master the skill of using context clues.

#### **Internal contextual clues or word structure clues**

Internal contextual clues assist learners in identifying meaning from the structure of the unknown words themselves (Sternburg et al., 1983; Cortina & Elder, 2002). The internal clues may consist of one or more of three parts; namely, the root or the base word, which has its own meaning; the prefix or the part of the word attached to the beginning of a base word, which changes its meaning; and the suffix or part of the word attached to the end of a base word which affects its part of speech (Cortina & Elder, 2002).

Two instructional steps have been suggested by Sternburg and colleagues (1983) that help learners to employ these clues to identify the meaning of vocabulary as follows: initially, learners are given opportunities to practise the different forms and functions

when the internal contextual clues are attached; and then they will be asked to identify words with appropriate internal contextual clues to fill in the blanks in the reading material. Although learners may guess the meaning through the recognition of internal contextual clues, they can be further supported by external contextual clues when they are reading.

### **External contextual clues or word structure clues**

External contextual clues are syntactic and semantic clues that are in or between the sentences where the unknown vocabulary appears. Research scholars explain that external contextual clues can be divided into six categories (Vacca & Vacca, 1986; Sinatra & Downd, 1991; Cortina & Elder, 2002). They are clues of definition, synonym, contrast, experience, example, and from other sentences (Vacca & Vacca, 1986; Cortina & Elder, 2002). Cortina and Elder (2002) provided further explanations and examples of external clues as shown in Table 1.

**Table 1**      **Types of external contextual clues**

<b>Type of clue</b>	<b>Explanation</b>	<b>Signal clues</b>	<b>Examples</b>
Definition clue	The clue will define the meaning of words.	is defined as, is called, is known, refers to	<b>Interiority</b> is defined as a tendency to look within during middle age.
Synonym clue	The clue will provide the word with similar meaning set off by punctuation such as commas, parentheses, a colon, dash or bracket.	such as, in other words, or, that is to say, also known as, by this we mean, that is	The garden was <b>redolent</b> , or fragrant, with the scent of roses.
Contrast clue	The clue will provide the word with opposite meaning of unknown word.	instead of, but, in contrast, on the other hand, however, unlike, although, even though	I did the physical therapy exercises incorrectly and, instead of helping my back, they were actually <b>deleterious</b> .

Type of clue	Explanation	Signal clues	Examples
Experience clue	The clue will activate the learner's background knowledge which may enable the learner to identify the meaning of unknown words.	A sentence which gives the information that learners are familiar with or already know	The campers were warned that hiking up that steep mountain trail would <b>enervate</b> even the fittest members of their group.
Example clue	The clue will provide examples which help learners to identify the meaning of unknown words.	for example, for instance, such as, to illustrate, like	He enjoys <b>aquatic</b> sports such as swimming, scuba diving, and water skiing.
Clue from another sentence	The clue is located in another sentence close to the unknown vocabulary, which helps learners to identify the meanings of unknown words.	Further explanation from another sentence in the context	When studying for his final exams, the learner was told to <b>eschew</b> television. "Just give TV up!" was his roommate's advice.

Source: Cortina and Elder (2002, pp. 78-79)

To provide instruction on the use of external contextual clues, Ryder (1986) and Honig (2001) suggest that learners should initially start selecting the most appropriate vocabulary before the instruction. The selected vocabulary should be presented in concrete rather than abstract form, as it is much easier for learners to understand the content in this way. Then, the lecturer instructs learners regarding the clues, which usually appear in context, and teach them strategies to identify the meaning of unknown vocabulary by the presence of given clues. Next, the lecturer should select vocabulary for its level of difficulty or later revise or reselect it. Finally, the lecturer can also provide learners with reading techniques (Ryder, 1986; Honig, 2001).



### **2.3.1.3 Semantic mapping**

The use of semantic mapping has been shown to be effective in vocabulary learning, providing the graphic organisation of ideas (Woolley, 2010). Semantic mapping is usually presented in the form of charts, and it supports learners by linking new vocabulary to their background knowledge (Johnson & Pearson, 1984).

Semantic mapping, suggested by Johnson, Pittleman, and Heimlich (cited in Johnston et al., 1986) to enhance the learners' skills in vocabulary identification, includes seven steps of instruction, as described below.

First, the lecturer selects the key vocabulary presented in the context. Secondly, the lecturer presents these words to the learners. Thirdly, the lecturer encourages learners to think about words related to the presented vocabulary, and then to classify these related words into groups or sub-topics. Subsequently, the lecturer encourages learners to find more words to be related to the groups. Then, the learners share their ideas with their friends, write down those new words from sharing ideas, and map them in groups and sub-groups in graphic mode (semantic map). Next, the learners present their semantic maps in the class. Finally, the lecturer organises a discussion about semantic mapping by encouraging the learners to find familiar and unknown words, and then to find the relationships between the words (Johnson et al., 1986).

In conclusion, knowledge of vocabulary has been acknowledged in the development of English reading comprehension, especially for non-native English speakers. Therefore, it is essential for foreign learners to identify the meaning of unknown vocabulary for better comprehension of the reading content.

## **2.3.2 Reading comprehension instruction**

This section provides information about the teaching procedures relevant to the English reading comprehension instruction discussed in the present study and reviews the literature on the employment of these strategies.

### **2.3.2.1 Scaffolded instruction**

Scaffolding is a term that is frequently found in the literature on English reading instruction (Ediger, 2002). Scaffolding is also known as modelling (Magno, 2010).

Scaffolded instruction is a methodology that includes the preparation of learning content, learning materials, and activities or tasks that encourage peer support (Larkin, 2001; Ediger, 2002; Graves & Graves, 2003; Archer & Hughes, 2011). Another definition of scaffolding is the learning process in which there is interaction between lecturers and learners that leads toward independent learning (Rodgers & Rodgers, 2003). Scaffolding is also described as assistance from guardians or parents for the development of children's reading, and has proven to be effective with adults and more proficient learners (Magno, 2010).

Scaffolded instruction also has the same elements as explicit instruction (Archer & Hughes, 2011), which was previously cited in the present study as appropriate instruction. Those elements include:

1. The instruction includes multiple strategies, which learners are taught explicitly.
2. The skills are related to each other for the development of language proficiency.
3. The examples and problems used in the instruction progress from simple to more complex content.
4. A demonstration and a model of the problem are provided for further clarity.
5. Hints and prompts are provided for students during practice.
6. Learning aids are provided in class, as these may enable learners to accomplish the given task.

During the instruction, the lecturer scaffolds the learning for the tasks that are beyond the learners' ability (Rodgers & Rodgers, 2003; Magno, 2010). During the learning process, learners are assisted in completing new or difficult learning tasks before they can do them by themselves (Larkin, 2001; Magno, 2010). The aim is to reduce the lecturers' responsibilities and assistance when learners begin to master the assigned tasks by themselves, which encourages learners to be more independent (Bodrova & Leong, 1998; Larkin, 2001; Rodgers & Rodgers, 2003).

With regard to scaffolded instruction, researchers have provided different guidelines, as summarised below; however, these should be supported by the Thai curriculum and meet the learners' specific learning needs.

Larkins (2001) provides six guidelines for effective scaffolded instruction. The guidelines are as follows:

1. The lecturer must know what the learners already know (background knowledge), what they do not know, and any misconceptions they may have regarding the learning content or tasks (identification of learners' existing knowledge).
2. The lecturer should be aware of learners' individual differences and assign them the tasks or learning content that suit their abilities (identification of learners' abilities).
3. The lecturer provides assistance, which enables learners to achieve the specified learning goals quickly.
4. The lecturer provides support for learners to "be" like everyone in the class; at this step the lecturer assigns the same task to all learners in the class, while encouraging those with learning difficulties to work hard, and gives sufficient support to build the confidence of the struggling learners.
5. The lecturer assigns the task in appropriate amounts, allowing sufficient time for completion (know when it is time to stop).
6. Learners are encouraged to be more independent when they master the assigned tasks; at this step, learners can do the assigned tasks on their own. The lecturer begins to reduce his or her support gradually to promote self-directed learning.

In addition, Rodgers & Rodgers (2003) suggest four guidelines for observing the learners' needs in learning. First, the lecturer should observe the learners carefully by selecting the most appropriate tasks and providing adequate time for instruction by using a learning log or observation matrix. Secondly, the lecturer should respond to learners by carefully observing their learning and try to minimise problems when needed. Thirdly, the lecturer should try to observe and keep track of the changes in the learners, not just appraise them according to their previous problems or abilities.

Finally, the lecturer should assist learners in the selection of learning materials that suit them.

Graves and Graves (2003) provide an instructional framework called Scaffolded Reading Experiences (SRE), which has been found to be an effective method of instruction. The framework consists of two major phases: the planning phase and the implementation phase. In the planning phase, there are three components to be considered by the language lecturer: the characteristics of learners, the appropriate selection of the reading material, and identification of the purposes of the reading. The implementation stage is the selection of activities for pre-reading, reading, and post-reading. During the English reading instruction, the lecturer employs scaffolded reading instruction, which aims to: assist with the learners' vocabulary identification; activate their background knowledge by linking learning content to their background knowledge; promote the collaborative learning of learners and communities; and motivate them to become self-directed learners.

Although the steps of scaffolded instruction may be slightly different among reading scholars, the similarities are the preliminary investigation of the learners' needs or problems regarding learning, then minimising these problems prior to instruction. During the instruction, the lecturer provides support for the learners at the beginning, and then the support is gradually reduced when the learners begin to master the assigned tasks.

Regarding the activities employed in scaffolded instruction, Fitzgerald and Graves (2004) stated that the possible components of a scaffolded reading experience can be divided into three main parts; namely, pre-reading activities, reading activities, and post-reading activities. Those components applied in English reading comprehension instruction are shown in Table 2.

**Table 2** Components of scaffolded reading instruction and activities

Pre-reading activities	Reading activities	Post-reading activities
Motivating	Silent reading	Questioning
Activating and building Background knowledge	Reading to learners	Discussion
Providing text-specific information	Guided reading	Writing
Relating the reading to learners' lives	Oral reading by learners	Drama
Pre-teaching vocabulary	Modifying the reading material	Artistic, graphic, and nonverbal activities
Pre-teaching concepts		Application and outreach activities
Pre-questioning, predicting and direction setting		Building connections
Suggesting strategies		Re-teaching

Source: Fitzgerald & Graves (2004, p. 16)

In conclusion, scaffolded reading is an approach that has been cited as effective in developing learners' skills and helping them to be more confident in learning (Archer & Hughes, 2011). It also involves many activities that can be applied in the instruction of skills related to reading comprehension.

### 2.3.2.2 Text structure instruction

Another important process of reading is the recognition of the different structural patterns of texts. Therefore, instruction in text structure is considered one of the most effective strategies to increase reading comprehension, particularly regarding expository text instruction (Carrell, 1985; Hall et al., 2005; Ephraim, 2009; Dymock & Nicholson, 2010; Akhondi et al., 2011; Ray & Meyer, 2011).

With regard to the types of expository texts, there are two common expository text structures; namely, descriptive structure and sequential structure (Dymock, 2005). The pattern of the descriptive structure may be as a list, web, or matrix. The

sequential structure only occurs in a string pattern. Many expository texts may combine more than one structural pattern (Pilonieta, 2011). In one pattern of classification, there can be more than five main types of text structure, such as collection, listing, mixed, and others (Seyler, 2000), which overlap with the rhetorical structures described earlier. However, most literature classifies text structure into five types; namely, description, sequence (collection or listing), comparison and contrast, cause and effect, and problem and solution (Armbruster et al., 1989; Richek et al., 2000). The patterns of reading material that usually appear in both Thai and English follow the latter pattern. Therefore, instruction in these five patterns would be more appropriate for the present study, as learners are more familiar with them. Furthermore, the five types of expository text structures are much clearer than other patterns in which different structures are mixed and may cause confusion for Thai readers. The differences and characteristics of the five text patterns as discussed in the present study are described below.

The description pattern provides information regarding the topic or explains the characteristics, features, or examples of the topic. Compared to other patterns, this type of material may provide fewer or no signal words to be used for comprehension. The sequence pattern provides information on the topic by providing steps or presenting information in chronological order. The comparison and contrast pattern provides information about similarities and differences of two or more things presented in the reading material. Cause and effect provides information about the cause or consequence of the action, showing the relationship of the action. Problem and solution provides information about the problem of the discussed issue, followed by one or more solutions (Meyer, 1975, 1985; Seyler, 2000; Cooper & Kiger, 2009; Ray & Meyer, 2011). As can be seen from the above, each text type expresses a different purpose for writing, and learners should be able to identify those differences to be able to develop a higher level of reading comprehension and retention (Cohen et al., 2009; Pilonieta, 2011). To clearly highlight the differences, examples of the text patterns are provided in Table 3.

**Table 3** Examples of expository text structure

Expository Structure	Example
Description	The tiger is the master of the Indian jungle. It stalks its prey in deadly silence. For half an hour or more, it carefully watches and then slowly placing one foot softly in front of the other, closes in.
Sequence	As a master of the Indian jungle, the male tiger plays many roles. First, he is the hunter of prey who stalks in deadly silence. He is the beauty of the jungle, and expert at doing nothing so that he can rest to be ready for his hunt. Finally, the lord of the jungle is the active seeker of mates, who begin his mating with a nuzzle, but ends with a roar.
Comparison and contrast	The power of the great tiger is like that of no other animal in the jungle. With one steady lunge, it can destroy its prey, seemingly without an effort at all. Unlike other predators, the tiger basks in the sun after an attack to prepare for its next kill. The action of the tiger resembles those of no other animal in the Indian Jungle.
Cause and effect	We observed the tiger from our vehicle as it stalked the herd of deer. As a result of the slight noise from our running camera, the tiger turned and knew we were there. This didn't stop it from returning to its intended prey. Slowly and carefully it moved forward, not making a sound. The deer were initially unaware of its presence, but because of the shifting winds they caught the tiger's scent. This was enough to scare them away.
Problem-solution	One problem to be resolved in tiger watching is transportation. How is it possible for observers to get close enough to a tiger without scaring it away or being attacked? Nature has helped solved this problem by making the tiger and the elephant friends. It is possible for an elephant carrying several people to get very near a tiger without being noticed. If it weren't for this natural friendship, tiger watching would be virtually impossible.

Source: Cooper and Kieger (2009, p. 83)

Study on instruction in text structure has proven to be effective in many aspects of learning; the issues related to the instruction of text structures are identified below.

Effective instruction regarding text structure supports the learners' comprehension of rhetorical textual patterns (Dymock, 2005; Hall et al., 2005; Meyer & Ray, 2011). More specifically, text structure instruction enables learners to identify the major

components of a reading material, including the supporting details and major topics and sub-topics of the reading content (Carrell, 1985; Hall et al., 2005). Also, this type of instruction helps the reader to create mental images and to identify the relationships of the ideas in the reading material (Cohen et al., 2009; Lipson & Wixson, 2009; Akhondi et al., 2011; Ray & Meyer, 2011), and learners can produce well-structured summaries after the reading (Hall et al., 2005). Meyer et al. stated that “without models of text structure, reading researchers would be confined to looking at task variables such as adding pre-questions, without any way to specify their interaction with the material” (1980, p. 74).

Instruction in text structure promotes the activation of background knowledge (Akhondi et al., 2011), which has been considered the main factor affecting English reading comprehension of L2 learners and reading fluency.

Additionally, text structure instruction builds learners' confidence in reading (Carrell, 1985), as readers learn new vocabulary from expository texts that is rarely found in narrative texts (Pilonieta, 2011), and the knowledge gained from the instruction can be applied to real life (Ephraim, 2009).

Previous research on the instruction of text structure indicates that the strategy is appropriate to be employed in the present study, as it minimises the issues related to the development of English comprehension skills of L2 learners by developing their level of reading comprehension and systematic reading strategies, and activating their background knowledge while boosting their confidence in learning. Structural instruction then is considered by research scholars to be one of the reading comprehension strategies that should be employed in the English reading classroom (Dymock, 2005; Dreher & Gray, 2009; Akhondi et al., 2011; Ray & Meyer, 2011).

There are three success indicators in text structure instruction. The first indicator is the choice of appropriate strategies for instruction, as some learners do not have adequate expository reading strategies to help them understand non-fiction texts (Hall et al., 2005; Ephraim, 2009; Lapp et al., 2010; Meyer & Ray, 2011; Ray & Meyer, 2011). The second important indicator is the structure of the reading material selected for instruction, which should be presented in well-written format. The third



indicator is the selection of expository texts that provide learners with opportunities to practise their comprehension strategies (Hall et al., 2005). As the last two issues regarding the selection of texts have already been previously addressed in the chapter, this section only focuses on the strategies regarding text structure instruction.

There are many strategies that can be employed in instruction, such as previewing text structure, the application of the advance organiser, previewing reading content, generating inferences, imaging, monitoring analysis, questioning, and summarising content (Philips et al., 2007).

## **2.4 Conclusion**

In conclusion, this chapter provides information regarding reading comprehension, the reading processes, the factors related to the development of English reading comprehension skills on the part of foreign language learners, and related English reading comprehension instruction.

The two main factors affecting the development of reading comprehension faced by L2 learners are classified into two main categories— internal and external factors. The internal factors frequently addressed by researchers are background knowledge, motivation, learners' language skills, and word decoding skills, while the external factors are the representation of the advance organiser in context, the types of material, and the learning environment.

This chapter has also discussed the issues relating to English reading instruction, such as vocabulary teaching and scaffolded instruction.

The next chapter provides a further review of the history of the implementation of technology in English reading instruction and learning; there is also further discussion of how BL instruction has been integrated into the design of blended English reading comprehension instruction.

## **CHAPTER THREE: ICT in Language Learning and the BL Approach**

This chapter is divided into four sections. The first section begins with general information regarding the applications of information and communication technology (ICT). It then describes the advantages and limitations of computers used in education. The third section describes BL in terms of its definitions, strategies, the issues related to the development of BL in the present study, and the related research on its use. The final section summarises the issues regarding the employment of blended learning (BL), and identifies those that need to be further investigated. The structure of this chapter is designed to convey the framework within which the research was undertaken; that is, the use of BL to improve reading comprehension.

### **3.1 Applications of technology in education**

The adoption of e-learning, as it is now known, provides a variety of channels through which learners can communicate and exchange information. E-learning can be grouped into two main categories: asynchronous computer-mediated communication and synchronous computer-mediated communication. The most common, asynchronous computer-mediated communication, is the use of email or web bulletins accessed through the Internet (Maier & Warren, 2000; Warschauer et al., 2000; Hrastinski, 2008). The second category, synchronous computer-mediated communication, refers to communication in real time with others that are simultaneously online, for example video conferencing, instant messaging, and online chatting (Turbee, 1999; Vilmi, 1999; Warschauer et al., 2000; Hrastinski, 2008).

Different computer applications can serve different learning purposes. Lee (2006) provides examples of the use of different computer applications for different aspects of learning including instructional applications, communication, and resources, as shown in Table 4.

**Table 4      The implementation of computers in education**

Computers in education		
Instructional applications	Communication	Resources
word processor	Email	Learning materials
spreadsheet	Mailing lists	Websites
database	Discussion forums	CD ROMS
presentation graphics	MOOs	Online journals
statistical analysis	Video-conferencing	Online abstracts
programming	Chat rooms	Online citation indexes
languages	Instant messaging	Online datasets
CAD drafting programs	Social networks, e.g. Facebook and Hi5	
visualiser		

Based on: Maier & Warren (2000)

In the Thai educational context, computers have been used in learning for many purposes, for example, the submission of assignments via word processors, or the use of presentation graphics to enhance understanding. More importantly, the promotion of the use of computer applications is enhanced by the development of wireless networks that enable learners to access information from external sources and to download learning materials outside the institution. Moreover, communication between teacher/learners and learners/learners is assisted by online applications. On the other hand, it has been argued in the literature that the use of computers can create concerns for lecturers. For example, specific software that requires advanced computer skills and for which it takes a long time to develop learning materials can cause issues (Hubbard, 2005; Park & Son, 2009).

In the present study, the design of the BL component had to take into account the participants' familiarity with computer applications, and the compatibility of

computer applications which could be installed on most models of computers. Familiarity with and the compatibility of applications would minimise technical problems and provide opportunities for participants to access information from any computer without worrying about the availability of specific software. For this reason, PowerPoint was selected for use in the BL instruction and on the LMS used by the university, as it was a basic type of software installed on all computers, which the participants obtained from the university in the first year of enrolment. Outside classroom sessions, email and chat rooms were available to learners as channels of communication, while suggested databases, CD ROMS, videos posted on the university's LMS, and websites were used as external reading resources.

### **3.2 Computer terms used in learning**

There are many terms that have been applied to the specific roles that computers can play in education. The use of computers to enhance instruction in general is known as computer assisted/aided learning (CAL); to practice, teach, and test are referred to as computer-based instruction (CBI); as a channel for communication between teachers and learners and between learners it is known as computer-mediated communication (CMC); and as an online application to facilitate language learning it is referred to as computer-assisted language learning (CALL). The concepts to which these terms refer illustrate the extent to which computers can be used in all forms of education, including language learning. For example, with the employment of computers to enhance learning, it is possible to incorporate more interactive computer applications and improved presentation of materials; they may be used to help learners check their understanding and monitor their progress through the use of certain types of software; and they may be used as a tool to communicate with classmates outside the classroom.

#### **3.2.1 A brief history of computers in language learning**

The stages of the development of CALL are in alignment with approaches to the teaching of English to speakers of other languages (TESOL) that pertained at the time of each development. It has been argued that this development can be categorised into three major phases: “behaviouristic [sic] CALL”, “communicative CALL”, and “integrative CALL” (Warschauer, 1996). Behaviouristic CALL began

with text-based software and was limited in form to drill and practice exercises. It reflected an approach commonly adopted between 1960 and 1970 which viewed language learning as a process of habit formation, learning taking place through repeated response to a stimulus (Gunduz, 2005; Lee, 2006). Communicative CALL emerged between 1970 and 1980. The communicative approach with which it was associated was based on cognitive theories, which argued that learning was a creative process of discovery, expression, and development (Gunduz, 2005; Lee, 2006). During this stage, personal computers were beginning to become available, providing greater opportunities for individual access. Much of the software created at this stage involved text reconstruction and simulation applications. The third phase, integrative CALL, reflected not only technological advances but also the development of a shift in language teaching towards a socio-cognitive view, which focused on the use of meaningful and authentic contexts (Lee, 2006). During this phase, computer technology became more accessible and used in schools, enhanced by the use of multimedia and the growing network of the World Wide Web (WWW) (Cameron, 1999; Liu et al., 2002). More recently, CALL has shifted from being largely CD-ROM-based to being to web-based, creating more possibilities of developing online communities of learners (Zaphiris & Zacharia, 2006). The widespread use of technology has led to the use of multimedia, Internet tutorials, chat lines, and email being potentially available to every learner (Donaldson & Haggstrom, 2001; Liu et al., 2002; Gunduz, 2005; Hubbard, 2009).

With regard to Thai education, the advancement of technology in Thailand has changed the method of instructional delivery in most universities. As technology has become accessible, Thai universities have become equipped with wireless networks, which enable learners to access information inside and outside classroom sessions. However, the availability of computer facilities may not fully support learning per se. The identification of different purposes of technology can also assist Thai teachers in employing suitable technology in classroom instruction.

### **3.2.2 The advantages of computers**

This section explores the advantages of computers in education that have been identified in the literature relevant to the current study. The main advantage of

computers is that they can be a useful tool in promoting learning (Soo, 1999; Lai & Kritsonis, 2006; Lee, 2006). There are several reasons why this should be the case.

First, the kinds of interactive software that are available, such as games, simulations, and problem-solving activities, may help reduce learner anxiety and stress and increase learners' enjoyment through promoting challenge, control, curiosity and fantasy (Johnston, 1999; Hsu et al., 2000).

Second, computers can be helpful in taking into account a number of different learning styles, as learners are in some cases able to learn at their own pace, and may work on assignments by themselves until they have been completed to their satisfaction (Wheatley et al., 1993; Levy, 1997). In the Thai context, this advantage of computers may enable learners to review the learning materials they have missed. Also, it may minimise the issue of Thai learners' low level of learning autonomy which has been observed in the literature (Center for Educational Technology, 2003).

Third, computers have the capacity to provide instant feedback so that learners do not necessarily have to wait for feedback from a teacher (Liu et al., 2002; Lai & Kritsonis, 2006). A Thai lecturer may assign learners to practise language learning using CALL activities, which are appropriate for a large number of learners, as all learners are given feedback and instruction that guide them towards a clearer understanding. In many universities in Thailand, some basic subjects or subject are taught in large halls with more than a hundred learners. A practice which has the capacity to provide instant feedback is ideal for integration into classroom instruction in Thailand.

Another advantage of computers is that they may be used in instruction specifically to promote the development of learners' language skills (Liu et al., 2002; Lai & Kritsonis, 2006; Lee, 2006). For example, one study (Ridder, 2000) found that learners improved their reading comprehension by using an application that provided definitions of unknown vocabulary using rollovers when learners read a text on the screen. These results align with those of Abdurrahman (2006), who found that CALL instruction enhances vocabulary development and reading comprehension. CALL software has also been used to assist in the development of speaking skills,

particularly pronunciation (Tsutsui & Kato, 2001). Although the current study was centered on the development of learners' reading comprehension, learners may acquire other skills during the course of reading instruction which are of value in the process of improving English language proficiency (Abdurrahman, 2006).

A further advantage of computers is that they can create a "global classroom" through the widespread availability of technologies such as the Internet or videoconferencing, which have the potential to enhance learners' language development by giving them the opportunity to practise communication on a global level (Liu et al., 2002; Lee, 2006). Within a language-learning environment, this not only provides learners with the opportunity to develop their linguistic expertise, but also provides them with the potential to develop new social relationships with people in their own community or around the world (Egbert, 1999; Liu et al., 2002). In the Thai educational context, Thai learners do not have many opportunities to practise English in their daily lives and have few opportunities to communicate in English with native speakers (Plailek, 2011). Computer technology may provide opportunities to practise English with fluent English speakers around the world.

In addition, previous studies regarding the implementation of computers have indicated that computers can be effectively integrated into English reading strategies in classroom instruction (Barriere & Duquette, 2002; Kim et al., 2006; Kim, 2009). One such approach is the metacognitive reading strategy (Bruce & Robinson, 2000; Kramarski & Feldman, 2000; Liu et al., 2002). According to Bruce and Robinson's (2000) study, the metacognitive instructional approach based on reciprocal teaching has been successfully used in both laboratories and in the classroom in order to improve the reading comprehension of learners. In addition, a comparative study, which investigated the difference between traditional instruction and online instruction, revealed that the integration of computer applications and reading strategies was as effective as the use of metacognitive reading strategies in traditional face-to-face (F2F) instruction. The study found that learners' levels of achievement and metacognitive awareness were not significantly different between the two types of instruction (Kramarski & Feldman, 2000).

In summary, research indicates that computers can serve meaningful purposes in learning, as they can facilitate the development of learners' language skills and minimise the issues that can result from F2F language instruction. However, there are some disadvantages and limitations associated with the use of computers in language learning. These are described in the next section.

### **3.2.3 The limitations of computers**

Although the use of online computer technology in language learning in general, and e-learning in particular, has been cited in the literature as effective in facilitating learning, many scholars contend that e-learning should be combined with other modes of training in order to assist learners in achieving their learning goals most effectively (McCray, 2000; Baldwin-Evans, 2006; Dynia, 2006; Dziuban et al., 2006). As has been observed earlier, traditional F2F instruction is still valued by learners (Hussain, 2009), and so it would seem that a combination of online and F2F study might be effective (William & Sosin, 2005).

Although the integration of technology has been found to be effective in learning, traditional instruction is still preferred by many learners (Hunt et al., 2002; Lee & Im, 2006; Intrat, 2007; Hussain, 2009). This is because traditional training or F2F learning provides learners with opportunities to share ideas and interact with peers during classroom sessions, and there are fewer possibilities of a learner misunderstanding content or messages than with other modes of instruction (Fitzsimmons et al., 2002; Epstein, 2006; Mackay & Stockport, 2006). Recently, a study in the USA (Kim, 2009) revealed that four out of six participants believed that the classroom interaction is vital to maintain the learners' level of motivation to learn. One of the participants in that study stated that he dropped out of the study because there was no human interaction in the fully online course. This issue suggests that studying reading through computers alone is unlikely to be as successful as incorporating opportunities for learners to discuss their issues with their peers and teachers face-to-face. With regard to the present study, most Thai learners have been taught through traditional F2F instruction since primary school, and they are used to the instruction that a teacher provides. Therefore, they are more familiar with the traditional method of instructional delivery, in which teachers provide guidance and are the source of information in the classroom than they are with taking



responsibility themselves for accessing information on computers at their own pace (Center for Educational Technology, 2003; Intratat, 2007; Khamkhien, 2012).

Secondly, the financial barrier has been identified as one of the greatest issues preventing the adoption of computers in language classrooms (Gips et al., 2004; Lee, 2006). In the first place, the cost of hardware can be high, particularly if large numbers of computers are required for classroom use. In addition, there are the costs of maintaining the hardware. Furthermore, there is the cost incurred in personal development in ICT training (Anderson, 1986; Levy, 1997). One of the causes of financial difficulties in adopting the use of computers in the classroom is the lack of support by academic institutions or governments, even in developed countries (Park & Son, 2009). For this reason, it has been claimed that financial difficulties in schools have a major consequence for learning, especially for low-income schools and less well-off learners, who are unlikely to be able to afford the price of computer hardware and software (Gips et al., 2004). This, of course, has implications for the equitable access to education for all learners.

In the Thai higher education system, within which this study took place, the issue of cost is not as problematic as in other contexts. A study by the Thai government sector shows that 99.7 per cent of universities in Thailand provide computers to support learning and 97.2 per cent of universities have wireless Internet access, which enables learners to access information both in and outside the classroom. In addition, many universities offer free or low-cost training for both staff and learners so that the personal financial burden is minimised (National Statistical Office, 2008). The rationale behind this is that the government considers that technology plays an important role in learning, particularly at the undergraduate level. Other countries, too, have followed this route in universities. Metz (cited in William and Sosin 2005), for example, reports that over 90 per cent of public universities in the USA provide a wireless LAN connection. Moreover, it has been claimed that computers with wireless connection have been widely used among learners, and are considered important as a tool to support learning because they provide learners with opportunities to acquire knowledge at any time and in any place (William & Sosin, 2005). In the situation in which the current study was conducted, the university provided free personal computers to all learners in their

first year of enrolment and free wireless connections were available at anytime and anywhere at the university.

Another issue regarding the use of computers in classroom instruction concerns the capacity of the computers used. In circumstances where the equipment lacks advanced technology such as a high-speed modem or an efficient network, the capabilities of the computer are affected (Fitzsimmons et al., 2002; Intrat, 2007). This indicates that while many computer applications serve meaningful purposes in learning, the selection of technology which most suits the learning environment where the study is taking place is the main priority for the classroom developer. At the university where the current study was conducted, a high-speed network was available for learners, so this particular issue was not relevant.

In addition, the integration of technology in reading instruction may not be effective because of the type of layout and formatting available on the computer monitor, which may not suit some types of reading exercises on computers. For example, those which contain long texts may not be seen clearly on the computer screen (Towndrow, 1999). As a result, the learning strategies used in the traditional F2F setting may not be effective when technology is integrated into the reading instruction.

As well as the limited capacity of computers, concerns have been expressed about the inappropriate use of computers, which appears to have a negative impact on reading effectiveness (Chun, 2001). For example, in one study, parents expressed concern about their children's overuse of computers in surfing the Internet and in playing games rather than studying; as a consequence of such studies, the literacy benefits from computers have been questioned (Radi, 2001). From a different perspective, Chun (2001) argues that the classroom use of computers must incorporate learning activities or materials that keep learners focused on their assigned tasks. Although this can be a drawback, the issue was not a primary concern for the present study, since the participants were adults.

Another drawback associated with computers is the extent to which teachers have computer experience. For example, a study by Hubbard (2005) revealed that lecturers

that work with computers are novices (Hubbard, 2005). The finding correlates with a study in Korea, which revealed that although ten of twelve teachers rated their computer abilities as average or good, limited types of technology including the Internet and CD-ROM were mainly used in classrooms. Furthermore, another study showed that many teachers do not attend any computer training (Park & Son, 2009). It is therefore unsurprising that those studies found that teacher training should be provided for lecturers regularly to enable them to use technology at a more advanced level.

A study by Lee and Im (2006) found that the participants believed that they would achieve less academically in a fully online classroom. The main reasons for this were related to the participants' beliefs concerning insufficient support from the administration of the university, the lack of relevant learning materials, workloads, and technical problems caused by online learning (Lee & Im, 2006). This suggests that learners in some countries may not be ready for a fully-online learning mode or instruction which is solely computer-based. To further develop fully online instruction effectively, it has been argued, adequate support from lecturers needs to be provided for learners, and the technical problems caused by the technology need to be minimised (Khamkhien, 2012). In addition, lecturers need to be aware of the amount of work assigned to learners and need to supervise the selection of relevant learning materials (Lee & Im, 2006).

With regard to the Thai educational context, there appears to be a lack of readiness to implement a fully online learning mode. For example, the results from a Thai government study have indicated that a fully online mode of instruction may not currently be appropriate for Thai learners, as learners are not yet sufficiently self-directed to fully work on their own (Center for Educational Technology, 2003). That study found that, even though the use of LMS assists teachers in tracking learners' progress in learning, some learners do not perform the assigned tasks at their own pace; instead they rely on teachers to assist them (Center for Educational Technology, 2003). In relation to this issue, it has been argued that Thai learners do not have sufficient English skills to understand some difficult learning materials on their own (Center for Educational Technology, 2003). These studies indicate that Thai learners are not familiar with SDL, and, therefore, that within the Thai

educational context, fully online learning may not be the most appropriate direction to pursue at this stage.

In addition, Thai learners may not be able to employ a fully-online learning mode effectively because some learners may not have sufficiently well-developed computing skills (Center for Educational Technology, 2003). A study by the Thai government has indicated that although online learning serves meaningful purposes in learning, Thai learners are not yet familiar with it (Center for Educational Technology, 2003). It would, therefore, appear from the literature that the use of online learning needs to be blended with F2F instruction to promote the most effective forms of learning (Center for Educational Technology, 2003). In relation to Thai education and the present study, a fully online form of instruction is not suitable in any case, as learners are required to attend classes in all subjects as set by the curriculum.

Consideration of this argument has guided the design of this study, which consequently takes a BL approach as opposed to a completely online one. This strategy is described below. To further investigate how BL can be conducted in classroom instruction, the following section identifies the issues related to BL that informed the current study.

### **3.3 Blended learning**

BL has been defined from a range of perspectives. Historically, the two different types of instruction, F2F and distance learning, were separated. F2F instruction was mainly based on instruction from a teacher, with interaction in a live synchronous environment, while distance learning systems were mainly based on self-access materials in an asynchronous learning environment (Dennis et al., 2006). As computer-based technology grew, the two different modes of instruction became combined, and the term “BL” was introduced to describe integrated traditional instruction and e-learning (Dennis et al., 2006). Over time, the concept of “BL” has developed, and there are now a number of different interpretations of this term.

### **3.3.1 Types of BL**

It has been argued that the term “BL” has been used to describe different concepts: the delivery media used for instruction; different instructional methods; and online instruction with F2F instruction. The first two types are too broad to be useful, as most instruction consists of a combination of media and instructional methods (Dennis et al., 2006), for example, the integrative use of formal lectures, classroom discussions, assignments, group projects, and examinations in learning (Masie, 2006). Therefore, the third description of BL as online learning combined with F2F instruction is suggested as the most appropriate definition (Dennis et al., 2006).

BL has also been described as the combination of F2F instruction and online learning, with learners spending minimal F2F time in the class (Dziuban et al., 2006). Moreover, BL has been seen as the integration of self-access learning, instructor-led training, distance learning, and the delivery of multiple learning tools in both digital and printed form, which enable learners to achieve the desired learning outcomes (Ziob & Mosher, 2006). For the purposes of this study, BL can appropriately be seen as the integration of both synchronous and asynchronous online learning with traditional F2F instruction. As a result, online learning is used in classroom instruction and is also adopted outside classroom sessions to support learners' learning to replace the use of paper-based materials and to provide more channels of communication, which are limited in general traditional F2F instruction.

### **3.3.2 Approaches to BL**

The approaches which are most appropriate to the present study are presented below.

Horn and Staker (2011) have identified six different modes in which BL can be incorporated into learning. They are as follows:

1. Face-to-face driver: instruction takes place on a F2F basis throughout the course, with online learning used only to supplement or remediate learning outside classroom sessions or in a computer lab.
2. Rotation: instruction rotates on a fixed schedule between traditional F2F instruction and online learning. For example, learners may spend one

classroom period online and spend the remaining classroom period F2F in order to reinforce learning.

3. Flex: instruction is primarily conducted online throughout the course, while the teacher provides F2F instruction through one-on-one or small group tutoring on a casual basis or if needed.
4. Online: instruction is solely conducted online throughout the course.
5. Self-blend: online learning is integrated in a supplementary way into traditional F2F teaching.
6. Online driver: the online driver is mostly conducted remotely. Learners may meet with the teacher only at the beginning of the course or when learners are required for F2F check in.

The first mode of BL, the F2F driver, is appropriate for the instruction of English reading comprehension in the Thai context because, as described above, most Thai universities only offer full-time courses on a F2F basis and classroom attendance is a part of the evaluation in all subjects. Further, the study was conducted during the semester in which participants had to attend other classes after the designed English reading courses. Therefore, the F2F driver mode in which the instruction was mainly conducted at the university would not affect other classes.

With regard to approaches, Graham (2006) has divided BL instructional approaches into three main categories:

1. Enabling blends: focuses on the flexibility of learners by enabling them to have opportunities to learn using various modalities.
2. Enhancing blends: the system may not totally change the pedagogy which has been employed in the F2F class, but will further support the current pedagogy, such as the use of online learning resources or materials to support traditional F2F instruction.
3. Transforming blends: focuses on pedagogical change, such as a change from the previous model in which learners are mainly a receiver, to an instructional model encouraging them to obtain knowledge from live interaction; this type of BL cannot be done without the enhancement of technology.

Each of these categories, it is argued, serves a different learning purpose. The first category enables learners to access learning materials at their convenience. This approach is beneficial for learners when they need to review learning materials, and is also useful for learners that may not be able to physically attend a class. The second category provides the lecturer with an opportunity to enhance instructional approaches by combining strategies; for example, by using reading strategies that have been taught in F2F instruction, integrated with online activities that can increase students' motivation. The third category can ultimately assist learners to become autonomous learners as they take a greater level of responsibility for their own learning. For example, learners may be assigned activities where they have more opportunities to work at their own pace and pursue materials that are specifically related to their own interests. In relation to the present study, each of these approaches is useful in terms of supporting different aspects of reading development.

### **3.3.3 Issues related to the development of blended reading instruction**

The issues related to the implementation of BL in the classroom are divided into two main issues. The first issue concerns how F2F instruction can be blended with e-learning instruction effectively, and the second issue concerns consideration of the use of e-learning applications in the classroom.

With regard to the first issue, the blend of two instructional modes, namely F2F and e-learning, it is asserted that BL is not a comparison of which mode is better than another. Rather, it concerns how to integrate the strengths of the two modes of instruction to be used appropriately for different learning purposes in the classroom (Elsenheimer, 2006). The strengths of the applications of and benefits between the two modes of instruction are identified in Table 5.

**Table 5 Strengths and benefits of the classroom between F2F and e-learning**

	F2F instruction	e-learning
Strengths	<ul style="list-style-type: none"> <li>• Long lesson duration</li> <li>• Culture team building</li> <li>• Motivation and collaboration</li> <li>• Problem-solving and coaching</li> <li>• Role-playing and hands-on practice</li> <li>• Wrap-ups and learner's questions</li> </ul>	<ul style="list-style-type: none"> <li>• Short, focused lesson</li> <li>• Stable concrete materials</li> <li>• Systems training and simulation</li> <li>• Introduction and refreshers</li> <li>• Prerequisite work</li> <li>• Assessment</li> </ul>
Benefits	<ul style="list-style-type: none"> <li>• Interaction and dialogue with leader</li> <li>• Interaction and collaboration peers</li> <li>• Freedom from interruptions</li> <li>• Observable study and practice</li> <li>• Greater flexibility and customisation</li> <li>• Dynamic feedback and negotiation</li> </ul>	<ul style="list-style-type: none"> <li>• Easy access to references</li> <li>• Flexible scheduling, self-study</li> <li>• Greater focus on materials</li> <li>• Greater consistency</li> <li>• Automatic tracking</li> <li>• Ease of updating</li> </ul>

Based on: Elsenheimer (2006)

As shown in Table 5, Elsenheimer (2006) argues that both types of instruction serve different learning purposes, as F2F instruction is suitable for a long period of instruction, and may enable the lecturer to design instruction which promotes interaction between the lecturer and learners, and learners and learners, during the classroom session. Moreover, it has been asserted that learning can be motivating and controlled by the presence of the lecturer. On the other hand, Elsenheimer (2006) argues that online learning is suitable to use for practice because learners are given immediate feedback, while online learning is available for self access, and learners



have multiple sources from which to research information from the Internet and other online applications (Elsenheimer, 2006).

With regard to the second issue, the employment of e-learning applications in a classroom, there are three crucial factors to be considered for the design of BL instruction: the audience, the subject matter, and the applications (Dynea, 2006). These factors are discussed below.

Regarding the first factor, the audience, it is important to consider the learners' experience with technology so that the most appropriate type of computer applications can be used in the classroom (Elsenheimer, 2006). To support BL, it has been maintained that learners should be provided time to become familiar with the use of computers and connect to online facilities (Garnham & Kaleta, 2002; Hofmann, 2006). This is particularly relevant in Thailand, given that some Thai learners have been found not to have adequate computer skills (Center for Educational Technology, 2003).

The second factor, the subject matter, is related to learning objectives and learning communities (Hofmann, 2006). In relation to learning objectives, it has been asserted that BL should enhance learning without focusing too much on technology (Hofmann, 2006). In the present study, the most important goal was to examine the extent to which BL assisted in the development of reading comprehension in Thailand. This specific context has led to the selection of certain ICT applications. In relation to the creation of a learning community, it has been maintained that learning should occur both inside and outside the classroom session (Terry et al., 2003; Hofmann, 2006). This study takes into account that there are between 40 and 100 learners in a Thai English class. Therefore, a BL design which encourages learners to share ideas with classmates and enables the lecturer to provide answers to the whole class or immediate feedback for a large number of learners would minimise the problems caused by a large number of learners.

The final factor is the selection of appropriate online learning applications. The issues regarding this are classified as follows. Initially, if an online learning application is inappropriately selected, learners would spend more time

understanding the learning materials, especially without the presence of a teacher (Guo & Willis, 2006; Huang & Zhou, 2006). Hence, it is recommended that classroom applications need to be selected according to their interactivity, the visual clarity of the materials, and the activities that reinforce learning retention (Dynia, 2006). Secondly, the selection of online applications in BL should not overemphasise one type of online element (Hofmann, 2006). As shown in BL research, some types of computer applications are not appropriate for the learning materials used for the instruction, and learners may not have experience with them. For example, the use of email may not be appropriate for a large number of learners (Sosin et al., 2004). Finally, the applications employed in the instruction should be affordable for all learners (Hofmann, 2006). Although, as mentioned earlier, the high cost of computers and applications were not be a main concern in the present study, the selection of free and basic computer applications is more appropriate for Thai learners so that they can access information from anywhere with any computer.

#### **3.3.4 The role of BL in skill development**

BL has been shown to make a contribution to the development of language skills. For example, in one study students wrote better papers, obtained higher scores on examinations, produced better project work, and increased their reading comprehension (Chun & Plass, 1996; Garnham & Kaleta, 2002). In another study, BL was shown to have a positive impact on all four macro skills: reading, writing, listening, and speaking (O'Leary, 2008).

With regard to reading skill development, BL has been shown to develop the reading skills of learners, for example the majority of learners (80 percent) in a previous study were able to understand the text and identify main ideas (Alseweed, 2013). Another study showed that learners made significant learning progress after obtaining BL reading instruction (Nguyen, 2011).

There are many reasons why BL influences reading learning, and they are described as follows:

Initially, BL enhances the lecturer's ability to organise classroom instruction in many ways. For example, the online learning content provider used in BL informs the

teachers immediately when learners have difficulties in learning, and therefore it enables the teacher to help the learner solve problems in the assigned tasks (Horn & Staker, 2011). Lecturers are also able to employ ICT applications in language learning tasks to promote learning, such as blogging, which broadens learning opportunities outside the classroom (Zare-ee et al., 2009).

Secondly, it has been argued that learners benefit from BL; for example, they have more time to contact each other with the enhancement of ICT (Zare-ee et al., 2009). In one study, the enhancement of e-learning applications used in the BL class made learning more motivating for the learners; they shared ideas with their friends, especially the shy learners (Blankson & Kyei-Blankson, 2008). Further studies have found that the stress and anxiety experienced in learning to read is reduced by the learning applications used in BL (Suanpang et al., 2004; Manisah & Zawawi, 2005; Curcher, 2011). In addition, the support from F2F instruction and the ICT applications used in BL such as video conferences, electronic discussion, and email, which provide virtual learning experiences, enhance learning (Liu et al., 2002). BL also promotes the idea sharing among learners and provides greater opportunities for collaboration (Arano-Ocuaman, 2010). Finally, BL enables learners to check their understanding of the designed quizzes and to review learning materials through the enhancement of e-learning (Kendall & Prowse, 2005).

This also corroborates studies in Thailand which have shown that the implementation of BL has a positive influence on the development of knowledge, as learners are able to make use of both F2F tutoring and online resources (Bunchua, 2006; Sriwongkol, 2008; Wannapiroon, 2008; Chantem, 2010). For example, in two separate studies, learners were able to create concept maps, link new and previously-known information, share knowledge with their peers, and develop their critical thinking skills (Sriwongkol, 2008; Wannapiroon, 2008).

However, these examples of studies where BL has been found to increase skills can be countered by others that have identified issues that have an adverse impact on the development of learners' skills.

First, some modes of BL would not be appropriate to be employed in all classrooms as, for example, in synchronous BL instruction where learners have to attend live

online instruction but later have to attend other subjects taught using F2F instruction. In this way learners are not able to study the reading subject fully online at home (Negash et al., 2007). This issue relates to Thai education, as most universities in Thailand are conducted on a F2F basis, where learners are required to attend classrooms as a part of the evaluation. Therefore, a mode of BL employing live online instruction or other online learning applications where learners are required to study remotely may not be appropriate.

Secondly, it is claimed that the ICT facilities provided for participants are not sufficient for a large number of learners and lead to poor learning outcomes, as learners do not have enough time for practising (Guo & Willis, 2006). Hence, this is another concern for BL, where lecturers need to be ensured that learners have equal access to ICT facilities.

The effectiveness of BL in skill development has been compared with other instructional approaches, including the fully-online learning mode and traditional F2F instruction. The studies indicate that although BL has been addressed as an instructional approach, enhancing the development of skills, it is still questionable whether BL may suit all learning environments and different learning contexts.

It has been found in small number of studies that that the success rate of BL instruction was equal to or higher than traditional instruction and fully online instruction (Dziuban et al., 2006; Alseweed, 2013). In contrast to the above findings, however, a study in the USA showed that learners in the F2F class scored higher than in the BL class. It has also been asserted that learners are not familiar with BL instruction and methods of evaluation (Arano-Ocuaman, 2010). A study by Terry, Lewer, and Macy (2003) revealed similar findings, with the participants that were taught online performing the poorest, and the participants in a traditional setting performing the best. However, the differences in scores between the traditional and BL classroom were not statistically significant. In contrast with other findings, one study showed that learners in the fully-online class attained significantly higher grades than with either the F2F class or BL class after the instruction (Nguyen, 2011).

### 3.3.5 Role of BL in the development of self-directed learning (SDL)

This section reviews research into the role of BL in the development of self-directed learning.

A self-directed learner has been described as a learner that is motivated, independent, and active in learning, is engaged in classroom learning, and is able to make use of a range of different learning approaches according to the specific situation (Sibthorp et al., 2011). SDL, which is also known as autonomous learning (Blin, 2004; Benson, 2007; Ciekanski, 2007), and lifelong learning (Grow, 1991; Sibthorp et al., 2011), has been identified as learning that is controlled by the learner in the sense that he or she identifies materials that are meaningful, and exercises autonomy over the learning process (Grow, 1991). SDL can be said to be present when learners are able to construct meaning out of the learning materials, can identify learning goals and appropriate learning strategies using information both from the learning materials and other external information (Pintrich, 2000), and can take responsibility for their own learning (Pintrich, 2000), as Shetzer and Warschauer (2000, p. 176) suggest in the following:

Autonomous learners know how to formulate research questions and devise plans to answer them. They answer their own questions through accessing learning applications and resources on-line and off-line. Moreover, autonomous learners are able to take charge of their own learning by working on individual and collaborative projects that result in communication opportunities in the form of presentations, Web sites, and traditional publications accessible to local and global audiences (Shetzer & Warschauer, 2000).

The relationship between BL and SDL has been explored in a number of studies. First, research has found that the flexibility inherent in BL can enhance SDL as follows:

Learners are able to access learning materials in their own time and focus on the tasks assigned (Garnham & Kaleta, 2002; Kendall & Prowse, 2005; Motteram, 2005;

Graham, 2006; Huang & Zhou, 2006; Vaughan, 2007; Curcher, 2011). As a result, BL helps learners to be more self-directed (Vaughan, 2007).

Secondly, in a BL environment learners can monitor learning progress with a click of the mouse (Manisah & Zawawi, 2005). In a study in China, where educational approaches can be viewed as similar to those in Thailand, learners changed their behaviour once they were introduced to e-portfolios, which allowed them to monitor their learning (Huang & Zhou, 2006).

Third, BL can enhance student engagement, a construct which has been shown in a number of studies to increase learners' sense of responsibility for their own learning (Bunchua, 2006; Guo & Willis, 2006; Horn & Staker, 2011). In the classroom, learning materials that can be accessed through various online sources that suit learners with different styles of learning were found to increase learners' engagement (McCray, 2000; Wannapiroon, 2008). Outside the classroom, learners may share comments and collaborate with friends in social networks (Curcher, 2011). One study found that learners voluntarily sought out other English reading activities, including speech contests and a singing contest conducted by the university (Guo & Willis, 2006).

To sum up, although research has been conducted to investigate the effects of BL in the development of learners' skills and SDL, the issue needing investigation is the effectiveness of other online applications used in instruction, as most lecturers in Thailand employ asynchronous forms of e-learning, such as websites and self-developed e-learning applications, rather than integrating synchronous e-learning into the classroom (National Statistical Office, 2008). Secondly, there are few studies investigating the implementation of online applications in promoting intrinsic motivation in reading (Chun, 2006). Thirdly, the previous results comparing the effectiveness of BL in skill development compared to other modes of instruction are still inconsistent regarding different learning contexts (Nguyen, 2011). More importantly, most studies that have investigated the situation in Thailand have not focused on how BL affects the development of learning skills. Therefore, the present study would fill some of the gaps in previous BL research.

### **3.4 Conclusion**

The research literature has shown that there are many advantages to the employment of ICT in education. These include an increase in the motivation to learn, the development of language skills, the promotion of problem-solving skills, and increased collaboration in the classroom. As technology has developed, online learning has been used in education in different modes of instruction to enhance learning; however, the appropriateness of a fully-online mode of instruction has been questioned for learners that are not autonomous, as has its suitability in Thai higher education where classroom attendance is required. As a consequence, it is argued that BL, which combines traditional F2F instruction and online applications, is more likely to be an effective approach in developing the English of EFL learners than fully online programs.

## **CHAPTER FOUR: Research Methodology**

The study was conducted at a Thai university using undergraduate participants enrolled in English language programs. The institution was selected for the study because it was large, with about 4,500 learners spread across seven campuses at the time the study was conducted, offering a large pool of potential participants from which to draw. In addition, partly because of its size, the university has learners from a wider range of educational and social backgrounds than some other universities. It was envisaged that such diversity could enrich the study. Moreover, at this particular institution, English is included as a subject in the standard curriculum for all fields of study, which also increased the possibility of obtaining a sufficiently large sample of participants for the purposes of the study. It was believed that the findings from this study would be beneficial for any subsequent review of English language instruction that took place at the university, as well as for other universities using the standard curriculum under the management of the Ministry of Education.

The study used a mixed method approach, which employed both qualitative and quantitative strategies in both the collection and analysis of the obtained data (Cresswell, 2005). To identify the perceived barriers regarding English reading learning, a focus group was conducted with a small group of participants, and then the questionnaire was later distributed to larger number of participants. To compare the learning outcomes and their perception of the identified learning barriers between the traditional F2F and BL classes, a pre-test, post-test and evaluation containing a 5-point Likert scale and open-ended questions were used in the study. Further details of each phase are described below.

The study was divided into three consecutive phases: first, a preliminary investigation into learner barriers to learning; second, an evaluation of the BL program in terms of learning outcomes, using a pre-test/post-test model; and third, an evaluation of the BL program from the perspective of the participants themselves.



With regard to the study, the conceptual framework was developed. The aims were to identify the variables related to the study and to clarify the relationship between the variables, as shown in Figure 1.

**Figure 1 Conceptual Framework of the Study**

<b>Phase</b>	<b>Data collection</b>	<b>Research outcome</b>
Phase 1: Preliminary investigation of learning barriers	<ul style="list-style-type: none"> <li>• Focus group</li> <li>• Questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>• Learners' perceived barriers to reading comprehension</li> <li>• Learners' perceptions about the use of technology in the classroom</li> </ul>
Phase 2: Pre-test/post-test investigation into student learning	<ul style="list-style-type: none"> <li>• English language pre-test</li> <li>• Technology-based reading class and control group taught in the 'traditional' mode</li> <li>• English language post-test</li> </ul>	<ul style="list-style-type: none"> <li>• Comparison of learning outcomes between 'traditional' and technology-based reading classes</li> </ul>
Phase 3: Investigation into learners' perceptions of learning barriers	<ul style="list-style-type: none"> <li>• Post-course 'evaluation' questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>• Learners' perceptions of the advantages and disadvantages of technology-based reading classes</li> </ul>

#### **4.1 Phase One: barriers to learning: focus group and questionnaire**

In order to address the first research question, Phase One comprised an investigation into the barriers perceived by participants as limiting the development of their reading comprehension skills in their regular instructional environment. Phase One was conducted in academic year 2008, semester two. This Phase incorporated two data-collection strategies: a focus group interview and a questionnaire. The information derived from the focus group informed the development of the questionnaire using repeated questioning forms, which were subsequently administered to a larger group of participants. The details of each of these steps are presented below.

#### **4.1.1 Focus group**

A focus group session was held with a total of nine participants that were enrolled in an English reading subject in semester two of the 2008 academic year. The participants were similar in age, level of English proficiency, and educational experience, since it has been shown that groups of homogeneous participants are more productive and work better together (Stewart et al., 2007). They were enrolled in the English reading class taught using a F2F approach provided by the university. The members of the focus group were taken from the same large cohort who would be invited to complete the questionnaire and, therefore, shared their characteristics. They were also similar in terms of age, proficiency levels, and experience to the participants that would later be the participants for Phase Two and phase of the study, although the latter would be drawn from the 2009 student cohort. The focus group approach was selected to provide information for the development of the questionnaire instrument to be used with the larger population, as it was believed that “the interaction of the members of the group would generate a depth of data through the synergies of the group that would not necessarily be elicited in individual interviews” (Chomchaiya & Dunworth, 2008).

In order to select participants for the focus group, the staff members at the university were asked to randomly select learners that were enrolled in English reading comprehension subjects. Those learners were then contacted and those that agreed to participate in the study were invited for the focus group interview. As with all participants in this study, those that agreed were provided with an information sheet about the study and asked to sign a letter of consent. The information sheet provided information about the study, and also informed prospective participants that the focus group interview would be recorded, that they could withdraw from the study at any time, and that the results from the study might subsequently be used to inform future teaching practices. Those learners that participated in the focus group interview had not met the researcher previously in any capacity and were not made aware that the researcher was a member of the staff at the university so that they would not feel under pressure to participate or to present a particular point of view.

A decision was made to hold only one focus group interview with nine participants. While this single group is unusual in academic research, the decision was made for

three reasons. First, the data from the focus groups would be used to confirm (or alternatively extend or question) the issues that had already been identified in the scholarly literature rather than identify “new” ideas. Second, there was limited time available in which to conduct this phase of the study. Third, the focus group data would only help identify what was to be the major data collection instrument of this first phase (the questionnaire) rather than act as the first phase itself. The focus group was facilitated by the researcher and recorded, and later transcribed for analysis. In addition, a scribe took notes during the session in order to provide synchronous feedback to the participants and ensure that their views were being accurately presented. The focus group took place on the university premises in a closed private room.

Prior to the focus group interview, a number of open-ended questions were prepared with the purpose of obtaining information from the participants regarding their attitudes toward reading in Thai and English, their reading habits, the kind of materials they used in the classroom, and the kind of issues they experienced in their reading instruction classes. A list of the prepared questions is provided in Appendix C.

At the beginning of the focus group, the tape recorder was checked to be certain that the quality of the recording was appropriate from all parts of the room. At the commencement of the session, the participants were offered refreshments and invited to introduce themselves as a way of “breaking the ice” and helping them to feel comfortable about their participation. The chairs were set in a circle and all of the participants were asked to answer the questions so that all members of the focus group had a chance to present their views; they were also encouraged to discuss the questions with their friends, without pressure, and the participants were assured that the group did not have to reach any kind of consensus in their ideas (Krueger, 1994).

Although the researcher tried to make the participants comfortable during the focus group session, encouraging them to share their perceptions regarding their classroom environment and their own English reading difficulties, it was recognised that some participants might provide positive answers to please the interviewer. This issue was minimised by informing the participants verbally and in writing that honesty was

important, as it would help the researcher develop better English reading environments in the future. In addition to this, the participants were assured that the information they gave would be anonymous and would be kept in a secure location, and would not affect their scores or grades.

When the participants were seated, a diagram of the seating arrangement was drawn so that it could be used for checking purposes later, if necessary. The focus group session was recorded in two ways, as suggested by Bertrand, Brown, and Ward (1992). A scribe was appointed to take notes during the session to ensure the completeness of the information, and the session was also recorded by the use of sound recording devices. The scribe was also requested to note particular paralinguistic features such as body language, as it was envisaged that this combination of verbal and physical data might later help contribute to the analysis, thus “supplementing the oral text and enabling a fuller analysis of the data” (Raibee, 2004, p. 56).

All of the comments given in response to each question were summarised and read back to the participants in order to reduce bias and to promote accuracy. In addition, the notes taken by both the researcher and the assistant were crosschecked immediately at the end of the discussion to ensure the correctness of information and to clarify vague information, as suggested by Krueger and Casey (2000). It was acknowledged that bias may occur during this type of study, which involves the co-production of data between the researcher and participants (Corbin & Strauss, 1990). The conformability of the information was an essential component for organising the focus group and subsequent analysis, as this is an important consideration in qualitative research (Lincoln & Guba, 1985).

The data were analysed using content analysis (Cresswell, 2005; White & Marsh, 2006). Content analysis can be used in various types of research, including quantitative, qualitative or mixed mode approaches (White & Marsh, 2006) and in both deductive and inductive ways (Kohlbacher, 2006; Elo & Khyngas, 2007). The study followed the procedures of inductive content analysis as suggested by Elo and Khyngas (2007), which aimed to identify any possible themes related to the issue. The process of analysis is described below.

Initially the comments from the participants were typed onto a coding sheet. Then, the script was coded using a process of open-coding. The analysis was mainly based on three sources, the studies related to English reading difficulties, theories regarding the learning difficulties as references, and the experience of experts in English reading instruction. The phrases or words mentioned by the participants were grouped together, and they were developed and transcribed into categories. Finally, the developed coding matrix and the categories were presented to three English lecturers for comment on the appropriateness of the codes developed, as part of the validation of the coding process.

The results from this process are described in Chapters 5, in the results section.

#### **4.1.2 The questionnaire**

The data obtained from the initial focus group were used, along with the understanding obtained from the scholarly literature, to help develop a questionnaire that was then distributed to a large group of participants from the same 2008 group as the focus group members, i.e. participants enrolled in an English reading subject, although the questionnaire was not submitted to those focus group participants. The questionnaire was based on three main issues: the learning barriers faced by participants that affected English reading instruction inside and outside the classroom, particularly emphasising the factors mentioned in the focus group; the identification of language skills to enhance the participants' English reading comprehension; and the level of interest in the BL approach to English reading instruction. All of the participants were also informed that their responses would remain confidential and were told that they could withdraw from the study if they felt uncomfortable without affecting their grade results. The participants that agreed to join the study were asked to sign a written consent form. All drafts of the questionnaires during this phase were distributed by the university staff that voluntarily participated in the study. They were not teachers of any subjects taught at a university. The researcher was not in Thailand during this process.

The first draft of the questionnaire was submitted to a number of colleagues for comment. At this stage, some questions that were considered irrelevant or ambiguous were removed. A number of subsequent drafts were developed and tested on peers

and colleagues to ensure that the instrument had face validity (Weber, 1990) before a version was developed that was trialled with a group of 30 learners in an English reading class that agreed to participate in the trial. To ensure the reliability of the questionnaire, the test-retest method was used. The same questionnaire was distributed to the same 30 participants on two separate occasions, two weeks apart. The scores from the 24 closed-ended questions were calculated for correlation by using SPSS. The correlation was .86, which indicates a high level of consistency. Some further amendments were made as a result of this trial. One final check was made using 100 volunteers from three English reading classes in the 2008 cohort to obtain feedback on the clarity, appropriateness, and semantic content of the questionnaire. The questionnaire was again checked for reliability using the same method, and the result was .81. Details of this are in Appendix E. This was higher than .80 or the acceptable correlation between the two sets of scores (Singleton & Straits, 1999).

The final questionnaire comprised 34 questions divided into 24 closed and 10 open-ended questions. The aims of the closed-ended questions were to identify the participants' reading habits in both Thai and English, the reading strategies they employed, and their experience in using computers. The open-ended questions were aimed at expanding on the data obtained from the focus group session and scholarly literature, identifying any other issues which might arise. Those issues that had particularly emerged from the focus group sessions, supported by the literature, related to classroom activities, teaching materials, reading topics, instructional approaches, the learning environment, and the use of computers in the classroom.

Once the questionnaire was finalised, it was distributed to all participants across ten classes by other university staff members, all of whom would be required to enrol in English language reading programs at the university. There were 437 participants in total. This number excluded those that had already participated in the focus group and the other trial sessions conducted earlier. They were from different majors including English, business English, business administration, and management. The 437 questionnaires were distributed on the final examination date by the university's staff without the presence of lecturers. The questionnaire was separated from the exams to maintain the anonymity of the participants and it was collected by

university staff members and was later handed to the researcher. In total, 400 of 437 questionnaires were returned (91.5 per cent), which was a very high response rate, perhaps explained by the fact that it was distributed in a classroom at the end of an examination.

During the coding process, all of the comments were typed on coding sheets. Similar comments were grouped and then developed into coding categories. Each category was tallied for frequency to identify the issues to be considered for the development of the English reading program. Deductive content analysis was used to compare the results from the focus group (Kohlbacher, 2006). The purposes of deductive content analysis were to confirm the results from the focus group and to identify whether there were any emerging themes. The analysis of the results was mainly based on previous literature, the results from the focus group, and the experience of experts in English reading instruction.

Finally, the identified categories were checked by three language lecturers to ensure the appropriateness of the developed coding categories and to be sure that the coding was valid.

## **4.2 Phase Two: Pre-test/post-test investigation into student learning**

### **4.2.1 The design of the instructional program**

In Phase Two, a BL instructional model was designed which combined traditional F2F learning with synchronous and asynchronous online instruction. The design of the syllabus was developed using the data obtained from the questionnaire results obtained from Phase One, and also drew on the existing literature on instructional design and BL instructional approaches, and theories of reading comprehension. At the same time, the syllabus needed to conform to the overall educational directives of the Thai Education Department.

**Figure 2** BL syllabus design process

<b>Preliminary Findings</b>	<b>Theory of Reading Comprehension: Skills, Strategies &amp; Knowledge</b>	<b>Mode of BL</b>	<b>BL Instructional Approach</b>	<b>Overall Educational Directives of the Ministry of Education</b>
<b>The Designed Syllabus</b>				

With regard to the selection of strategies for English reading instruction, the two instructional approaches (traditional F2F and BL) were based on the seven types of research-based reading strategies which have been proven to be effective in reading comprehension instruction (National Reading Panel, 2000 ; Alverman, 2002). The strategies are as follows:

1. Comprehension monitoring (readers learn to be aware of their understanding of the learning content)
2. Cooperative learning (readers co-operate with others to learn reading strategies)
3. Use of graphic and semantic organizers (learning is enabled by the use of illustrations)
4. Story structure
5. Question answering (readers answer questions provided by the lecturer and then are given the correct answers)
6. Question generation (readers ask themselves questions about the text)
7. Summarization (readers learn to identify important ideas from the reading content)
8. Multiple-strategy teaching (readers use several of these procedures in interaction with the lecturer)

The development of the BL English reading comprehension instruction also took into account the processes that enabled the participants to apply appropriate reading strategies so that they could construct meaning from the written content (Stewart & Tei, 1983). Also, it was intended that the selection of the learning materials would provide the participants with opportunities to practice, review, and check their



individual comprehension, and spend time on identifying the structural relationships of ideas presented in context (McGee, 1982).

Scaffolded reading was one of the strategies used in both the traditional English reading instruction classes and blended English reading instruction classes for the development of the participants' English reading comprehension. This is because scaffolded reading instruction is a process by which participants are guided on difficult learning tasks until they master the assigned tasks and can perform them on their own (Rodgers & Rodgers, 2003; Magno, 2010), especially regarding word identification skills, which enhance the reading comprehension of learners for whom English is not their mother tongue (Stahl & Hiebert, 2005; Phunpruek & Mahapontong, 2006; Chomchaiya & Dunworth, 2008).

With regard to the mode of BL used in the experimental group, the researcher employed the F2F driver mode. The F2F driver mode is instruction based on F2F interaction for the entire course, while online learning is used to support learning in and outside the classroom (Horn & Staker, 2011). The BL mode was most appropriate for the study because all of the participants at the university were required to attend the class.

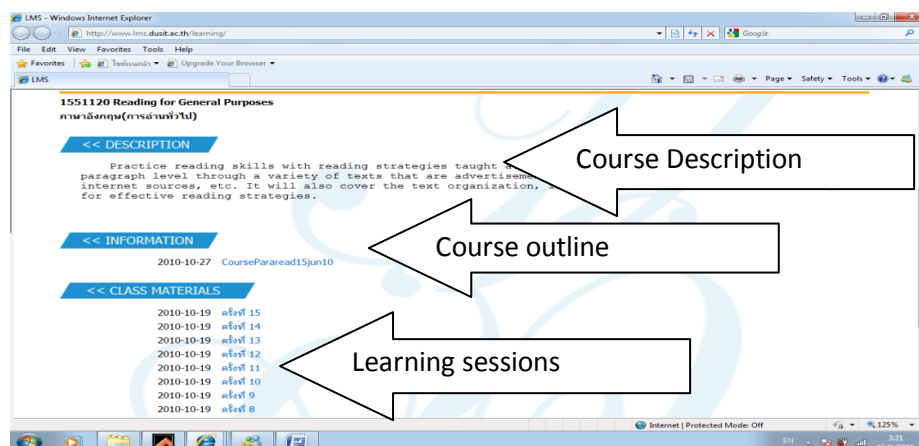
In considering the selection of the medium to be used for the selected BL mode, it was important to take into account that they had to be appropriate for use inside and outside the classroom. In the BL classroom, the range of media included a visualiser (an electrical device used to capture texts on worksheets, illustrations, objects, slides, into a larger display unit), the Internet, PowerPoint presentation files, animations and videos. It was also necessary to bear in mind that the traditional form of instruction, with which the BL program was to be compared, would also contain a range of media. In the traditional F2F class, the learning tools used in the class were mainly paper-based, including the university textbook, worksheets, word cards, and tables, except the visualiser, which is a tool that has replaced the overhead projector in classrooms.

With regard to the employment of the BL instructional approach in the study, the researcher employed the enhancing blend approach described by Graham (2006). The enhancing blend approach is an approach that employs ICT technology to support the English reading pedagogy. Online learning is integrated both in and outside classrooms (Graham, 2006). Furthermore, for the class using BL English reading comprehension instruction, in order to provide channels of communication between lecturer and participants outside the classroom, the participants were able to ask questions by email or MSN Messenger if they had any inquiries regarding the learning content or other issues. In addition, the participants were able to download the learning content and review the previous lesson by watching videos or listening to the audio clips posted on the designed LMS systems. The participants in the BL class were assigned texts to read outside the class; these texts were selected from various sources, including the university database for access to journals and the Internet.

The BL participants were able to review the previous lesson through the learning management system (LMS) designed by the university. In order to access the previous learning content and to download the learning materials, the participants had to log on to the university website and enter their identification number and password. The participants accessing the LMS were then linked to a content page containing subjects included in the university curriculum. The participants were able to select the subject they wanted to study.

After the subject was selected, the participants were taken to a page where they could obtain further information from the description of the selected course in order to have a clear understanding of the learning goals of the selected subject. They were also able to download the course outline from the website in paper-based form (PDF file) and select the learning session they may have missed or review the content they had studied (Figure 3).

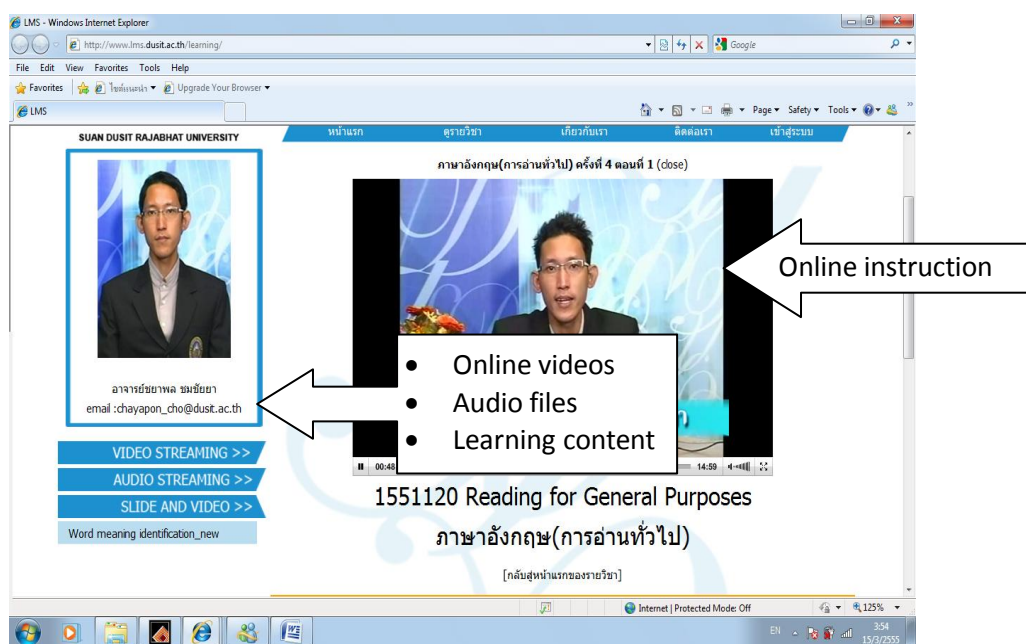
**Figure 3 The introduction page of the subject**



When the learning session was selected, the participants were taken to the next page where they could watch or download the online instructions, the audio files, and learning content in PowerPoint format using the panel icons on the left hand side, as shown in Figure 4.

As shown in the left of the Figure 4, the video streaming button allowed the participants to access instruction through the video. The video was divided into sub-sections, which ranged between 20 and 40 minutes depending on the content. The video was divided into these sections in order to minimise the delay caused by downloading and to allow the participants a break between sections. For the participants that were not able to use a computer at home or had a problem with the Internet speed, which was much slower than at the university, an audio rather than video option was available. The audio file could be saved on audio devices such as IPOD or MP3 players, giving the participants opportunities to study at their own pace without accessing the Internet. Apart from the video files and audio files available on the designed LMS, worksheets and the slide presentation used during the instruction could also be downloaded and printed out.

**Figure 4** The learning session page of the English reading subject



With regard to the traditional F2F English reading classes in the natural setting, the control group participants were instructed using the same English reading pedagogy and the same learning content used with the experimental group. The control classes were mainly assigned to practise the English reading skills in the textbook and worksheets, while the BL participants could practice their English from multiple online sources and the designed LMS provided by the lecturer. Although the traditional class included the use of email, which could be classified as a use of ICT, it was used only for communication about issues or enquiries.

To clearly differentiate between the BL English reading instruction and the traditional F2F instruction in the study, the similarities and the differences between the two approaches are listed in Table 6.

**Table 6 A comparison between the BL class and traditional class in the study**

Measure aspects	The designed blended learning instruction	The traditional F2F instruction
Reading strategies	<ul style="list-style-type: none"> <li>• Seven types of research-based reading strategies based on National Reading Panel (2000)</li> <li>• Scaffolded Reading</li> </ul>	<ul style="list-style-type: none"> <li>• Seven types of research-based reading strategies based on National Reading Panel (2000)</li> <li>• Scaffolded reading</li> </ul>
Content source	<ul style="list-style-type: none"> <li>• textbook</li> <li>• visualiser</li> <li>• computer</li> <li>• PowerPoint files</li> <li>• Internet</li> <li>• animation</li> <li>• video</li> <li>• LMS</li> </ul>	<ul style="list-style-type: none"> <li>• textbook</li> <li>• visualiser</li> <li>• worksheets</li> <li>• word cards</li> <li>• tables</li> </ul>
Revision and self-accessed learning content	<ul style="list-style-type: none"> <li>• library</li> <li>• textbook</li> <li>• LMS</li> <li>• websites</li> </ul>	<ul style="list-style-type: none"> <li>• library</li> <li>• textbook</li> <li>• worksheets</li> </ul>
Channels for communication	<ul style="list-style-type: none"> <li>• F2F</li> <li>• email</li> <li>• MSN messenger</li> </ul>	<ul style="list-style-type: none"> <li>• F2F</li> <li>• email (rarely used)</li> </ul>

#### **4.2.1.1 The process of the program implementation**

The model was implemented in the language classrooms using the control group pre-test/post-test design (Hatch & Lazaraton, 1991; Frankel & Wallen, 2003). The designed English reading instruction was conducted in academic year 2009, semester one. A consent form providing information about the study was given to the university administrator for permission to conduct the study. Permission was granted to conduct the study at the university.

Participants were initially selected by using stratified random sampling (Frankel & Wallen, 2003; Mertler & Charles, 2005). The aim of this sampling method was to select the first-year learners from the English program to be participants in the study because they had to enrol in English reading subjects in both semesters, and, therefore, it was possible for the researcher to organise the instruction in either semester. Additionally, the selected participants were similar in age and in terms of English language background, as they had been art/language majors at the high school level.

Before the BL and traditional F2F programs were implemented, the participants in all of the classes were informed orally and in written form about the purposes of the study. Consent forms were given to them and signed by those that agreed to participate. Those that felt uncomfortable attending the BL class were able to enrol in other available F2F classes. The participants were also informed that they could withdraw from the study or change to classes using another type of English reading comprehension instruction at any time if they felt uncomfortable without affecting their grades. Also, they were reassured of the anonymity of the information obtained from the study (Lincoln & Guba, 1985). They were informed that their names and any personal information that could be linked to them would not be included in the thesis or any published documents.

There were 199 participants enrolled in the English Reading unit at the university, a core subject within the curriculum. All of them agreed to participate in the study. Next, the researcher and another lecturer selected two classes each, according to the teaching schedules of both the researcher and the other lecturer that participated in the study. The 199 participants were already divided into four classes by the university. The university did not allocate classes according to level of proficiency, so each class contained a mix of levels.

Class A (46 participants) and Class B (44 participants) were taught by another lecturer that voluntarily participated in the study using traditional F2F English reading comprehension instruction. Class C (53 participants) was taught by the researcher using BL instruction to ensure consistency of the approach, while Class D (56 participants) was taught by the researcher using the traditional F2F English

reading comprehension instruction. Therefore, the study had three control groups and one experimental group. This choice was made because it was considered important that the same person should teach both the BL class and a traditional class, as the use of different lecturers would have introduced confounding variables into the study because of their inevitable differences in classroom behaviour. The BL class (Experimental) and the traditional F2F (Control) class were taught by the researcher. They were taught for 16 weeks [a full semester] or 45 hours, as set by the university's curriculum. All classes were conducted between 9.00am and 12pm to ensure that instruction was not affected by the different instructional time.

Although the instruction using the same lecturer for both types of instruction would fully fit the control group pre-test-post-test design by Hatch and Lazaraton (1991), the researcher tried to take into account unintentional bias against or towards the BL program by asking the head of the English department and all the staff members of the English program to ask the lecturer, who was from a similar English background and had equivalent teaching experience, to teach the two control classes (Class A and Class B) using traditional English reading comprehension instruction. One lecturer that qualified for the study had obtained both bachelor and master degrees in English, and he/she had 4 years of experience in English reading instruction at the undergraduate level, like the researcher. To minimise the bias of the researcher toward one or another approach of English reading instruction, the pre-designed lesson was strictly followed. The research design of the study is shown in Table 7.

**Table 7 Control group pre-test-post-test design**

<b>Control classes (A, B, D)</b>	<b>Pre-test</b>	<b>F2F program</b>	<b>Post-test</b>
<b>Experimental class (Class C)</b>	<b>Pre-test</b>	<b>BL program</b>	<b>Post-test</b>

Initially, it was hoped that a lecturer other than the researcher would be able to teach the BL program. However, the researcher had much more experience with the BL approach and a higher level of computer proficiency than any other lecturers that were willing to participate in the study. If another staff member had been selected,

they would have needed to be trained in both BL and the use of computers, and it was not possible for the other lecturers to be proficient in these skills within the time available. Therefore, the researcher was the only person that taught the BL class. This is acknowledged as a limitation of the study.

#### **4.2.2 Test-intervention-retest design**

The pre- and post-test aimed to measure the learning progress made by the participants, and to compare whether there was a difference between the scores of the participants receiving English reading instruction using BL and traditional F2F instruction.

The test selected for the pre- and post-test component of the study was the reading component of the London Test of English (no longer available at the time of writing as it has been developed into the Pearson Test of English). This was selected as a tool to measure the level of English reading comprehension of the participants for three main reasons. First, the London Tests of English were, at the time at which the study was conducted, commercially available instruments that had been tested for validity and reliability and have been used with L2 speakers of English by universities. Secondly, the tests had been used as a standardised test to examine the level of English proficiency of participants that speak English as an additional language and has been used as an admission test for many English-speaking universities, for example, Yale University, the Stanford Graduate School of Business, the London Business School, and the Harvard Business School. Finally, the tests were recognised as tests that measure the language skills of non-native speakers of English and have different levels of difficulty, ranging from a basic level of English proficiency (A1) to the advanced level (5). This enabled the researcher to select a test at the appropriate level of difficulty for the class (London Tests of English, 2007).

The tests were obtained from the website <http://www.pearsonpte.com>, which allowed free access to previous versions of the test for research purposes at the time the study was conducted. As the test measured four skills of English reading proficiency, only the reading comprehension sections were used. The selected questions were formed into two sets of reading tests. The two tests were once again administered by the three English reading lecturers that had experience in testing and evaluation to ensure



that the selected reading questions of both tests were related to the designed English reading programs and that they were equivalent. The main purpose was to avoid effects which could have been caused by the tests; to be more specific, the selection of the test and the questions of both tests had to be similar, as shown in Table 8.

**Table 8 Comparison of the pre-test and post-test used in the study**

Pre-test	Type of Text	Skill measured	Number of questions	Question Type
Task one (A)	Job advertisement	Reading comprehension	7	Short answer
Task one (B)	Worksheet	Reading comprehension	7	True/false
Task two (A)	Article	Topic identification	7	Matching
Task two (B)	Article	Reading comprehension	5	Short answer
Post-test	Type of text	Skill measured	Number of questions	Question type
Task one (A)	Job advertisement	Reading comprehension	7	Short answer
Task one (B)	Email	Reading comprehension	7	True/false
Task two(A)	Article	Topic identification	7	Matching
Task two (B)	Article	Reading comprehension	5	Short answer

To ensure that the pre-test and post-test were equivalent and could be used for the comparison of the level of the test-takers' English reading comprehension skills, they were trialled with 15 participants in academic year 2008, semester two, who were enrolled in a reading subject, excluding those that participated in the first phase of the study. The scores were statistically calculated for the level of difficulty of each individual item to ensure that the items were not too easy or too difficult ( $p$ ), and to calculate the level of discrimination ( $r$ ) in order to measure how well the items discriminated between the weaker and stronger learners (Alderson et al., 1995; Weir, 2005) and to measure the internal consistency or reliability of the total test performed by the participants (Weir, 2005). Finally, the correlation coefficient of both tests was calculated to check that the two tests were correlated and that they could be substituted for one another (Frankel & Wallen, 2003) using the Statistical Package for the Social Sciences (SPSS) software.

The results obtained from the trial session showed that the levels of difficulty of the pre-test and post-test were .63 and .57 respectively. The statistical calculation for the

level of difficulty showed that the two tests were at a similar level. The difficulty level of the tests, near .50, was ideal for classrooms in which the participants vary in their levels of English (Alderson et al., 1995).

In addition, the discrimination levels of the pre-test and post-test were similar at .45 and .51, and much higher than the accepted minimum level of discrimination at .15 (Madsen, 1983). Thus both tests were at a similar level in terms of identifying high- and low-performing participants. Moreover, the two tests were in a similar range of reliability coefficient at .88 and .85, above the .80 accepted reliability level conventionally used for research purposes (Frankel & Wallen, 2003).

When the correlation coefficient for the two tests was calculated (Hatch & Lazaraton, 1991; Frankel & Wallen, 2003), it showed that the two tests were correlated with each other at .88, which confirmed the assumption that the two sets of tests were reliable and were suitable to be used for comparing the English reading scores of the participants before and after completing the English reading instruction (Hatch & Lazaraton, 1991).

#### **4.2.2.1 The pre-test and post-test implementation**

In Phase Two, all of the participants in the English Reading unit took the English reading comprehension tests (pre-test and post-test) to measure and compare their achieved level of English reading proficiency in the control and the experimental groups. The pre-test and post-test used the equivalent forms or parallel test method, where the two tests may be slightly different with regard to the specific questions but where the same constructs are measured (Hatch & Lazaraton, 1991; Frankel & Wallen, 2003). The participants were re-informed both orally and in writing regarding the purposes of the study and how the information provided would assist in the development of English reading comprehension instruction in the future. The participants were allowed to see their own pre-test and post-test to check for the improvement of their English reading proficiency. Written consent was obtained from the participants to use the data from the evaluation form in the study.

Both experimental and control groups took the pre-test on the first day of the instruction. After the completion of the course, they took the post-test. The scores

from the pre-test and post-test of the control and experimental groups were analysed, using one-way analysis of variance (one-way ANOVA, available through SPSS software) to compare the scores between the classes taught using the different instruction methods. The Scheffe's Method was used to comparatively evaluate the scores by pair-wising the scores of the classes with more than two groups of samples (Scheffe, 1953), and finally a t-test was used to measure the learning outcomes attained by each class. The outcomes at this stage of the study addressed the research question regarding the effectiveness of the developed instruction using the BL approach in relation to the participants' reading comprehension.

### **4.3 Phase Three: Investigation into the learners' perceptions of learning barriers**

In Phase Three, an evaluation questionnaire was developed to further address the second and third research questions from the perspective of the participant perceptions regarding the barriers to learning classified in the preliminary investigation, as well as the participants' views on the enhancement of BL in the development of their English reading comprehension.

#### **4.3.1 The design of the evaluation questionnaire**

The draft version of the evaluation questionnaire was previously tested on peers and colleagues experienced in testing and evaluation to ensure that the instrument had face validity (Weber, 1990). After that, it was piloted on 20 participants drawn from the learners enrolled in an English reading subject, a group that excluded those that had already participated in the first phase of the study, to ensure the appropriateness of language and semantic content. The results obtained from the pilot study enabled the researcher to adjust the questions to minimise ambiguity.

The final evaluation form used for all classes contained 34 questions, divided into three main sections measuring five different aspects of the study. These were: autonomous learning, the learning environment, classroom instruction, English reading materials, and the learners' English reading strategies. The first section provided general information about the participants regarding gender, age, and experience in using technology in learning. The second section aimed to measure the

participants' preferences regarding English reading comprehension instruction in terms of the five different aspects included in the evaluation. A 5-point Likert scale (Mertler & Charles, 2005) was used to compare the learning preferences in terms of the different measured aspects of the participants that were taught using the two methods of English reading comprehension instruction, namely F2F and BL instruction. The third section of the evaluation form contained six open-ended questions aimed at obtaining more in-depth information on whether the delivery of the reading development program promoted the skills and attributes that encourage SDL in participants.

#### **4.3.2 The distribution of the evaluation questionnaire**

The evaluation was given on the examination date by other staff members of the university without the presence of the teachers participating in the study. As part of the process, the participants were advised that any information they provided would be anonymous, and that they could skip any question that made them feel uncomfortable. They were encouraged to provide honest information by being informed that the feedback would be kept confidential and would not affect their grades. Also, they were informed about the contribution that the researcher would obtain from providing "true" information. To that end the researcher was not involved in the process of supervising or collecting the evaluation forms; the participants were left in a quiet classroom to complete their evaluations. Once the evaluation form was collected, it was handed to the researcher.

After the evaluation forms were filled out and 187 out of 199 forms (93.97 %) were returned, the information from the first and second sections were tallied and later calculated using the SPSS for the average score and standard deviation. In addition, the open-ended comments from the third section of the evaluation forms were analysed with the employment of deductive content analysis (Elo & Khyngas, 2007). The deductive content analysis with unconstrained questions aimed to identify the participants' perception regarding the identified barriers in learning after experiencing the English reading comprehension instruction (Kohlbacher, 2006). The obtained data were typed onto sheets to be later coded. The construct of the analysis was developed from previous literature, the results from the preliminary investigation, and the experience of experts in English reading instruction.

The phrases or words cited by participants were tallied for most frequently issues. After that, the comments from the participants under the same topic were grouped and categorised. In order to clearly identify the similarities, differences, and other themes that emerged, colour-coded themes were created (Miles & Huberman, 1994; Hramiak, 2005). Finally, the developed categories were examined by three language lecturers to ensure the validity of the coding process.

Next, the tallied scores of each coding category were calculated for averages ( $\bar{X}$ ) and standard deviation (S.D) and then were presented in order. The comments of the participants in the traditional English classes and those in the BL class were compared using one-way analysis of variance (one-way ANOVA) calculated with SPSS software. The Scheffe's Method was used in the study to evaluate all of the contrasting scores by pair-wising the score of the classes, which enabled the researcher to compare the differences in the scores of all four classes (Scheffe, 1953). Next, all of the comments were translated into English and cross-checked by a research assistant that had experience in Thai-to-English translation and English reading comprehension instruction in Thailand. Finally, the themes generated from the evaluation form were compared with the information from the test scores and other research conducted earlier.

## **CHAPTER FIVE: Results**

### **5.1 Introduction**

As described earlier, this study aimed to address the following research questions:

1. What do undergraduate learners at a Thai university perceive as the barriers to developing their English reading comprehension in the classroom environment?
2. How does the introduction of a reading development program using a BL approach affect learner perceptions of the barriers to developing their English reading comprehension?
3. To what extent, if at all, does the delivery of a reading development program using a BL approach enhance English reading comprehension?

In order to address these research questions, different data collection tools (see chapter 4 for details) were used at each stage of the study. The results from each data collection process are described in order below.

### **5.2 Focus group**

In the first stage of the study, a focus group was held to explore the participants' perceptions of the learning barriers which may affect the development of their English reading comprehension (see Appendix C). The comments obtained from the participants were used to support and to obtain further information regarding the issues addressed in the scholarly research literature. The main issues relating to learning barriers were classified into: (1) the skills enhancing reading comprehension, (2) reading materials, (3) the English reading instruction employed at a Thai University, and (4) the learning environment. They are discussed below.

#### **5.2.1 General attitudes toward reading**

When asked about reading in English, the focus group participants expressed a positive view about it. These participants gave three main reasons why they enjoyed reading in English: (1) it provides them with opportunities to learn new vocabulary; (2) it is intrinsically enjoyable; and (3) it is relevant to their daily lives.

### **5.2.2 Skills enhancing reading comprehension**

There were three main difficulties from a linguistic point of view that the participants identified as being problematic when reading in English: vocabulary, in particular the meaning of words and words that had multiple meanings; spelling, which they felt made it difficult to memorise the words they were learning; and grammar, particularly sentence structure and tense. Few participants indicated that they used reading strategies to overcome the difficulties they experienced with reading. Some participants stated that they checked for the accuracy of information from a dictionary, particularly for the meaning and spelling of words. However, the most frequently-identified solution to their issues was to consult someone else who was more knowledgeable than themselves, such as foreign friends, parents, and lecturers.

### **5.2.3 Reading materials**

The participants commented that they were required to read different types of materials within their educational program, including conversational texts, newspapers, and articles, following which they were expected to undertake language practice activities. They also followed materials in their classes, although they had some reservations about their usefulness, particularly with regard to the confusing nature of the fonts used and the lack of colour and illustrations within some of them. They felt that the use of illustrations and colour, in those materials that contained them, assisted them in guessing the content of the text.

For example, as one participant commented: “some exercises in the materials may ask us to answer the questions from the dialogue. Some questions are about the characteristics of the characters, and we do not know how to answer. However, if there are illustrated pictures, we will be able to know what they do and how they feel” (S3).

With regard to the second issue identified above, that of confusing fonts, the participants described the different forms that are used in materials, for example the use of italics to highlight key words or information—a convention that is not used in the Thai language. One participant stated: “Sometimes, the author wants to highlight some words, and the words will be presented in italic forms, as a result, they are confusing” (S4). In addition, there was also a complaint about the size of the fonts

used in the materials, which may cause reading difficulties for people that have a visual impairment.

With regard to the topic of the reading material, the key ideas that emerged from the focus group were that the material should be within their fields of interest, for example connected with travelling, general knowledge or beauty tips (which they contrasted with politics, which they did not find interesting), and that the material should be visually appealing; for example, that the text should include cartoons or illustrations. The participants also expressed a preference for “everyday” conversational genres which they found easier to follow than, for example, articles on politics, which might include complex vocabulary as well as technical terms. Texts which contained dense writing, had a complex story, were not illustrated or required an effort to understand appeared to negatively affect their interest in reading. Comments included: “If there is no picture in the book and it contains too many letters, I feel dizzy and do not want to read it” (S5) and “... reading long passages is boring and uninteresting” (S9).

#### **5.2.4 Reading instruction at a Thai University**

In order to investigate the participants’ feelings about how the English reading curriculum and instruction may present barriers to the development of their English language reading comprehension, two main concepts were explored in the focus groups: (1) the English reading curriculum and (2) English reading instruction at their university.

With regard to the English reading curriculum, the participants agreed that the English reading subjects taught in their classrooms assisted them in gaining more knowledge about English grammar, vocabulary, pronunciation, and reading strategies. In addition, the English reading courses also assisted them in identifying their strengths and weaknesses in reading that needed to further develop, for example, word meaning identification and pronunciation of unknown vocabulary.

With regard to instruction, the participants interpreted this as referring to the personal qualities of particular lecturers rather than to a specific methodological approach. For example, some participants referred to their lecturers’ knowledge of their field, and



their capacity to provide assistance and clarification in reading classes. They also identified the negative behaviours of their lecturers; for example they stated that some lecturers were excessively judgemental of their learners, and that some did not pay sufficient attention to the topic of the lesson, but went “off-topic.”

Another issue which the participants reported was the differences in their lecturers’ pronunciation, which they blamed on their lecturers’ native language interference and which they claimed caused them confusion about how a particular lexical item “should” be pronounced. Therefore, the participants maintained that the English reading classes would be more helpful if they were taught by teachers that could speak or pronounce English words correctly, as the teachers could correct their pronunciation and be a model for speaking English.

### **5.2.5 Learning environment**

With regard to the learning environment, it appeared that most of the participants were strongly supported in their English language development by their families, who promoted a supportive learning environment by providing useful resources such as English newspapers and exercises for their children to practise their English skills. In addition, the participants commented that their families encouraged them to practise their English by watching the television news in English, and by using English as the language of communication at home.

Regarding another issue concerning the learning environment, although the participants mentioned that their classmates were supportive, as they usually shared their knowledge and collaborated in classroom activities, it was not the case in the class containing a large number of learners, as they did not pay attention in the classroom.

Although the participants were positive about reading in English, most of them said that they rarely read English outside the classroom because, in terms of reading for intrinsic purposes, texts written in Thai were much more accessible. They stated that they only read English that appeared within their immediate environment, such as English billboards posted on streets, English technical terms presented in Thai materials, English song lyrics, and English commands on mobile phones and

computer software. In order to promote a more effective learning environment, the participants maintained that English should be used as a medium of instruction, as it would enable them to become familiar with the English language and provide them more opportunities to practise English.

The focus group results identified the main issues regarding the learning barriers affecting the development of the participants' English reading comprehension skills. These barriers were classified as internal and external factors. The data from this part of the study then informed the development of the questionnaire.

### **5.3 Questionnaire**

The questionnaire was developed using the results from the focus group and the information obtained from the literature review. The aim of the questionnaire was to obtain detailed information about the learning barriers experienced by participants attending the university's courses, and to identify the participants' experiences of and attitudes towards the use of computer-based technology in the classroom. The results were then used to inform the design of the subsequent BL reading program.

The results of the questionnaire are presented in this chapter according to the main topic areas of the questions asked. These are: (1) the participants' perceptions regarding the three main topics, including internal factors relating to the development of reading comprehension; (2) the external factors related to English reading comprehension; and (3) the employment of computers and ICT in learning. The investigated internal factors were the skills and strategies which the participants employed in English reading and those perceived as difficulties affecting their English reading comprehension. The external factors were the English reading materials used in the classroom, the learning environment, and English reading instruction. The final section identifies the participants' computer experience and their perceptions regarding the advantages and disadvantages of the employment of computers in enhancing the design of the BL instruction of the study. The results are described below.

### **5.3.1 Internal factors: Skills and strategies enhancing English reading comprehension**

The information obtained from the questionnaire provided more extensive information than did the focus group on which learning approaches the participants believed to be the most suitable for their needs, and which reading strategies they used. These data were used to identify the different approaches that would be most suitable for the design of English reading instruction in this study and that would meet the expressed learning needs of the majority of participants.

With regard to the English reading strategies used by the participants, fewer than half the participants surveyed (47%) stated that they used their background knowledge to enhance their reading comprehension. More than 70 per cent of the participants (285/400) stated that they read the whole English reading text before answering the comprehension questions. Although 71 per cent of the participants maintained that they were able to identify the main idea of the reading passage, most of them said that they struggled to define the meaning of the words, with approximately 90 per cent of them tending to rely on a dictionary to check unfamiliar words in a text. However, fewer participants (76.5%) stated that they used context clues to assist them in word identification.

Many English reading difficulties faced by participants (see Appendix J, Table 32) were identified in the open-ended comments of the participants; for example, limited vocabulary, inability to translate the English text, comprehension difficulties, and unknown technical terms. The major problem described by the participants was that they had difficulty with vocabulary. The two main factors which the participants described as limiting their full understanding were their inability to: (1) pronounce words or (2) identify the meanings accurately. In addition, the participants from backgrounds with insufficient exposure to English before attending university had difficulties such as unknown English idioms and lack of grammatical knowledge.

### **5.3.2 External factors: Reading materials and topics**

The results from the questionnaire showed that the materials used in the reading instruction were another important factor affecting the participants' development of their English reading comprehension skills.

With regard to the characteristics of the reading materials which would assist the participants in developing their English reading comprehension (see Appendix J, Table 33), the participants primarily mentioned the visual appearance of the text and its content. With regard to the visual appearance, the participants believed that the learning materials should have illustrations to make their understanding of the reading material easier and to motivate them. The participants also thought that a lot of examples with illustrations relating to the lesson should be provided for the participants. This is similar to the results obtained from the focus group participants who believed that illustrations could aid in their comprehension of English reading texts.

With regard to the content of the materials, most participants suggested that the reading material should be presented with clear explanations and full examples. They believed that the material should be related to the participants' experiences in order to increase their attention to the learning, and it should be simplified by providing word definitions and pronunciations, or that it could be explained in Thai to facilitate understanding. In addition, the participants suggested that there should be more vocabulary exercises, grammar, games and speaking activities integrated into the material, as these could support and stimulate the development of the participants' English reading comprehension.

Another issue related to the content of the material was the reading topic used in the classroom (see Appendix J, Table 34). Topics concerning entertainment, information about customs and the culture of English speaking countries, cartoons and real life, such as travel and sports, were the preferred topics suggested. In addition, fiction, including tales, short stories, and novels were the types of text which the participants appeared to appreciate more than others.

Apart from the features and content of the reading materials, one of the issues that emerged in the study related to the management and facilities of a Thai university, mainly in regard to the availability of the learning materials used in all subjects. The participants commented that there were a number of them who had not received materials before attending their class and they were, therefore, not able to fully understand the lecture.

### **5.3.3 External factors: Learning environment**

The learning environment was an important factor as perceived by the participants. Various learning environment issues were identified, including the physical classroom condition and the learning atmosphere.

With regard to the learning environment (see Appendix J, Table 35), participants expressed the view that the general classroom conditions should be quiet, without any disturbing voices outside the class which might distract the learners' attention from their study, and the classroom should be fully equipped with learning materials such as computers, books, and audio tapes. In addition, they noted that the classroom should be clean and the temperature should be comfortable.

Another issue concerning the classroom environment was the appropriate class size or numbers of learners in one class. The participants suggested that the classroom should not be too large or crowded, as smaller classes would enable the lecturer to organise the lessons more effectively.

In addition to the physical classroom conditions, the participants stated that the learning atmosphere should be relaxing and fun, and that this would facilitate learning. A relaxing atmosphere could be created in a number of ways, according to the participants. These included the lecturer and the learners. For example, lecturers could create a positive learning atmosphere by being friendly and trying to understand more about their learners. Further, they could motivate their learners by posting useful knowledge on the classroom wall and organising activities which enable the sharing of ideas between them and the learners, and between the learners themselves. The participants also believed that the lecturers should pay more attention to all learners by being supportive and caring more about them. On the other hand, participants were also critical of their own behaviour, asserting that the learners themselves should pay attention in class by not talking with friends, and by fully participating in the classroom activities.

### **5.3.4 External factors: English reading instruction**

With regard to the instructional approaches enhancing the development of English reading comprehension instruction (see Appendix J, Table 36), a number of

participants expressed the belief that English reading comprehension instruction should be conducted in an interesting and relaxing way by selecting interesting topics related to the learners' experiences and by providing face-to-face instruction; they maintained that this approach gives them more opportunities to ask more questions than other modes of instruction, and that they would concentrate better on learning when the lecturer is in the classroom.

In addition to this, the participants thought that the learners' understanding should be checked before the lecturer moved on to new learning material. In relation to this, they suggested that lecturers should also be aware of the appropriate speed of the instruction provided. For example, as one participant commented: "Teacher shouldn't teach too fast as it is difficult to understand learning content".

Another issue which emerged from the study was that some of the participants expressed their views on the use of native English speakers in terms of practising their English speaking skills; they believed it would enhance their development of English speaking skills to imitate native speakers.

Finally, the participants stated that lecturers should assign learners more practice, exercises and assessments, as these would enable learners to learn more effectively. The three activities in particular which the participants said they would like to practise were reading, pronunciation and speaking, and vocabulary (meaning identification) skills.

According to the comments given by the participants about the activities they enjoyed doing in the English classroom (see Appendix J, Table 37), they most enjoyed participating in question-answering. This can be generally described as an activity in which learners are assigned to read an article and then they answer questions about the text. The second most preferred activity was reading a text aloud in front of the class, followed by reading dialogues with friends or lecturers to practise both their reading and speaking skills. There were many other activities which the participants liked to do in their English classes, for example, finding word meanings, participating in recreational activities, doing presentations, and practising translation skills.

### **5.3.5 Perceptions regarding the use of computer and ICT in learning**

A section of the questionnaire identified the participants' experience and perceptions regarding the employment of computers and ICT in the classroom. The aims of this section were to inform the selection of an appropriate model and approach to the designed BL English reading instruction and the selection of learning resources which mostly suited the participants. The results are as follows.

#### **5.3.5.1 Computer experience**

Most of the participants (397/400) claimed that they knew how to use computers, and many of them (366/400) claimed that they were able to use different types of computer software. Despite this familiarity, nearly 39 per cent of participants (154/400) mentioned that they had little experience with computers.

Regarding the purposes for which the participants used computers, most of them (398/400) stated that they used computers for work, and 96 per cent of the participants (385/400) used computers for university study. In addition, 90 per cent of them (377/400) said that they used computers for entertainment, and a smaller number, 67.25 per cent, mentioned the use of computers in English learning.

Concerning the use of the Internet, nearly three-quarters of the participants used the Internet at university (70.5%) and at home (74.5%). Less than half of the participants (41.25%) used it at an Internet café, and at their friends' or relatives' houses (34%). Nearly half of the participants responded that they had experienced online lessons at the university; however, only 32.75 per cent spoke of their experiences in online English reading classes.

#### **5.3.5.2 Advantages of using computers**

When the participants were questioned about the advantages of using a computer in English reading classes (see Appendix J, Table 38), they identified many ways in which computers could assist learning. With support from ICT applications, the two main advantages of using computers, according to the participants, were (1) to search for information needed, and (2) the speed of accessing and processing information. Many of the participants said that there was a wide range of information which could be easily acquired by using the Internet. In addition, it was maintained that the ICT

applications enabled the participants to use a computer for communicating with others.

The participants also maintained that the use of computers provided them with the opportunity to practise their computer skills while learning English, and that they enjoyed using computers in learning.

With regard to more specific purposes for the use of computers in English learning, the questionnaire showed that computers were used to ease vocabulary difficulties, mainly in word identification. In addition, participants expressed the belief that computers could also assist them with developing pronunciation skills, as there are many websites or online dictionaries available. Further, the translation software installed on the computers could be used as a tool for translating difficult texts, and movie and audio files could also assist in the development of listening and speaking skills.

The participants further maintained that the activities that they most enjoyed doing on the computer were to support learning (see Appendix J, Table 39). The participants stated that they mostly used ICT for searching for information, such as searching for articles or news linked to learning material, and used the software or websites available on the Internet to identify the meaning of unknown English words or to translate English sentences into Thai. They also used computers for a wide range of activities which would assist them in developing English reading comprehension, for instance, reviewing previous lessons, practice and assessments, and typing a report.

#### **5.3.5.3 Disadvantages of using computers**

The questionnaire showed that although the participants mentioned many advantages of computers (see Appendix J, Table 40), there were also concerns raised about the use of computers in English reading instruction. The participants claimed that the use of the computer may have some negative consequences for learning, resulting from the inaccuracy of the information obtained from the Internet, the reduction in classroom interactions, physical damage resulting from the overuse of computers and other technical problems. The participants identified three main disadvantages of



computers. These were: (1) the inappropriate use of computers during classroom session, (2) the reduction of learning attention, and (3) technical problems caused by computers. The main disadvantage of computers, according to the participants, was that although computers provided opportunities to access a wide range of information, they felt that they might be distracted by content other than that intended and engage in playing games, surfing the Internet, listening to songs or even accessing pornographic websites. These distractions might result in reduced concentration, which was the second most frequent concern of the participants.

The participants also claimed that the technical problems of the computer itself contributed to a reduction in their learning concentration. The primary problem was the quality of the sound and the vision of tracks on the computer, which sometimes could not be heard or seen clearly. Further, the participants expressed concern about the unreliability of Internet connections, which reduced Internet speed or caused a loss of connection during the instruction. Finally, the participants were concerned about the limitations of the use of computers in English learning: that is, their inability to provide as clear an understanding of the learning material as face-to-face learning, as the computer was not able to provide immediate feedback when the participants had enquiries concerning the material.

In addition to the three main disadvantages mentioned earlier, an issue that emerged in the study was raised by those participants that had experienced online learning at a Thai university. These participants suggested that although online learning may bring great benefits to learning, it alone might not fulfil the participants' needs. These participants that had experience with online instruction via video conference learning at a Thai university maintained that the classroom still needed to be managed by lecturers, who could assist in ensuring that the classroom was quiet, provide assistance regarding any of the participants' enquiries and solve any problems which may be caused by the use of computers.

#### **5.4 Evaluation of BL program**

As described in the methodology chapter, there were 199 participants in the evaluation of the development program. These were freshmen majoring in English,

and enrolled in a core English reading subject at a Thai university. They were divided into four classes: A, B, C, and D. Class D had the highest number of participants (56 or 28.14%), followed by Class C (53 or 26.63%), Class A (46 or 23.12%), and Class B (44 or 22.11%). Three classes, A, B, and D, were taught using the traditional English reading comprehension instruction methods. Classes A and B were taught by an English reading lecturer that voluntarily participated in the study, while Class D was taught by the researcher. Class C was taught by the researcher using the BL approach. Therefore, the study had three control groups (A, B, and D) and an experimental group (C).

#### 5.4.1 Pre-test and post-test results

**Table 9 Comparison of reading scores prior to the English reading instruction, classified by classes**

Participants' English reading scores	Class A (n = 46)		Class B (n = 44)		Class C (n = 53)		Class D (n = 56)	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Average English reading scores	13.85	3.92	14.73	4.20	14.64	3.82	13.82	5.61

On the face of it, it appeared that there was a considerable difference in the standard deviation and mean reading scores between the highest and lowest scoring classes. For this reason, a one-way analysis of variance (One-way ANOVA) was conducted to establish whether the difference was significant or not. The results, shown in the table below, indicate that the participants' reading scores, prior to the commencement of the different reading instruction programs, were not significantly different ( $p = .621$ ). From this it can be concluded that all of the participants commenced their respective reading instruction programs at similar levels of ability, according to the mean scores.

**Table 10** One-way ANOVA of participants' English reading scores before receiving the different English reading instructions, classified by classes

Participants' English reading scores	Variance	SS	df	MS	F – Ratio	p
Average English reading scores	Within groups	35.870	3	11.957	0.592	621.
	Between groups	3937.065	195	20.190		
	Total	3972.935	198			

**Table 11** Comparison of pre-test and post-test scores, classified by classes

Class	Pre-test (n = 46)		Post-test (n = 46)		t – value	p
	$\bar{X}$	S.D.	$\bar{X}$	S.D.		
A	13.85	3.92	15.80	4.33	10.646	.000
B	14.73	4.20	16.77	4.49	7.172	.000
C	14.64	3.82	17.68	4.38	14.562	.000
D	13.82	5.61	16.11	6.27	10.046	.000

As shown in Table 11, the post-test scores of all classes were higher than the pre-test scores. To investigate whether the pre-test and post test scores were significantly different, a t-test was used. It showed that all classes had improved their English reading comprehension. The scores between the pre-test and post-test of all classes were significantly different at the .001 level.

**Table 12** Average and standard deviation of the participants' English reading scores before and after receiving the different English reading instructions, classified by classes

Participants' English reading scores	Class A (n = 46)		Class B (n = 44)		Class C (n = 53)		Class D (n = 56)	
	$(\bar{X})$	S.D.	$(\bar{X})$	S.D.	$(\bar{X})$	S.D.	$(\bar{X})$	S.D.
Overview of the participants' English reading scores	1.96	1.25	2.05	1.89	3.04	1.52	2.29	1.70

To further investigate whether the scores prior to and after receiving the English reading instruction were significantly different, the average ( $\bar{X}$ ) and the Standard Deviation (S.D.) scores of all classes in Table 12 were statistically measured using One-way ANOVA, as shown in Table 13. The results corroborated the results measured by the t-test, indicating that participants of all class had progressed in their English reading, as the scores were statistical significant at level .01. ( $F = 4.714$ ,  $p = .003$ ).

**Table 13** One-way ANOVA of the participants' English reading scores before and after receiving the different English reading instructions, classified by classes

Participants' English reading scores	Variance	SS	df	MS	F – Ratio	p
Overview of the participants' English reading scores	Within groups	36.493	3	12.164	4.714	.003
	Between groups	503.175	195	2.580		
	Total	539.668	198			

**Table 14** Pair-wise comparison of the participants' English reading scores before and after receiving the different English reading instructions using Scheffe's Method, classified by classes

Class	Class A (n = 46)	Class B (n = 44)	Class C (n = 53)	Class D (n = 56)
(A) Average 1.96	–	0.09	1.08*	0.33
(B) Average 2.05		–	0.99*	0.24
(C) Average 3.04			–	0.75
(D) Average 2.29				–

\*. Statistical significance at a .05 level

A pair-wise comparison of the average scores using Scheffe's Method was employed in the study. Scheffe's Method was used to judge the contrasting scores using the

pair-wising the scores of the samples with more than two groups (Scheffe, 1953). As shown in Table 14, it was apparent that the English reading scores of the Class A and Class B participants before and after receiving the English reading comprehension instructions were significantly statistically different from the Class C participants at the .01 level. The statistical analysis showed that Class C achieved a significantly higher level of reading proficiency, as measured by the reading test, than Class A or Class B. However, there was no significant difference in the reading proficiency levels of Class C when compared with Class D. In other words, there was no significant difference in the reading proficiency levels of participants that were in the two classes taught by the researcher.

In summary, there were no statistically significant differences between the scores of the participants in any of the groups at the commencement of the English reading comprehension program. After the different instructional modes were applied to the different classes, the participants in all of the classes made significant progress regarding their English reading achievement. In fact, the participants in all classes achieved higher levels of English reading comprehension at a statistically significant level of .01. Although the marks attained by Class C, taught using the BL approach were higher than the others, the scores did not show a statistically significant difference from Class D. Therefore, English reading comprehension instruction using the BL approach was shown to be as effective in reading comprehension skill development as traditional F2F English reading comprehension instruction at a Thai university.

In order to obtain further information on the effects of the BL approach to English reading comprehension instruction on the development of the participants' English reading comprehension, and the promotion of continuous learning, data obtained from the pre-test and post-test were used to support the text-based information from the course's evaluation form in the following section.

## 5.5 Evaluation of the participants' perception in the development of their English reading comprehension using the BL approach

The purpose of the evaluation was to evaluate the effectiveness of the English reading comprehension instruction that was delivered using the BL approach, and to observe how it might contribute to autonomous learning. The evaluation form was distributed to 199 participants from all groups, and 187 sets (93.97 %) were returned. The results are described below.

### 5.5.1 General information about the participants

The first section of the evaluation form identified the characteristics of all of the participants in the study and their experience in computer use in the English reading class.

**Table 15** General information about the participants

General information about the participants	Number (n = 187)	Percentage
1. Class		
– Class A	44	23.53
– Class B	42	22.46
– Class C	51	27.27
– Class D	50	26.74
2. Gender		
– Male	56	29.95
– Female	131	70.05
3. Age		
– 17 – 18 years old	90	48.13
– 19 – 20 years old	66	35.29
– Over 20	31	16.58
4. Have you experienced the use of technology in English reading instruction?		
– Yes	46	24.60
– No	141	75.40

As shown in Table 15, the highest number of participants was from Class C: 51 participants (27.27%). Altogether, there were 56 (29.95%) male participants and 131 (70.05%) female participants. The participants were mostly between the age of 17 and 18 (48.15%) and 19 and 20 (35.29%). About 75 per cent of the participants had never experienced English reading instruction using technology.

**Table 16 Difficulties faced by the participants before attending the English reading classes, classified by classes**

Difficulties	Frequency of problems mentioned by participants					Percentage
	Class A	Class B	Class C	Class D	Total	
Vocabulary (not specified)	13	10	18	15	55	27.6
Word meaning identification	11	6	16	6	39	19.6
Pronunciation	10	8	7	10	35	17.6
Reading comprehension	5	5	12	9	31	15.6
Participants' attitudes toward learning	3	6	10	4	23	11.6
Other (for example, lecturer, translation, materials, and grammar)	6	3	6	6	25	12.6
No answer provided	3	7	0	6	16	8

According to the responses to the open-ended question regarding the difficulties faced by the participants before receiving the English reading comprehension instruction, as shown in Table 16, the main difficulty affecting their learning was vocabulary. Nearly 30 per cent of all participants stated "I don't know some of the English vocabulary". The problems with vocabulary of the participants were mainly related to the lack of adequate skills which could assist them in identifying word meaning and pronunciation.

Apart from the problems in vocabulary, two other difficulties frequently mentioned were the lack of essential English reading comprehension competency to assist with their comprehension of the material, and the participants' personal attitude toward

the English reading classes. The difficulties identified showed that the participants also needed to be taught essential English reading comprehension. The participants' attitudes toward their learning varied, such as lack of confidence in reading, the lecturer, having a poor English background, and a negative attitude toward the reading subjects, among other limitations.

### 5.5.2 Participants' perceptions of the English reading instruction

This section explores the overall perceptions regarding the effects of the English reading instruction on different learning aspects which were accounted for as important factors related to the development of the students' English reading comprehension and to the promotion of better learning. Those aspects were grouped according to the following: (1) the participants' reading strategies, (2) learning environment, (3) English reading materials, (4) autonomous learning, and (5) classroom instruction. The results are described in Table 17.

**Table 17 Overall perceptions of the effects of the English reading instruction on the development of English strategies**

Participants' reading strategies	$\bar{X}$	S.D.	Rating opinion	Order
This class helped me to identify the main idea of the reading passage.	3.94	0.65	Agree	1
This class helped me to guess the meanings of words from their roots, prefixes, and suffixes.	3.93	0.71	Agree	2
This class helped me to learn how to scan a text for the specific information I needed.	3.89	0.66	Agree	3
This class helped me to guess the meaning of unknown words by using contextual clues.	3.87	0.73	Agree	4
This class helped me to identify any supporting details presented in the reading passage or text.	3.81	0.65	Agree	5



Participants' reading strategies	$\bar{X}$	S.D.	Rating opinion	Order
This class helped me to link my previous background/prior knowledge to the reading text.	3.78	0.73	Agree	6
This class helped me to identify different types of text structures.	3.76	0.68	Agree	7
<b>Total</b>	<b>3.87</b>	<b>0.49</b>	<b>Agree</b>	

In Table 17, it can be seen that most of the participants agreed that the English reading comprehension program could assist them in developing their English reading comprehension skills. Among the overall skills taught in the classes, the participants responded that they were mostly able to: (1) identify main ideas ( $\bar{X} = 3.94$ ); (2) guess the meaning of unknown words through the use of roots, prefixes, and suffixes ( $\bar{X} = 3.93$ ); (3) scan a text to find particular information ( $\bar{X} = 3.89$ ); and (4) guess for the meanings of words by using contextual clues ( $\bar{X} = 3.87$ ). The three lowest-rated skills were the ability to: (1) identify supporting details ( $\bar{X} = 3.81$ ); (2) link their background knowledge to the reading texts ( $\bar{X} = 3.78$ ); and (3) identify different types of text structures ( $\bar{X} = 3.76$ ).

**Table 18 Overall perceptions of the learning environment in the English reading classes**

Learning environment	$\bar{X}$	S.D.	Rating opinion	Order
My friends were supportive in this class.	3.97	0.74	Agree	1
My English reading classroom was suitable for learning.	3.90	0.67	Agree	2
I was able to consult the lecturer in various ways when I had any questions.	3.87	0.83	Agree	3
I usually discussed problems or shared ideas with my classmates in class.	3.66	0.81	Agree	4
<b>Total</b>	<b>3.84</b>	<b>0.52</b>	<b>Agree</b>	

Table 18 shows that the participants' perceptions of the effects of the English reading comprehension instruction on the learning environment in the classes were positive, as they agreed that it supported their ability to learn to read ( $\bar{X} = 3.84$ ). The highest-rated aspect was that their friends were supportive ( $\bar{X} = 3.97$ ), followed by the suitability of the classroom ( $\bar{X} = 3.90$ ), various channels for consultation offered by the lecturer ( $\bar{X} = 3.87$ ), and opportunities to share ideas or discuss with friends ( $\bar{X} = 3.66$ ).

**Table 19 Overall perceptions of the reading materials used in the English reading instruction**

English reading materials	$\bar{X}$	S.D.	Rating opinion	Order
The English reading materials were appropriate for my English reading level.	3.89	0.75	Agree	1
There were several exercises that assisted me in understanding the learning material.	3.85	0.67	Agree	2
The illustrations in the reading materials helped me to understand the content of the material.	3.83	0.78	Agree	3
The content of the English reading materials used in my class could be easily linked to my previous knowledge.	3.82	0.66	Agree	4
The English reading materials had interesting content which motivated me to read.	3.77	0.75	Agree	5
<b>Total</b>	<b>3.83</b>	<b>0.54</b>	<b>Agree</b>	

Table 19 shows that the participants perceived that the learning materials used in their class were satisfactory at an average of 3.83. Of all the aspects, the participants were most satisfied with the level of difficulty of the materials ( $\bar{X} = 3.89$ ). Next, in order of satisfaction were the variety of exercises ( $\bar{X} = 3.85$ ) and the illustrations that helped the participants to understand the learning content of the materials ( $\bar{X} = 3.83$ ). The two lower-rated aspects of the materials were: (1) their connection with

the participants' previous knowledge ( $\bar{X} = 3.82$ ) and (2) the relevance of the materials in terms of motivating them their reading ( $\bar{X} = 3.77$ ).

**Table 20 Overall perceptions of the effects of the English reading instruction on autonomous learning**

Autonomous learning aspects	$\bar{X}$	S.D.	Rating Opinion	Order
The English reading class provided me with opportunities to acquire knowledge outside the classroom.	4.07	0.74	Agree	1
The English reading class enabled me to manage my own learning to read in English.	4.06	0.66	Agree	2
I made progress with my reading in the reading class.	3.86	0.66	Agree	3
In the English reading class, I tried to solve the problems in English by myself.	3.81	0.66	Agree	4
I enjoyed the English reading class.	3.81	0.85	Agree	5
The English reading class encouraged me to work at my own pace.	3.75	0.73	Agree	6
I am more confident in English reading after participating in the reading class.	3.68	0.71	Agree	7
I was encouraged to participate in the reading class.	3.66	0.83	Agree	8
I had to prepare before attending each reading class.	3.38	0.76	Neutral	9
<b>Total</b>	<b>3.80</b>	<b>0.42</b>	<b>Agree</b>	

Table 20 shows that the participants' perceptions regarding the autonomous learning aspects were positive, as they agreed that the English reading comprehension instruction contributed to their autonomous learning ( $\bar{X} = 3.80$ ). The greatest level of agreement was that the participants had been provided with an opportunity to acquire knowledge outside the classroom ( $\bar{X} = 4.07$ ). Following this they were able to manage their own English reading learning and develop their English reading

sequentially ( $\bar{X} = 4.06$ ). On the other hand, the autonomous learning aspects least affected by the English reading comprehension instruction was that the participants had to prepare themselves before attending the class ( $\bar{X} = 3.38$ ).

**Table 21 Overall perceptions of the English reading instruction employed in class**

English reading instruction	$\bar{X}$	S.D.	Rating opinion	Order
I could consult the lecturer about the lesson during and after class time.	3.82	0.81	Agree	1
The lecturer's instructions were clear.	3.76	0.90	Agree	2
There were several kinds of reading activities in the English reading class.	3.68	0.84	Agree	3
<b>Total</b>	<b>3.76</b>	<b>0.67</b>	<b>Agree</b>	

As shown in Table 21, the participants' opinions of the English reading comprehension instruction in their classes were positive, as the majority of them agreed that they were offered opportunities to consult the lecturer outside class time ( $\bar{X} = 3.82$ ); also, they could understand the lecturer's instructions clearly ( $\bar{X} = 3.76$ ) and were able to practise their English reading through several kinds of activities ( $\bar{X} = 3.68$ ).

**Table 22 A comparison of perceptions of different learning aspects**

Learning aspects measured in the English reading classroom	$\bar{X}$	S.D.	Rating Opinion	Order
Participants' Reading Strategies	3.87	0.49	Agree	1
Learning Environment	3.84	0.52	Agree	2
English Reading Materials	3.83	0.54	Agree	3
Autonomous Learning	3.80	0.42	Agree	4
Classroom Instruction	3.76	0.67	Agree	5
<b>Total</b>	<b>3.84</b>	<b>0.41</b>	<b>Agree</b>	

According to the information summarised in Table 22, the participants of all groups generally agreed that the English reading comprehension instruction affected the five learning aspects measured in the study at an average of 3.84 (S.D. = 0.41). Most of the participants agreed that the English reading comprehension instruction had positively affected their reading strategies, the learning environment, English reading materials, autonomous learning, and the classroom instruction (in order of extent).

### 5.5.3 A comparison of the participants' perceptions of different learning aspects, classified by classes

This section further explores the potential of BL by comparing the perceptions of the participants regarding the different measured aspects in learning. The aims were to investigate whether BL contributed to the measured learning aspects. The measured aspects were classified according to the participants' learning, reading strategies, the learning environment, English reading materials, autonomous learning, and classroom instruction.

**Table 23 A comparison of the participants' perceptions of the effects of the English reading instruction on learning**

Effects of English reading instruction on learning	Frequency of the learning effects mentioned by the participants				
	Class A	Class B	Class C	Class D	Total
English reading comprehension development	12	8	20	16	56
Positive attitude in reading learning	7	5	14	8	34
Better learning (not specified)	3	4	8	11	26
Application of the knowledge to life	7	2	3	5	17
No change	4	4	0	1	9
Other (for example, obtaining knowledge from reading and classroom interaction)	2	2	4	5	13
No answer provided	6	10	5	5	26

Table 23 reports the participants' opinions, sought through an open-ended question regarding the effects of English reading instruction on their learning. The most frequent response, made by 56 participants mainly from Class C and Class D, claimed that they had better English reading comprehension after attending the English classes. In the second most frequent response, 34 participants responded that they were more enthusiastic about learning and 26 of them claimed that the English reading instruction provided them with improved learning, as they could apply the knowledge gained.

According to the above table, the aspects of English reading instruction which need to be highlighted are those that made the participants more enthusiastic about their learning and promoted a positive attitude towards English reading learning. The number of positive responses related to these aspect from the Class C participants was approximately double that of the other classes that received F2F English reading instruction. The open-ended comments were analysed to explore the reasons why this should have been the case. Asked about their attitude toward learning, the Class C participants responded that BL instruction could assist them in paying more attention in class because they perceived it as fun. In addition, they were more enthusiastic to attend the English reading class.

**Table 24** A comparison of the participants' perceptions about the effects of English reading instruction on the development of their English reading strategies, classified by classes

The effects of English reading instruction on reading	Frequency of participants' comments				
	Class A	Class B	Class C	Class D	Total
Application of sub-skills in English reading	14	5	20	20	59
Able to read better (no specific skill specified)	8	14	9	19	50
Better understanding of reading material	6	8	18	15	47
Read faster	4	1	4	7	16

The effects of English reading instruction on reading	Frequency of participants' comments				
	Class A	Class B	Class C	Class D	Total
Using the knowledge gained in real life	1	5	4	2	12
Application of the knowledge gained to other English skills	6	1	0	1	8
No answer provided	2	6	1	4	13

Table 24 shows the participants' perceptions of their English reading after receiving the English reading comprehension instruction. Overall, the participants expressed positive feelings about the instruction; approximately a quarter of the participants from all groups stated that they could read better than before. Mainly, the highest number of participants from Class C (BL) and Class D maintained that they could apply the essential English reading sub-skills in support of their reading comprehension and they could comprehend the English reading text more easily. The English reading sub-skills that assisted the participants in their comprehension included meaning identification, pronunciation, and main idea identification, which they learned from the classes.

**Table 25 A comparison of the participants' preferences for English reading, classified by classes**

The participants' preferences for English reading	Frequency of the preferred skills mentioned by the participants				
	Class A	Class B	Class C	Class D	Total
Classroom activities, e.g. playing games, pair work & group work activities	12	13	18	11	54
Doing reading practice, e.g. finding answers from the text	12	9	17	16	49
Obtaining information (informative)	8	9	7	9	33

The participants' preferences for English reading	Frequency of the preferred skills mentioned by the participants				
	Class A	Class B	Class C	Class D	Total
Learning materials	5	5	9	10	29
English reading instruction	4	1	6	11	22
No answer provided	6	12	3	8	29

In Table 25 the participants' preferences for English reading instruction are shown. Classroom activities were the preferred category (54 participants), followed by classroom practice (49 participants), and knowledge obtained from reading (33 participants). Many of the activities were identified by the participants as preferred, including word meaning identification, brainstorming, and identification of textual components, including topic, main ideas, and supporting details. With regard to reading practice, the participants' preferences varied and included engaging in classroom practice and the assigned homework, identifying the main idea of a text, and answering reading questions regarding the text. Informative lessons were the third preference; many of the participants stated that from these, they could learn the essential aspects of English reading comprehension which they could apply to real life. Moreover, the content of the reading material provided the participants with new general knowledge, which motivated them.

**Table 26 A comparison of the participants' dissatisfaction with the English reading, classified by classes**

The participants' dissatisfaction with the English reading	Frequency of dissatisfaction mentioned by the participants				
	Class A	Class B	Class C	Class D	Total
Learning material	11	14	21	15	61
Classroom activities	6	7	6	7	26
Classroom environment	1	1	4	8	14
Assignments	2	0	4	8	14
Lecturer	5	4	1	0	10
Reading instruction	4	0	1	1	6
Nothing unpleasant	0	0	5	2	7
No answer provided	15	16	14	14	59



Table 26 illustrates the reasons given by the participants for dissatisfaction with their English reading instruction. Overall, the issues causing dissatisfaction were similar across all groups, with the exception of the question of the learning material. As shown in the table above, the majority of participants in all groups were not satisfied with the learning material. The participants, mainly from class C, commented on the difficulty and the quantity of the material. To be more specific, the Class C participants (21 of 53) stated that some of the learning material, especially the material regarding the identification of word meaning by using contextual clues, was very difficult. They also mentioned that some of the lessons were too long. Meanwhile, the participants of the other classes expressed dissatisfaction with the difficulty of the learning material and the unattractiveness of the materials. However, 59/199 participants of all groups did not mention their dissatisfaction with any aspect of the English reading course.

With regard to the classroom activities, the second highest reason given for dissatisfaction for all of the participants was related to the lack of participation by some members in the group work activities and, for a large number of participants, the disturbance caused by the participants that were talking while learning, which reduced the learning attention of their classmates.

Although all of the classes used the same learning material and had the same amount of practice, some of the activities used inside/outside the classes with different modes of instruction were adapted to suit their modes of study (see Table 6). The major difference was found in Class C taught in the BL mode. In this class, the participants had to be more responsible for checking their email for useful information and general updates about the subject, and for answering the instructor's questions by email and reviewing the learning material from the Learning Management System (LMS).

**Table 27** A comparison of the participants' perceptions regarding the effect of the reading instruction in all learning aspects, classified by class

Learning aspects	Class A (n = 44)		Class B (n = 42)		Class C (n = 51)		Class D (n = 50)	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Autonomous learning	3.66	0.54	3.70	0.39	3.96	0.35	3.84	0.35
Learning environment	3.70	0.60	3.79	0.46	4.04	0.47	3.82	0.48
English reading instruction	3.46	0.50	3.54	0.61	4.13	0.57	3.82	0.75
English reading materials	3.60	0.56	3.77	0.51	4.03	0.41	3.90	0.60
Participants' English reading strategies	3.66	0.59	3.77	0.45	4.02	0.41	3.97	0.41
<b>Total</b>	<b>3.65</b>	<b>0.49</b>	<b>3.74</b>	<b>0.36</b>	<b>4.02</b>	<b>0.35</b>	<b>3.91</b>	<b>0.36</b>

Table 27 indicates that all of the learning aspects measured in the study were perceived as satisfactory. It was also apparent that the class taught using the BL approach (Class C) had the highest level of satisfaction in all measured learning aspects. Regarding the aspects of learning after receiving BL instruction, the Class C participants mostly mentioned that the English reading class enhanced their English reading comprehension. As well as the change in the participants' behaviours in the classroom, the BL instruction affected the attitude of the participants positively.

**Table 28** One-way ANOVA of the participants' perceptions in all learning aspects, classified by classes

Learning aspects	Variance	SS	df	MS	F – Ratio	p
Autonomous learning	Between groups	2.347	3	0.782	4.662	.004
	Within groups	28.524	170	0.168		
	<b>Total</b>	<b>30.871</b>	<b>173</b>			

Learning aspects	Variance	SS	df	MS	F – Ratio	p
Learning environment	Between groups	2.894	3	0.965	3.798	.011
	Within groups	43.426	171	0.254		
	<b>Total</b>	<b>46.319</b>	<b>174</b>			
English reading instruction	Between groups	12.544	3	4.181	10.975	.000
	Within groups	66.291	174	0.381		
	<b>Total</b>	<b>78.835</b>	<b>177</b>			
English reading materials	Between groups	4.542	3	1.514	5.488	.002
	Within groups	48.002	174	0.276		
	<b>Total</b>	<b>52.544</b>	<b>177</b>			
Participants' English reading strategies	Between groups	3.931	3	1.310	6.015	.002
	Within groups	37.685	173	0.218		
	<b>Total</b>	<b>41.616</b>	<b>176</b>			
Total	Between groups	3.351	3	1.117	7.271	.000
	Within groups	23.809	155	0.154		
	<b>Total</b>	<b>27.160</b>	<b>158</b>			

Table 28 shows that the total of the participants' perceptions from all classes regarding the English reading comprehension instruction in all aspects were statistically significantly at .001 ( $p = .000$ ,  $f = 7.211$ ). Satisfaction with the three learning aspects—(1) autonomous learning, (2) the English reading materials, and (3) English reading strategies—were statistically significant at .01. Satisfaction with the aspect of English reading comprehension was statistically significant at .001, and their attitudes toward the learning environment were significant at .05.

**Table 29** Pair-wise comparison of the participants' perceptions in all learning aspects using Scheffe's Method, classified by classes

Learning aspects	Class	Class A (n = 44)	Class B (n = 42)	Class C (n = 51)	Class D (n = 50)
Autonomous learning	Class A ( $\bar{x}$ =3.66)	–	0.04	0.30*	0.18
	Class B ( $\bar{x}$ =3.70)		–	0.26*	0.14
	Class C ( $\bar{x}$ =3.96)			–	0.12
	Class D ( $\bar{x}$ =3.84)				–
Learning environment	Class A ( $\bar{x}$ =3.70)	–	0.09	0.34*	0.12
	Class B ( $\bar{x}$ =3.79)		–	0.25	0.03
	Class C ( $\bar{x}$ =4.04)			–	0.22
	Class D ( $\bar{x}$ =3.82)				–
English reading instruction	Class A ( $\bar{x}$ =3.46)	–	0.08	0.67**	0.36
	Class B ( $\bar{x}$ =3.54)		–	0.59**	0.28
	Class C ( $\bar{x}$ =4.13)			–	0.31
	Class D ( $\bar{x}$ =3.82)				–
English reading materials	Class A ( $\bar{x}$ =3.60)	–	0.17	0.43**	0.30
	Class B ( $\bar{x}$ =3.77)		–	0.26	0.13
	Class C ( $\bar{x}$ =4.03)			–	0.13
	Class D ( $\bar{x}$ =3.90)				–
Participants' English reading skills and strategies	Class A ( $\bar{x}$ =3.66)	–	0.11	0.36**	0.31
	Class B ( $\bar{x}$ =3.77)		–	0.25	0.20
	Class C ( $\bar{x}$ =4.02)			–	0.05
	Class D ( $\bar{x}$ =3.97)				–
<b>Total</b>	Class A ( $\bar{x}$ =3.65)	–	<b>0.09</b>	<b>0.37**</b>	<b>0.26*</b>
	Class B ( $\bar{x}$ =3.74)		–	<b>0.28*</b>	<b>0.17</b>
	Class C ( $\bar{x}$ =4.02)			–	<b>0.11</b>

\* Statistically Significant at the .05 level \*\* Statistically Significant at the .01 level

To investigate whether the level of perceptions about all aspects was statistically significant, a pair-wise comparison of the participants' satisfaction using Scheffe's Method was employed. The results showed that the overall level of perceptions of Class C was statistically significant at the .01 level, and at .05 when compared to Class A and B. However, it was not statistically significant compared to Class D.

The Class A and Class B participants' perceptions were different from the Class C participants regarding autonomous learning and the environmental aspects of learning. It was statistically significant at .05. The difference between Class A and Class C participants' perceptions of the instructional aspects of English reading and learning material were statistically significant at .01 for both aspects. The differences in the Class A participants' perceptions of the learning materials for English reading and English reading strategies, compared to Class C, were statistically significant at .01.

#### 5.5.4 Other suggestions

**Table 30 Suggestions for further development of English reading instruction, classified by classes**

Suggestions for further developments in English reading instruction design	Frequency of suggestions mentioned by the participants				
	Class A	Class B	Class C	Class D	Total
Doing more practice exercises	11	9	12	19	51
More responsibilities for participants	10	9	16	12	47
Participants need to be more autonomous	6	5	6	6	23
Learning materials	10	6	2	4	22
Class activities	1	8	4	3	16
Instruction	3	4	6	1	14
Learning content	1	4	2	1	8
No answer provided	5	10	7	11	33

Table 30 presents suggestions from the participants in all of the classes for improving the English reading comprehension instruction. It is noteworthy that about 25 per cent of the participants (51/199) perceived that the best way to develop the instruction was to do more English reading practice, as this helped the participants to understand their English lessons better. Another suggestion from the participants, especially from Class C, was that they needed to be more responsible for their learning, for example, by attending classes, paying attention during the instruction, participating in classroom activities, reviewing the learning material, and preparing themselves before attending the class. Some of the participants suggested that they needed to be more self-directed. The suggestions from the participants of all the classes were similar in this respect, for they perceived that one way of developing their English reading comprehension was for them to be more independent. An additional suggestion identified by the participants concerned the development of the learning materials. However, the number of participants from Class C who made this suggestion was fewer than in the other classes. Further, comments from participants in Class A, B, and D suggested that technology be integrated into classroom instruction.

### **5.5.5 Testing the hypotheses**

#### **5.5.5.1 Hypothesis one: The participants will perceive that the developed BL program minimises the barriers to developing the learners' English reading comprehension**

According to the results from the evaluation, the participants in the experimental group (BL class) had the highest level of satisfaction among the groups on five aspects related to the development of the participants' English reading comprehension. As calculated by the pair-wise comparison using Scheffe's Method, the perception of the participants in two of the control groups (F2F instruction taught by another lecturer, Class A and B) was statistically different from the BL group regarding the autonomous learning and environmental aspects of learning at .05, while their differences of opinion of the BL class concerning the instructional aspects of English reading were statistically different at .01. Finally, the control group participants' opinions (Class A) about the learning materials for English reading and English reading strategies, compared to the BL class, were statistically significant at .01. From this, it can be concluded that participants were more satisfied with the BL

class than some traditional F2F classes in minimising their perceived learning barriers.

#### **5.5.5.2 Hypothesis Two: BL enhances the development of the learners' English reading proficiency as traditional F2F instruction**

The statistical analysis of the scores of all classes measured by t-test showed that the participants in all groups had progressed in their learning at a .001 level. From the One-way ANOVA of the pre- and post-test used in the study, the participants, including the BL and traditional F2F classes, made significant progress in their English reading at a .01 level ( $F = 4.714$ ,  $p = .003$ ). Further, regarding the pair-wise comparison of the average scores using Scheffe's Method to compare the English reading scores of the BL class and the three control classes employing traditional F2F instruction, the results revealed that the English reading scores before and after receiving English reading comprehension instruction of BL participants were significantly higher than the two control classes taught by another lecturer (Class A and Class B) at the .01 level. On the other hand, the scores for the BL class were not statistically different from the traditional F2F class taught by the researcher. The results indicate that BL is as effective as the well-designed traditional F2F instruction to develop learners' English reading proficiency.

The BL class participants perceived that BL enhanced the development of their English reading comprehension. For example, they could understand the English reading text much more easily with the employment of various English reading sub-skills, especially to identify the meaning of unknown vocabulary, which was cited as a primary difficulty for the language learners in the preliminary findings, and to identify the main idea of English texts.

#### **5.5.6 Conclusion**

The English reading difficulties mentioned by the participants were similar to those expressed in the focus group, and to the findings from the preliminary investigation. In general, the participants from all classes had positive feelings toward five aspects of English reading comprehension instruction: (1) autonomous learning, (2) the learning environment, (3) English reading instruction, (4) English reading materials, and (5) progress in their English reading strategies. Before experiencing the

instruction designed in this study, the problems which the participants of all classes had identified were their inability to comprehend the meaning of vocabulary, their uncertainty about the pronunciation of certain words, and their lack of appropriate skills in reading and comprehension.

Aside from these difficulties, most participants of all classes were satisfied with the development of their English reading strategies, as well as with the learning environment, English reading materials, autonomous learning, and with the classroom instruction. More specifically, it was clear that the participants that were taught using the BL approach had more positive feelings towards all aspects of the learning described above than was the case with the other classes, which were taught using more F2F methods, even though the level of satisfaction between Class C and Class D was not statistically significant. The aspect of instruction that the BL class participants expressed most satisfaction with was the English reading instruction, followed by the learning environment, English reading materials, the participants' English reading strategies, and autonomous learning. Therefore, the results from the study demonstrate that English reading instruction using a BL approach is at least as satisfactory as the well-designed F2F approaches.

The next chapter will discuss all of the results in the light of the research questions.



## CHAPTER SIX: Discussion and Recommendations

In this chapter, the findings from each phase of the research are discussed in relation to the research questions. The discussion is followed by recommendations and the identification of strategies for learning, which are brought together in a model for the development of English reading comprehension for second language (L2) learners using blended learning (BL) as a mode of instruction. The final section of the chapter highlights the recommendations for future research.

### 6.1 Undergraduate learners' perceptions of the barriers to developing English reading comprehension

The findings revealed that there were both internal and external factors that were perceived by the participants in this study as barriers to the development of English reading comprehension. The main internal factors were learners' limited background knowledge as it related to the content of the material that they read, their motivation levels, and their lack of adequate language skills to support their English reading comprehension. The external factors which affected the development of their English reading comprehension were related to the lack of advance organisers presented in the material or during instruction, the use of materials that were not related to the learners' interests or their background knowledge, and the classroom environment. These five factors identified as barriers affecting the development of the English reading comprehension of Thai learners are shown in Table 31 below.

**Table 31 Factors perceived by Thai learners to affect the development of their English reading comprehension**

Internal Factors	External Factors
Background knowledge of reading materials	Advance organisers, for example visual graphics and connective clues
Motivation	Materials, for example textbooks
Language skills and strategies	Learning environment

The results also indicated that some of the internal and external factors identified in the present study were interrelated and overlapping. For example, the abilities of

learners to activate their background knowledge depended on the content of the material that they were allocated, and simultaneously, the reading materials that enabled the learners to activate their background knowledge was likely to be associated with high levels of motivation. The development of the learners' motivation was related to friends, interesting classroom instruction in which games and fun activities were employed, and learning materials that were interesting to the learners. Each of these factors is discussed in more detail below.

### **6.1.1 Internal factors: background knowledge**

Background knowledge has been observed in previous research findings as an important factor affecting the development of English reading comprehension (Carrell, 1987; Bond et al., 1989; Kitao, 1989; Irwin, 1991; Gan et al., 2004). Although the participants in this study perceived that most reading materials used in their previous English classrooms were interesting and that they could understand them, they still had difficulty in understanding the materials with which they were unfamiliar, as they were not able to link these to their experience. This also affected the learners' ability to guess the meaning of unknown vocabulary and thus their overall capacity to understand a text. An example of this is when the participants were given the topic of "politics," which was not interesting for them.

Less than half of the survey participants (47%) maintained that they used background knowledge in English reading comprehension. This indicated that there may be some that were not aware of the role of background knowledge in reading. The two main issues relating to the employment of background knowledge of the participants are discussed below.

An illustration of the impact of background knowledge on comprehension can be seen in the participants' confusion about the use of italics in their English materials to identify new items of vocabulary. Thai materials do not use italics to highlight important points or new terms; rather they use bold forms. Moreover, many participants in the study stated that they rarely encountered English script outside their classes, and were primarily familiar with texts using the Thai alphabet.

### **6.1.2 Internal factors: motivation**

With regard to motivation, the results from this study corroborate those of previous research, which indicate that motivational factors contribute to success in English reading comprehension (Ryan & Deci, 2000; Guthrie et al., 2004; Williams & Williams, 2011). The study's findings on the effects of motivation in the development of learners' English reading comprehension are illustrated through the examples below.

Initially, the participants said that they were more highly motivated when they found the learning activities interesting. The results indicated that when classroom instruction incorporated activities that the learners found interesting and enjoyable, the participants perceived that their English reading comprehension was developing. These findings are in line with those of Lau (2006). In contrast, as Guthrie and colleagues (2004) found, the participants expressed a sense of demotivation when they were expected to engage in activities that they did not find interesting.

In addition, external factors such as rewards from the lecturer may intrinsically motivate learners, as these have the capacity to develop a positive attitude in learners towards the classroom instruction and stimulate their interest in learning. For example, one participant maintained that although he did not expect any rewards from the lecturer, it was fun to participate in classroom activities when there were rewards given. These results are supported by a previous study in which intrinsic motivation was seen to be promoted by rewards such as scholarships (Gan et al., 2004).

### **6.1.3 Internal factors: language skills and strategies**

With regard to the language skills and strategies related to the development of the participants' English reading comprehension, the findings corroborated those of a previous study in Thailand, in which the learners were found to have difficulties with their English reading comprehension (Sroinam, 2003). In the present study, the participants perceived that the two main language difficulties affecting their comprehension of English reading materials were the lack of appropriate reading strategies to enhance their English reading comprehension—for example, identification of main ideas, text structure identification, and grammatical

knowledge—and the inability to identify the meaning of vocabulary. These findings corroborated those in a study by Phunpruek and Mahapootong, conducted in 2006.

With regard to vocabulary, the participants considered that their inability to identify vocabulary was related to their limited skills in pronunciation and meaning identification. Both of these skills have been found to be essential for understanding reading materials (Graham & Bellert, 2005; Phunpruek & Mahapootong, 2006; Lipson & Wixson, 2009). Without these skills, the participants argued that they would make less effort to identify unknown English vocabulary and be more dependent on others.

#### **6.1.4 External factors: advance organisers**

In this study, the participants cited advance organisers as a factor which could motivate learners and enhance their understanding of written messages. The results corroborated previous research into the use of advance organisers (Gambrell et al., 1987; Haupman, 2000; Lin et al., 2006; Lapp et al., 2010). As shown in the present study, English reading materials containing illustrations, a type of graphic organiser, were preferred by the participants, as this helped them to guess unknown vocabulary and predict content. The participants expressed a negative response and a low level of interest in the material when they encountered plain texts with no illustration. The present study supports the use of graphic organisers as a cognitive tool to assist in the the development of English reading comprehension, as also noted by Gambrell, Kapinus, and Wilson (1987).

#### **6.1.5 External factors: reading materials**

The participants also found the reading materials to be another factor affecting their development of English reading comprehension. The main issues were the selection of reading materials, the features of the selected materials, and the level of difficulty.

With regard to the selection of materials, the participants expressed a preference for learning materials that were relevant to their fields of study or related to their individual interests so that they could apply any knowledge gained to their real lives. Many reading topics were suggested by the participants as being of interest, for example, entertainment, general knowledge, travelling, beauty tips, cartoons, and

songs. The three reading topics identified as the least interesting were English poetry, documentaries, and health. It appeared that the participants' perceptions about the materials overlapped with other factors related to the development of their English reading comprehension, including background knowledge and motivation. This is because culturally unfamiliar reading materials do not assist with background knowledge activation, as shown in Gan and colleagues' (2004) study, and motivation in reading is developed when learners access reading materials related to their interests (Keller, 2008).

Concerning another issue regarding textual features, the participants maintained that the English reading materials should be easy to understand from a visual perspective; for example, the use of multi-colour materials would be interesting, and learners could see the illustrations more clearly than in black and white photocopies. This also overlapped with the issue regarding the implementation of advance organisers to enhance English reading comprehension mentioned earlier.

An additional issue regarding the use of materials was the level of difficulty of the English reading materials used in the classroom. The study found that some previous English materials were beyond the participants' reading ability in English and, as a consequence, all of the chapters in the material were perceived as too difficult to understand. This finding supports Blau's (1982) argument, which maintains that the author's classification of the difficulty level of the material may not correspond with the experience of L2 learners of English, a situation which the current research suggests has not changed since Blau's research was conducted. This is particularly relevant in the context of Thai education, because the materials used in Thai higher education are not country-specific but are produced by international publishers for multiple countries. This is problematic because the materials are not sensitive to contextual differences. For example, the level of English reading proficiency of L2 learners in some countries may not match the expected degree of difficulty if the classification is unsuited to the context, for example, if the material uses age range to set the level of text difficulty.

### **6.1.6 External factors: learning environment**

The participants' comments on their learning environment related to their lecturers, their support structures, and the educational setting. The participants agreed that the lecturer was of primary importance in influencing the participants' learning. The main issue relating to the lecturer was the desire for clear and interesting instruction. The participants commented that the lecturers should provide interesting tools and fun activities such as games, computer applications and well-prepared learning materials with illustrations to motivate learners in the language classroom. The importance of the lecturer in classroom instruction is supported by previous studies (Kitisripanya, 2006; Christensen, 2009).

With regard to support structures, support from friends and family was considered to be very important by the participants—a finding that is reflected in the literature (Richek et al., 2000; Lipson & Wixson, 2009). In this study, most participants stated that they were fully supported by their families, who encouraged them to learn, and by friends, who shared their learning experiences and co-operated in class activities.

When it came to the setting, the participants believed that a clean and quiet classroom with many learning resources provided would be beneficial for them to fully concentrate on learning. This was not the situation that they encountered during their instruction and outside the classroom. A previous study, by Phunpruek and Mahapootong (2006), found that the learning environment in Thailand did not support learning, as English was rarely used in daily life, and concluded that Thai learners need more learning sources and support which will allow them to practice English reading both inside and outside the classroom in order to be more fluent in English.

A further issue related to the setting was that some participants expressed the view that the class size could be an obstacle to language learning, particularly if this prevented concentration on the task at hand, such as when large numbers of learners talk during lectures. While this may be to some extent a classroom management issue, it is also important that classes should contain a small enough number of learners to facilitate their involvement in the learning process and to maintain concentration.

## **6.2 The blended learning (BL) approach and learners' perceptions of the barriers to the development of their English reading comprehension**

The evaluations by the participants in this study indicated that all of the learning barriers identified in the first research question were reduced by both the face-to-face (F2F) and BL instruction that took place in this study. This suggests that well-designed instruction of any type may reduce the learning barriers affecting their development of English reading comprehension. Overall, the participants of all classes using different approaches expressed the belief that the designed English reading program enhanced the development of their reading skills, as they were able to use different reading skills, for example word identification skills, topic identification, and main idea identification skills, to enhance comprehension. Moreover, they believed that the reading materials used in all of the classrooms were interesting, with the integration of different advance organisers. The factors and possible reasons for this preference are explored below.

### **6.2.1 Choices in learning**

Initially, the results from the evaluation form showed that the participants of all classes were given opportunities to select reading materials of their interest in the final part of all lessons. It was mentioned by the participants of all the classes that the self-access activities were beneficial, as they enjoyed reading the materials which could be used in their daily lives. In the BL class, the participants stated that the information and communication technology (ICT) enhanced their learning, as they were able to find reading topics related to their interests more easily by searching the Internet. As shown in the self-access tasks of the BL class, most of the participants chose familiar reading topics that were addressed in the preliminary investigation; for example, most female participants chose the topic health and beauty from the websites they usually accessed, while the male participants chose sports and technology. These findings are similar to those of Elsenheimer (2006), who found that BL enables learners to access learning materials more easily.

### **6.2.2 Background knowledge activation**

The participants in all classes agreed that the learning materials used in their classrooms could be easily linked to their previous knowledge, and it was related to their learning experiences, which assisted in their understanding of English reading materials. This finding indicates that both well-designed face-to-face (F2F) and BL modes enabled participants to activate their background knowledge, and to develop their English reading comprehension. The activation of the background knowledge in the BL class was related to the reading materials and ICT application used in the class. As BL participant commented, “The learning materials were interesting and encouraged learners to informally share ideas.” This corroborates the studies in Thailand which show that BL enhances the activation of background knowledge (Sriwongkol, 2008; Wannapiroon, 2008).

### **6.2.3 Development of learning motivation**

The results from the study indicated that the learners in all the classes perceived that they were motivated to learn and were satisfied with the English reading comprehension instruction. They were motivated by the interesting instruction, the reading materials, the classroom activities, and the learning environment of both the F2F and the BL instruction. It can be clearly seen from the results that BL earned the highest scores in all learning aspects among all classes, although the results showed that the level of satisfaction of the Class C participants regarding the motivation to learn was significantly higher than that of Class A and B, which was not the case for Class D. Therefore, it can be summarised that BL is as effective as traditional F2F instruction in motivating learners. Possible reasons why BL in particular can motivate learning are identified as follows.

With regard to the first issue, it was maintained by the BL participants that they were more intrinsically motivated during the BL program. The roles of technology in promoting motivation have been observed by many researchers (Guo & Willis, 2006; Kim, 2009; Curcher, 2011). Although the participants agreed that BL was motivating, they did not explicitly identify why this should be the case. However, it is possible to infer from their comments that the participants found certain applications, such as animations and videos, visually stimulating, and that they found the materials relevant and interesting.



In addition, as other studies have found (Terry et al., 2003; Hofmann, 2006), opportunities for online web-discussion and activities used in BL can increase motivation and encourage participants to share their comments.

Another possible reason why BL was perceived to be as satisfactory as F2F instruction could be related to the different computer applications used in BL. The materials used in the BL class in the present study were illustrated and in colour, which the participants found interesting and easy to understand. This contrasted with the black and white materials that have been used as the primary source of materials in traditional F2F classrooms in Thailand for many years. One participant in the focus group noted, for example, that sometimes the images in the black and white material were not really clear because of the low-quality printing. This finding corroborates a study by Dynia (2006) where it was indicated that the learning materials that have visual clarity reinforce learning retention. However, the issue regarding the black and white material used in traditional F2F instruction was not a main concern for this study, as it was minimised by the use of authentic reading materials related to the participants' interests, and they were in colour.

### **6.3 The influence of the BL approach on the development of English reading comprehension**

The section explores the possible ways in which BL may contribute to the development of English reading comprehension. As shown in the study, there were two main aspects of learning to be discussed; language skill development and autonomous learning. These are discussed below.

#### **6.3.1 Skill development**

The pre- and post-test scores showed that the participants receiving English reading comprehension instruction in both BL and traditional F2F classes obtained significantly higher scores at the end of the instruction. This indicated that both instructional approaches enabled the participants to develop their English reading skills. The effectiveness of BL for the development of English reading comprehension is supported by several studies of BL (Chun & Plass, 1996; Center for Educational Technology, 2003; Manisah & Zawawi, 2005; Bunchua, 2006).

Although the scores of the BL class were significantly higher than those obtained in traditional F2F classes taught by another lecturer, the differences in the scores of the BL class and the F2F classroom taught by the researcher were not statistically significant. This may be because the researcher, who taught both the BL class and a traditional F2F class, was aware of the factors that affect the development of the English reading comprehension of participants, and the learning barriers that are usually found in a F2F classroom were addressed and minimised by the researcher. These findings indicate that well-designed F2F English reading comprehension instruction can be as effective in English reading skill development as BL if the language learning difficulties are addressed and minimised by language lecturers.

Whatever the reason might be, the results showed that there was no statistically significant difference in the increase in reading comprehension, as measured by the reading test, among learners in classes C and D. Thus this study has to conclude that the BL approach was not in itself a more effective way of developing reading comprehension for the learners in this study.

This conclusion is particularly noteworthy given the role of the researcher in the study. Because of the lack of staff computer expertise within the institution, there was no choice but to have the researcher design and teach the BL class. However, the danger of unconscious bias influencing the way in which the classes were taught was an issue, even allowing for conscious attempts made by the researcher to reduce these. The results suggest that, in spite of the researcher's interest in BL, he had at least managed to avoid unconsciously teaching the traditional F2F class in a less effective way.

### **6.3.2 Autonomous learning**

The participants of all classes perceived that both F2F and BL instruction may promote autonomous learning. Although the perceptions of the BL participants in this aspect were statistically higher than Class A, and Class B taught by another lecturer, they were not statistically significant compared to the F2F class taught by the researcher. Therefore, it can be concluded that any well-designed instruction, whether or not this includes BL, may contribute to the development of autonomous learning. The findings provide similar results to previous studies of BL (Garnham &

Kaleta, 2002; Motteram, 2005). The BL participants in this study believed that they were able to manage their English reading class, and they perceived that the instruction affected their learning behaviour; for example, the participants tried to solve their English reading problems by themselves rather than being dependent on other information sources or other people as they used to be.

To further investigate the contribution of BL to autonomous learning, the following aspects are discussed.

With regard to the channels of communication, the participants of all classes perceived that they were fully supported by both lecturers in the study, as they could consult them when they had any questions. However, the issue that clearly differentiated BL from the traditional F2F instruction was the participants' opportunities to consult the lecturers and discuss with friends if they had any queries. This was because the BL participants were provided with different channels of communication enhanced by ICT, as earlier explained. The change in the participants' learning behaviours was related to a component of autonomous learning called "learning control." As found in a previous study, BL allows participants to access various online learning materials that suit their learning styles and connect with others outside the classroom session (Horn & Staker, 2011).

With regard to collaboration, the participants in all the classes perceived that there were opportunities for classroom interaction. Many of the participants argued that collaboration skills were promoted in both classes, as there was much more interaction in the classroom compared to the traditional F2F instruction they had experienced previously. In addition, all the participants were encouraged to collaborate with their peers by sharing ideas. Thus, the changes in behaviour led them to feel more relaxed in learning and reduced the shyness that Thai learners may experience in sharing ideas with others. However, the F2F participants only had a chance to share ideas in the classroom activities, while the BL participants were able to share ideas on the web blogs. Despite this difference, perceptions of the participants between the two classes taught by the researcher were not significantly different. Therefore, the results suggest that both well-designed traditional F2F and BL were perceived as instruction that promotes collaboration. The findings

corroborated previous surveys which highlighted the effects of BL on autonomous learning (William & Sosin, 2005; Dziuban et al., 2006; Huang & Zhou, 2006; Sriwongkol, 2008; Chantem, 2010).

With regard to attitudes toward learning, the participants of all classes perceived that the course designed for this study helped them to develop a positive attitude towards English reading. By the end of the course, the participants perceived that English reading comprehension was important in English language learning. Also, the positive development of the participants' attitude toward English reading led them to become autonomous learners, as they participated in other English activities outside the classroom and had more reading practice. The findings indicated that BL has as good an effect on motivation related to the development of a learning attitude as well-designed F2F English reading instruction. The findings corroborated a study in China regarding the change of attitudes toward learning associated with BL (Guo & Willis, 2006).

In short, in this study, the participants of all classes perceived that the English reading instruction they experienced promoted autonomous learning, which was accomplished through the use of self-access activities. However, the participants in the BL class were more easily connected with both the lecturer and other classmates out of the classroom sessions by online communication applications. This minimised the gap in the traditional F2F instruction of Thailand, whereby lecturers only meet learners in person or in small groups. In addition, the participants were more engaged in reading activities enhanced by motivating learning materials, classroom activities, and online learning practices and resources. As a result, the participants maintained that they paid more attention during the lecture and became autonomous learners.

#### **6.4 Summary**

The following section summarises the study's findings based on the research questions. The study initially identified the participants' perceptions of the learning barriers they faced in the development of their English reading comprehension, then investigated their perceptions regarding the learning barriers after receiving BL

instruction and the possible ways in which BL may enhance their English reading comprehension.

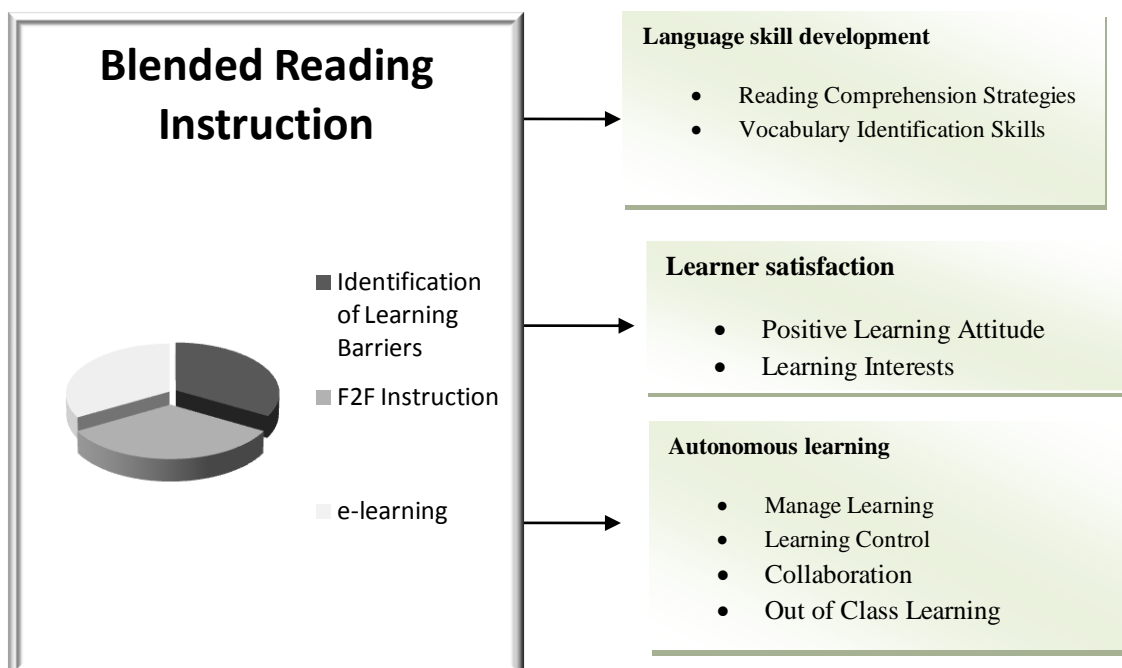
The participants' learning barriers were related to both internal and external factors. The internal factors were the lack of background knowledge to enhance their reading comprehension, low levels of motivation, and insufficient language skills and reading strategies. The external factors concerned the lack of advance organisers used in the traditional F2F classes, the features of the materials, and the learning environment.

With regard to the participants' perceived learning barriers after the instruction, both well-designed F2F English reading comprehension instruction and BL instruction were seen to be able to minimise the learning barriers to English reading learning. However, the perceptions of the learners did not differ significantly between the two modes. The positive aspects of BL that were perceived to enhance the participants' development of English reading comprehension were: the choices of learning strategies, by which the learners were able to select more learning materials through different online learning sources; the online applications and activities that motivated the participants to participate in English reading activities both during and outside classroom sessions; and the learning materials created by computer applications that increased their learning interest and understanding. Although the results showed that BL instruction may not be more effective than F2F instruction, it could be an alternative approach to English reading comprehension instruction or the activities in an English reading classroom could be supported through the use of ICT.

In relation to the development of the participants' English reading comprehension, the well-designed F2F and BL instruction were perceived by the participants as an effective approach in English reading classes. The BL participants in the study benefitted from both F2F instruction and BL integrating ICT, especially regarding the promotion of autonomous learning. ICT enables learners to communicate with lecturers more easily at a convenient time, and they can share ideas both inside and outside the classroom. This indicates that although BL was not found to be more effective than F2F instruction in this study, it is still useful to integrate BL and ICT applications into the English reading comprehension class.

These findings led to the development of a model for English reading comprehension instruction using BL, as presented in Figure 5. The model is focused on the important features of BL that developed the participants' English reading comprehension and assisted them in becoming autonomous learners.

**Figure 5** Model of English reading comprehension instruction using the BL approach for L2 learners



The proposed blended reading instructional model has three main components. The first component is the identification of the learning barriers which enable the lecturer to organise the appropriate learning strategies to minimise those barriers. The second component is the F2F instruction, in which lecturers provide live instruction and organise classroom activities to motivate learning. The third component is the implementation of e-learning and computer applications that suit the learning environment to motivate learning inside and outside the classroom. Also, they can be used as a channel of communication between learners/learners and teachers/learners.

The aims of the proposed BL English reading model are to develop learners' reading skills and strategies related to English reading comprehension, to motivate participants in learning to read, and to foster autonomy, which allows learners to

manage and control their learning, collaborate with others, and to self-access learning content at a convenient time.

## **6.5 Recommendations for future research**

Although the study provided information regarding English reading comprehension difficulties, the potential of BL to minimise those perceived learning difficulties, and the effectiveness of BL in the development of English reading comprehension, there were some issues that were not addressed.

Initially, the examination of the participants' perceived learning barriers related to the development of their English reading comprehension involved the investigation through the focus group and the questionnaire distribution, consisting of multiple cross-checking processes to confirm the findings. The use of an English reading proficiency test may identify the unrecognised learning barriers of participants and this may also strengthen the findings.

According to the issue related to the implementation of ICT, although the present study showed that many ICT applications served different purposes in learning, for example, developing English reading comprehension skills, promoting autonomous learning, and increasing learning motivation, it did not investigate how specific online applications could minimise learning barriers. Therefore, further investigation into the roles of specific online applications would enable other researchers to identify the strengths and weaknesses of the online applications to be applied in their studies. Also, it would enable other researchers to select the various types of learning applications which best suit their institution.

In addition, although there were more advanced ICT applications that could have been employed in this study, the researcher selected those, which were the most accessible for a large number of participants, based on their cost and the participants' familiarity with them. Further investigation using more advanced e-learning applications would be beneficial for Thai learners and language lecturers, as it would provide them with more choices for selecting applications that may address their learning gaps.

The study employed a BL mode which was used in combination with F2F instruction. Other studies could identify the potential of BL in different contexts, for example, the use of BL instruction in distant learning.

Finally, the BL class was only taught by the researcher, as it was not possible to employ another lecturer that had experience in BL, and there was insufficient time available to train someone. For this reason, a comparative study of BL and traditional F2F that employed more than one lecturer would have the capacity to strengthen or refute the current findings.



## References

- Abdullah, M., H. (2001). *Self-Directed Learning*. Retrieved from [http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content\\_storage\\_01/0000019b/80/19/87/18.pdf](http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/19/87/18.pdf)
- Abdurrahman, G., A. (2006). The Effect of Computer Assisted Language Learning (CALL) on United Arab Emirates English as a Foreign Language (EFL) School Students' Achievement and Attitude. *Journal of Interactive Learning Research, 17*(2), 121-142.
- Akhondi, M., et al. (2011). How to Teach Expository Text Structure to Facilitate Reading Comprehension. *The Reading Teacher, 64*(5), 368-372.
- AL-Sohbani, Y. (2013). Metacognitive Reading Strategies Use by Yemeni EFL Undergraduate University Students. *Frontiers of Language and Teaching, 4*, 121-133.
- Alderson, J., C, et al. (1995). *Language Test Construction and Evaluation*. Cambridge: Cambridge University Press.
- Allington, R., L. (1983). Fluency: The Neglected Reading Goal. *The Reading Teacher, 36*, 556-561.
- Alotaibi, H. (2012). *Decide, Design, Develop and Evaluate: Computer-Based Reading Lessons for ESL Learners* Paper presented at the ICT for Language Learning, Florence, Italy.
- Alseweed, M., A. (2013). Students' Achievement and Attitudes toward Using Traditional Learning, Blended Learning, and Virtual Classes Learning in Teaching and Learning at the University Level. *Studies in Literature and Language, 6*(1), 65-73.
- Alverman, D. (2002). Effective Literacy Instruction for Adolescents. *Journal of Literacy Research, 34*(2), 189-208.
- Alverman, D., et al. (1996). Middle and High School Students' Perceptions of How They Experience Text-Based Discussions: A Multicase Study. *Reading Research Quarterly, 31*, 244-267.
- Alvermann, D. (1981, April 13-17, 1981). *The Compensatory Effect of Graphic Organizer Instruction on Text Structure*. Paper presented at the The Annual Meeting of the American Educational Research Association, Los Angeles, CA.

- Anderson, J. (1986). *Developing Computer Use in Education*. Bangkok: Unesco Regional Office for Education in Asia and the Pacific.
- Anderson, N. (2003). Reading. In D. Nunan (Ed.), *Practical English Language Teaching*. (pp. 67-86). New York: McGraw Hill.
- Arano-Ocuaman, J. (2010). *Differences in Student Knowledge and Perception of Learning Experiences among Non-Traditional Students in Blended and Face-to-Face Classroom Delivery*. Phd. University of Missouri - Saint Louis.
- Archer, A., & Hughes, C. (2011). *Explicit Instruction: Effective and Efficient Teaching* New York: The Guildford Press.
- Armbruster, B., et al. (1989). Teaching Text Structure to Improve Reading and Writing. *The Reading Teacher*, 43(2), 130-137.
- Baldwin-Evans, K. (2006). Blended Learning: The What, Where, When and How. *Training & Management Development Method*, 20(3), 353-366.
- Barriere, C., & Duquette, L. (2002). Cognitive-Based Model for the Development of a Reading Tool in FSL. *Computer Assisted Language Learning*, 15(5), 469-481.
- Benson, P. (2007). Autonomy in Language Teaching and Learning. *Language Teaching*, 40(1), 21-40.
- Bersin, J. (2004). *The Blended Learning Book - Best Practices, Proven Methodologies and Lessons Learned*. San Francisco: Pfeiffer.
- Bertrand, J., et al. (1992). Techniques for Analyzing Focus Group Data. *Evaluation Review*, 16, 198-209.
- Biyaem, S. (1997). *Learner Training: Changing Roles for a Changing World, Educational Innovation for Sustainable Development*. Paper presented at the 3rd UNESCO-ACEID International Conference, Bangkok.
- Blair, R., T. (2008). *Reading Comprehension Instruction*. Paper presented at the Cam TESOL Conference on English Language Teaching, Cambodia.
- Blankson, J., & Kyei-Blankson, L. (2008). Nontraditional Students' Perception of a Blended Course: Integrating Synchronous Online Discussion and Face-to-Face Instruction. *Journal of Interactive Learning Research*, 19(3), 421-438.
- Blau, E. (1982). The Effect of Syntax on Readability for ESL Students in Puerto Rico. *TESOL Quarterly*, 16(4), 517-528.

- Blin, F. (2004). Call and the Development of Learner Autonomy: Toward an Activity-Theoretical Perspective. *ReCALL*, 16(2), 377-395.
- Bodrova, E., & Leong, D. (1998). Scaffolding Emergent Writing in the Zone of Proximal Development. *Literacy Teaching and Learning*, 3(2), 1-18.
- Bond, G., et al. (1989). *Reading Difficulties: Their Diagnosis and Correction* (6 ed.). New Jersey: Prentice Hall.
- Boonyaritrungrote, S. (2004). *The Development of Reading for Main Ideas Exercises for Mattayomsuksa 3 Students*. (Master thesis). Silpakorn University.
- Boothby, P., & Alverman, D. (1984). A Classroom Training Study: The Effects of Graphic Organizer Instruction on Fourth Graders' Comprehension. *Reading World*, 23(325-339)
- Bozzo, L. (2012). *Collaborative Construction of Glossaries in Language Learning: An Integration of the Lexical Approach and Constructionism through Blended Learning* Paper presented at the ICT for Language Learning, Florence, Italy.
- Brown, C. (2007). Supporting English Language Learners in Content-Reading. *Reading Improvement*, 44(1), 32-39.
- Bruce, M., & Robinson, G. (2000). Effectiveness of a Metacognitive Reading Program for Poor Readers. *Issues in Educational Research*, 10(1), 1-20.
- Bunchua, S. (2006). From Blended Learning to Elearning: Experience with the Mscict Program. *The International Journal of the Computer, the Internet and Management*, 14(SP1), 37.31-37.34.
- Cameron, K. (1999). Introduction. In Lisse (Ed.), *Call Media, Design & Applications*. (pp. 1-10): Sweet & Zeitlinger.
- Candy, C., C. (2004). *Linking Thinking: Self-Directed Learning in the Digital Age*. DEST Research Fellowship Scheme.
- Carrell, P. (1985). Facilitating ESL Reading by Teaching Text Structure. *TESOL Quarterly*, 19(4), 727-752.
- Carrell, P. (1987). Content and Formal Schemata in ESL Reading. *TESOL Quarterly*, 21(3), 461-481.

- Center for Educational Technology. (2003). *Research of the Development and Trends of E-Learning in Thailand*. Bangkok: Bangkok Block.
- Chantem, S. (2010). Hybrid Learning and Educational Innovation of Accounting Teaching in the 21st Century: A Case Study of the University of the Thai Chamber of Commerce. *UTCC Journal*, 30(1)
- Chomchaiya, C., & Dunworth, K. (2008). *Identification of Learning Barriers Affecting English Reading Comprehension Instruction, as Perceived by ESL Undergraduates in Thailand*. Paper presented at the EDUCOMM 2008.
- Christensen, A., C. (2009). Supporting Students with Reading Difficulties within a Whole School Approach to Literacy. *Australian Journal of Dyslexia and Learning Difficulties*, Vol. 4, Spring/Summer 3-14.
- Chun, D. (2001). L2 Reading on the Web: Strategies for Accessing Information in Hypermedia. *Computer assisted language learning*, 14(5), 367-403.
- Chun, D. (2006). Call Technologies for L2 Reading. In N. Ducate & N. Arnold (Eds.), *Calling on Call: From Theory and Research to New Directions in Foreign Language Teaching*. San Marcos, Tex: CALICO.
- Chun, D., & Plass, J. (1996). Facilitating Reading Comprehension with Multimedia. *System*, 24(4), 503-519.
- Ciekanski, M. (2007). Fostering Learner Autonomy: Power and Reciprocity in the Relationship between Language Learning Adviser. *Cambridge Journal of Education*, 37(1), 111-1127.
- Cohen, L., et al. (2009). Fluency, Text Structure, and Retelling: A Complex Relationship. *Reading Horizons*, 49(2), 101-124.
- Cooper, D., J., & Kiger, N., D. (2009). *Literacy: Helping Students Construct Meaning* (7 ed.). Boston: Houghton Mifflin Company.
- Corbin, J., & Strauss, A. (1990). Grounded Theory Research: Procedures, Canons and Evaluative Criteria. *Qualitative Sociology*, 13 (1), 3-21.
- Cortina, J., & Elder, J. (2002). *Opening Doors: Understanding College Reading* (3 ed.). Boston: McGraw-Hill Higher Education.
- Cresswell, J. (2005). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (2 ed.). Upper Saddle River: Pearson Education.

- Curcher, M. (2011). A Case Study Examining the Implementation of Social Networking Technology to Enhance Student Learning in a Second Language. *Education, Business and Society: Contemporary Middle Eastern Issues*, 4(1), 80-90.
- Davis, J. (1989). Facilitating Effects of Marginal Glosses on Foreign Language Reading. *The Modern Language Journal*, 73(1), 41-48.
- Deci, E., et al. (1991). Motivation and Education: The Self-Determination Perspective. *Educational Psychologist*, 16(3&4), 325-346.
- Dennis, A., et al. (2006). The Cisco Networking Academy: A Model for the Study of Student Success in a Blended Learning Environment. In C. Bonk & C. Graham (Eds.), *The Handbook of Blended Learning*. (1 ed., pp. 120-135). San Francisco: Pfeiffer.
- Donaldson, R., & Haggstrom, A. (2001). Using Call to Address Changes in Student Learning Styles. In K. Cameron (Ed.), *C.A.L.L-the Challenge of Change*. (pp. 31-40). Exeter: Elm Bank Publications.
- Dreher, M., & Gray, J. (2009). Compare, Contrast, Comprehend Using Compare-Contrast Text Structures with Ells in K-3 Classrooms. *The Reading Teacher*, 63(2), 132-141.
- Dunkel, P. (1991). The Effectiveness Research on Computer-Assisted Instruction and Computer Assisted Language Learning. In P. Dunkel (Ed.), *Computer Assisted Language Learning and Testing*. (pp. 5-30). New York: Newbury House.
- Dunston, P., J. (1992). A Critique of Graphic Organizer Research. *Reading Research and Instruction*, 31(2), 57-65.
- Dymock, S. (2005). Teaching Expository Text Structure Awareness. *The Reading Teacher*, 59(2), 177-182.
- Dymock, S., & Nicholson, T. (2010). "High 5!" Strategies to Enhance Comprehension of Expository Text. *The Reading Teacher*, 64(3), 167-178.
- Dynia, M. (2006). E-Learning or B(Lended)-Learning. *LIMRA's Market Facts Quarterly*, 25(1), 42-46.
- Dziuban, C., et al. (2006). Blended Learning Enters the Mainstream. In C. Bonk & C. Graham (Eds.), *The Handbook of Blended Learning*. (pp. 195-208). San Francisco: Pfeiffer.

- Ediger, M. (2002). Scaffolding Experiences in Reading Instruction. ERIC Retrieved June 12, 2011  
<http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED468080>
- Egbert, J. (1999). Classroom Practice: Creating Interactive Call Activities. In J. Egbert & E. Smith (Eds.), *Call Environments: Research, Practice, and Critical Issues*. (pp. 27-40). Illinois: Teacher of English to Speakers of Other Language.
- El-Gayar, O., & Dennis, T. (2005). Effectiveness of Hybrid Learning Environments. *Issues in Information Systems*, 6(1), 176-182.
- Elo, S., & Khyngas, H. (2007). The Qualitative Content Analysis Process. *Journal of Advanced Nursing* 62(1), 107-115.
- Elsenheimer, J. (2006). Got Tools? The Blended Learning Analysis and Design Expediter. *Performance Improvement*, 45(8), 26-30.
- Eng, L. S., et al. (2008, 7-11 March 2008). *Teaching Mathematics Using Blended Learning Model at Mara University of Technology Sarawak*. Paper presented at the Amazing E-Learning II, Suan Dusit Rajabhat University.
- Ephraim, K. (2009). *Reading Comprehension Instruction for Expository Text in Elementary Education*. Senior Honors Thesis. Liberty University.
- Epstein, P. (2006). Online, Campus, or Blended Learning: What Do Consumers Prefer and Why? *Distance Learning*, 3(3), 35-37.
- Ferrari, M., & Palladino, P. (2007). Foreign Language Learning Difficulties in Italian Children: Are They Associated with Other Learning Difficulties. *Journal of Learning Disabilities*, 40(3), 256-269.
- Fitzgerald, J., & Graves, M., F. (2004). *Scaffolding Reading Experience for English Language Learners*. Norwood, MA: Christopher-Gordon.
- Fitzsimmons, J., et al. (2002). *Flexible Delivery: Convergence and Quality in Model Redesign*. Paper presented at the HERDSA Conference, Perth.
- Frankel, J., & Wallen, N. (2003). *How to Design and Evaluate Research in Education* (5 ed.). New York: McGraw-Hill.
- Fulcher, G. (1997). Text Difficulty and Accessibility: Reading Formulae and Expert Judgement. *System*, 25(4), 497-513.

- Gambrell, L., B., et al. (1987). Using Mental Imagery and Summarization to Achieve Independence in Comprehension. *Journal of Reading*, 30, 638-642.
- Gan, Z., et al. (2004). Understanding Successful and Unsuccessful EFL Students in Chinese Universities. *The Modern Language Journal*, 88(2), 229-244.
- Garnham, C., & Kaleta, R. (2002). Introduction to Hybrid Courses. *Teaching with Technology Today*, 8(6). Retrieved from <http://www.uwsa.edu/ttt/articles/garnham.htm>
- Gips, A., et al. (2004). *The Effect of Assistive Technology on Education Costs: Two Case Studies*. Paper presented at the The International Conference on Computers Helping People with Special Needs, Paris.
- Grabe, W. (2002). Reading in a Second Language. In R. Kaplan (Ed.), *The Oxford Handbook of Applied Linguistics*. New York: Oxford University Press.
- Graham, C. (2006). Blended Learning System: Definition, Current Trends, and Future Directions. In C. Bonk & C. Graham (Eds.), *The Handbook of Blended Learning*. (1 ed., pp. 3-21). San Francisco: Pfeiffer.
- Graham, L., & Bellert, A. (2005). Reading Comprehension Difficulties Experienced by Students with Learning Disabilities. *Australian Journal of Learning Disabilities*, 10(2), 71-78.
- Graves, M., F., & Graves, B. (2003). *Scaffolding Reading Experiences: Designs for Student Success* (2 ed.). Norwood, MA: Christopher-Gordon.
- Graves, M., F., & Prenn, M., C. (1986). Costs and Benefits of Various Methods of Teaching Vocabulary. *Journal of Reading*, 29, 596-609.
- Green, E., J. (2007). *No Magic Spell for Autonomous Learning*. Retrieved from [http://navitasenglish.com/media/pdf/acl\\_media\\_20070515\\_ACLAutonomousLearningCampusReview.pdf](http://navitasenglish.com/media/pdf/acl_media_20070515_ACLAutonomousLearningCampusReview.pdf)
- Griffin, C., et al. (1995). Effects of Graphic Organizer Instruction on Fifth Grade Students. *Journal of Educational Research*, 89, 98-107.
- Grow, G., O. (1991). Teaching Learners to Be Self-Directed. *Adult Education Quarterly*, 41 (3), 125-149.
- Gunduz, N. (2005). "Computer Assisted Language Learning". *Journal of Language and Linguistic Studies*, 1(2), 193-214.
- Gunning, T. (2006). *Assessing and Correcting Reading and Writing Difficulties* (3 ed.). Boston: Pearson Education.

- Guo, N., & Willis, R. (2006). *An Investigation of an Optimizing Model of Autonomous Learning of TEFL Using Multimedia and the Internet Technologies (ICT)*. Paper presented at the AARE Conference, Parramatta.
- Guthrie, J. (2004). Classroom Contexts for Engaged Reading: An Overview. In J. Guthrie, et al. (Eds.), *Motivating Reading Comprehension: Concept-Oriented Reading Instruction*. (pp. 1-24). New Jersey: Lawrence Erlbaum Associates.
- Guthrie, J., et al. (2006a). From Spark to Fire: Can Situational Reading Interest Lead to Long-Term Reading Motivation? *Reading Research and Instruction*, 45(2), 91-117.
- Guthrie, J., et al. (2006b). Influences of Stimulating Tasks on Reading Motivation and Comprehension. *The Journal of Educational Research*, 99(4), 232-245.
- Guthrie, J., et al. (Eds.). (2004). *Motivating Reading Comprehension: Concept-Oriented Reading Instruction*. Mahwah, NJ: Erlbaum.
- Hall, K., M, et al. (2005). Expository Text Comprehension: Helping Primary-Grade Teachers Use Expository Texts to Full Advantage. *Reading Psychology*, 26(3), 211-234.
- Hatch, E., & Lazaraton, A. (1991). *The Research Manual: Design and Statistics for Applied Linguistics*. Boston: Heinle & Heinle Publishers.
- Hauptman, P. (2000). Some Hypotheses on the Nature of Difficulty and Ease in Second Language Reading: An Application of Schemat Theory. *Foreign Language Annals*, 33(6), 622-631.
- Hernández, A., et al. (2012). *Students' Perception on English E-Learning* Paper presented at the ICT for Language Learning, Florence, Italy.
- Hofmann, J. (2006). Why Blended Learning Hasn't (yet) Fullfilled Its Promises: Answers to Those Questions That Keep You up at Night. In C. Bonk & C. Graham (Eds.), *The Handbook of Blended Learning*. (1 ed., pp. 27-40). San Francisco: Pfeiffer.
- Honig, B. (2001). *Teaching Our Children to Read: The Components of an Effective, Comprehensive Reading Program* (2 ed.). Thousand Oaks.
- Horn, M., & Staker, H. (2011). *The Rise of K-12 Blended Learning*. Innosight Institute. Retrieved from <http://www.innosightinstitute.org/innosight/wp-content/uploads/2011/01/The-Rise-of-K-12-Blended-Learning.pdf>
- Hramiak, A. (2005). A Method for the Analysis of Data from Online Educational Research. *Jouranal of Interactive Online Learning*, 4(2), 81-93.



- Hrastinski, S. (2008). Asynchronous & Synchronous E-Learning. *Educause Quarterly*, 4, 51-55.
- Hsu, J., et al. (2000). *Evaluating Computer-Based Educational Resources*. Singapore: Prentice Hall.
- Huang, R., & Zhou, Y. (2006). Designing Blended Learning Focused on Knowledge Category and Learning Activities: Case Studies from Beijing Normal University. In C. Bonk & C. Graham (Eds.), *The Handbook of Blended Learning*. (pp. 296-310). San Francisco: Pfeiffer.
- Hubbard, P. (2005). A Review of Subject Characteristics in Call Research. *Computer assisted language learning*, 18(15), 351-368.
- Hubbard, P. (Ed.). (2009). *Computer Assisted Language Learning* (Vols. 1 Critical Concepts in Linguistics) London: Routledge.
- Hunt, L., et al. (2002). *Student Resistance to ICT in Education*. Paper presented at the International Conference on Computers in Education.
- Hussain, H. (2009). Blended Approach Environment Shift in Higher Education. In A. Cartelli & M. Palma (Eds.), *Encyclopedia of Informaiton Communication Technology*. (pp. 69-74). Hershey, PA: Information Science Reference.
- Intratrat, C. (2004). Evaluation of Call Materials for EFL Students at Kmutt, Thailand. *Journal of Research and Development*, 27(4), 411-426.
- Intratrat, C. (2007). Investigation on Advantages and Disadvantages in Using English Call According to the Opinions of Thai University Students and Lecturers. *Journal of Research and Development*, 30(1), 3-19.
- Irwin, J. (1991). *Teaching Reading Comprehension Processess* (2 ed.). New Jersey: Prentice-Hall.
- Jenkins, J., R, et al. (1989). Two Approaches to Vacabulary Instruction: The Teaching Individual Word Meanings and Practice in Deriving Word Meanings and Practice in Derving Word Meaning from Context. *Reading Research Quarterly*, 24(215-235)
- Jiang, X. (2011). The Role of First Language Literacy and Second Language Proficiency in Second Language Reading Comprehension. *The Reading Matrix*, 11(2), 177-190.
- Johnson, D., D, & Pearson, D., D. (1984). *Teaching Reading Vocabulary* (2 ed.). New York: Holt, Rinchart and Winston.

- Johnson, D., D, et al. (1986). Semantic Mapping. *The Reading Teacher*, 39, 778-783.
- Johnson, P. (1982). Effects on Reading Comprehension of Building Background Knowledge. *TESOL Quarterly*, 16(4), 503-516.
- Johnston, B. (1999). Theory and Research: Classroom Atmosphere. In J. Egbert & E. Hanson-Smith (Eds.), *Call Environments: Research, Practice, and Critical Issues*. (pp. 331-345). Illinois: Teacher of English to Speakers of Other Language.
- Jorajit, S. (2003). Factors Affecting Reading among Students in Higher Education Institutes in Southern Thailand. *Songklanakarin Journal of Sciences and Humanities*, 9(1), 51-64.
- Kashani, M., et al. (2013). The Role of Schema or Background Knowledge Activation and Graphic Organizer on Increasing Iranian EFL Learners' Reading Comprehension. *European Online Journal of Natural and Social Sciences*, 2(2 Special Issue on Teaching and Learning), 229-241.
- Kaur, A. (2011). *Effects of Teacher Autonomy Support Intervention on Thai Students' Motivation: A Self Determination Theory Perspective*. Ph.D. Universiti Utara Malaysia.
- Kawichai, P. (1997). *A Development of Computer Lessons of English Vocabulary for Mattayom One Learners with Low Learning Achievement* M. Ed. Chiangmai University, Chiangmai.
- Keller, J., M. (1987). Strategies for Stimulating the Motivation to Learn. *Performance and Instruction*, 26(8), 1-7.
- Keller, J., M. (2008). First Principles of Motivation to Learn and E-Learning. *Distance Education*, 29(2), 175-185.
- Kendall, M., & Prowse, A. (2005). Supporting 1st Year Undergraduates through Blended Learning. *Learning & Teaching in Action*, 4(1), 11-17.
- Keshavarz, M., et al. (2007). Content Schemata, Linguistic Simplification, and EFL Readers' Comprehension and Recall. *Reading in a Foreign Language*, 19(1), 19-33.
- Khamkhien, A. (2012). Computer Assisted Language Learning and English Language Teaching in Thailand: Overview. *Mediterranean Journal of Social Sciences*, 3(1), 55-64.
- Khruathong, S. (2008, 7-11 March 2008). *Sufficiency Foreign Language: A Software Development for French Writing from Thai Template*. Paper presented at the Amazing E-Learning II, Suan Dusit Rajabhat University.

- Kim, A., et al. (2006). Improving the Reading Comprehension of Middle School Students with Disabilities through Computer-Assisted Collaborative Strategic Reading. *Remedial and Special Education, 27*(4), 235-249.
- Kim, K. (2009). Motivational Challenges of Adults Learners in Self-Directed E-Learning. *Journal of Interactive Learning Research, 20*(3), 317-335.
- Kitao, K. (1989). *Reading, Schema Theory and Second Language Learners*. Tokyo: Eichosha Shinsha.
- Kitisripanya, P. (2006). The Development of the Undergraduates' English Performance through the Instruction of the Concentrated Language Encounter. *UBUJournal, 8*(2), 104-121.
- Klingner, J., & Vaughn, S. (1996). Reciprocal Teaching of Reading Comprehension Strategies for Students with Learning Disabilities Who Use English as a Second Language. *The Elementary School Journal, 96*(3, Special Issue: The Language-Minority Student in Transition), 275-293.
- Kohlbacher, F. (2006). The Use of Qualitative Content Analysis in Case Study Research. *Forum: Qualitative Social Research, 7*(1). Retrieved from <http://www.qualitative-research.net/index.php/fqs/article/view/75/153#g522>
- Konza, D. (2006). *Teaching Children with Reading Difficulties* (2 ed.). South Melbourne: Social Science Press.
- Kramarski, B., & Feldman, Y. (2000). Internet in the Classroom: Effects on Reading Comprehension, Motivation and Metacognitive Awareness. *Education Media International, 37*(3), 149-155.
- Krueger, R. (1994). *Focus Groups: A Practical Guide for Applied Research* (2 ed.). Thousand Oaks: Sage Publications.
- Krueger, R., & Casey, M. (2000). *Focus Groups: A Practical Guide for Applied Research* (3 ed.). Thousand Oaks: Sage.
- Kucan, L., & Beck, I. (1997). Thinking Aloud and Reading Comprehension Research: Inquiry, Instruction, and Social Interaction. *Review of Educational Research, 67*(3), 271-299.
- LaBerge, D., & Samuels, S., J. (1974). Towards a Theory of Automatic Information Processing in Reading. *Cognitive Psychology, 6*, 293-323.
- Lai, C., & Kritsonis, W. (2006). The Advantages and Disadvantages of Computer Technology in Second Language Acquisition. *Doctoral Forum, 3*(1), 1-6.

- Lapp, D., et al. (2010). Text Mapping Plus: Improving Comprehension through Supported Retelling. *Journal of Adolescent & Adult Literacy*, 53(5), 423-426.
- Larkin, J., M. (2001). Providing Support for Student Independence through Scaffolded Instruction. *Teaching Exceptional Children*, 34(1 ), 30-34.
- Lau, K.-L. (2006). Reading Strategy Use between Chinese Good and Poor Readers: A Think-Aloud Study. *Journal of Research in Reading*, 29(4), 383-399.
- Lau, K.-L., & Chan, D. (2003). Reading Strategy Use and Motivation among Chinese Good and Poor Readers in Hong Kong. *Journal of Research in Reading*, 26(2), 177-190.
- Lea, P., & Clark, D. (2007). 21st Century Learning. *E.Learning Age*, 10-12.
- Lee, K. (2006). *English Teachers' Barriers to the Use of Computer Assisted Language Learning*. *The Internet TESL Journal*. Retrieved from <http://www.4english.cn/englishstudy/xz/thesis/barrir>
- Lee, O., & Im, Y. (2006). The Emergence of the Cyber-University and Blended Learning in Korea. In C. Bonk & C. Graham (Eds.), *The Handbook of Blended Learning*. (pp. 281-295). San Francisco: Pfeiffer.
- Levy, M. (1997). *Computer-Assisted Language Learning*. Oxford: Clarendon Press.
- Lewin, L. (1999). Site Reading" the World Wide Web. *Educational Leadership*, 56, 16-20.
- Lin, H., et al. (2006). Effects of Static Visual and Computer-Generated Animations in Facilitating Immediate and Delayed Achievement in the EFL Classroom. *Foreign Language Annals*, 39(2), 203-219.
- Lincoln, Y., S., & Guba, E., G. (1985). *Naturalistic Inquiry*. Beverly Hills, CA.: Sage.
- Lipson, Y., M, & Wixson, K., K. (2009). *Assessment and Instruction of Reading and Writing Difficulties: An Interactive Approach* (4 ed.). Boston: Pearson.
- Little, D. (2000). Learner Autonomy: Why Foreign Languages Should Occupy a Central Role in the Curriculum. In S. Green (Ed.), *New Perspectives on Teaching and Learning Modern Language*. (pp. 24-45). Clevedon: Multilingual Matters.
- Liu, M., et al. (2002). A Look at the Research on Computer-Based Technology Use in Second Language Learning : A Review of the Literature from 1990-2000. *Journal of Research on Technology in Education*, 34(3), 250-273.

- London Tests of English*. (2007). Retrieved from <http://www.londontests.com.ar/exams.html>
- Macdonald, J. (2006). *Blended Learning and Online Tutoring: A Good Practice Guide*. Hampshire: Gower.
- Mackay, S., & Stockport, G. (2006). Blended Learning, Classroom and E-Learning. *The Business Review*, 5(1), 82-88.
- Madsen, S., H. (1983). *Techniques in Testing*. New York: Oxford University Press.
- Magno, C. (2010). The Effect of Scaffolding on Children's Reading Speed, Reading Anxiety, and Reading Proficiency. *TESOL Journal*, 3, 92-98.
- Maier, P., & Warren, A. (2000). *Integrating Technology in Learning and Teaching*. London: Kogan Page.
- Manisah, M., & Zawawi, Z. (2005, 4-7 August 2005). *Enhancing Remedial Learners Reading through Elearning*. Paper presented at the The Second International Conference on eLearning for Knowledge-Based Society, Bangkok, Thailand.
- Marinak, B., & Gambrell, L. (2008). Intrinsic Motivation and Rewards: What Sustains Young Children' Engagement with Text. *Literacy Research and Instruction*, 47, 9-26.
- Masie, E. (2006). The Blended Learning Imperative. In C. Bonk & C. Graham (Eds.), *The Handbook of Blended Learning*. (1 ed., pp. 22-26). San Francisco: Pfeiffer.
- Mathes, P., G, et al. (2007). Teaching Struggling Readers Who Are Native Spanish Speakers: What Do We Know? Language, Speech, and Hearing Services in School. *American Speech-Language-Hearing Association*, 38, 260-271.
- McCray, G., E. (2000). The Hybrid Course: Merging Online Interaction and the Traditional Classroom. *Information Technology and Management*, 1, 307-327.
- McGee, L. (1982). Awareness of Text Structure: Effects on Children's Recall of Expository Text. *Reading Research Quarterly*, 17(4), 581-590.
- Mckeown, M., et al. (2009). *Reading Comprehension Instruction: Focus on Content or Strategies?* Paper presented at the Perspective on Language and Literacy, Orlando, Florida.
- McNeil, J. (1992). *Reading Comprehension: New Directions for Classroom Practice* (3 ed.). Los Angeles: HarperCollins.

- Mertler, C., & Charles, C. (2005). *Introduction to Educational Research* (5 ed.). New York: Pearson Education.
- Meyer, B., J., F., et al. (1980). Use of Top-Level Structure in Text: Key for Reading Comprehension of Ninth-Grade Students. *Reading Research Quarterly*, 16(1), 72-103.
- Meyer, B., J., F., & Ray, M., N. (2011). Structure Strategy Interventions: Increasing Reading Comprehension of Expository Text. *International Electronic Journal of Elementary Education*, 4(1), 127-152.
- Meyer, B., J., F. (1975). *The Organization of Prose and Its Effects on Memory*. Amsterdam: North Holland.
- Meyer, B., J., F. (Ed.). (1985). *Understanding Expository Text: A Theoretical and Practical Handbooks for Analyzing Explanatory Text* Hillsdale, NJ: Erlbaum.
- Miles, M., & Huberman, M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook* (2 ed.). Thousand Oaks: Sage Publication.
- Motteram, G. (2005). 'Blended' Education and the Transformation of Teachers: A Long-Term Case Study in Postgraduate UK Higher Education. *British Journal of Educational Technology*, 37(1), 17-30.
- Nagy, W., et al. (1989). Morphological Families in the Internal Lexicon. *Reading Research Quarterly*, 24, 262-279.
- National Reading Panel. (2000). *Teaching Children to Read* (Nih Pub. No. 00-4754). Washington, DC.
- National Statistical Office. (2008). *Investigation on the Use of ICT in Educational Institution B.E. 2551*. Bangkok: Bangkokblog.
- Negash, S., et al. (2007). Synchronous Hybrid E-Learning: Teaching Complex Information Systems Classes Online. *International Journal of Information and Communication Technology Education*, 3(3), 1-13.
- Neufeld, P. (2005). Comprehension Instruction in Content Area Classes. *The Reading Teacher*, 59(4), 302-312.
- Nguyen, B., T. (2011). Face-to-Face, Blended, and Online Instruction: Comparison of Student Performance and Retention in Higher Education. ProQuest Dissertations and Theses Retrieved January 22, 2017 <http://search.proquest.com/docview/937029598?accountid=10382>. (937029598).

- Office of the National Education Commission. (2002). *National Education Act of B.E. 2542 to 2549*. Office of the National Education Commission Retrieved from <http://www.onec.go.th>.
- Office of the National Education Commission. (2003). *National Education Act of B.E. 2542 (1999) and Amendments (Second National Education Act B.E. 2545 (2002))*. Office of the National Education Commission Retrieved from [http://www.onec.go.th/publication/law2545/nation\\_edbook.pdf](http://www.onec.go.th/publication/law2545/nation_edbook.pdf).
- Oh, S., Y. (2001). Two Types of Input Modification and EFL Reading Comprehension: Simplification Versus Elaboration. *TESOL Quarterly*, 35(1), 69-96.
- O'Leary, M., B. (2008). *A Case Study of Student Learning Outcomes Based on the Implementation of a Blended Course Format in Introductory Spanish*. Ph.D. The University of Alabama. Retrieved from <http://search.proquest.com/docview/304682393?accountid=10382>. Available from ProQuest Dissertations and Theses,
- Onglumyong, C. (1992). *Developing English Reading-Lessons through Computer*. M.Ed Silpakorn University, Nakhon Prathom.
- Park, C. N., & Son, J.-B. (2009). Implementing Computer-Assisted Language Learning in the EFL Classroom: Teachers' Perceptions and Perspectives. *International Journal of Pedagogies & Learning*, 5(2), 80-101.
- Pawapatcharandom, R. (2007). *An Investigation of Thai Students' English Language Problems and Their Learning Strategies in the International Program at Mahidol University*. Master. King Mongkut's Institute of Technology North Bangkok, Bangkok.
- Pearson, D., & Johnson, D. (1978). *Teaching Reading Comprehension*. New York: Holt, Rinehart and Winston.
- Perfetti, A., C. (1979). Language Comprehension and Fast Decoding: Some Psycholinguistic Prerequisites for Skilled Reading Comprehension. In J. Guthrie (Ed.), *Cognition, Curriculum, and Comprehension*. (2 ed., pp. 20-41). Delaware: International Reading Association.
- Philips, L., M., et al. (2007). Reading Comprehension Instruction. *Encyclopedia of Language and Literacy Development*. Retrieved from <http://www.literacyencyclopedia.ca/pdfs/topic.php?topld=232>
- Phunpruek, S., & Mahapoontong, C. (2006). A Study of English Lanugauge Proficiency, Language Usage Problems and Language Needs among Graduate and Post Graduate Students at King Mongkut's Institute of Technology North Bangkok. *The Journal of KMITNB*, 17(3)

- Pilonieta, P. (2011). The Expository Text Primer: A Teacher's Resource Guide for Using Expository Text. *New England Reading Association Journal*, 46(2), 45-52.
- Pintrich, P. (2000). The Role of Goal Orientation in Self-Regulated Learning. In M. Boekaerts, et al. (Eds.), *Handbook of Self-Regulation*. (pp. 451-502). Mahwah, NJ: Lawrence Erlbaum.
- Piromruen, U. (1993, August 3-4). *The Impact of Foreign Language Literacy on Higher Education in Thailand*. Paper presented at the Asian Reading Conference, Tokyo, Japan.
- Plailek, T. (2011). Factors Effecting English Speaking Ability of Second Year English Major Students in the Faculty of Education, Rajabhat Universities in Bangkok Metropolitan Area. *Research and Development Journal*, 3, 52-58.
- Pralubraksa, W. (1998). *Multimedia Computer Assisted Language Learning Lessons for English Reading and Writing (E022) for Mattayom One Students*. M.Ed Thesis. Khonkaen University, Khonkaen.
- Pressley, M. (2002). Metacognition and Self-Regulated Comprehension. In A. A. Farstrup & S. Samuels, J (Eds.), *What Research Has to Say About Reading Instruction*. (pp. 291-309). Newark, DE: International Reading Association.
- Radi, O. (2001, July29-August 3, 2001). *The Impact of Computer Use on Literacy in Reading Comprehension and Vocabulary Skills*. Paper presented at the Seventh World Conference on Computer Education, Copenhagen.
- Rabiee, F. (2004). Focus-Group Interview and Data Analysis. *Proceedings of the Nutrition Society*, 63, 655-660.
- Rasinski, T., V. (2004). *Assessing Reading Fluency*. Honolulu, HI: Pacific Resources for Education and Learning.
- Ray, M., J., & Meyer, B., J., F. (2011). Individual Differences in Children's Knowledge of Expository Text Structures: A Review of Literature. *International Electronic Journal of Elementary Education*, 4(1), 67-82.
- Reiber, L., P., & Kini, A., S. (1991). Theoretical Foundations of Instructional Applications of Computer-Generated Animated Visual. *Journal of Computer-Based Instruction*, 18(3), 83-88.
- Reinders, H., & Lewis, M. (2005). How Well Do Self-Access Call Materials Support Self-Directed Learning. *The JALT CALL Journal*, 1(2), 41-49.



- Richek, M., et al. (2000). *Reading Problems: Assessment and Teaching Strategies* (4 ed.). Boston: Allyn and Bacon.
- Ridder, I. (2000). Are We Conditioned to Follow Links? Highlights in Call Materials and Their Impact on the Reading Process. *Computer Assisted Language Learning*, 13(2), 183-185.
- Rinehart, S., et al. (1991). Effects of Advance Organizers on Text Recall by Poor Readers. *Reading & Writing Quarterly*, 7, 321-335.
- Riviera-Mills, S., & Plonsky, L. (2007). Empowering Students with Language Learning Strategies: A Critical Review of Content Issues. *Foreign Language Annals*, 40(3), 535-548.
- Robert, T. (2004). Toward a New Learning Paradigm? *Information Management*, 17(314), 26-29.
- Rodgers, A., & Rodgers, E. (Eds.). (2003). *The Role of Scaffolding in Teaching* Portsmouth, NH: Heinemann.
- Rodgers, D., L., & Withrow-Thorton, B., J. (2005). The Effect of Instructional Media on Learners Motivation. *International Journal of Instructional Media*, 32(4), 333-343.
- Ryan, R., M., & Deci, E., L. (2000). Intrinsic and Extrinsic Motivation: Classic Definitions and New Direction. *Contemporary Educational Psychology*, 25(1), 54-67.
- Ryder, R., J. (1986). Teaching Vocabulary through External Context Clues. *Journal of Reading*, 30, 61-65.
- Sabbatino, E. (2004). Students with Learning Disabilities Construct Meaning through Graphic Organizers: Strategies for Achievement in Inclusive Classroom. *Learning Disabilities: A Multidisciplinary Journal*, 13(2), 69-73.
- Salataci, R., & Akyel, A. (2002). Possible Effects of Strategy Instruction on L1 and L2 Reading. *Reading in a Foreign Language*, 14, 1-17.
- Sanders, M. (2008, 7-11 March 2008). *Student Use of Call as a Means to Motivate and Sense of Accomplishment in English Studies*. Paper presented at the Amazing E-Learning II, Suan Dusit Rajabhat University.
- Satiman, U., et al. (2004). *The Study of Students' Problems and Desire Learning through Video Conference System of Rajabhat Institute Suan Dusit*. Rajabhat Institute Suan Dusit, Bangkok.

- Scheffe, H. (1953). A Method for Judging All Contrasts in the Analysis of Variance. *Biometrika*, 40, 87-104.
- Seyler, D., U. (2000). *The Reading Context* (2 ed.). Boston: Allyn and Bacon.
- Shetzer, H., & Warschauer, M. (2000). An Electronic Literacy Approach to Network-Based Language Learning. In M. Warschauer & R. Kern (Eds.), *Network-Based Language Teaching: Concepts and Practice*. (Vol. 171-185). Cambridge: Cambridge University Press.
- Shiozawa, T. (2001). Graded Reading System on-Line. In K. Cameron (Ed.), *C.A.L.L.-the Challenge of Change*. Exeter: Elm Bank Publications.
- Sibthorp, J., et al. (2011). Experiential Education and Lifelong Learning: Examining Optimal Engagement in College Students. *Journal of Experiential Education*, 33(4), 388-392.
- Sinatra, R. (1991). Integrating Whole Language with the Learning of Text Structure. *Journal of Reading*, 34(6), 424-433.
- Singhal, M. (1997). *The Internae and Foreign Language Education: Benefits and Challenges*. *The Internet TESL Journal* Retrieved from <http://iteslj.org/Articles/Singhal-Internet.html>
- Singleton, R., & Straits, B. (1999). *Approach to Social Research* (3 ed.). New York: Oxford University Press.
- Snowball, D. (2006). Comprehension for All. *Teaching Pre K - 8*, 36(8), 62-36.
- Soo, K. (1999). Theory and Research: Learning Styles, Motivation, and the Call Classroom. In J. E. E. Hanson-Smith (Ed.), *Call Environments: Research, Practice, and Critical Issues*. (pp. 289-301). Illinois: Teacher of English to Speakers of Other Language.
- Sosin, K., et al. (2004). Efficiency in the Use of Technology in Economic Education: Some Preliminary Results. *American Economic Review*, 94(2), 253-258.
- Sriwongkol, T. (2008, 20-21 November 2008). *Development of Aaa Model for Blended Learning Based on the Philosophy of Sufficiency Economy*. Paper presented at the International e-Learning Conference, Bangkok, Thailand.
- Sroinam, R. (2003). *Students' Scores of Reading for Text Interpretation*. Udon Thani Rajabhat University, Udon Thani.

- Sroinam, R. (2005). *English Reading Comprehension of Thai Undergraduates: L1/L2 Usage, Texts, Strategies and Problem*. (Phd. Thesis). Edith Cowan University.
- Stahl, S., A., & Hiebert, E., H. (2005). The 'Word Factors': A Problem for Reading Comprehension Assessment. In S. Paris & S. Stahl (Eds.), *Current Issues in Reading Comprehension and Assessment*. (pp. 161-186). Mahwah, NJ: Lawrence Erlbaum Associates.
- Steffensen, M., et al. (1979). A Cross-Cultural Perspective on Reading Comprehension. *Reading Research Quarterly*, 15(1), 10-29.
- Sternburg, R., J., et al. (Eds.). (1983). *Teaching Vocabulary Building Skills: Contextual Approach*, New York: Academic Press.
- Stewart, D., et al. (2007). *Focus Groups: Theory and Practice* (2 ed.). Thousand Oaks: Sage.
- Stewart, O., & Tei, E. (1983). Some Implication of Metacognition for Reading Instruction. *Journal of Reading*, 27, 36-43.
- Strangman, N., et al. (2003). *Background Knowledge Instruction and the Implications for UDL Implementation*.
- Suanpang, P., et al. (2004). Student Attitudes to Learning Business Statistics: Comparison of Online and Traditional Methods. *Educational Technology & Society*, 7(3), 9-20.
- Suknantapong, W., et al. (2002). An Analytical Study of Humanities and Social Sciences Students' Problems in Reading English. *Songklanakarin Journal of Sciences and Humanities*, 8(2), 121-132.
- Sweet, A., & Guthrie, J. (1996). How Children's Motivation Relate to Literacy Development and Instruction. *The Reading Teacher*, 49(8), 660-662.
- Taylor, B. (1980). Memory for Expository Text after Reading. *Reading Research Quarterly*, 15(3), 399-411.
- Taylor, B., et al. (1995). *Reading Difficulties: Instruction and Assessment* (2 ed.). New York: McGraw-Hill.
- Terry, N., et al. (2003). The Efficacy of Alternative Instruction Modes in Economics. *Economic Research Network Educator*. Retrieved from <http://ssrn.com/abstract=392561>

- Thienmongkol, R. (2008, 7-11 March 2008). *A Study of User Design Interface Problems in E-Learning*. Paper presented at the Amazing E-Learning II, Suan Dusit Rajabhat University.
- Thorne, K. (2003). *Blended Learning: How to Integrate Online & Traditional Learning*. London: Kogan Page.
- Topping, K., & Paul, T. (1999). Computer-Assisted Assessment of Practice at Reading: A Large Scale Survey Using Accelerated Reader Data. *Reading & Writing Quarterly*, 15, 213-231.
- Torut, S. (1984). *English Reading Skills Development*. Nakornprathom: Department of Education, Silpakorn University.
- Towndrow, P. (1999). The Impact of Digital Education on Tesol. *Computer Assisted Language Learning*, 12(2), 157-162.
- Tsutsui, M., & Kato, M. (2001). Designing a Multimedia Feedback Tool for the Development of Oral Skill. In K. Cameron (Ed.), *C.A.L.L.-the Challenge of Change*. (pp. 81-88). Exeter: Elm Bank Publications.
- Turbee, L. (1999). Classroom Practice: Moo, Woo, and More-Language Learning in Virtual Environments. In J. Egbert & E. Smith (Eds.), *Call Environments: Research, Practice, and Critical Issues*. (pp. 346-361). Illinois: Teacher of English to Speakers of Other Languages.
- Ullman, E. (2012). Developing Self-Motivated, Lifelong Learners. *Education Update; Apr, Vol. 54 Issue 4, p3, 54(4), 3*.
- Vacca, R., T., & Vacca, R., J. (1986). *Content Area Reading*. Boston: Little, Brown and Company.
- Vaughan, N. (2007). Perspectives on Blended Learning in Higher Education. *International Journal on ELearning*, 6(1), 81-94.
- Vilmi, R. (1999). Call Issues: Language Learning over Distance. In J. Egbert & E. Smith (Eds.), *Call Environments: Research, Practice, and Critical Issues*. (pp. 427-441). Illinois: Teachers of English to Speaker of Other Languages.
- Wannapiroon, P. (2008). Development of Problem-Based Learning Model in Developing Undergraduate Students' Critical Thinking. *e-Journal*, 1(2). Retrieved from <http://ejournals.swu.ac.th/index.php/ictl/article/view/367>
- Warschauer, M. (1996). Computer Assisted Language Learning: An Introduction. In S. Fotos (Ed.), (*Ed.*) *Multimedia Language Teaching*. (pp. 3-20). Tokyo: Logos International. Retrieved from <http://www.ict4lt.org/en/warschauer.htm>

- Warschauer, W., et al. (2000). *Internet for English Teaching*. Virginia: Teacher of English to Speakers of Other Languages.
- Weber, R., P. (1990). *Basic Content Analysis*. Newbury Park, CA: Sage Publication.
- Weir, C. (2005). *Language Testing and Validation: An Evidence-Based Approach*. Hampshire: Palgrave-Macmillan
- Westwood, P. (2003). *Reading and Learning Difficulties: Approaches to Teaching and Assessment*. Victoria: ACER.
- Westwood, P. (2007). *Commonsense Methods for Children with Special Education: Strategies for the Regular Classroom* London: (RoutledgeFalmar).
- Wheatley, E., et al. (1993). Computer Assisted Vocabulary Instruction. *Journal of Reading*, 37(2), 92-102.
- White, D., R. (1981). "Reading." *In Communication in the Classroom Applications and Methods for a Communicative Approach*. London: Longman.
- White, M. D., & Marsh, E. E. (2006). Content Analysis: A Flexible Methodology. *Library Trends*, 55(1), 22-45.
- William, G., & Sosin, K. (2005). Teaching with Technology: May You Live in Interesting Time. *The Journal of Economic Education*, 36(3), 276-291.
- Williams, C., K., & Williams, C., C. (2011). Five Key Ingredients for Improving Student Motivation. *Research in Higher Education Journal*, 12, 1-23.
- Wilson, L., V. (1999). *The Challenge of Enhancing Adult Motivation to Learn in a Multicultural Environment: Difference without Difference*. Paper presented at the Allie Academies National Conference, Myrtle Beach.
- Wloodkowski, R., J. (1993). *Enhancing Adult Motivation to Learn*. New York: Holt, Rinehart and Winston.
- Wloodkowski, R., J., & Ginsberg, M., B. (1995). *Diversity and Motivation*. San Francisco: Jossey-Bass.
- Woolley, G. (2007). A Comprehension Intervention for Children with Reading Comprehension Difficulties. *Australasian Journal of Learning Difficulties*, 12(1), 43-50.
- Woolley, G. (2010). A Multiple Strategy Framework Supporting Vocabulary Development for Studens with Reading Comprehension Deficits. *Australasian Journal of Special Education*, 34(2), 119-132.

- Yimwilai, S. (2008). English Reading Abilities and Problems of English-Major Students in Srinakharinwirot University. *Journal of Humanities and Societies*, 4(2), 130-148.
- Zaphiris, P., & Zacharia, G. (2006). Preface. In P. Zaphiris & G. Zacharia (Eds.), *User-Centered Computer Aided Language Learning*. (pp. vi-ix). Hershey: Information Science Publishing.
- Zare-ee, A., et al. (2009). The Educational Usefulness and Use of Blogging in Higher Education: Male and Female Iranian Undergraduate Students' Views. *World Applied Sciences Journal*, 2(1), 211-219.
- Zhang, X. (2008). The Effects of Formal Schema on Reading Comprehension-an Experiment with Chinese EFL Readers. *13*, 2, 197-214.
- Ziob, L., & Mosher, B. (2006). Putting Customer First at Microsoft. In C. Bonk & C. Graham (Eds.), *The Handbook of Blended Learning*. (1 ed., pp. 92-104). San Francisco: Pfeiffer.
- Zukowski, A. (2006). Exploring the New Pathway of Blended Learning. *Momentum*, 37(4), 82-83.

"Every reasonable effort has been made to acknowledge the owners of copyright materials. I would be pleased to hear from any copyright owner who has been omitted or incorrectly acknowledged"

## **Appendices**

**Appendix A:      A letter to the president of SDU**

Curtin University of Technology  
 Kent Street  
 Bentley WA 6102

November 2, 2007

Suan Dusit Rajabhat University  
 295 Ratchasima Road  
 Dusit Bangkok 10300

มหาวิทยาลัยราชภัฏสวนดุสิต
เลขที่..... ๗๕๖
วันที่..... ๕ พ.ย. ๐๗
เวลา..... ๗.๑๐ น.

Dear President,

Seeking permission to conduct a research project

My name is Chayapon Chomchaiya, a lecturer in the English program, Dusit Commercial College Campus. I am currently enrolling in PhD in the Department of Languages and Intercultural Education at Curtin University of Technology. My candidacy proposal entitled "An investigation into the development of English language reading comprehension among Thai undergraduate students using an online blended learning approach" was approved by the Divisional Graduate Studies Committee (DGSC) on 26 October 2007. I would like to ask for your permission to conduct a research with Suan Dusit Rajabhat University students, Dusit Commercial College Campus. The study will be divided in four phases and it will be conducted between July 2008 and December 2009.

The objectives of this research are threefold. Initially, the study will seek to uncover the perceptions of a group of Thai undergraduate students at Suan Dusit Rajabhat University in relation to the difficulties they experience in developing their English language reading skills in their normal instructional environment. The initial stage of the research will elicit information from the target group on their own perceptions as to why this should be the case. Second, using the data obtained from the first part of the project, an instruction program using the blended learning approach will be designed with the aim of reducing the perceived barriers and enhancing the development of reading comprehension skills. The third, and most important, objective will be the evaluation of the program from the dual perspectives of learner perceptions and the degree to which the program attains its learning goals. I attach my candidacy proposal in order to give you further information about the research project.



Any enquiries about the study can be made to Chayapon Chomchaiya on 0402671794 or boomcurtin@yahoo.com.au, my research supervisor, Dr. Katie Dunworth, Department of Languages and Intercultural Education, Curtin University of Technology, telephone +61 8 9266 4227, e-mail: [k.dunworth@curtin.edu.au](mailto:k.dunworth@curtin.edu.au).

Your approval and support would be highly appreciated.

Yours Sincerely,

*Chayapon Chomchaiya,*

Chayapon Chomchaiya

English lecturer  
English Program  
Dusit Commercial College  
Suan Dusit Rajabhat University.

*Katie Dunworth*



Special No.1/2550

Dusit Commercial College Campus  
Suan Dusit Rajabhat University  
438/17 Rajvithee Soi 5  
Rajthevee 10400

November 9, 2007

Dear Mr. Chayapon Chomchaiya,

Following your request to conduct your doctoral study at Suan Dusit Rajabhat University with students from the English language programs, we are happy to grant your permission to undertake this research. We wish you success in your studies.

Yours Sincerely,

A handwritten signature in black ink, reading "Panya Anantathanachai".

Assistant Professor Panya Anantathanachai  
Director of Dusit Commercial College Campus  
Suan Dusit Rajabhat University

**Appendix B: Letters of invitation and consent forms**

### **Invitation of participation (Phase One)**

The invitation of participation distributed to Suan Dusit Rajabhat University's students in Phase One of the study.

Dear Student

I would like to ask for your participation in a research of an investigation into the development of English language reading comprehension among Thai undergraduate students using an online BL approach. This research is a part of my Phd. research at Curtin University of Technology. The study will seek to uncover the perceptions of a group of Thai undergraduate students at Suan Dusit Rajabhat University in relation to the difficulties they experience in developing their English language reading comprehension in their normal instructional environment. The results obtained from the questionnaire or interview will be a useful guidance for lecturer to develop the BL approach which address the learner's barriers of learning and provide an alternative teaching method for Suan Dusit Rajabhat University.

The data collection in the research will be obtained from questionnaire or interview. Students name will be shown as anonymous. The information will be kept confidential by the researcher and will not be open to the general public or to other students. If you feel inconvenience to answer the questions from both questionnaire or interview, you can skip the question or ask the researcher to move on to the next question. Students are also allowed to recheck or change the information which is previously given.

Finally, I would like to thank you in advance for your valuable time and contribution in joining the study.

Yours Sincerely,

Chayapon Chomchaiya, Lecturer  
English Program  
Faculty of Humanities and Social Sciences  
Dusit Commercial College Campus  
Suan Dusit Rajabhat University  
email: [chayapon\\_cho@dusit.ac.th](mailto:chayapon_cho@dusit.ac.th)

### **Invitation of participation (Phase Three)**

The invitation of participation distributed to Suan Dusit Rajabhat University's students who enrolled in the English reading subject of Suan Dusit Rajabhat University

Dear Student

I would like to ask for your participation in a research of an investigation into the development of English language reading comprehension among Thai undergraduate students using an online BL approach. This research is a part of my Phd. research at Curtin University of Technology. The study will seek to evaluate of the developed BL approach from the dual perspectives of learner perceptions and the degree to which the program attains its learning goals. The results obtained from the study will be a useful guidance for lecturer to create better learning environment for learners, assist the research to determine the effectiveness of BL and provide an alternative teaching method for Suan Dusit Rajabhat University.

The data collection in the research will be obtained from pretest and posttest score, questionnaire and interview. Students name will be shown as anonymous. At the end of the data collection process, the score obtained from the study will be transferred into CD and kept in lock storage. The information will be kept confidential by the researcher and will not be open to the general public or to other students

If you feel inconvenience to join the class during the period of the study, you may withdraw from the study or join another traditional learning class taught by the same instructor at anytime. Apart from this, if you do not want to answer the questions from both questionnaire and interview,

you can skip the question or ask the researcher to move on to the next question. Students are also allowed to recheck or change the information which is previously given.

Finally, I would like to thank you in advance for your valuable time and contribution in joining the study.

Yours Sincerely,

Chayapon Chomchaiya, Lecturer  
English Program  
Faculty of Humanities and Social Sciences  
Dusit Commercial College Campus  
Suan Dusit Rajabhat University  
email: [chayapon\\_cho@dusit.ac.th](mailto:chayapon_cho@dusit.ac.th)

## แบบตอบรับเข้าร่วมงานวิจัย (Consent Form)

ข้าพเจ้าขอยืนยันว่าข้าพเจ้าได้รับการอธิบายรายละเอียดและส่วนร่วมของข้าพเจ้าเกี่ยวกับงานวิจัยดังกล่าว โดยข้าพเจ้าสามารถถอนตัวจากงานวิจัยดังกล่าวเมื่อข้าพเจ้าต้องการ นอกจากนี้ข้อมูลที่ได้รับจากแบบสอบถามนี้จะไม่สามารถเปิดเผยถึงตัวตนของข้าพเจ้า

I confirm that I have been informed about this project and understand what my participation involves. I understand that I can withdraw at any time, and that no information which could identify me will be used in published material.

ข้าพเจ้ามีความสมัครใจเข้าร่วมให้ข้อมูลแก่งานวิจัยดังกล่าว

I agree to participate in the study as described to me.

ชื่อ (Name).....

ลายเซ็น (Signature) .....

วันที่ (Date).....



## **Appendix C: Focus group questions**

### **Question 1**

How do you feel about reading?

### **Question 2**

How do you feel about English reading?

### **Question 3**

What reading topic do you like to read?

### **Question 4**

How much do you usually read outside the classroom?

### **Question 5**

What do students usually read outside the classroom?

### **Question 6**

What do you read in classrooms?

### **Question 7**

How do you feel about the English reading materials at SDU?

### **Question 8-**

What kind of problem do you mostly have in English reading?

### **Question 9**

How do you solve the problem?

### **Question 10**

How does the learning environment affect your English reading learning?

### **Question 11**

How does the English reading instruction affect your English reading?

### **Question 12**

How do you feel about your English reading teachers?

### **Question 13**

Do you have any suggestions to the teacher or the university which may improve the English reading instruction in your university?

**Appendix D: A questionnaire used in Phase One**

### Questionnaire (English)

The purpose of this questionnaire is to find out about your classroom reading instruction. The results will help language instructors to design a program that helps students to learn most effectively. All information you provide will be kept confidential by the researcher.

The questionnaire should take you about 15 minutes to complete.

**Part I: (please tick the box according to whether you agree or disagree with the following statements).**

- |    |                                      |                                |                                   |
|----|--------------------------------------|--------------------------------|-----------------------------------|
| 1. | I enjoy reading in Thai              | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 2. | I enjoy reading in English           | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 3. | I read in English for pleasure       | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 4. | I read in English for information    | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 5. | I read English outside the classroom | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |

#### Your computer experience

- |     |   |                                |                                   |
|-----|---|--------------------------------|-----------------------------------|
| 6.  | I know how to use a computer.                                     | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 7.  | I have little experience with computers.                          | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 8.  | I am able to use some different types<br>of software.             | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 9.  | I am familiar with a wide range of<br>software types.             | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 10. | I use a computer for entertainment                                | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 11. | I use a computer for work   | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 12. | I use a computer for university study                             | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 13. | I use a computer to learn English                                 | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 14. | I mainly use the Internet at university                           | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 15. | I mainly use the Internet at home                                 | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 16. | I mainly use the Internet at an internet cafe                     | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 17. | I mainly use the Internet at friends or<br>relatives' house       | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 18. | I have experienced online lessons at my<br>university             | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |
| 19. | I have studied online English reading<br>classes at my university | <input type="checkbox"/> Agree | <input type="checkbox"/> Disagree |

**Your reading strategies in class**

20. I use my background knowledge to understand the reading text.  Agree  Disagree
21. I usually read the whole reading text before answering comprehension questions.  Agree  Disagree
22. I usually use a dictionary to look up words I don't know.  Agree  Disagree
23. I am usually able to guess the meaning of unknown words from the text.  Agree  Disagree
24. I am usually able to identify the main idea of the reading passage.  Agree  Disagree

**Part II:**

25. What are the main problems you have with reading in English?

---



---



---

26. What kind of activities do you enjoy doing in your English reading classroom?

---



---



---

27. What kind of English reading materials would help you to develop your English reading comprehension? (e.g. describe the style, format)

---



---



---

28. What kind of topics do you most enjoy reading about?

---



---



---

29. In your opinion, what kind of teaching approach would best help you to improve your English reading comprehension?

---



---

30. What kind of classroom environment would help you to study most effectively?

---

---

---

31. What do you think are the advantages of using a computer in your English reading class, if any?

---

---

---

32. What do you think are the disadvantages of using a computer in your English reading class, if any?

---

---

---

33. In your reading class, what kind of activities, if any, would you enjoy doing on the computer?

---

---

---

34. Are there any other comments you would like to make about the reading instruction you receive?

---

---

---

## Questionnaire (Thai version)

แบบสอบถามชุดนี้ได้ถูกออกแบบมาเพื่อศึกษาถึงแนวความคิดของนักศึกษาเกี่ยวกับการการสอนการอ่านภาษาอังกฤษ ข้อมูลที่ได้รับจากการวิจัยในครั้งนี้จะเป็นประโยชน์ต่ออาจารย์ผู้สอนภาษาในการจัดการเรียนการสอนวิชาการอ่านภาษาอังกฤษที่ตรงกับความต้องการของผู้เรียน และช่วยส่งเสริมการพัฒนาการเรียนรู้ของผู้เรียนอย่างมีประสิทธิภาพสูงสุด ข้อมูลที่ได้รับจะถูกเก็บเป็นความลับโดยผู้วิจัย ขอขอบคุณนักศึกษาทุกท่านสำหรับความร่วมมือในการตอบแบบสอบถามชุดนี้

แบบสอบถามนี้จะใช้เวลาประมาณ 15 นาทีในการทำ

**ส่วนที่ 1 :** โปรดอ่านข้อคำถามต่อไปนี้ แล้วเลือกว่าคุณเห็นด้วยกับข้อความดังกล่าวหรือไม่

- |   |                          |          |                          |             |
|---|--------------------------|----------|--------------------------|-------------|
| 1. ฉันรู้สึกสนุกกับการอ่าน  | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 2. ฉันรู้สึกสนุกกับการอ่านภาษาอังกฤษ                                    | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 3. ฉันอ่านภาษาอังกฤษเพื่อความบันเทิง                                    | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 4. ฉันอ่านภาษาอังกฤษเพื่อค้นหาข้อมูล                                    | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 5. ฉันอ่านภาษาอังกฤษนอกชั้นเรียนอยู่บ่อยครั้ง                           | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| <b>ประสบการณ์ของผู้เรียนเกี่ยวกับการใช้คอมพิวเตอร์</b>                  |                          |          |                          |             |
| 6. ฉันสามารถใช้คอมพิวเตอร์ได้   | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 7. ฉันมีประสบการณ์ในการใช้คอมพิวเตอร์น้อยมาก                            | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 8. ฉันพอใช้โปรแกรมคอมพิวเตอร์ประเภทต่างๆ ได้                            | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 9. ฉันมีความชำนาญกับ โปรแกรมคอมพิวเตอร์ประเภทต่างๆ                      | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 10. ฉันใช้คอมพิวเตอร์เพื่อความบันเทิง                                   | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 11. ฉันใช้คอมพิวเตอร์ในการทำงาน   | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 12. ฉันใช้คอมพิวเตอร์ในการเรียนระดับมหาวิทยาลัย                         | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 13. ฉันใช้คอมพิวเตอร์ในการเรียนภาษาอังกฤษ                               | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 14. ฉันมักจะใช้อินเทอร์เน็ตที่มหาวิทยาลัย                               | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 15. ฉันมักจะใช้อินเทอร์เน็ตที่บ้าน                                      | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 16. ฉันมักจะใช้อินเทอร์เน็ตที่ร้านอินเทอร์เน็ตคาเฟ่                     | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 17. ฉันมักจะใช้อินเทอร์เน็ตที่บ้านเพื่อนหรือบ้านญาติ                    | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 18. ฉันมีประสบการณ์เกี่ยวกับบทเรียนออนไลน์                              | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |
| 19. ฉันเคยเรียนวิชาการอ่านภาษาอังกฤษผ่านระบบออนไลน์ที่มหาวิทยาลัยของฉัน | <input type="checkbox"/> | เห็นด้วย | <input type="checkbox"/> | ไม่เห็นด้วย |

### ทักษะการอ่านภาษาอังกฤษของผู้เรียน

20. ฉันมักจะเชื่อมโยงประสบการณ์ส่วนตัวกับเนื้อเรื่องภาษาอังกฤษที่อ่าน  
 เห็นด้วย  ไม่เห็นด้วย
21. ฉันมักจะอ่านเนื้อเรื่องทั้งหมดให้จบก่อนที่จะตอบคำถาม  
 เห็นด้วย  ไม่เห็นด้วย
22. ฉันมักจะใช้พจนานุกรมเพื่อค้นหาความหมายของคำศัพท์ภาษาอังกฤษที่ฉันไม่รู้  
 เห็นด้วย  ไม่เห็นด้วย
23. ฉันมักจะเดาความหมายของคำศัพท์ภาษาอังกฤษที่ไม่รู้จักจากเนื้อเรื่องที่อ่าน  
 เห็นด้วย  ไม่เห็นด้วย
24. ฉันมักจะหาใจความสำคัญจากเนื้อเรื่องที่อ่านได้  
 เห็นด้วย  ไม่เห็นด้วย

### ส่วนที่ 2 :

25. ปัญหาอะไรที่คุณพบมากที่สุดในการอ่านภาษาอังกฤษ?

---



---



---

26. กิจกรรมในชั้นเรียนอะไร ที่คุณชอบที่จะมีส่วนร่วมในชั้นเรียนการอ่านภาษาอังกฤษ?

---



---



---

27. คุณคิดว่า บทเรียนภาษาอังกฤษควรมีลักษณะอย่างไรที่จะช่วยส่งเสริมการพัฒนาความเข้าใจในการอ่านภาษาอังกฤษ? (ตัวอย่างเช่น ลักษณะเนื้อหา และ รูปลักษณะภายนอกของบทเรียน)

---



---



---

28. หัวเรื่องในการอ่านประเภทไหนที่คุณชอบอ่านมากที่สุด?

---



---



---

29. คุณคิดว่า อาจารย์ควรจัดรูปแบบการเรียนการสอนในรูปแบบใดเพื่อที่จะช่วยส่งเสริมการพัฒนาทักษะการอ่านภาษาอังกฤษของคุณได้ดีที่สุด?

---

---

---

30. สภาพแวดล้อมในห้องเรียนควรมีลักษณะอย่างไรที่จะช่วยให้คุณเรียนได้อย่างมีประสิทธิภาพมากที่สุด?

---

---

---

31. คุณคิดว่าอะไรคือข้อดีในการนำคอมพิวเตอร์เข้ามาใช้เป็นส่วนประกอบในชั้นเรียนการอ่านภาษาอังกฤษของคุณ (ถ้ามี)?

---

---

---

32. คุณคิดว่าอะไรคือข้อเสียในการนำคอมพิวเตอร์เข้ามาใช้เป็นส่วนประกอบในชั้นเรียนการอ่านภาษาอังกฤษของคุณ (ถ้ามี)?

---

---

---

33. ในชั้นเรียนการอ่านภาษาอังกฤษของคุณ กิจกรรมอะไรที่คุณมีความต้องการที่จะทำผ่านทางคอมพิวเตอร์ (ถ้ามี)?

---

---

---

34. คุณมีความคิดเห็นอะไรที่คุณต้องการจะเพิ่มเติมเกี่ยวกับการจัดการเรียนการสอนในวิชาการอ่านภาษาอังกฤษที่คุณกำลังเรียนอยู่หรือไม่?

---

---

---



## Appendix E: Questionnaire reliability

Trialled group containing 30 participants

Reliability

\*\*\*\*\* Method 1 (space saver) will be used for this analysis \*\*\*\*\*

### RELIABILITY ANALYSIS - SCALE (ALPHA)

	N of			
Statistics for	Mean	Variance	Std Dev	Variables
SCALE	13.1000	31.1276	5.5792	24
Item-total Statistics				
	Scale	Scale	Corrected	
	Mean	Variance	Item-	Alpha
	if Item	if Item	Total	if Item
	Deleted	Deleted	Correlation	Deleted
V01	12.3667	29.0678	.3830	.8648
V02	12.6000	28.2483	.4848	.8616
V03	12.7333	27.2368	.7136	.8541
V04	12.4667	28.3954	.4771	.8619
V05	12.8667	27.4989	.7633	.8538
V06	12.3333	29.5402	.2999	.8670
V07	12.6667	29.4023	.2692	.8687
V08	12.3667	29.6195	.2667	.8681
V09	12.8333	28.9023	.4183	.8637
V10	12.3333	29.5402	.2999	.8670
V11	12.3000	29.5276	.3244	.8663
V12	12.3000	29.5966	.3085	.8667

V13	12.6667	28.4368	.4533	.8626
V14	12.5333	28.6023	.4213	.8637
V15	12.3000	29.6655	.2926	.8671
V16	12.7333	29.4437	.2714	.8684
V17	12.8000	29.2000	.3395	.8661
V18	12.6667	27.5402	.6301	.8567
V19	12.7667	28.2540	.5187	.8606
V20	12.8000	27.4759	.7029	.8549
V21	12.5333	28.6023	.4213	.8637
V22	12.3000	29.6655	.2926	.8671
V23	12.4333	29.1506	.3375	.8663
V24	12.6000	27.4207	.6474	.8560

#### Reliability Coefficients

N of Cases = 30.0

N of Items = 24

Alpha = .8683

Question	(p)	(r)
1	0.73	0.38
2	0.50	0.48
3	0.37	0.71
4	0.63	0.48
5	0.23	0.76
6	0.77	0.30
7	0.43	0.27
8	0.73	0.27
9	0.27	0.42

10	0.77	0.30
11	0.80	0.32
12	0.80	0.31
13	0.43	0.45
14	0.57	0.42
15	0.80	0.29
16	0.37	0.27
17	0.30	0.34
18	0.43	0.63
19	0.33	0.52
20	0.30	0.70
21	0.57	0.42
22	0.80	0.29
23	0.67	0.34
24	0.50	0.65

Trialled group containing 100 participants

### Reliability

\*\*\*\*\* Method 1 (space saver) will be used for this analysis \*\*\*\*\*

### RELIABILITY ANALYSIS - SCALE (ALPHA)

				N of
Statistics for	Mean	Variance	Std Dev	Variables
SCALE	15.0000	22.6465	4.7588	24

### Item-total Statistics

	Scale	Scale	Corrected	
	Mean	Variance	Item-	Alpha
	if Item	if Item	Total	if Item
	Deleted	Deleted	Correlation	Deleted
V01	14.2000	21.1919	.3493	.8043
V02	14.3600	20.2731	.4927	.7970
V03	14.4400	20.0873	.5166	.7956
V04	14.2100	21.2181	.3343	.8049
V05	14.6400	20.3943	.4635	.7985
V06	14.2000	21.4949	.2656	.8077
V07	14.5900	20.7696	.3623	.8035
V08	14.2200	21.4057	.2771	.8073
V09	14.6100	20.9676	.3204	.8056
V10	14.2500	21.3611	.2724	.8076
V11	14.2200	21.4663	.2610	.8079
V12	14.2200	21.0016	.3856	.8027
V13	14.3700	20.3769	.4643	.7984
V14	14.2800	21.1127	.3207	.8055

V15	14.2400	21.3358	.2841	.8070
V16	14.5600	21.0368	.2974	.8068
V17	14.6000	21.0707	.2950	.8069
V18	14.4400	20.6529	.3848	.8024
V19	14.6800	20.9067	.3545	.8039
V20	14.5400	20.3317	.4569	.7987
V21	14.3000	21.1616	.3004	.8064
V22	14.2600	21.3863	.2614	.8081
V23	14.2600	21.2853	.2869	.8069
V24	14.3100	20.9837	.3397	.8046

#### Reliability Coefficients

N of Cases = 100.0

N of Items = 24

Alpha = .8108

Question	(p)	(r)
1	0.80	0.35
2	0.64	0.49
3	0.56	0.52
4	0.79	0.33
5	0.36	0.46
6	0.80	0.27
7	0.41	0.36
8	0.78	0.28
9	0.39	0.32
10	0.75	0.27
11	0.78	0.26

12	0.78	0.39
13	0.63	0.46
14	0.72	0.32
15	0.76	0.28
16	0.44	0.30
17	0.40	0.30
18	0.56	0.38
19	0.32	0.35
20	0.46	0.46
21	0.70	0.30
22	0.74	0.26
23	0.74	0.29

## Appendix F: Pre-test and post-test reliability

### Reliability (Pre-test)

		Notes
<b>Output Created</b>		01-NOV-2009 13:27:32
<b>Comments</b>		
<b>Input</b>	<b>Filter</b>	<none>
	<b>Weight</b>	<none>
	<b>Split File</b>	<none>
	<b>N of Rows in Working Data File</b>	15
<b>Syntax</b>	RELIABILITY /VARIABLES=var00001 var00002 var00003 var00004 var00005 var00006 var00007 var00008 var00009 var00010 var00011 var00012 var00013 var00014 var00015 var00016 var00017 var00018 var00019 var00020 var00021 var00022 var00023 var00024 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL .	
<b>Resources</b>	<b>Elapsed Time</b>	0:00:00.02

\*\*\*\*\* Method 1 (space saver) will be used for this analysis \*\*\*\*\*

## RELIABILITY ANALYSIS - SCALE (ALPHA)

## Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
VAR00001	14.4667	27.9810	.5379	.8747
VAR00002	14.2667	29.3524	.2756	.8826
VAR00003	14.0667	29.2095	.3894	.8788
VAR00004	14.0667	29.9238	.2271	.8827
VAR00005	14.7333	29.2095	.4708	.8771
VAR00006	14.0000	29.8571	.2972	.8807
VAR00007	14.0667	29.3524	.3566	.8796
VAR00008	14.0000	29.5714	.3733	.8791
VAR00009	14.0667	28.4952	.5559	.8746
VAR00010	14.0000	30.1429	.2218	.8823
VAR00011	14.0667	28.4952	.5559	.8746
VAR00012	14.0000	29.4286	.4116	.8783
VAR00013	14.4000	25.8286	.9580	.8608
VAR00014	14.0000	29.7143	.3352	.8799
VAR00015	14.2667	28.6381	.4106	.8786
VAR00016	14.4667	28.1238	.5100	.8755
VAR00017	14.3333	28.0952	.5045	.8757
VAR00018	14.5333	28.6952	.4190	.8782
VAR00019	14.3333	29.3810	.2637	.8831
VAR00020	14.4667	29.6952	.2120	.8845
VAR00021	14.4667	26.4095	.8552	.8645
VAR00022	14.4000	25.8286	.9580	.8608
VAR00023	14.4667	27.9810	.5379	.8747
VAR00024	14.0000	30.1429	.2218	.8823



## Reliability Coefficients

N of Cases = 15.0

N of Items = 24

Alpha = .8816

**Reliability (Post-test)**

		<b>Notes</b>	
<b>Output Created</b>		01-NOV-2009 13:58:08	
<b>Comments</b>			
<b>Input</b>	<b>Filter</b>	<none>	
	<b>Weight</b>	<none>	
	<b>Split File</b>	<none>	
	<b>N of Rows in Working Data File</b>	15	
<b>Syntax</b>	RELIABILITY /VARIABLES=var00001 var00002 var00003 var00004 var00005 var00006 var00007 var00008 var00009 var00010 var00011 var00012 var00013 var00014 var00015 var00016 var00017 var00018 var00019 var00020 var00021 var00022 var00023 var00024 /FORMAT=NOLABELS /SCALE(ALPHA)=ALL/MODEL=ALPHA /SUMMARY=TOTAL .		
<b>Resources</b>	<b>Elapsed Time</b>	0:00:00.00	

\*\*\*\*\* Method 1 (space saver) will be used for this analysis \*\*\*\*\*

RELIABILITY ANALYSIS - SCALE (ALPHA)

## Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
VAR00001	13.4667	27.6952	.4265	.8441
VAR00002	13.6000	25.5429	.8265	.8283
VAR00003	13.7333	27.0667	.5307	.8402
VAR00004	13.7333	26.3524	.6750	.8346
VAR00005	13.6000	29.2571	.1074	.8559
VAR00006	13.4667	27.6952	.4265	.8441
VAR00007	13.2667	28.0667	.5186	.8425
VAR00008	13.2667	28.4952	.4006	.8456
VAR00009	13.2667	28.0667	.5186	.8425
VAR00010	13.6000	28.2571	.2914	.8492
VAR00011	13.6667	28.2381	.2950	.8491
VAR00012	13.4667	28.1238	.3404	.8472
VAR00013	13.2667	28.4952	.4006	.8456
VAR00014	13.6667	27.3810	.4582	.8429
VAR00015	13.6667	28.5238	.2417	.8510
VAR00016	13.7333	26.6381	.6168	.8369
VAR00017	13.6667	29.3810	.0851	.8567
VAR00018	13.6000	27.8286	.3723	.8462
VAR00019	13.7333	27.3524	.4740	.8423
VAR00020	13.5333	28.8381	.1889	.8528
VAR00021	13.6667	27.5238	.4306	.8440
VAR00022	13.4667	26.5524	.6629	.8355
VAR00023	13.3333	28.5238	.3230	.8475
VAR00024	13.6000	28.4000	.2647	.8502

## Reliability Coefficients

N of Cases = 15.0

N of Items = 24

Alpha = .8505

**Appendix G: Evaluation form**

**Evaluation form (English version)****Evaluation Form**

The results from this evaluation will be useful for the language instructor to develop and improve an English reading instructional course that suits students' requirements and helps them to learn most effectively. All individual responses will remain confidential.

**Please tick only one box in each question unless specified.**

**Part I : Demographic information**

1. Gender       Male       Female
2. Age \_\_\_\_\_
3. Have you experienced the use of technology in English reading instruction?  
 Yes    No

If yes, please specify

---



---

**Part II :** Please comment on how you feel about learning in your English reading classroom

SD = strongly disagree, D = disagree, N = neutral, A = Agree, SA = strongly agree

Skip this question = you prefer not to answer

**Autonomous learning**

4. I am more confident in English reading after participating in the reading class.  
 SD       D       N       A       SA       Skip this question
5. I had to prepare before attending each reading class.  
 SD       D       N       A       SA       Skip this question
6. I made progress with my reading in the reading class.  
 SD       D       N       A       SA       Skip this question
7. I was encouraged to participate in the reading class.  
 SD       D       N       A       SA       Skip this question

8. The English reading class enabled me to manage my own English reading learning.

SD       D       N       A       SA       Skip this question

9. I enjoyed the English reading class.

SD       D       N       A       SA       Skip this question

10. The English reading class encouraged me to work at my own pace.

SD       D       N       A       SA       Skip this question

11. The English reading class provided me with opportunities to acquire knowledge outside the classroom.

SD       D       N       A       SA       Skip this question

12. In the English reading class, I tried to solve the problems in English reading by myself.

SD       D       N       A       SA       Skip this question

### **Learning Environment**

13. My English reading classroom was suitable for learning.

SD       D       N       A       SA       Skip this question

14. I usually discussed problems or shared ideas with my classmates in my class.

SD       D       N       A       SA       Skip this question

15. My friends were supportive in this class.

SD       D       N       A       SA       Skip this question

16. I was able to consult teacher in various ways when I had any questions.

SD       D       N       A       SA       Skip this question

### **Classroom Instruction**

17. I could consult the teacher about the lesson in and outside class time.

SD       D       N       A       SA       Skip this question

18. There were several kinds of reading activities in the English reading classroom.

SD       D       N       A       SA       Skip this question

19. The teacher's instructions were clear.

SD       D       N       A       SA       Skip this question

**English reading materials**

20. The English reading materials were appropriate for my English reading level.

SD       D       N       A       SA       Skip this question

21. The English reading materials had interesting content which motivate me to read

SD       D       N       A       SA       Skip this question

22. The content of the English reading materials used in my class can be easily linked to my previous knowledge.

SD       D       N       A       SA       Skip this question

23. The illustrations in the reading materials assisted me to understand the content of the textbook.

SD       D       N       A       SA       Skip this question

24. There were several exercises which assisted me to understand the learning content.

SD       D       N       A       SA       Skip this question

**Learners' reading strategies**

25. This class helped me to link my previous background/prior knowledge to the reading text.

SD       D       N       A       SA       Skip this question

26. This class helped me to learn how to scan a text for the specific information I need.

SD       D       N       A       SA       Skip this question

27. This class helped me to guess meanings of words from their roots, prefixes and suffixes.

SD       D       N       A       SA       Skip this question

28. This class helped me to guess the meaning of unknown word by using context clues.

SD       D       N       A       SA       Skip this question

29. This class helped me to identify the main idea of the reading passage.

SD       D       N       A       SA       Skip this question

30. This class helped me to identify any supporting details presented in a reading passage or text.

SD       D       N       A       SA       Skip this question

31. This class helped me to identify different types of text structures.

SD       D       N       A       SA       Skip this question

**Additional comments**

32. Were there any difficulties that you had before joining in the English reading instruction?

---

---

---

33. In what way, if any, did the English reading class affect the way you read now?

---

---

---

34. In what way, if any, did the English reading class affect your learning style?

---

---

---



35. Was there anything you particularly liked about your English reading class? (please give details)

---

---

---

36. Was there anything you particularly disliked about your English reading class? (please give details)

---

---

---

37. Is there any way you think the English reading class could be improved?

---

---

---

Thank you for your valuable participation in this survey

**Evaluation form (Thai version)****แบบประเมินผลการเรียนรู้วิชา การอ่านทั่วไป (1551120)**

ข้อมูลที่ได้รับจากแบบประเมินผลการเรียนรู้จะสามารถนำมาใช้ให้เป็นประโยชน์สำหรับอาจารย์ผู้สอนในการพัฒนาและปรับปรุง  
 แก้ไขในการสอนวิชาการอ่านภาษาอังกฤษในอนาคตเพื่อให้เหมาะสมกับความต้องการของผู้เรียนและช่วยให้ผู้เรียนเกิด  
 กระบวนการเรียนรู้ที่มีประสิทธิภาพมากที่สุด ข้อมูลที่ได้รับจะถูกปิดเป็นความลับ

โปรดอ่านแล้วตอบคำถามดังต่อไปนี้

ส่วนที่ 1 : ข้อมูลทั่วไป

1. เพศ  ชาย  หญิง

2. อายุ \_\_\_\_\_

3. สาขาวิชา \_\_\_\_\_

4. คุณเคยมีประสบการณ์เกี่ยวกับการสอนการอ่านภาษาอังกฤษที่มีการนำเทคโนโลยีต่างๆเข้ามาเป็นส่วนประกอบหรือไม่

เคย  ไม่เคย

ถ้าเคยโปรดระบุ

---



---

ส่วนที่ 2 : โปรดแสดงความคิดเห็นของนักศึกษาที่มีต่อการเรียนรู้ในชั้นเรียนวิชาการอ่านภาษาอังกฤษ

SD = ไม่เห็นด้วยอย่างยิ่ง, D = ไม่เห็นด้วย, N = เฉยๆ, A = เห็นด้วย,

SA = เห็นด้วยอย่างยิ่ง Skip this question = คุณไม่ต้องการที่จะตอบคำถามข้อดังกล่าว

การเรียนรู้ด้วยตนเอง

5. ฉันมีความรู้สึกมั่นใจมากขึ้นในการอ่านภาษาอังกฤษหลังจากที่ได้เข้าเรียนในชั้นเรียนการอ่าน

SD  D  N  A  SA  Skip this question

6. ฉันได้เตรียมความพร้อมก่อนที่จะเข้าชั้นเรียนการอ่านภาษาอังกฤษ

SD  D  N  A  SA  Skip this question

7. ฉันได้พัฒนาทักษะการอ่านภาษาอังกฤษในชั้นเรียนการอ่าน

SD  D  N  A  SA  Skip this question

8. ฉันได้ถูกชักจูงให้ร่วมทำกิจกรรมในชั้นเรียนการอ่าน

SD  D  N  A  SA  Skip this question

9. วิชาการอ่านภาษาอังกฤษสามารถช่วยฉันในการเรียนรู้การอ่านภาษาอังกฤษด้วยตัวเอง

SD  D  N  A  SA  Skip this question

10. ฉันมีความสุขกับชั้นเรียนการอ่านภาษาอังกฤษ

SD  D  N  A  SA  Skip this question

11. ฉันได้ถูกจูงใจโดยชั้นเรียนวิชาการอ่านภาษาอังกฤษในการทำงานด้วยตัวเอง

SD  D  N  A  SA  Skip this question

12. วิชาการอ่านภาษาอังกฤษได้มีเปิดโอกาสให้ฉันในการค้นคว้าหาความรู้นอกห้องเรียน

SD  D  N  A  SA  Skip this question

13. ฉันมักจะพยายามแก้ปัญหาในการอ่านภาษาอังกฤษด้วยตนเองในชั้นเรียน

SD       D       N       A       SA       Skip this question

**สภาพแวดล้อมในการเรียนรู้**

14. ห้องเรียนวิชาการอ่านภาษาอังกฤษมีความเหมาะสมสำหรับการเรียนรู้

SD       D       N       A       SA       Skip this question

15. ฉันมักจะถกปัญหาหรือแลกเปลี่ยนความคิดเห็นกับเพื่อนในชั้นเรียนการอ่าน

SD       D       N       A       SA       Skip this question

16. เพื่อนของฉันสามารถให้ความช่วยเหลือต่างๆในชั้นเรียนการอ่าน

SD       D       N       A       SA       Skip this question

17. ฉันสามารถปรึกษาอาจารย์ผู้สอนได้หลายช่องทางในเวลาที่ฉันมีข้อสงสัยต่างๆ

SD       D       N       A       SA       Skip this question

**การจัดการเรียนการสอน**

18. ฉันสามารถปรึกษาอาจารย์ผู้สอนเกี่ยวกับเนื้อหาบทเรียนทั้งในและนอกเวลาเรียน

SD       D       N       A       SA       Skip this question

19. ชั้นเรียนการอ่านภาษาอังกฤษมีกิจกรรมการอ่านที่หลากหลาย

SD       D       N       A       SA       Skip this question

20. การสอนของอาจารย์มีความชัดเจน

SD       D       N       A       SA       Skip this question

**สื่อการเรียนการสอนวิชาการอ่านภาษาอังกฤษ**

21. สื่อที่ใช้ในการเรียนวิชาการอ่านภาษาอังกฤษมีความเหมาะสมกับระดับความสามารถในการอ่านของฉัน

SD       D       N       A       SA       Skip this question

22. สื่อที่ใช้ในการเรียนวิชาการอ่านภาษาอังกฤษมีเนื้อหาที่น่าสนใจและจูงใจให้ฉันอ่าน
- SD       D       N       A       SA       Skip this question
23. ฉันสามารถที่จะเชื่อมโยงความรู้เดิมของฉันเข้ากับเนื้อหาที่ใช้เป็นสื่อการเรียนการสอนวิชาการอ่านภาษาอังกฤษ.
- SD       D       N       A       SA       Skip this question
24. รูปภาพที่ใช้ในสื่อการเรียนการสอนวิชาการอ่านภาษาอังกฤษช่วยให้ฉันเข้าใจเนื้อหาของบทเรียนได้ดียิ่งขึ้น
- SD       D       N       A       SA       Skip this question
25. บทเรียนที่ใช้ในวิชาการอ่านภาษาอังกฤษมีแบบฝึกหัดหลากหลายที่ช่วยให้ฉันเข้าใจในเนื้อหาของบทเรียน
- SD       D       N       A       SA       Skip this question

**กลวิธีการอ่านของผู้เรียน**

26. วิชานี้ช่วยฉันในการเชื่อมโยงความรู้เดิมที่มีอยู่เข้ากับเนื้อเรื่องที่อ่าน
- SD       D       N       A       SA       Skip this question
27. วิชานี้ช่วยฉันในการเรียนรู้ในการอ่านเพื่อหาข้อมูลเฉพาะที่ต้องการ (Scanning)
- SD       D       N       A       SA       Skip this question
28. วิชานี้ช่วยฉันในการเดาความหมายของคำศัพท์จากรากของคำ(Roots)อุปสรรค(Prefixes)และปัจจัย(suffixes)
- SD       D       N       A       SA       Skip this question
29. วิชานี้ช่วยฉันในการเดาความหมายของคำศัพท์ที่ไม่รู้โดยใช้บริบท (Context)
- SD       D       N       A       SA       Skip this question
30. วิชานี้ช่วยฉันในการระบุใจความสำคัญของเนื้อเรื่องที่อ่าน
- SD       D       N       A       SA       Skip this question
31. วิชานี้ช่วยฉันในการระบุส่วนของมูลสนับสนุน (Supporting Details) ของเนื้อเรื่องที่อ่าน
- SD       D       N       A       SA       Skip this question

32. วิชาที่ช่วยฉันในการระบุรูปแบบต่างๆของเนื้อเรื่องที่อ่าน

SD       D       N       A       SA       Skip this question

คำถามเพิ่มเติม

33. นักศึกษามักจะมีปัญหาอะไรเกี่ยวกับการอ่านภาษาอังกฤษก่อนที่จะเข้าเรียนในรายวิชาการอ่านภาษาอังกฤษ (ถ้ามีโปรดระบุ)

---



---



---

34. วิชาการอ่านภาษาอังกฤษส่งผลอย่างไรต่อการอ่านภาษาอังกฤษในปัจจุบันอย่างไร (ถ้ามีโปรดระบุ)

---



---



---

35. ชั้นเรียนการอ่านภาษาอังกฤษส่งผลต่อวิธีการเรียนของนักศึกษาอย่างไร (ถ้ามีโปรดระบุ)

---



---



---

36. อะไรที่นักศึกษาชอบมากเป็นพิเศษเกี่ยวกับวิชาการอ่านภาษาอังกฤษ

---



---



---

37. อะไรที่นักศึกษาไม่ชอบเกี่ยวกับวิชาการอ่านภาษาอังกฤษ

---

---

---

38. นักศึกษาคิดว่าวิธีอะไรที่สามารถช่วยในการพัฒนาชั้นเรียนการอ่านภาษาอังกฤษ

---

---

---

ขอขอบคุณนักศึกษาสำหรับการสละเวลาอันมีค่าในการตอบแบบประเมินผลการเรียนรู้

**Appendix H: A sample of blended English reading  
comprehension course**



## New Course Outline for BL Course at Suan Dusit Rajabhat University

**Subject Code**            1551104  
**Course**                    Reading for General Purposes    3 (0-6)



### Course Description

Practice reading comprehension with reading strategies taught at both the complex sentences and the paragraph level through a variety of texts that are advertisements, graphs, magazines, newspapers, Internet sources, etc. It will also cover the text organization, Internet retrieval and devices necessary for effective reading strategies.

### Objectives:

1. Learners are able to use basic strategies to develop their reading efficiency.
2. Learners are able to identify the meaning of words using word-study skills.
3. Learners are able to identify the meaning of words by using context clues.
4. Learners are able to identify the topic of the reading paragraph.
5. Learners are able to identify the main idea of the reading context.
6. Learners are able to identify the various patterns of paragraphs in the reading contexts.
7. Learners are able to make inferences from the reading passages.

### Semester

**Lecturer**                Mr. Chayapon Chomchaiya        **Room**    2208

**Program**                English

Faculty of Humanities and Social Sciences

**Contact**                02 644 8832 ext. 24 (Please make a 3 day appointment prior the meeting)

**Email** boomsu2002@ yahoo.co.th (students are welcome to discuss about any learning issues via yahoo messenger, for examples content clarification, assignments or sick leaves.)

Available period for online consultation:

Day ..... between .....

Day ..... between .....

**Length of time :**    16 weeks

### **Assessment**

- Exercise 20% (In-Class Online exercises)
- Report 30% (Portfolio)
- Classroom attendance and participation 10%
- Quiz (Quiz on week 7 & Post test) 10%
- Final exam 30%

### **Policies**

- All assignments must be submitted at the mentioned date. Late submission will not be acceptable unless you have a doctor's report from hospital or the permission of absence in advance from a lecturer.
- In case of late submission, you have to contact your instructor within two days after the due date. Late assignments will be deducted 30% of total marks.
- In case of absence of quizzes or midterm examinations, you have to contact your instructor within two days. Otherwise, your right to take an examination will be terminated.
- Students are not allowed to access any websites unless specified by the instructor.
- Dishonesty behaviour is a serious guilt, for example copying or doing assignments for your friends will not be given any score.
- All returned assignments must be kept in a portfolio as evidence.
- Everyone has to sign your name on the submitted and returned assignment form.
- "I" will be given for students who fail to submit their reports.

### **Guidance**

- If you do not understand the lesson, you should ask your instructor right away.
- You should prepare the lesson and read the textbook before the class.
- If you have further questions, please do not hesitate to contact your instructor.

- You are encouraged to search for further related readings from other sources such as newspapers, magazines, websites, etc.
- If you want to meet the instructor in person, please make an appointment 2 days earlier.

### Evaluation

90-100 = A

85-89 = B+

75-84 = B

70-74 = C+

60-69 = C

55-59 = D+

50-54 = D

0-49 = F

### Suggested readings :

1. More Reading Power
2. Reading Power
3. Techniques for English Reading Skill and Comprehension Development for Thai Students
4. Systematic Reading
5. Opening Doors

Week	Content	Learning & Teaching Activities	Materials
1	Orientation and Ice-breaking	<ul style="list-style-type: none"> <li>- Course description</li> <li>- Course objectives</li> <li>- Ice-breaking activities</li> </ul>	- Visualiser
2	Pre-test	Date :	- Paper Based Test

3	Skimming	<ul style="list-style-type: none"> <li>- Lecture</li> <li>- Classroom discussion</li> <li>- Doing exercises</li> </ul>	<ul style="list-style-type: none"> <li>- Visualiser</li> <li>- Authentic Texts</li> <li>- Online Content</li> <li>- LMS</li> </ul>
4	Scanning	<ul style="list-style-type: none"> <li>- Discussion</li> <li>- Lecture</li> <li>- Doing exercises</li> </ul>	<ul style="list-style-type: none"> <li>- Visualiser</li> <li>- Online Content</li> </ul>
5-6	Word Meaning Identification and Context Clues	<ul style="list-style-type: none"> <li>- Lecture</li> <li>- Discussion</li> <li>- Lecture</li> <li>- Exercises</li> <li>- Assignment</li> </ul>	<ul style="list-style-type: none"> <li>- Visualiser</li> <li>- Online Content</li> <li>- LMS</li> </ul>
7	Quiz	Date :	<ul style="list-style-type: none"> <li>- Paper-based test</li> </ul>
8	Topics	<ul style="list-style-type: none"> <li>- Lecture</li> <li>- Group discussion</li> <li>- Exercises</li> <li>- Pair work</li> </ul>	<ul style="list-style-type: none"> <li>- Visualiser</li> <li>- Online Content</li> <li>- LMS</li> </ul>
9-10	Main Ideas	<ul style="list-style-type: none"> <li>- Discussion</li> <li>- Lecture</li> <li>- Exercises</li> <li>- Assignment</li> </ul>	<ul style="list-style-type: none"> <li>- Visualiser</li> <li>- Online Content</li> <li>- LMS</li> </ul>
11-13	Patterns of Organization	<ul style="list-style-type: none"> <li>- Discussion</li> <li>- Lecture</li> <li>- Exercises</li> </ul>	<ul style="list-style-type: none"> <li>- Visualiser</li> <li>- Online Content</li> <li>- LMS</li> </ul>
14	Making Inferences	<ul style="list-style-type: none"> <li>- Discussion</li> <li>- Lecture</li> <li>- Exercises</li> </ul>	<ul style="list-style-type: none"> <li>- Visualiser</li> <li>- Online Content</li> <li>- LMS</li> </ul>
15	Classroom Evaluation and Quiz (Post Test)	Date :	<ul style="list-style-type: none"> <li>- Questionnaire</li> <li>- Paper Based Test</li> </ul>
16	Final Examination		

## **A lesson plan of the English reading instruction using BL approach**

### **Week 3 Lesson Plan (Skimming)**

**Total time 3 hours**

#### **Teaching Materials**

- Computers
- Visualiser
- Online Lessons (Also available in pdf. Format)
- Online Practices
- Online Assignments
- LMS (to download learning content and to preview previous lessons)

#### **Teaching Procedures**

##### **Pre reading**

1. Students will be asked about the reading habits used in English reading, then post their comments in the blog provided.

##### **Instruction and Practices**

2. Students will be explained about skimming technique and how it can help in developing reading comprehension. Students can also look on the visualiser presented by teachers and online lesson during the instruction.
3. Students will be asked to do the exercises on LMS to practice their skimming techniques. The materials used in practices will be taken from authentic materials available, for example brochures and job advertisement on newspapers (pair works).
4. Students will be taught how to skim reading passage or text.
5. Then, they will be assigned to do another reading exercise (pair works).
6. Students will be assigned to do another exercise individually.

Teacher will later explained and clarified the answers of each exercise at the end of each exercise and students can also download the answer keys from the LMS two weeks after the exercises were completed.

**Extension Activity**

7. After the end of the class, students will be assigned to find reading materials (materials can be vary, ranges from articles to books) that students want to read and answer the following questions.
  - What is the material about?
  - What make you want to read the materials?
  - How could the selected reading materials can be beneficial in your English reading?
  - \*\*\* The students should attach the book cover or the content of text (in the case that the text is shorter than 400 words) with reference provided.
8. Students have to submit the assignment online in text format (word or powerpoint) within 3 days after the instruction and they must also keep the assignment in their portfolios.

**Assessment**

- Students will be evaluated from the scores obtained from the online exercise.
- An online assignment (a part of portfolio assessment)

**Appendix I: A sample of traditional face-to-face English reading comprehension course**

## Traditional Face-to-Face Course Outline at Suan Dusit Rajabhat University

**Subject Code**            1551104  
**Course**                    Reading for General Purposes    3 (0-6)



### Course Description

Practice reading comprehension with reading strategies taught at both the complex sentences and the paragraph level through a variety of texts that are advertisements, graphs, magazines, newspapers, Internet sources, etc. It will also cover the text organization, Internet retrieval and devices necessary for effective reading strategies.

### Objectives:

1. Learners are able to use basic strategies to develop their reading efficiency.
2. Learners are able to identify the meaning of words using word-study skills.
3. Learners are able to identify the meaning of words by using context clues.
4. Learners are able to identify the topic of the reading paragraph.
5. Learners are able to identify the main idea of the reading context.
6. Learners are able to identify the various patterns of paragraphs in the reading contexts.
7. Learners are able to make inferences from the reading passages.

### Semester

**Lecturer**                Mr. Chayapon Chomchaiya        **Room**    2208

**Program**                English

Faculty of Humanities and Social Sciences

**Contact**                02 644 8832 ext. 24 (Please make a 3 day appointment prior the meeting)

**Email** boomsu2002@ yahoo.co.th (students are welcome to discuss about any learning issues via yahoo messenger, for examples content clarification, assignments or sick leaves.)

Available period for online consultation:

Day ..... between .....

Day ..... between .....

**Length of time :**    16 weeks



### **Assessment**

- Exercise 20% (Workbook)
- Report 30% (Portfolio)
- Classroom attendance and participation 10%
- Quiz (Quiz on week 7 & Post test) 10%
- Final exam 30%

### **Policies**

- All assignments must be submitted at the mentioned date. Late submission will not be acceptable unless you have a doctor's report from hospital or the permission of absence in advance from a lecturer.
- In case of late submission, you have to contact your instructor within two days after the due date. Late assignments will be deducted 30% of total marks.
- In case of absence of quizzes or midterm examinations, you have to contact your instructor within two days. Otherwise, your right to take an examination will be terminated.
- Students are not allowed to access any websites unless specified by the instructor.
- Dishonesty behaviour is a serious guilt, for example copying or doing assignments for your friends will not be given any score.
- All returned assignments must be kept in a portfolio as evidence.
- Everyone has to sign your name on the submitted and returned assignment form.
- "I" will be given for students who fail to submit their reports.

### **Guidance**

- If you do not understand the lesson, you should ask your instructor right away.
- You should prepare the lesson and read the textbook before the class.
- If you have further questions, please do not hesitate to contact your instructor.

- You are encouraged to search for further related readings from other sources such as newspapers, magazines, websites, etc.
- If you want to meet the instructor in person, please make an appointment 2 days earlier.

### Evaluation

90-100 = A

85-89 = B+

75-84 = B

70-74 = C+

60-69 = C

55-59 = D+

50-54 = D

0-49 = F

### Suggested readings :

1. More Reading Power
2. Reading Power
3. Techniques for English Reading Skill and Comprehension Development for Thai Students
4. Systematic Reading
5. Opening Doors

Week	Content	Learning & Teaching Activities	Materials
1	Orientation and Ice-breaking	<ul style="list-style-type: none"> <li>- Course description</li> <li>- Course objectives</li> <li>- Ice-breaking activities</li> </ul>	- Visualiser
2	Pre-test	Date :	- Paper Based Test

3	Skimming	<ul style="list-style-type: none"> <li>- Lecture</li> <li>- Classroom discussion</li> <li>- Doing exercises</li> </ul>	<ul style="list-style-type: none"> <li>- OHP</li> <li>- Authentic Texts (newspaper)</li> <li>- Workbook</li> <li>- Textbook</li> </ul>
4	Scanning	<ul style="list-style-type: none"> <li>- Discussion</li> <li>- Lecture</li> <li>- Doing exercises</li> </ul>	<ul style="list-style-type: none"> <li>- Visualiser</li> <li>- Textbook</li> <li>- Workbook</li> </ul>
5-6	Word Meaning Identification and Context Clues	<ul style="list-style-type: none"> <li>- Lecture</li> <li>- Discussion</li> <li>- Lecture</li> <li>- Exercises</li> <li>- Assignment</li> </ul>	<ul style="list-style-type: none"> <li>- Visualiser</li> <li>- Textbook</li> <li>- Workbook</li> </ul>
7	Quiz	Date :	<ul style="list-style-type: none"> <li>- Paper-based test</li> </ul>
8	Topics	<ul style="list-style-type: none"> <li>- Lecture</li> <li>- Group discussion</li> <li>- Exercises</li> <li>- Pair work</li> </ul>	<ul style="list-style-type: none"> <li>- Visualiser</li> <li>- Textbook</li> <li>- Workbook</li> </ul>
9-10	Main Ideas	<ul style="list-style-type: none"> <li>- Discussion</li> <li>- Lecture</li> <li>- Exercises</li> <li>- Assignment</li> </ul>	<ul style="list-style-type: none"> <li>- Visualiser</li> <li>- Textbook</li> <li>- Workbook</li> </ul>
11-13	Patterns of Organization	<ul style="list-style-type: none"> <li>- Discussion</li> <li>- Lecture</li> <li>- Exercises</li> </ul>	<ul style="list-style-type: none"> <li>- Visualiser</li> <li>- Textbook</li> <li>- Workbook</li> </ul>
14	Making Inferences	<ul style="list-style-type: none"> <li>- Discussion</li> <li>- Lecture</li> <li>- Exercises</li> </ul>	<ul style="list-style-type: none"> <li>- Visualiser</li> <li>- Textbook</li> <li>- Workbook</li> </ul>
15	Classroom Evaluation and Quiz (Post Test)	Date :	<ul style="list-style-type: none"> <li>- Questionnaire</li> <li>- Paper Based Test</li> </ul>
16	Final Examination		

## **A lesson plan of the traditional face-to-face English reading comprehension instruction**

### **Week 3 Lesson Plan (Skimming)**

**Total time 3 hours**

#### **Teaching Materials**

- Visualiser
- Textbook
- Authentic texts, for example newspaper, articles, and journals
- Workbook

#### **Teaching Procedures**

##### **Pre reading**

1. Students will be asked about the reading habits used in English reading, then share their habits in the classroom.

##### **Instruction and Practices**

2. Students will be explained about skimming technique and how it can help in developing reading comprehension. Students can also look on the visualiser presented by teachers and altogether look at the textbook.
3. Students will be asked to do the exercises on the workbook to practice their skimming techniques. The materials used in practices will be taken from authentic materials available, for example brochures and job advertisement on newspapers (pair works).
4. Students will be taught how to skim reading passage or text.
5. Then, they will be assigned to do another reading exercise (pair works).
6. Students will be assigned to do another exercise individually.

Teacher will later explained and clarified the answers of each exercise at the end of each exercise and students will be given the answer keys by the lecturer two weeks after the exercises were completed.

**Extension Activity**

7. After the end of the class, students will be assigned to find reading materials (materials can be vary, ranges from articles to books) from the library that students want to read and answer the following questions.
- What is the material about?
  - What make you want to read the materials?
  - How could the selected reading materials can be beneficial in your English reading?
  - \*\*\* The students should attach the book cover or the content of text (in the case that the text is shorter than 400 words) with reference provided.
8. Students have to submit the assignment to the teacher within 3 days after the instruction and they must also keep the assignment in their portfolios.

**Assessment**

- Students will be evaluated from the scores obtained from the worksheets.
- A workbook

## Appendix J: Additional results from questionnaire

**Table 32 The main English reading difficulties, as perceived by the participants**

English reading difficulties	Frequency
• General Vocabulary	253
• Meanings	172
• Pronunciation	106
• Translation	94
• Spelling	20
• Others, (for example, technical terms, grammar, idioms, and dictionary skills)	26

**Table 33 Types of the English reading materials enhancing the development of English reading comprehension, as perceived by the participants**

Aspects regarding the reading material	Frequency
• Clarity of content	98
• Illustrations	92
• Interesting content (no further details provided)	48
• Vocabulary simplification (definition and pronunciation given or using simple vocabulary)	35
• Authenticity of content (content related to real life or can be applied in real life)	29
• The appropriate length of content	27
• Simplified content (no further details provided)	24
• Others, (for example, coloured, Thai explanation, songs and communicative activities)	72

**Table 34 The reading topics preferred by the participants**

Topic	Frequency
• Entertainment and jokes	69
• Information about customs and culture of the English speaking countries	54
• Cartoons or comics	44
• Stories and novels	39
• Travel and adventure	33
• Folklores and fairy tales	31
• Topics that are interesting and related to real life (general knowledge)	31
• Articles and extracts from a range of texts	25
• Others, (for example, cooking, technology & easy reading topics)	48

**Table 35 The preferred learning environment, as perceived by the participants**

Aspects regarding learning environment	Frequency
• Quiet (no one talking and no disturbing voices)	113
• Relaxing & fun learning atmosphere	94
• Fully equipped with learning materials	61
• Temperature & air conditioning	51
• Cleanliness	49
• Learners pay attention in class	28
• Size of classroom	27
• Others, (for example, lights, classroom interaction and presentation activities)	48

**Table 36 Useful teaching approaches enhancing the development of English reading comprehension skills, as perceived by the participant**

Teaching approach	Frequency
• Teaching should be made interesting and relaxing	75
• Teaching should be clear and comprehensible	71
• The speed of instruction provided by teachers	56
• Approach or activities to improve English reading comprehension	52
• Approach or activities to improve pronunciation & speaking activities	51
• Practice exercises and assessments assigned to learners (no further details provided)	50
• Face-to-face (F2F) instruction	47
• Approach or activities to improve vocabulary skills (word identification and memorisation)	46
• Activities which enable learner to be motivated to learn should be assigned to promote learning (no further details provided)	39
• Entertaining activities such as games, songs and out-of-class learning to motivate learners	30
• Materials used in learning	28
• Others, e.g. small group instruction, grammar activities, group work and etc.	61

**Table 37 Preferred activities in the English reading classes, as perceived by the participants**

Activities in the English classroom	Frequency
• General reading lecture and practice	83
• Question answering activities	52
• Recreational Activities, e.g. dancing, singing and games	50
• Speaking activities	42
• Group work	38
• Presentation	29
• Reading aloud	22
• Others (for example, testing, listening activities, pair work, and reading dialogues)	51



**Table 38 Advantages of using computers, as perceived by the participants**

Advantages of using computer	Frequency
• Useful for information retrieval	126
• Convenient	108
• Learning English vocabulary (no further details provided)	61
• Meanings	31
• Motivational (Interesting and fun)	23
• Others	69

**Table 39 Preferred computer activities, as perceived by the participants**

Activities	Frequency
• Translating text and meaning of words by using the computer	55
• Searching for information	51
• Submitting assignments	31
• Doing practice exercises and assessments	29
• Using the computer as a learning tool (no further details provided)	24
• Typing and writing a report	23
• Others (for example, listening to audio files, watching movies, playing games and making websites)	24

**Table 40 Disadvantages of using computers, as perceived by the participants**

Disadvantages of using computers	Frequency
• Using the computer for other purposes in class, for example, playing games, chatting with friend and surfing the Internet	90
• Distracts learning attention	67
• Technical problems caused by the computer	32
• Inconvenience, for example, bringing a computer to the university and operating the computer	23
• Others	33

**Table 41**      **Other suggestions provided by the participants**

Suggestion for better learning	Frequency
• Teachers pay more attention to learners	14
• Ample materials provided in classroom	12
• F2F instruction	8
• Others, (for example, beautiful view, native English lecturer, easy home works and scoring criteria)	21