วิทยานิพนธ์ งานวิจัย

THE IMPROVEMENT OF ENGLISH READING COMPREHENSION ABILITY BY USING THE JIGSAW TECHNIQUE FOR PRATOM SUKSA 6 (6th GRADE) STUDENTS

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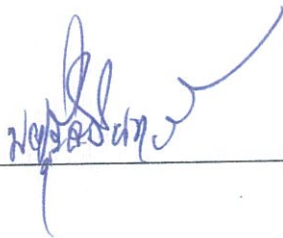|		
ชื่อเรื่อง	:	การพัฒนาการอ่านภาษาอังกฤษเพื่อความเข้าใจโดยใช้เทคนิคจิ๊กซอว์สำหรับ นักเรียน ชั้นประถมศึกษาปีที่ 6
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บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อ (1) ศึกษาดัชนีประสิทธิผล (E.I.) ต่อการอ่านภาษาอังกฤษเพื่อความเข้าใจของนักเรียนชั้นประถมศึกษาปีที่ 6 โดยใช้เทคนิคจิ๊กซอว์ (2) เปรียบเทียบความสามารถในการอ่านภาษาอังกฤษเพื่อความเข้าใจ ก่อนและหลังเรียนโดยใช้เทคนิคจิ๊กซอว์ และ (3) ศึกษาทัศนคติของนักเรียนต่อการอ่านภาษาอังกฤษเพื่อความเข้าใจโดยใช้เทคนิคจิ๊กซอว์ กลุ่มประชากรในการวิจัยคือ นักเรียนชั้นประถมศึกษาปีที่ 6 ที่กำลังศึกษาในภาคเรียนที่ 2 ปีการศึกษา 2560 จำนวน 20 คน โรงเรียนโคกคอนวิทยาคม อำเภอเมือง จังหวัดกาฬสินธุ์ เครื่องมือที่ใช้ในการวิจัยในครั้งนี้คือ 1) แผนการสอนจำนวน 5 แผน 2) แบบฝึกหัด และ 3) แบบสอบถามเพื่อวัดทัศนคติของนักเรียนในการอ่านภาษาอังกฤษเพื่อความเข้าใจโดยใช้เทคนิคจิ๊กซอว์ สถิติที่ใช้การวิเคราะห์ข้อมูล คือ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน ทดสอบค่าสมมติฐานการวิจัยโดยใช้ค่าที (t-test)

ผลการวิจัยพบว่า (1) ดัชนีประสิทธิผล (E.I.) ต่อการอ่านภาษาอังกฤษเพื่อความเข้าใจโดยใช้เทคนิคจิ๊กซอว์ มีค่าดัชนีประสิทธิผล (E.I.) เท่ากับ 0.6371 หรือ 63.71%. (2) ความสามารถในการอ่านภาษาอังกฤษเพื่อความเข้าใจโดยใช้เทคนิคจิ๊กซอว์หลังเรียนสูงกว่าก่อนเรียนอย่างมีนัยสำคัญทางสถิติที่ระดับ .05 (3) ทัศนคติของนักเรียนต่อการเรียนภาษาอังกฤษเพื่อความเข้าใจผ่านเทคนิคจิ๊กซอว์ อยู่ในระดับดีมากที่สุด ($\bar{X}$=4.84, S.D.= 0.47)

คำสำคัญ : เทคนิคจิ๊กซอว์, การอ่านภาษาอังกฤษเพื่อความเข้าใจ

_____ อาจารย์ที่ปรึกษาวิทยานิพนธ์หลัก

| Title | : The Improvement of English Reading Comprehension Ability by Using the Jigsaw Technique for Pratom Suksa 6 (6th Grade) Students. |

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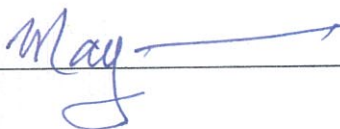   Assistant Professor Dr. Sooksil Prasongsook
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ABSTRACT

The aims of the research were to: (1) study the effectiveness index (E.I.) of reading comprehension ability lesson plans based on the jigsaw technique; (2) compare the students' reading comprehension ability before and after learning by the jigsaw technique; and (3) study the attitudes of students after learning by using the jigsaw technique. The participants consisted of Pratom Suksa 6 (6th grade) students during the second semester of the academic year 2017 at Khok Khon Wittayakom Primary School in Kalasin. The research instruments were: (1) the jigsaw technique lesson plans, (2) English reading comprehension exercises; and (3) attitude questionnaire. The statistics used for data analysis were mean ($\bar{X}$) and standard deviation (S.D.). The statistic for testing hypothesis was dependent sample t-test.

The research results revealed that: (1) the effectiveness index (E.I.) of reading comprehension ability based on the jigsaw technique was 0.6371 or 63.71 percent; (2) the students' reading comprehension ability after learning by the jigsaw technique was higher than before learning at the .05 level of significance; and (3) the result of attitude towards learning by using the jigsaw technique was at a highest level ($\bar{X}$=4.84, S.D.= 0.47)

Keywords : jigsaw technique, English reading comprehension ability

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Miss Piyawadee Kanama

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CHAPTER 1
INTRODUCTION

1.1 Background of the Study

In the world of infinite communication, we make use of English for various purposes. We use it for business matters, interviews, television broadcast, reading newspaper or other books, writing messages (e.g., notes, articles, mails) and other general daily communications. It is inevitable that English is the most powerful language at present (Ellis, 2010)

With the need of English skills, of the four language modes (listening, speaking, reading and writing), reading is one of the four main skills for gaining knowledge and experience. Every skill has its importance as well. The most necessary skill is probably reading as most of them do not need to use English in everyday communication but they need the knowledge of English as a key to another world knowledge. As Anderson (1999) has asserted, "for many, reading is the most important skill to master. With strengthened reading skills, ESL/EFL readers will make greater progress and attain greater development in all academic areas" (p.1), and it also seems to be the most attainable language skill for learners in countries where English is not widely spoken. In ESL and EFL countries, reading texts are the fundamental source for language exposure (Ellis, 2010). That is, reading is a thought process that requires drawing from the knowledge that the reader has already acquired. Learners use reading as a tool for studying and acquiring English and to gather information for the professions of medicine, science, technology and law, among others. Moreover, most of the assignment at the education level involve reading to acquire researching. Students depend on effective reading to acquire knowledge.

Fowle (2000) points out that many Thai learners have problems in reading English. Moreover, teaching techniques in reading are neglected in classes. Many studies show that Thai students who learn English as a foreign language (EFL) have problems on reading English texts. They cannot succeed in reading because they have

difficulties with a language that is so different from their native Thai language. Generally speaking, Thai students also do not like reading, and this behavior leads them to have low achievement in reading.

A survey by the National Statistics Office (2008) on the reading habits of Thai people revealed that people aged 6 years have decreased their reading ability from 69.1% (2005) to 66.3% (2008). The survey result showed that the percentage of Thai's reading from 2005 to 2008 went down by 2.8%. Moreover, educators in Thailand who have investigated the reading ability of Thai students found that the reading ability of Thais were at a low level. Furthers, most EFL students fail to read English effectively because when they are confronted with the reading materials, they are confused by grammatical structures and difficult vocabulary, and they lack background knowledge that could facilitate reading (Aebersold and Field, 1997, Dagostina and Carrifio, 1994, Nattall, 2000, Wei, 2005).

In teaching/learning process, teachers play an important role in encouraging and supporting learners to develop reading skills, and teachers should implement teaching techniques in reading classroom in order to develop English reading skills. There are several techniques, such as using games, storying telling, SQ3R, KWL to improve students' reading skill. One of the important techniques which can be used to develop learners' reading comprehension effectively is using the jigsaw technique.

Jigsaw, which is a kind of cooperative learning, is widely used in many places (Aronson and Patnoe,1997). Through this method, students are active in the learning process. They will learn more through a process of constructing and creating, working in groups and sharing knowledge. This method is believed to give students to be involved in discussion, have courage and critical thinking and is willing to take responsibility for their own learning. Although students' role is considered most important, it does not mean that the teacher is not participating. In fact, in the cooperative learning process, the teacher is a facilitator (Qiao and Jin, 2010). During a jigsaw reading, students are arranged into groups of four to six students: this is the "Jigsaw group". Each member of the group is assigned a segment or portion of the text. Then, all the students from different groups who have the same portion of text gather together and form an "expert group" to discuss and communicate with each other until they master the material. Later, each student from the expert group return to their

original group which is the "Jigsaw group" to teach the members of his or her group so that every member has a complete picture of the information.

When it came to teaching reading to Pratom Suksa 6 students, Khok Khon Wittayakhom school, Kalasin province. The researcher found that the ability to get the main idea, to find the details, to make inference, and to differentiate between fact and opinion was low. The researcher found that main detail was low reading skill. According to the report of the score of English in O-NET achievement of the year 2015 for Pratom Suksa 6 (6th grade) (Academic report of the school, 2015) students the mean scores of the school were lower than mean level score of the school's standard. After interviewing English teachers, the most common problems found in the classroom was that students lacked ability in reading comprehension. They could read aloud and pronounced words, but they do not understand or remember what they had read. This was because most of the students in Khok Khon Wittayakhom School were rural students who came to school just to get a certificate from school to find a job after finishing basic education level.

According to the related literature review, the importance of reading comprehension, and the problems of reading and the advantages of the jigsaw technique mentioned above, the researcher as one of English teachers in this school has been interested in using the jigsaw technique to improve the students' English reading comprehension. The researcher considers that the jigsaw technique can help students learn, share knowledge together and understand and gain the whole meaning what they have read, and finally this technique will make the students have positive attitude towards learning English in their future study.

1.2 Research Purposes

The purposes of this study are:

1.2.1 To study the effectiveness index (E.I.) of reading comprehension lesson plans based on the jigsaw technique.

1.2.2 To compare the students' English reading comprehension ability before and after learning by using the jigsaw technique.

1.2.3 To study the attitudes of students' English reading comprehension by using the jigsaw technique.

1.3 Research Hypothesis

The Pratom Suksa 6's reading comprehension ability after learning by using the jigsaw technique is higher than that of before learning.

1.4 Scope of Study

1.4.1 Population, Place and Time

The target population of the study consisted of 20 students of Pratom Suksa 6 (6th Grade) students at the Khok Khon Wittayakhom, Amphue Mueang Kalasin, Kalasin Province. The experimental period of the study was 10 periods (10 hours) in 5 weeks, 2 periods a week, in the second semester of the 2017 academic year.

1.4.2 Scope of the contents

The content and vocabulary in this study was taken from lessons 6-10 of the "Say Hello" book for Pratom Suksa 6 on the topics of "Our Neighbors", "We Are Friends", "Famous People", "My Plan" and "Good Children".

1.5 Definitions of Key terms

The major terms used in this study are defined as follows:

"Jigsaw Technique" refers to a jigsaw reading, students are arranged into groups of four to six students: this is the "Jigsaw group". Each member of the group is assigned a segment or portion of the text. Then, all the students from different groups who have the same portion of text gather together and form an "expert group" to discuss and communicate with each other until they master the material. Later, each student from the expert group return to their original group which is the "Jigsaw group" to teach the members of his or her group so that every member has a complete picture of the information. Here are the steps:

1- Students are divided into groups. The number of each group depends on the number of the texts.

2- Each member of the group is assigned a section or portion of the text.

3- Each student meets with the members of the other groups who have the same assigned

section of the text forming an expert group.

4- The expert group learns the material together and decides on how to teach the material

to the jigsaw groups.

5- Students later return to their original groups, whose member are each now an expert in one of the different areas of the topic being studied, and teach their area of expertise to the other group members.

6- A teacher gives questions or assigns tasks related to the text in the end. At that time, team members may help each other to complete the assigned tasks.

"Reading comprehension ability" means that when students read a passage, they are able to find main idea and supporting details of the passage and to make inferences from the content of the passage and to interpret the purpose of the writer of the passage. The ability can be assessed by using a reading comprehension test which was conducted by the researcher.

"Pratom Suksa 6" refers to 12 years old students who are studying in Pratom Suksa 6 or grade 6 in Khok Khon Wittayakhom School, Mueang Kalasin, Kalasin Province, in the 2rd semester of the year 2017.

"Attitude" refers to feeling, opinions and ideas of learners on English reading comprehension learning by using the jigsaw technique that can be assessed by using questionnaire.

CHAPTER 2
LITERATURE REVIEW

The purpose of this chapter is to review the literature relevant to this study in the following topics:

2.1 The Basic Education Core Curriculum; Learning Area of Foreign Languages

2.1.1 The Importance of Foreign Language Learning

In the present global society, learning foreign languages is very important and essential to daily life, as foreign languages serve as an important tool for communication, education, seeking knowledge, livelihood and creating understanding of cultures and visions of the world community. Foreign languages enable learners to be aware of diversity of cultures and viewpoints in the world community, conducive to friendship and cooperation with various countries. They contribute to learners' development by giving learners better understanding of themselves and others. The learners are thus able to learn and understand differences of languages and cultures, customs and traditions, thinking, society, economy, politics and administration. They will be able to use foreign languages for communication as well as for easier and wider access to bodies of knowledge, and will have vision in leading their lives (Ministry of Education, 2008, p. 1).

2.1.2 Nature of Foreign Language Learning

Learning foreign languages is different from other learning areas since learners do not learn languages for seeking language knowledge but they learn them as a key for communication in any situation both in their real life and in their livelihood. The use of accurate, fluent and suitable language is dependent skill of language usage. Therefore, good language teaching and learning management will enable learners to increase their time in practicing language skills, both inside and outside the classroom. Teaching and learning processes must correspond to the nature and characteristics of language. A variety of teaching and learning management activities should be organized in language class including both language skills practice and activities that improve the self-acquisition of language. This will lead learners to become learner-independent and become lifelong learners by using foreign language as a tool in seeking knowledge for other learning areas, to further education and to use in livelihood. Learners are the one major purpose of language learning reform (Ministry of Education, 2008, pp. 2 - 3).

2.1.3 Visions of Foreign Language Learning

In language teaching and learning management in the basic education core curriculum, it is expected that language learners learn the language constantly from elementary to secondary education level, it is expected that learners will have a good attitude toward learning foreign languages and will be able to use them to communicate in different situations, acquire knowledge and pursue further education. Foreign language learners will have knowledge and understanding of events and the diversity of cultures within the global community and also be able to transfer their concepts and Thai culture to global society creatively (Ministry of Education, 2008, pp. 2- 3).

2.1.4 Goals of Learning Processes

The Ministry of Education. (2008, pp. 3 - 5) explains that teaching and learning foreign language is a complex procedure that depends on the relationship between learners and the instructor, theoretical principles and the diver's procedures of learning and teaching. Teaching and learning English for communication emphasize practical learning processes, adopting language usage in meaningful communication, defining goals in using language for communication in real life, especially using suitable language with social situations. Therefore, teaching and learning processes will lead

learners to gain opportunities to practice language usage and to have skills in seeking knowledge from the diversity of knowledge sources. In teaching and learning activities, instructor should select learning strategies and learning styles that suit the learners' age and level. Learning strategies consist of communication strategies, recognition skills, question skills, considerate thinking skills, creative thinking skills, self-evaluation, self-learning planning, using a variety of learning and working with other learners. Child centered learning was brought into use in teaching and learning to let the learners gain opportunities to practice and use language following their interests. Child-centered learning should consist of: 1) choosing learning activity styles and materials that suit the learners' status and characteristics, encouraging learners to practice happily in the learning process, and considering integrative learning management, cooperative learning management, a whole language approach, communicative language teaching, project-based learning and task-based learning. 2) Searching for learning strategies and adapting them suitably with contents that relate to the learners' interest and age as well as corresponding with the learning standards of the school and community.

2.1.5 Foreign Language Indicators and Learning Goals

It is hoped that learners will have a favorable attitude toward foreign languages, the ability to use foreign languages in a variety of situations, to acquire knowledge and to pursue further education at a high level as well as having more knowledge and understanding of the diversity of global cultures, and the ability to transfer concepts and Thai culture to the global community creatively. The main contents of foreign language include:

2.1.5.1 Language for communication: learners should be able to use a foreign language for listening, speaking, reading and writing; exchanging data and information; expressing feelings and opinions; interpreting; presenting data, concepts and views on various matters; and creating interpersonal relationships appropriately.

2.1.5.2 Language and Culture: learners should be able to use foreign languages harmoniously within the culture of native speakers.

2.1.5.3 Language and Relationship with Other Learning Areas: learner should be able to use foreign languages to integrate knowledge in other learning areas, form the basis for further development, seek knowledge and broaden learners' world views.

2.1.5.4 Language and relationship with Community and the World: learners should be able to use foreign languages in various situations, both in the classroom and in the community and the global society, to form a basic tool for further education, exchange learning within the global society.

2.1.6 Qualities of Learners

The core curriculum expect that Grade 6 (6th grade) graduates should be able to: act in compliance with the orders, the requests and the instructions that they have heard and read; accurately read sentences, texts, tales and short verses aloud by observing the principles of reading; choose/specify the sentences and text corresponding to the meanings of symbols or signs read; tell the main idea and answer questions after listening to and reading dialogues, simple tales and stories.

Grade 6 (6th grade) graduates should be able to: speak/write in interpersonal communication; give orders, make requests and give instructions; speak/write to express needs; ask for help; willing and refuse to give help in simple situations; speak and write to ask for and give information about themselves, friends, families and matters around them; speak/write to express their feelings about various matters and activities around them, as well as provide brief justifications.

Grade 6 (6th grade) graduates should be able to: speak/write to give information about themselves, friends and the surrounding environment; draw pictures, plans, charts and tables to show the various information that they have heard and read; speak/write to show opinions about various matters around them.

Grade 6 (6th grade) graduates should be able to: use words, tone of voice, gestures and manners politely and appropriately by observing social manners and culture of native speakers; give information about the festivals /important days/ celebrations/ lifestyles of native speakers; participate in language and cultural activities in accordance with their interests.

Grade 6 (6th grade) graduates should be able to: tell similarities/differences between the pronunciation of various kinds of sentences, use of punctuation marks and word order regarding sentence structure of foreign languages and of Thai language; compare the similarities/differences between the festivals, celebrations and traditions of native speakers and those of Thai.

Grade 6 (6th grade) graduates should be able to: search for and collect the terms related to other learning areas from learning sources and present them through speaking/writing.

Grade 6 (6th grade) graduates should be able to: use foreign languages to communicate in classroom and in school.

Grade 6 (6th grade) graduates should be able to: use foreign languages in searching for and collecting various information.

Grade 6 (6th grade) graduates should be able to: be able to use foreign languages (focus on listening, speaking, reading and writing) to communicate about themselves, their families, schools, their environment, foods, beverages, free time and recreation, health and welfare, selling and buying, and climate around 1,050-1,200 words (concrete and abstract words).

Grade 6 (6th grade) graduates should be able to: use simple and compound sentences to convey meanings in various contexts.

According to the core curriculum, all skills are focused. However, reading is the necessary skill that firstly aim by the core curriculum.

2.2 Reading

2.2.1 The Definition of Reading

Reading plays an important role in promoting the academic and personal development of individual. Therefore, there is a great need for the school to help all students improve their reading skills, including the cooperative learning. The definition of reading could vary depending on people's perception.

Nassaji, (2011, p.173) states that reading is actually "a complex cognitive skill, involving many subskills, processes, and knowledge sources".

Grabe and Stoller (2002, p.9) defined that reading is the ability to construct the meaning from message encoded in the printed page and interpret the extracted information.

Richards, Platt and Patt (1999) viewed reading as a process of perceiving a written text in order to comprehend to contents of the text.

Nuttal (1996, p. 4) defines the term "reading" as "a process to get meaning from a text".

In short, reading is an interactive process that involves constructing the meaning of a text. Readers interact with a text to derive the meaning from it, relying on different reading models. Therefore, knowing these models will help understand how readers work out the meaning from a text.

2.2.2 Reading Purposes

As mentioned in the previous section, reading plays an important role in our learning, especially for the higher educational level students. It is useful and helpful if students realize the purpose of their reading. This section specifically deals with the purposes of reading. Reading purposes refer to readers' aims and objectives in reading texts. If reader carefully think and consider the purposes of reading, reader can find different purposes from different readers. Therefore, reading purposes are one of the important factors which can lead reader to be successful readers.

According to Ruiqi (2007) reader's reading purpose is an integral part of successful reading. Herri-Augstein, Smith and Thomas (1982; cited in Ruiqi. 2007) affirms that reading purpose is important for two reasons: 1) the way one reads a text varies with purposes; and 2) the success for reading can only be checked against purpose.

Knutson (1998, cited in Ruiqi. 2007) also pointed out that the nature of reading varies according to the reader's purpose and situation, and that reader's reading purpose inevitably determines his/her approach to the text, the amount of attention paid, the time spent as well as that features of parts of the text are focused on.
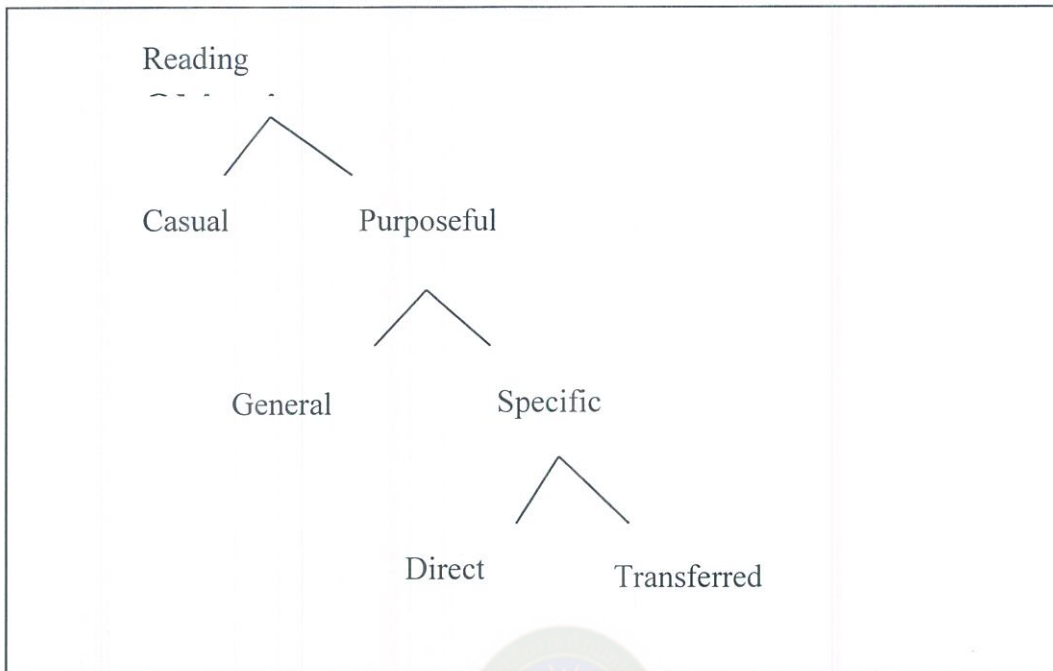
Figure 2.1 Reading Objectives (Source: Lucas, 1990, p.26)

The scheme shown in Figure 2.1 is an attempt to show the variety of reading objectives. With regard to the reading objectives shown above, into two groups as casual and purposeful objectives. The need distracted, idle curiosity, and a general interest in a topic can be objectives. In terms of the purposeful objectives, two sub-objectives into general and specific objectives, the interest in an academic and professional topic is in the group of general objectives. Additionally, the specific objectives can also be classified into two sub-objectives: direct and transferred objectives. The direct objective refers to a definite need for some particular information as a need to check some knowledge or understanding of the facts. Besides, the transferred objective refers to the task of finding information for somebody else, or the command of a teacher to read a particular text. Obviously, reading objectives will differ in intensity from one potential reader to another, and often a potential reader will have a combination of objectives (Lucas, 1990).

Ruiqi (2007) ascertains that there are two major reading purposes: reading for getting information and reading for pure fun or enjoyment.

Additionally, Grabe and Stoller (2002) have classified the reading purposes under seven main headings as follows:

1. Reading to search for simple information;

2. Reading to skim quickly (Both reading to search and reading to skim are common reading abilities. Reading to search is used so often in reading tasks that it is probably best seen as a type of reading ability.)

3. Reading to learn from the text typically occurs in academic and professional contexts in which a person needs to learn a considerable amount of information from a text;

4. Reading to integrate information inevitably requires critical evaluation of the information being read so that the reader can decide what information to integrate and how to integrate it for the reader's goal;

5. Reading to write (or search for information needed for writing);

6. Reading to critique texts (Both reading to write and reading to critique information from a text);

7. Reading for general comprehension is the most basic purpose for reading, underlying and supporting most other purposes for reading.

Kaewklom (1999) asserts that purposes of reading include:

Reading for pleasure: The purpose is relaxation. This concerns the reading of such materials as short stories, novels and comic books, which do not require any serious thinking.

Reading for practical application: This happens when readers are reading to gain information which they can apply or use in a particular situation.

Reading for detailed information: This process is normally a student's purpose in reading an assigned textbook. This happens when readers have to get all the information of the text; therefore, they have to understand the text thoroughly.

Reading for general ideas: To get the general ideas in the text, readers can read at faster speed, skip some sections and pay close attention to the author's topic or main idea. Usually, they read only the first and the last paragraphs of the section together with the first sentence of each paragraph; then they can grasp general ideas of the text or section.

Reading for specific information: This happens when readers have goals in mind, or they know what they are looking for. Readers can read over materials very fast, trying to locate their specific information they need. This purpose requires the techniques of skimming and scanning.

Reading to critically evaluate: This happens when readers want to judge an author's ideas and is able to express their opinion. This includes all ideas weather the readers agree or disagree with the author's ideas.

To summarize, the reading purposes, based on these scholars, reading purposes can be classified into two main purposes: reading for pleasure and reading for getting information. However, the reading purposes can also be categorized into many categories. There are a number of different reading purposes; therefore, recognizing the reading purposes is one factor which can help the students succeed in their reading tasks.

2.2.3 Model of Reading Process

It is essential for reading teachers to understand the reading processes so they can teach a second/foreign language reading efficiently and effectively. Students, on the other hand, should be trained to make use of the reading processes appropriately to achieve proficiency in reading. Larry, (2012) point out that a teacher should pay attention to each of the reading models to get more comprehensive view of reading and eventually use them in developing reading skills. These models have been developed over time and now there are three of them.

2.3.3.1 Bottom-up Models

In the bottom-up processing, Nuttal (1996) states, "The reader builds up a meaning from the black mark on the page: recognizing letter and words, working out sentence structure. We can make conscious use of it when an initial reading leaves us confused … Thus bottom-up processing can be used as a corrective to 'tunnel vision'

In addition, Alderson (2000) proposes that these approaches are defined as serial models, where the reader starts with the typed word, recognizes graphics stimuli, decodes them to sound, recognizes words and decodes meanings. Anderson (2003) also points out that in bottom-up processing, at first the reader is expected to recognize letters, then recognize the words, and in the end the reader obtains the meaning intended by the writer by combining the words that the reader recognized earlier.

Moreover, according to Grabe and Stoller (2002), the reader can understand a reading text by creating a piece-by-piece mental translation of the information in the written text where the interaction between the reader and the text includes little or no inference from the reader's own background knowledge.

2.3.3.2 Top-down Models

In contrast with bottom-up models, the top-down models view reading as a linear process. The process starts from the top, the higher-level mental stages, down to the text itself. In other words, the reading process is driven by the reader's mind at work on the text in these models. The reader is also expected to bring background knowledge to the reading text.

Wallace (1992, p. 147) defines the top-down approaches as "the ways of reading texts which attend to global meaning and are active greatly by existing knowledge of the world rather than the specific linguistic features of the text."

Since reading is a very complex process, the information about reading process may help the students understand how their brains deal with reading tasks which will be particularly useful for them. It would be useful to comprehend the models in reading in order to have a better understanding about reading process. Therefore, the following section deals with the reading models.

2.3.3.3 Interactive Models

Due to the weakness in the top-down models, linguists searched for other models which may be more effective. The interactive models are then developed form the basis of Coady's model of EFL readers (Coady, 1979) which suggests that to comprehend any text, the readers should have three areas of knowledge: conceptual ability, process strategies, and background knowledge (See Figure 1).
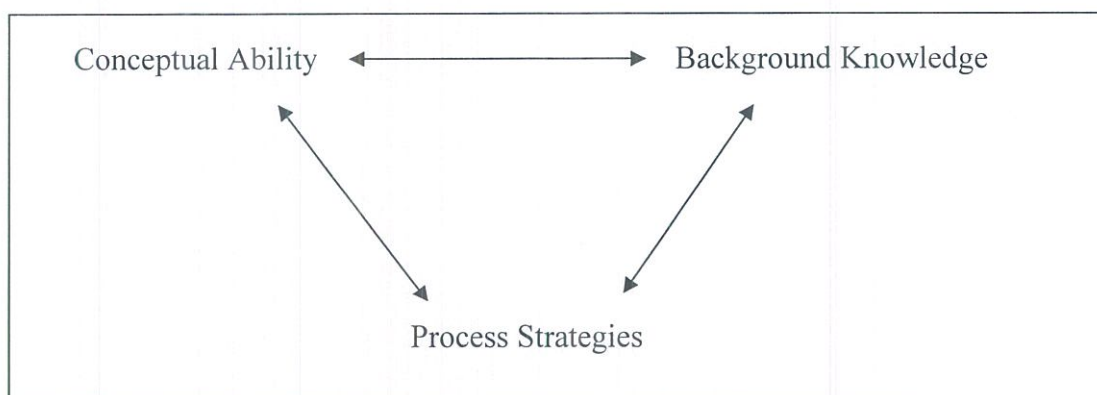
Figure 2.2 Model of the EFL Readers. by Carrell and Eisterhold (1983, p. 555)

According to this model, conceptual ability refers to general intelligent capacity; process strategies involves a variety of sub-elements of reading ability consisting of knowledge of phonological, syntactic and systems; background knowledge refers to the reader's knowledge of the world.

Judith (2003) state that readers need to focus not only on their language knowledge, but also on their related knowledge to process and interpret the text simultaneously.

This model incorporates the implications of reading as an interactive process. That is, the use of background knowledge, expectations, context, and so on. At the same time, it also incorporates notions of rapid and accurate feature recognition for letters and words, spreading activation of lexical form, and the concept of automaticity in processing such forms – that is, a processing that does not depend for primary recognition of linguistic units (p. 224)

In other words, in interactive processes both the top-down and bottom-up models are simultaneously called into use in processing a text. They are subsumed within a single model and take place at the same time in reading. For example, at the beginning readers can use top-down process by employing their knowledge to make predictions about the text for global comprehension and; then, they move to the bottom-up processes to check their assumption and predictions by reading the details. In doing this, readers rely on their knowledge of language to recognize the linguistic elements-letters, words, and sentence structures- to better understand the construction of meaning.

2.2.4 Types of Reading

Accordingly, it is necessary to identify the existing types of reading which are meant to teach and develop the language perception and comprehension skills in the students. We would like to introduce the most widely accepted kinds of reading:

2.2.4.1 Extensive reading–involves reading for pleasure and interest. The main purpose of this kind of reading is relaxation and self-enjoyment.

2.2.4.2 Intensive reading–involves careful and in-depth reading. The main purpose of this kind or reading is getting more detailed information for various educational goals. Due to those goals intensive reading can have the following technique or sub-types:

1) Scanning–rapid reading

2) Skimming–focusing on the important data

2.2.4.3 Exploratory reading–aims at a deeper investigation of the text and allots more time.

2.2.4.4 Study reading– aims at getting a maximum understanding of the main ideas of the text through surveying, questioning, note-taking and reviewing.

2.2.4.5   Critical reading–involves:

1) Differentiating between fact and opinion;

2) Recognizing the author's technique and purpose in writing;

3) Identifying the characters and their behavioral peculiarities.

2.2.4.6 Analytical reading or close reading– involves splitting the text into interrelated components, paying close attention to all the details (semantics, syntactic, stylistic, etc.). The main purpose of this kind of reading is "reading between the lines", thus trying to unveil the author's intentions and ambitions.

2.2.4.7 Developmental reading–final stage of reading which is meant for different professionals' special purposes.

To sum up, types of reading consisted of extensive reading, intensive reading, exploratory reading, study reading, critical reading, analytical reading and development reading.

2.2.5 Component of Reading

Wallace (1992) stated that reading is an astoundingly complex cognitive process. While the readers often think of reading as one singular act, their brains are actually engaging in a number of tasks simultaneously each time we sit down with a book. There are five aspects to the process of reading: phonics, phonemic awareness, vocabulary, reading comprehension and fluency are as follows:

2.2.5.1 Phonics

Phonics is the connection between sounds and letter symbols. It is also the combination of these sound-symbol connections to create words. Without phonics, words are simply a bunch of squiggles and lines on a page. If the reader thinks about it, letters are arbitrary. There is nothing innately bed-like about the written word "bed". It is simply the collection of letters and corresponding sounds that readers agree

constitute the word "bed". Learning to make that connection between the individual sounds that each letter represents and then putting those together is essential to understanding what that funny squiggle means.

There are a number of ways that phonics can be taught because there is a variety of ways to apply this aspect when reading. Each approach allows the reader to use phonics to read and learn new words in a different way. Synthetic phonics builds words from the ground up. In this approach readers are taught to first connect letters to their corresponding phonemes (sound units) and then to blend those together to create a word. Analytic phonics, on the other hand, approaches words from the top down. A word is identified as a whole unit and then its letter-sound connections are parsed out. Analogy phonics uses familiar parts of words to discover new words. Finally, phonics through spelling focuses on connecting sounds with letters in writing. All of these approaches can be taught and used independently or in combination to help young readers learn to identify new words.

2.2.5.2 Phonemic Awareness

Phonemic awareness is closely related to phonics because both involve the connection between sounds and words. While phonics is the connection between sounds and letters, phonemic awareness is the understanding that words are created from phonemes (small units of sound in language). These may seem like the same thing, but there is a subtle difference in the two. Phonics is used only in written language because it involves letters. Phonemes are sounds only. While readers can be represented using letters, can also be simply the auditory sounds of words. Phonemes are most often learned before a child begins to read because of centered on the sounds of language rather than written words.

It's like phonics; phonemic awareness can be taught and used in a number of ways. Phoneme isolation involves the reader parsing out the individual sounds in a word in order to determine its meaning. Similarly, phoneme segmentation asks the reader to break words into their corresponding phonemes (which may involve one or more individual sounds) to figure out the new word. Both of these approaches are very similar to synthetic phonics. Phoneme identification relies on the reader's general knowledge of phonemes (usually developed through speaking) to identify sound patterns in words. For example, a reader would identify the phoneme /d/ he knows from the words "dog" and "dad" to help him learn how to read a new word "doctor". Finally, phoneme blending requires the reader to connect a series of phonemes together to create a word. This strategy is always used in conjunction with one of the others.

2.2.5.3 Vocabulary

There are two primary ways of teaching and learning new vocabulary words. The first is explicit instruction. This involves someone telling how a word is pronounced and what its meaning is. That "someone" might be a teacher, a dictionary, a vocabulary guide or any other resource offering definitions and pronunciations. Context clues provide another method for discovering new words. Context clues are the "hints" contained in a text that help a reader figure out the meaning of an unfamiliar word. They include other words in a sentence or paragraph, text features (ie. bold print, italics), illustrations, graphs and charts. Context clues are basically any item in the text that points to the definition of a new word.

2.2.5.4 Fluency

Fluency is a reader's ability to read with speed, accuracy and expression. Thus, it requires him to combine and use multiple reading skills at the same time. While fluency is most often measured through oral readings, good readers also exhibit this skill when they are reading silently. Think about the way a book "sounds" in your mind when readers are reading silently. You "hear" the characters "speak" with expression. Even passages that are not written in dialogue "sound" as if the words fit the meaning. A particularly suspenseful action sequence moves quickly through your mind creating a palpable sense of tension. Your ability to move through a piece of text at a fluid pace while evoking the meaning and feeling of it demonstrates your fluency.

Fluency is intimately tied to comprehension. A reader must be able to move quickly enough through a text to develop meaning. If he is bogged down reading each individual word, he is not able to create an overall picture in his mind of what the text is saying. Even if the reader is able to move rapidly through a text, if she cannot master the expression associated with the words, the meaning of it will be lost.

2.2.5.5 Reading Comprehension

Comprehension is what most people think reading is. This is because comprehension is the main reason why we read. It is the aspect of reading that all of the others serve to create. Reading comprehension is understanding what a text is all about. It is more than just understanding words in isolation. It is putting them together and using prior knowledge to develop meaning.

Reading comprehension is the most complex aspect of reading. It not only involves all of the other four aspects of reading, it also requires the reader to draw upon general thinking skills. When a reader is actively engaged with a text, she is asking and answering questions about the story and summarizing what she has read. Like vocabulary, reading comprehension skills develop and improve over time through instruction and practice.

To conclude, component of reading comprehension consisted of phonics, phonemic awareness, vocabulary, reading comprehension and fluency. These five aspects work together to create the reading experience. As children learn to read, they must develop skills in all five of these areas in order to become successful readers.

2.3 Reading Comprehension

McNeil (1992) states that reading comprehension is a process of making sense out of text. In this process the reader uses one's background knowledge to interpret the text in order to comprehend the meaning of the text. Singhal (1992) also suggests that learners comprehend texts that reflect their own culture and background knowledge more easily than those that do not. Hence, for correct comprehension to take place, teachers may need to provide explicit background information as a pre- reading activity.

Similarly, comprehension means obtaining meaning from what we read. It is the heart of reading. Children can build their comprehension by learning to use mental plans, or strategies, to draw meaning as they read. These strategies include using what they already know to make sense of what they read, make predictions, paying attention to the way a reading selection is organized, creating mental pictures, asking questions, and summarizing. Specific strategies used before, during and after reading can help learners increase their comprehension.

Similarly, Taverner (1990) believes that comprehension is a complex process involving interaction between text and learners. As learners read, providing all their focus is not taken up with decoding, they adjust and update their knowledge as they read and reflect on meaning. Therefore, reading can bring learners to unfamiliar environments, times and cultures to gain a sympathetic understanding for other ways of life and to experience joy and sadness.

2.3.1 Reading Comprehension Level

Reading comprehension can be classified into different levels ranging from the lowest to the highest, which require different levels of reading and thinking abilities. Richard and Patt (1999) and other, have proposed similar levels of classification in reading comprehensions as follows:

2.3.1.1 Literal comprehension is reading to understand, remember, or recall the information explicitly contained in the passage.

2.3.1.2 Interpretation comprehension is reading to find out information which is not explicitly stated in a passage by employing their experiences and knowledge of the world. Hence, readers are required to think and go beyond what they have read.

They need to organize, analyze, classify, summarize, and synthesize the information directly presented in the printed texts.

At this point, Harmer (2001) further elaborates that some of the reading skills in this level require readers to do things as follows:

1. determining word meanings form context
2. finding main idea
3. reading between the lines or making inferences
4. drawing conclusions
5. making generalizations
6. recognizing cause and effect reasoning
7. recognizing analogies

2.3.1.3 Critical or evaluative comprehension is reading to compare information in a passage with the reader's own knowledge and values. This high-level of comprehension involves evaluation and making a personal judgement on the accuracy of values and truthfulness of what is read.

2.3.1.4 Appreciative comprehension is reading to gain emotional or other kinds of valued response from a passage. The readers are required to react and give emotional responses to the texts.

It can be seen that the four levels of reading comprehension ranging from the lowest to the highest encourage students to read for different purposes. Teachers should be aware of the range of these levels and plan their lessons according to the suitability of the text students are required to read do that they have chance to develop various skills of reading.

2.3.2 The Methods of Teaching Reading

To encourage students to use effective strategies when reading in a second or foreign language, there are many educators proposed the methods for teaching reading such as KWL(What I Know?, What I Want to know?, and What I Learned?), SQ3R (Survey, Question, Read< Recite, and Review) or PQRST (Preview, Question, Read, Self-recitation, Test) method. Barnett (1989) proposed a reading method that can develop simple exercise to elicit information via targeted strategies. The reading method contains four phases that are pre-reading, while reading, post-reading and follow-up.

Barnett's pre-reading activities were designed to activate relevant background knowledge, encourage students to predict content, give necessary cultural information, stimulate student interest, and provide them with a purpose for reading the text. Activities that Barnett suggest include brainstorming about ideas and vocabulary that will likely appear in the text, using titles, photos, and graphics to predict text topics and activate background knowledge, developing vocabulary through semantically-based activities, reviewing text types to help students identify text structure, practicing skimming and scanning, and encourage students not to read word by word.

During reading, exercise help students acquire reading strategies, improve their command of the linguistic features of the target language, and decode difficult passages. At this stage, activities should help students to learn to infer word meaning from context, give them practice in recognizing cognates, prefixes, suffixes and word families, grammatical structure, and function words, and teach them when and how to use a dictionary effectively. Students can also identify items or facts which are confusing by rereading.

The purpose of post-reading exercise is to verify that students can create a final summary of what they have learned, state how to use the information they get, revisit text for clarification and respond to questions. Types of comprehension cheek activities will vary depending on the text and the amount of comprehension required by the reading objectives the instructor has established. For example, Barnett points out that one reads classified ads in order to buy or sell something, a bus schedule to see bus arrival and departure times, and a short story for pleasure or to gain a new perspective on life.

Barnett's follow-up activities provided students with opportunities to go beyond the text either by learning strategies that they can then apply to other texts, and by developing student creativity and high order thinking skills. To help students lean to transfer strategies from one text to another, Barnett suggest that instructors provide follow-up reading to which previously learned strategies can be applied. Follow-up activities also encourage students to think creatively and critically about what they have read. Such activities might include comparing one's own point of view with that presented in the text, recreating the theme of a story in a new context, and writing about a topic from a variety of points of view.

To conclude, Barnett's method of teaching reading consisted of four stages; pre-reading, during reading, post-reading and follow up.

2.4 Cooperative Learning

2.4.1 Definition of Cooperative Learning

Cooperative Learning is one strategy for group instruction which is under the leaner–centered approach. Many educators give the definitions of cooperative learning as follows:

Slavin (1995, cited in Siriwan, 2012) stated that cooperative learning is an instructional program in which students work in small groups to help one another master academic content.

Brown (1994) affirmed that cooperative learning involves students working together in pairs or groups, and they share information. They are a team whose player must work together in order to achieve goal successfully.

According to Johnson (2005), cooperative learning as a successful teaching strategy in which small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. Each member of a team is responsible not only for learning what is taught but also for helping teammates learn, thus creating an atmosphere of achievement. Students work through the assignment until all group members successfully understand and complete it.

Towns, Kreke, and Fields. (2000: 111) ascertain that cooperative learning is the instructional use of small groups in which students work together to maximize their own and other students' learning.

Siriwan (2012) views cooperative learning as a successful teaching method which in small team, which is each different level student, uses various activities to improve their understanding. Each member of a team is responsible not only for learning what is taught but also for helping teammates learn.

To sum up, the cooperative learning requires student to work together with a task or their learning objective. It can develop integrating social skills with academic task, to help facilitate active learning, team building, and group skills.

2.4.2 The Importance of Cooperative Learning

In teaching, teachers have a duty to organize classroom activities well. Setting up good classroom activities could help enhance the effectiveness of classroom management and classroom organization. There are many classroom activities that teachers can apply and adapt for use in their classes to help their students learn the target language.

Cooperative learning activities are one kind of teaching technique that teachers can use in their class. Bassano and Christison (2009) suggested that cooperative learning technique in ESL classroom are important elements in successful classroom management. They point out that there are at least three areas in which cooperative learning can figure: social tasks, process tasks such as peer tutoring and goal setting, and progress monitoring and evaluative task. Cooperative learning encourages students to take partial or full responsibility for their successful work.

2.4.3 Common Characteristics of Cooperative Learning

In cooperative learning, students work with their teammates in a small group to finish their tasks or common goal. The goal is reached through interdependence among all group members rather than working alone (Johnson and Johnson, 1994a, cited in Siriwan, 2012). Cooperative learning group activities vary in duration, depending on the task to be accomplished. Cooperative learning has the following essentials characteristics: students work in team to master academic materials; teams are made up of high, average, and low achievers; teams are made up of racially and sexually mixed group of students; and reward system are group oriented rather than individually oriented.

In short, in cooperative learning, students work with their groupmates in group to learn, share their knowledge and reach their goal. The five basic elements of cooperative learning are: positive interdependence, individual and group accountability, interpersonal and small group skills, face-to-face promotive interaction and group processing.

2.4.4 Step of Cooperative Learning

Johnson and Johnson (1987, cited in Siriwan, 2012) proposed the method of cooperative learning as follows:

1. Assigning Appropriate-Tasks Coordination is an appropriate method for the facilitation of teaching and learning. Cooperative learning is employed in case of the following: Problem solving skills are needed, creative thinking, high quality achievement, complex tasks, and social development of learners.

2. Teacher – Student Interaction, in cooperative learning, there is a tight relationship between the teacher and students. The teacher introduces learning content to students, explains learning objectives, constructs learning conditions, observes classroom activities, and assists students when needed. Meanwhile, students take part in learning activities as introduced and they must do assigned task successfully.

3. Students–Student Interaction. Each student must perceive that his group members can help, support, and enhance him in learning.

4. Student–Materials Interaction. There is the difference in the preparation of learning materials based on form and objectives of learning content. Students will receive a set of learning materials for studying. The learning materials may be used for group tasks or individual tasks and obtained knowledge will be shared among group members.

5. Students Role Expectation–Cooperative learning aims to make students have interaction among group members. This includes idea and learning material sharing as well as support. Each students group must have clear goals and each group member must take part in group activities in order to achieve the goals.

2.4.5 Components of Cooperative Learning:

Johnson, et al, (1995, cited in Siriwan, 2012) cooperative learning is characterized to the five common elements, including

1. Positive interdependence that each member's contribution is important to the group's success. Each group member depends on and is accountable to the others to accomplish a shared goal or task. Group members relies that they are connected to each other in a way where one cannot succeed unless everyone succeeds. They need each other for support, explanation, and guidance. Without the help of one member, the group is not able to reach the target.

2. Face-to-face group interactions, each member encouraged to participate, help others succeed, and learn from each other. This method promotes each other's success. Group members promote one another's learning by praising, encouraging, supporting, sharing, or assisting each other to learn. Members explain, discuss, and teach what they know to group members. Group members are strategically seated in order to encourage "eye-to-eye, knee-to-knee" interaction. Through group building activities, promotive behaviors is facilitated.

3. Individual and group accountability members dividing the work and begin individually responsible for specific tasks. Although learners work together in a cooperative learning group, each student is held accountable for individual learning. Individual learner performance is assessed and the reported and celebrated by the individual as well as group members.

4. Development of small group social skills involving negotiating and use of group interaction skills. Groups cannot function effectively if members do not have and use the needed social skills. Members are encouraged and helped to improve and practice leadership, decision making, conflict management skills and communication.

5. Group processing: group processing is an assessment of how groups are functioning to achieve their goals or tasks. Groups need specific time to discuss how well they are achieving their goals and maintaining effective working relationships among members.

In summary, there are five necessary elements of cooperative learning. They are positive interdependence, individual accountability, interpersonal skills, face-to-face interaction, and group processing.

2.4.6 Types of Cooperative Learning

Types of Cooperative Learning as cited in Siriwan (2012) were as follows: Johnson and Johnson (1993) assert that three types of cooperative learning can be used in the classroom formal cooperative learning groups, informal cooperative learning groups, and cooperative base groups. Students often feel helpless and discouraged, especially when facing a difficult class. What follow are details of each type of cooperative learning.

1. Formal cooperative learning groups. Formal cooperative learning groups may last for one class period to several weeks to complete any course requirement such as solving problems, reading complex text material, writing an essay or report, conducting a survey or experiment, learning vocabulary, or answering questions at the end of a chapter. In formal cooperative learning groups, teachers introduce the lesson, assign students to small group, give students the material they need to complete the assignment, and assign student's roles. The teacher explains the task, teach any concepts or procedures the student need in order to complete the assignment, until all group members have successfully understood and completed it. While the students work together, the teacher moves from group to group systematically monitoring their interaction. The teacher intervenes when there are problems in working together. After the assignment is completed, the teacher evaluates the academic success of each student and has the group process how well they functioned as a team. In working cooperatively, students realize that they 1) are mutually responsible for each other's learning and 2) have a stake in each other's success.

2. Informal cooperative learning groups. These groups are temporary, ad hoc groups that last from a few minutes too one class period that are used during a lecture, demonstration, or film to focus student attention on the material to be learned, set a method conductive to learning, help set expectations as to what will covered in a class session, ensure that student cognitively process the material being taught, and provide closure to an instructional session.

3. Cooperative base group. These are long-term cooperative learning groups that may last for one semester or year with stable membership that give each member the support, help, encouragement, and assistance he or she needs to make academic process including attend class, complete all assignments or learn, and develop cognitively and socially in healthy ways.

In summary, the three types of cooperative learning consist of formal cooperative learning groups, informal cooperative learning groups, and cooperative base groups. All three types can be applied in several of instructional situations. They all focus on learning or working together in a small group and the support for each member's learning success.

2.4.7 Advantages and Disadvantages of Cooperative Learning as cited in Siriwan (2012) were as follow:

2.4.7.1 Advantages of Cooperative Learning

The remarkable advantages of cooperative learning are that it leads more motivation, intellectual, curiosity, caring for others, and psychological health.

Cooperative learning encourages the students to be in unity and to learn how to live in a society (Slavin, 1995, Johnson and Johnson, 2002) It also develops students interpersonal, social skills and cooperative interaction (Richard, et al., 1985, Slavin, 1995, Johnson and Johnson, 1998, Veeman, et al., 2002, McDonough, 2004); problem sloving (Slavin, 1995); academic achievement and facilitation of each other's learning (Slavin, 1995, Ghaith, 2002, Gillies, 2004) greater effort to achieve the target goal, long term retention and achievement, more positive relationship among students and great psychological health (Johnson and Holubec, 1993), interpersonal skills and responsibility (Gillies, 2004), heightened self-esteem and creatively (Johnson and Johnson, 1998).

To summarize, cooperative learning, a remarkable and beneficial type of learning, gives many advantages in many ways and provides opportunities for students to attain the target goal.

2.4.7.2 An Important Disadvantage of Cooperative Learning (cited in Siriwan, 2012)

While both the motivational theory and the cognitive theory support the achievement advantages of cooperative learning, there is, however, one important and observable weak point of cooperative learning. That is, if it is not properly constructed, a cooperative learning method can allow for the "free-rider" effect (Siriwan, 2012). This mean that while some group members do all or most of the work learning, others in the group go along for the ride- doing nothing. The free-rider effect is most likely to occur when the group has a single task, as group members are asked to hand in a single report, complete a single worksheet, or produce one project. (cited in Siriwan, 2012)

However, this problem could be estimated in cooperative learning in two principal way (Siriwan, 2012) The first way is to make each group member responsible for a unique part of the group's task, as in Jigsaw, Group Investigation, and related methods. The second way is to have students be individually accountable for their learning, for example, in the Student Team Learning (STL).

2.5 The Jigsaw Technique

2.5.1 The Definition of the jigsaw technique

There are several ways to teach English reading, such as case study teaching, problem-based learning, task-based learning, team-based learning, group investigations, learning together, etc. A technique used in teaching now is the jigsaw technique. Jigsaw is accepted to be one of an effective technique to improve English reading. It is so named because each student in a Jigsaw group has to become an expert on a part of a larger of the academic "puzzle"—so that everyone in the group learns all the component parts. Each student is in a position to bring to their group unique knowledge that is not readily available and allows group members to treat each other as resources (Aronson, 2006)

The jigsaw technique is initially introduced by Aronson et al. (1978, cited in Siriwan, 2012). This jigsaw structure is meant to provide students with the chance to learn a material from their peers. A material is divided into sections and one section is for each student to take care of. The students who are responsible for the same section get together and form a new group of which the goal is for the students to master the section of the material and to enable them to teach the other members in their original learning group later. The groups should be diverse in gender, ethnicity, race and ability. The teacher floats from group to group, observing the process. During the class the teacher may make an appropriate intervention if any group has problems in discussion. At the end of the session, the teacher gives a quiz on the material so that students quickly come to realize that the sessions are not just for fun (Aronson, 2006).

Jigsaw is a teaching technique used in small groups, proposed in 1978 by Aronson. Students of a normal-sized class are divided into groups of four to six students, each of which is given a list of subtopics to study. Individual members of each group then break off to work with the "experts" from other groups, researching a part of the material being studied, after which they return to their starting group in the role of the instructor for their subcategory.

The study material is designed in such a way that each student can be given a piece of material without having to understand the rest of material. Although each student is given only part of the material, each student is evaluated on the whole unit of the given topic. This could be done by dividing the components among students with the different aspects of the topic. The student learns his or her own material and is responsible for teaching that material to the rest of the students. Each team member is expected to be expert in his or her particular "part of the puzzle."

In order to become expert, the team members interact with the members of other groups who have been assigned the same part of the material (piece of puzzle) as an expert group. After the interaction, the members go back to their original group and explain them what they have understood

The group then puts together all parts of the Jigsaw or given material and explains the topic to the rest of the class through presentation. Though it is a group activity, students are evaluated on the basis of individual performance through tests and assignments. The whole group is also evaluated as a team. If each student's part is essential, then each student is essential; and that is precisely what makes this strategy so effective (Aronson, 2006).

Jigsaw is one of the best-known cooperative learning techniques (Coelho, 1992). For example, a reading passage on the causes and solutions to the problem of air pollution is divided into parts, just like a jigsaw puzzle is divided into pieces. Students from groups of four called "home team". Each home team member gets one piece of the passage. They then leave their have team and form and expert team with three people from other home teams who have the same pieces of the passage. The job of the expert team is to learn their piece well and prepare to teach it to their home team. Next the experts learn disband and students return to their home team where they take turn teaching their pieces of the passage. Finally, the group does a task requiring information from all the passage pieces (Jacobs, Gan and Ball, 1995).

To sum up, jigsaw technique, students separate from their own groups and form new groups with the other students who are responsible for preparing the same subjects. These groups, called "group of experts" try to make other students understand the subjects; they make plans about how they can teach the subject to their friends, and prepare a report. Afterward, they turn to their own groups and teach subjects to team

with the help of the reports they have prepared. Finally, students individually take the exam covering the points they have studied. Through the individual grades, the team grade is constituted.

2.5.2 Steps of Carrying out the Jigsaw Technique

Siriwan (2012) reviewed a number of documents on the steps of the jigsaw technique as follows:

1. Students are divided into 4-, 5- or 6-person jigsaw groups. The number in each group depends on the number of subtopics.

2. Each member of the group is assigned a subtopic of the material.

3. Each student who has the same assigned subtopic meets with the members of the other groups to form the expert group.

4. Students in the expert group learn the material together and decide on how to teach the material to the original groups.

5. Students return to their original groups, whose members are each now an expert in one of the different topics being studied, and teach their members what they have learned and discussed in the expert group.

6. The teacher needs to move from group in order to observe the process. He/She intervenes if necessary, such as a member being dominating or disruptive. There will come a point that the group leader should handle this task. Teachers can whisper to the group leader as to how to intervene until the group leaders can effectively it himself.

7. At the same end of the session, a quiz is given to check students' knowledge after learning. At that time on team members may help each other.

2.5.3 Benefits of the jigsaw technique

Siriwan (2012) reviewed a number of documents on jigsaw technique and found a number of advantages of this technique as follows:

1. Learners have the opportunity to teach their friends, instead of teacher having material presented to them. The teaching fosters depth of understanding.

2. Learners have practice in this method of self-teaching which fosters depth of understanding.

3. Learners have practice in peer teaching, which required that they understand the material at a deeper level.

4. Learners improve proficiencies in information gathering and editing.

5. Learners have an opportunity to demonstrate a high level of personal responsibility.

6. Learners think creatively and reflectively, devising new, differentiated ways of approaching, teaching, and presenting material.

7. Learners work towards a common goal by sharpening their cooperative and teamwork skills.

8. Learners improve in their thinking, listening, speaking, and problem-solving skills.

9. Learners reduce test-taking anxiety.

To conclude, Jigsaw helps students learn cooperation as group members share responsibility for each other's learning by using critical thinking and social skills to complete an assignment. Subsequently, this strategy helps to improve listening, communication, problem-solving skills, work towards a common goal and reduce their anxiety.

2.6 Lesson Plans

2.6.1 Definition of the lesson Plans

Lesson plans is one of learning and teaching management activities in classroom and it guides instructors in the learners' learning process. This researcher studied and reviewed the definitions of instructional plan from educators who have defined it as follows:

Poosara (2002, p. 159) asserts that a lesson plan is a tool in setting learning experiences for learners based on learning strand areas.

Moonkhum (2006, p. 58) states that a lesson plan is a teaching manual that it assists teachers to prepare the methodologies, materials and evaluations for every lesson of teaching. The instructional plan will make teachers easier in teaching and reach the objectives set in each lesson.

Tardthong (2009, p. 134) states that a lesson plan means the teaching manual in preparing stage of teaching that teachers prepare objectives, method of teaching, the material, activities and the assessment of teaching. Instructional plan consists of learning objectives, activities, materials as well as assessment and evaluation.

Singhal (1992, p. 79) asserts that a lesson plan is a plan or model of learning and teaching. To help the instructor follow by the learning objectives.

Pornkul (2014, p. 355) states that a lesson plan is an academic document that teachers prepared systematically in advance for using in their learning and teaching management activities. It also covered the diversity of activities between teachers and made it convince in teaching.

Nuangchalerm (2013, p. 168) defines the lesson plan as a plan or project which is written for using in learning and teaching in a specific course. It is also a teaching preparation systematically instrument based on the purposes of the curriculum.

From the definitions of lesson plan mentioned above, it can be concluded that lesson plan is a teaching manual which is contained teaching activities, teaching methodologies, materials and evaluations based on the objectives in each lesson. The instructional plan emphasized the learners on learning perceiving follow the curriculum purposes and developing of knowledge, process as well as attitude.

2.6.2 The Importance of lesson plan

This researcher studied and reviewed concepts of educators about the importance of lesson plan as follows:

Laksana (1990, pp. 3-4 cited in Soontornrojana, 2010, p. 30) states that an lesson plan assists teacher in many ways. Firstly, it helps teachers to plan the teaching methodology. Secondly, instructional plans assist teacher to create teaching materials and it convince teachers in learning and teaching methodology. Thirdly, it can be an academic work and published as an academic model. Lastly, it also creates convenient for co-teachers when the teachers is absent.

Moonkhum (2006, p. 58) mentions the importance of lesson plan that it is a teaching methodology that it is planned by teachers. It assists teachers to prepare the lessons for the learners in advance, and it helps teachers confident to manage the lessons. Additionally, it helps teachers notice their teaching methodologies clearly and also notice learning materials or sources as well as assessment and evaluation

Tardthong (2009, p. 134) states that an lesson plan has number of importance as follows: 1) It assists learning and teaching methodologies meaningfully, 2) teacher has a teaching manual, 3) It is an academic work that reflects competence of professional instructors, 4) Co-teacher can use it when teacher absents, 5) It assists teacher to manage learning activities, 6) Learners perceive whole learning approach as they can learn everything at the same time, 7) It can integrate in other learning areas unlimitedly, 8) It assists teacher to teaching activities based on objects of the lesson and school curriculum and 9) It promotes perfect learning activities in unlimited period of time.

As the study of importance of lesson plan mentioned above, the researcher summarizes that the lesson plan is the material that provides a useful basis of lesson planning and provides a coherent framework for smooth efficient teaching. It helps the teacher to be more organized and be more confident when delivering the lesson, gives a sense of direction in relation to the syllabus, helps the teacher to plan lessons which cater for different students and it is a proof that the teacher has taken a considerable amount of effort in his teaching.

2.6.3 Elements of Lesson Plans

The researcher for the present study reviewed elements of lesson plans from number of educators who suggest that the elements of lesson plans should have the main elements as follows: 1) Headings, 2) Concepts, 3) Objectives, 4) Contents, 5) Activities, 6) Material or Media and 7) Assessment.

Besides, study of the elements of lesson plan is still different in some issues according to Pornkul (2014, p. 356) suggest elements of learning management plan as follow: 1) Introduction consists of learning strand area, class, semester, academic year, learning unit, title, learning strand and standard, indicators and learning and teaching time, 2) Concepts, 3) Expected or learning objectives, 4) Contents, 5) Learning processes, 6) Evaluation and 7) learning materials/learning resources and 8) Learning and teaching outcomes note.

Neuangchalerm (2013, p. 168) states that the procedures of lesson plans writing should consist of diverse details likewise:

1. Heading, it is the first part of lesson plans which consists of the fundamental details: Number of instructional plans, identify learning strands area,

identify learning class, identify the heading, identify timing of learning activity and identify date, month, year and period of time in learning activity.

2. Concept, it is the introduction of the information in the lesson plan also it identifies or concludes the learning areas of learners after finish learning in learning content. The guidelines of the concept learning writing are: (1) Instructor need to write in the way of narrow knowledge, skills or attitude- write in short and clear, (2) Instructor should write in the text model or write it in sequence in the case of there are more than one concept, (3) In learning activity in each class level, concept should have only one in learning.

3. Objectives, the objectives are details about the characteristics of cognitive, affective or psychomotor domains. The writing of objectives can be variously written. Generally, instructors write in two ways:

3.1 Behavioral objective is indicated to the learners' behavior after finish learning based on learning management plan. Therefore, instructors need to identify learning behavior clearly. The completed behavioral objective should be consisted of three main parts these are condition, terminal behavior and criteria.

3.2 Terminal objective is an identified detail as main purposes of learners' learning after finish learning based on learning management plan. The characteristics of terminal objective are indefinite purposes in learners' learning behavior.

As for External objective is a small part of terminal objective which shows the expected behavior of learners. The main purposes of terminal objective are to monitor learners to show their behavior in positive side. Hence, external objective is written in behavioral objective.

4. Learning activity is the teaching situation of instructor both inside and outside the classroom. It is designed to present content, teaching method or effective learning methods. In learning activity writing, instructor needs to consider about: 1) Learning activity should be related to the learning objectives, knowledge, process and attitude, 2) It should be written orderly of the procedures of learning management plan writing such as presentation, practice and production, 3) It should be clearly identify that instructor or learners take a role or all of them participate in learning and teaching. Learning assessment and evaluation is a process in checking the quality of learners in their learning. Learning assessment and evaluation may use the various measurement

or method instruments such as observation, interview, questionnaires, portfolio or testing. The rating scale of assessment and evaluation may be pass or fail, satisfied or unsatisfied, good, fair or poor as well as define number system such as 4-3-2-1.

Jaiteang (2010, p. 209) also states that elements of lesson plan should be comprised of 1) Learning standard, 2) Indicators, 3) Contents, 4) Learning objectives, 5) Learning area, 6) Teaching and learning activities, 7) Assessment and evaluation, 8) Learning materials and resources and 9) Learning and teaching outcomes note.

In the study of elements of lesson plan mentioned above, it can be concluded that the elements of the lesson plan consist of heading of the plan that consist of the detail of a number of instructional plan, identify learning strands area, identify learning class, identify the heading, identify timing of learning activity and identify date, month, year and period of time in learning activity, the concept of the plan, the objectives of learning and teaching, the activities used in the plan, the material or media and the assessment and evaluation of learning.

2.6.4 Procedures of lesson Plan Writing

In the study of the procedures of lesson plan writing, there are two educators who explain the procedures of lesson plans writing as follow:

Chookhumpang (2010, pp. 94-95) states that the lesson plan writing should have procedures the following:

1. The lesson plan writer has to study curriculum or related document.

2. The teacher study's methodology of content analysis and concepts so that teacher applies in teaching planning, define expectation learning as well as learning assessment.

3. Teacher has to analyze the relationship between contents, concepts and expectation learning.

4. Teacher designs instructional plan that it is corresponded to teaching methodology.

5. Expert proves the content validity of instructional plan and

6. Teacher uses a proven instructional plan with the students.

Airasian and Russell (2008) state that the lesson process comprises three basic steps. The first is planning instruction, which includes identifying specific expectations or learning outcomes, selecting materials to foster these expectations or outcomes, and

organizing learning experiences into a coherent, reinforcing sequence. The second step involves delivering the planned instruction to students that is, teaching them. The third step involves assessing how well students learn or achieve the expectations or outcomes. Notice that to carry out the instructional process the three steps should be aligned with one another. That is, the planned instruction should be logically related to the actual instruction and the assessments should relate to the plans and instruction.
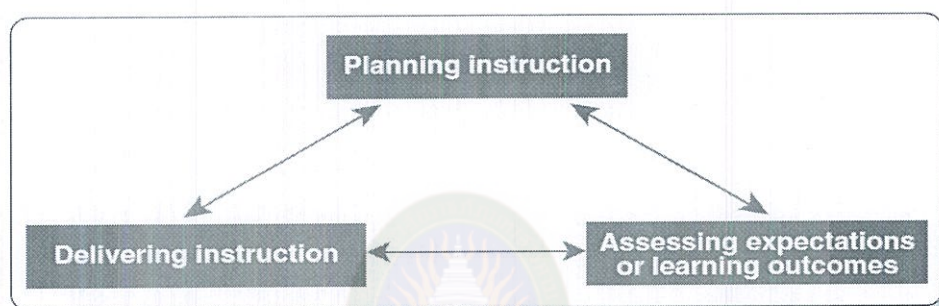
Figure 2.3 Three steps and the relationships Lesson Plan.

Notice that the diagram is presented as a triangle rather than as a straight line. This indicates that the three steps are interrelated in a more complicated way than a simple one-two-three sequence. For example, in planning instruction (step 1), the teacher considers the characteristics of students and the resources and materials available to help attain desired changes (step 2). Similarly, the information gained at the time of student assessment (step 3) is useful in assessing the appropriateness of the learning experiences provided students (step 2) and the suitability of intended expectations or learning outcomes (step 1). Thus, the three steps are interdependent pieces in the instructional process that can be aligned in different orders.

In summary, There are three main steps in writing the lesson plan: first, planning the instruction, which includes identifying specific expectations or learning outcomes, selecting materials to foster these outcomes, and organizing learning experiences into a coherent, reinforcing sequence; second, delivering the planned instruction to students by teaching them; and thirdly, assessing students, which involves

the collection and synthesis of formal information about how well students are learning or have learned compared with the expectations of learning outcomes.

2.6.5 Evaluation of the lesson Plan

Lesson plan is an innovation of learning and teaching so, the evaluation of it can do two ways according to Neuangchalerm (2013, pp. 212-215) these are rational and empirical approaches.

Rational approach is a process in finding effectiveness of research instrument by focusing on knowledge and reasons of experts in considering the valuation of learning and teaching innovation. The experts' considerations depend on content validity, usability by using research statistics. Also, learning and teaching innovations are evaluated by rating scales. Hence, the mean score of the experts assessment is ranging between 3.51-5.00 that shows the acceptance of experts at the same way if the effective value of learning and teaching innovation is lower than determined value, it have to be improved and considered again by experts.

Empirical approach is an experimental method. The finding effectiveness of learning and teaching innovation is considered from the percentage of learning process especially, during learning by using two numbers e.g. $E_1/E_2 = 80/80$ $E_1/E_2 = 85.85$ $E_1/E_2 = 90/90$. Therefore, the acceptance of effectiveness is based on:1). The criterion of E_1/E_2 is higher than the determined effective value. 2). The criterion of E_1/E_2 is as equal as the determined effective value.3). The criterion of E_1/E_2 is lower than the determined effective value is not over or under 2.5 percent.

Besides, Chookhumpang (2010, pp. 131-133) presents the finding of efficiency and effectiveness of lesson plan by using efficiency process (E_1). The value of it tells that instructional plan enables learners to acquire their learning constantly or not in the defined activity. The scores of it collect sub-exercises or learning behavior. Effectiveness process (E_2) is a value of learning management. Learners achieve the learning objectives or not as well as it is an indicator of learning achievement. The scores of it's comes from an achievement test (post-study test) of all learners. Effectiveness Index (E.I.) is the value of learning progression based on background knowledge after they study by using learning materials or innovations.

Kitrakarn (2003, pp. 1-6) has proposed a way to find the effectiveness of a learning plan by considering the development of students from before and after learning whether

the ability increases credibly. The ways to determine the increasing ability include T-test Dependent Samples and the effectiveness index (Effectiveness Index: E.I).

    1. Finding the incremental value of the learner by using the t-test (Dependent Samples) is to determine whether the student's development has increased reliably. By testing all students before (Pretest) and after learning (Posttest) and then testing by the t-test Dependent Samples, if it is statistically significant, it can be considered that the student development has increased reliably.

$$\text{T-test} \quad = \frac{\sum D}{\sqrt{\dfrac{n\sum D^2 - (\sum D^2)}{n-1}}} \tag{2-1}$$

When   df   =   n-1

           D   =   the difference between posttest and pretest

           n   =   the number of participant

    2. Finding the development of student growth by using the Effectiveness Index (E.I) is as follows:

$$\text{E.I.} \quad = \frac{P_2 - P_1}{(\text{number of student} \times \text{number of test item}) - P_1} \tag{2-2}$$

        P2   means   summation of posttest score

        P1   means   summation of pretest score

    To sum up, there are 2 ways of lesson plan evaluation: the rational approach and the empirical approach. The rational approach relies on experts and evaluation before application but the empirical approach relies on learners and evaluation after application. Both of them use research statistics in calculating an effective value for finding content validity and usability. Besides, effectiveness index is value of learning and teaching methodologies as well as learning innovations. In this study, the researcher uses the rational approach to evaluate the lesson plan by the experts

2.7 Attitude

2.7.1 The Definition and Components of Attitude

It is not easy to construct a definition sufficiently broad to cover the many kinds of attitudinal determination which psychologists today recognize and at the same time narrow enough to exclude those types of determination which are not ordinarily referred to as attitudes. But there are a lot of experts who attempt to give the definition of attitude as follows:

Gleitman (1991) "Attitudes are relatively stable mental positions held toward ideas, objects or people".

Antonak (1988) "Attitude is an idea charged with emotion which predisposes a class of actions in a particular class of social situations".

Ajzen (2001) mentions that attitude represents a summary evaluation of a psychological object captured in such attribute dimensions as good-bad, harmful-beneficial, pleasant-unpleasant, and likeable-dislikeable.

Gardner (1985) considers attitudes as components of motivation in language learning. According to him, "motivation ... refers to the combination of effort plus desire to achieve the goal of learning the language plus favorable attitudes toward learning the language" However, Wenden (1991) proposed a broader definition of the concept "attitudes". He states that the term attitudes include three components namely, cognitive, affective and behavioral. A cognitive component is made up of the beliefs and ideas or opinions about the object of the attitude. The affective one refers to the feeling and emotions that one has towards an object, 'likes' or 'dislikes', 'with' or 'against'. Finally, the behavioral component refers to one's consisting actions or behavioral intentions towards the object.

As can be seen in the above definitions, we can conclude that attitudes are often defined in terms of mood, thought processes, behavioral tendencies and evaluation. They combine beliefs, ideas and feelings of a person that will appear in each situation. And attitude can be divided into three components as follows: 1. the cognitive component our thoughts, beliefs, and ideas about something. When a human being is the object of an attitude, the cognitive component is frequently a stereotype, e.g.

"welfare recipients are lazy", 2. the affective, component feelings or emotions that something evokes, e.g. fear, sympathy, hate 3. the behavioral contains tendency or disposition to act in certain ways toward something.

2.7.2 Language Attitudes

People have attitudes/feelings/beliefs about language in general, their language, and the language of other people. They may feel that an unwritten language is not a 'real' language. They may feel shame when other people hear their language. They may believe that they can only know one language at a time. They may feel that the national language is the best language for expressing patriotism, the best way to get a job, the best chance at improving their children's future.

Attitudes cannot be observed directly but are demonstrated through actual behavior; for example, how people treat speakers of other languages (avoidance, approach), or in their desire (or not) to learn another language. The convergence of one's speech to conform to another's speech suggests a "positive attitude" toward the other's speech. By the same token, divergence suggests an intention for the opposite outcome.

Attitudinal studies aid in identifying how people of one language group view the personal character and social status of speakers of another language and how they form associations about other languages. Therefore, the assessment of language attitudes aids in grouping communities on the basis of their intergroup affinities and, in combination with other methods, in estimating potential extensibility of materials.

Since attitudes cannot be studied directly, the assessment of language attitudes requires asking questions about other aspects of life. For example, a person can be asked about their opinion of a person whose speech sample they just heard. The responses reveal attitudes about both people and their language. Opinions and attitudes are noted about how those being interviewed might be willing to accommodate to the people and languages that they just heard on the recordings. Language attitudes can be identified by simply asking why certain languages are in use (or not).

In summary, the language attitude can be assessed by asking questions about the feelings, beliefs, opinions and ideas of a person about learning a language.

2.7.3 The Measurement of Attitudes

Before procedures for measuring attitudes are discussed, there are several general characteristics of measurement that should be considered in order to determine if an evaluation technique is an effective one. Good tests have these characteristics. Basically, a quantitative approach to attitude measurement requires that measures be (Henerson, Morris and Fitz-Gibbon, 1987).

Valid, the instrument must be appropriate for what needs to be measured. In other words, a valid test measures the construct for which it is designed. A test of "attitude toward chemistry" will have items that deal directly with the concept of chemistry.

Reliable, the measure should yield consistent results. In other words, if people were to take a reliable test a second time, they should obtain the same, or nearly the same, score as they got the first time, they took the test, assuming no changes occurred between the two testing.

Fairly simple to administer, explain, and understand. Generally, the measures that yield a single score of an attitude position epitomize the intent of this characteristic, although the single score may be deficient in meeting the intent of other characteristics of good measurement. Most tests of single attitudes have about 10 to 30 items, are valid, and have reliability estimates above .80.

Replicable, someone else should be able to use the measure with a different group, or in a different situation, to measure the same attitude. Replicable tests of attitude should be usable in a variety of situations. In other words, a test of computer anxiety should measure the existence of that construct in college students, parents, elementary schools' students, and even stockbrokers.

There are four widely used and accepted categories, or approaches, for collecting attitude information. These approaches are (Henerson, Morris and Fitz-Gibbon, 1987):

1. Self-reports, where the members of a group report directly about their own attitudes. Self-reports include all procedures by which a person is asked to report on his or her own attitudes. This information can be provided orally through the use of interviews, surveys, or polls, or in written form through questionnaires, rating scales, logs, journals, or diaries. Self-reports represent the most direct type of attitude assessment and should be employed, unless the people who are being investigated are

unable or unwilling to provide the necessary information. Questions like "How do you feel about XT' where X is the attitude construct under investigation are often asked in self-reports.

2. Reports of others, where others report about the attitudes of a person or group. When the people whose attitudes are being investigated are unable or unlikely to provide accurate information, others can be questioned using interviews, questionnaires, logs, journals, reports, or observation techniques. Parents of children can be asked how their children feel about X, where X is the attitude construct under investigation.

3. Sociometric procedures, where members of a group report about their attitudes toward one another. Sociometric are used when the researcher desires a picture of the patterns within a group. Members of groups can be asked questions like "Who in your group fits the description of XT' where X is the attitude position being studied.

4. Records, which are systematic accounts of regular occurrences, such as attendance reports, sign-in sheets, library checkout records, and inventories. Records are very helpful when they contain information relevant to the attitude area in question. For example, when a researcher is trying to determine if a school wide program to develop a higher level of school pride is working, the school's maintenance records might give an index of the program's effectiveness. If school pride is improving, then vandalism should decline, and maintenance costs should be lower. The amount of trash picked up from the school's floors might yield relevant information, too. Students who have school pride are less likely to throw trash on the floor.

Within each of these categories, there are strategies for measuring attitude-related behaviors. Most commonly, attitude measurement is accomplished by one of the following techniques:

1. Questionnaires and rating scales are instruments that present information to a respondent in writing and then require a written response, such as a check, a circle, a word, a sentence, or several sentences. Attitude rating scales are special kinds of questionnaires. They are developed according to strict procedures that ensure that responses can be summed to yield a single score representing one attitude. Questionnaires and rating scales are often used because they permit anonymity, permit the responder time to answer, can be given to many people simultaneously, provide

uniformity across measurement situations, permit relatively easy data interpretation, and can be mailed or administered directly. Their main disadvantage is they do not pennit as much flexibility as do some other techniques.

2. Interviews are face-to-face meetings between two or more people in which the respondent answers questions. A survey is a highly structured interview. Often surveys are conducted over the telephone, an approximation of face-to-face interviewing. A poll is a headcount. Respondents are given a limited number of options and asked to select one. For example, word-of-mouth procedures, such as interviews, surveys, and polls, are useful because they can be read to people who cannot read or who may not understand written questions. They guarantee a relatively high response rate, they are best for some kinds of information especially when people might change their answers if responses were written, and they are very flexible. There are two major problems with interviews. First, they are very time consuming. Second, it is Possible that the interviewer may influence the respondent.

3. Written reports for example: logs, journals, and diaries. Logs, journals, and diaries are descriptions of activities, experiences, and feelings written during the course of the Program. Generally, they are running accounts consisting of many entries prepared on an event, on a daily or weekly basis. The main advantage of this approach is that reports provide a wealth of information about a person's experiences and feelings. The main problem is in extracting, categorizing, and interpreting the information. Written reports require a great deal of time by both the respondent and the researcher.

4. Observations, these procedures require that a person dedicate his or her attention to the behaviors of an individual or group in a natural setting for a certain period of time. The main advantage of this approach is its increased credibility when pertained; disinterested, unbiased observers are used. Formal observations often bring to attention actions and attitudes that might otherwise be overlooked. Observations are extremely consuming time, and sometimes observers produce discomfort in those they are observing. The presence of an observer almost always alters what is taking place in a situation.

Attempts at measurement, including the evaluation of attitude, require that a systematic process be followed. Using structured procedures increases the likelihood of an effective measurement taking place. Guidelines for attitude measurement usually recommend that at least six steps be followed (Henerson, Morris & Fitz-Gibbon, 1987):

1. Identify the construct to be measured. A construct is simply defined as the attitude area of interest.

2. Find an existing measure of the construct. Once a certain attitude construct has been identified, an attempt should be made to locate an instrument that will measure it. Published tests are the first choice for measuring attitudes because they have usually been tried out in other instructional situations and include some statement of test validity and reliability. Additionally, instructions for administration of published tests often are available. The use of standardized measures simplifies the job of attitude evaluation.

3. Construct an attitude measure. If no existing test of the relevant attitude is available, and a quantitative measure is needed, then it is necessary to construct a new test. Of the many types of attitude measurement possible, one widely used technique that seems to possess most of the characteristics of a good measure is the Agreement, or Likert-type, Scale. This technique involves the use of statements about the attitude that are either clearly favorable or unfavorable. Each student responds to each test item according to his perceived attitude "intensity" toward die statement. Often, students are asked to answer test items using a five-point scale that has responses varying in the amount of agreement to the statement from "strongly disagree" to 41strongly agree." Advantages of this technique are ease of scoring and ease of summarizing the information obtained.

2.8   Related Previous Research Studies

2.8.1 Related Previous Research Conducted in Thailand

Wiriyamanuwong (2008) conducted the research on a comparison of learning achievement in English reading and satisfaction of Prathomsuksa Six between using jigsaw technique and Conventional Reading Technique. The research results indicated that the learning achievement in English reading of jigsaw technique and conventional reading technique was not different at the .05 level of significance. The post-test learning achievement in English reading by both jigsaw technique and conventional reading technique was higher than the pre-test at the .05 level of significance. The learning achievement in English reading of jigsaw technique group and conventional reading technique was higher than the assigned criteria of 70 percent with the significance at the .05 level of significance. The learning satisfaction of both jigsaw technique and conventional reading technique was at a high level.

Santawamette (2008) conducted the research on the development of English reading comprehension of Pratom Suksa 6 students through Jigsaw Technique. The purpose of this study was to study the learning achievement of English reading comprehension of Pratom Suksa 6 students after learning through Jigsaw technique, and to study students' participation during learning through this technique. The findings were as follows: 1) after learning though jigsaw technique, students' learning achievement of English reading comprehension was higher than the assigned criteria of 60 percent, and 2) students' participatory behaviors during class activities using jigsaw technique showed that they cooperated treated their friends, as well as participated in group activities very well and effectively.

Jeethom (2010) conducted the research on the using jigsaw activity to promote English reading comprehension, speaking ability and social skills of expanding level students. The purpose of this research was to compare students' English reading comprehension, speaking ability and social skills before and after learning through Jigsaw activity, and to investigate students' negotiation of meaning strategies during learning through jigsaw activity. The target group comprised 15 Mathayom Suksa 4 students enrolled in English for reading and writing course (English 41203) during the

first semester of the academic year 2006 at Navaminarajudis Phayao, Mae Rim District, Chiang Mai. The results are as follows: 1) students' English reading comprehension was increased at the moderate level after learning through jigsaw activity, 2) students' English speaking ability was increased at the moderate level after learning though jigsaw activity, 3) according to the frequency of using negotiation of meaning clarification requests, comprehension checks and shorter response were mostly used respectively and 4) students' social skills were increased at a high level after learning though jigsaw activity.

Ketprang (2010) conducted the research on the development of English Reading Comprehension Skill using Cooperative Learning and Jigsaw Technique for Mattayom 1 students. The research found that students could read and find main ideas, pose questions and answer from the text by using 5W 1H. They could interpret, analyze, synthesize, classify facts & opinions, evaluate the author's purposes of writing, evaluate the value of written texts, gather information from their readings to reasonably judge if they could believe or not believe.

Petchngarm (2012) conducted the research on the use of jigsaw technique to promote English reading ability and analytical thinking among Pratom Suksa 5 students. The purpose of this research was to compare the students' English reading ability before and after using the jigsaw technique and analytical thinking after using the jigsaw technique. The target group was 46 Pratom Suksa 5/2 students who studied in the second semester of the academic years 2013 at Wattanothaipayap School, Muang District, Chiang Mai Province. The experimental instruments consisted of 7 lesson plans in which the jigsaw technique was used. The collecting data instruments were English reading ability test and analytical thinking test. The data were analyzed by using mean, standard deviation and percentage.

The findings revealed that the students' English reading ability increased from poor level to medium level after using the jigsaw technique and their analytical thinking passed the pretest criteria 60 percentage after using the jigsaw technique.

Chaikum (2014) conducted the research on the use of the jigsaw technique through computer-assisted instruction to enhance English vocabulary knowledge and reading comprehension of Pratom Suksa 2 students. The purposes of this research were to compare students' English vocabulary and reading comprehension before and after

they had learned by the jigsaw technique through computer - assisted instruction. The target group was 11 Pratom Suksa 2 students who enrolled in the first semester of the academic year 2010 at Ban Pong School, Chiang Mai. The research instruments consisted of 7 lesson plans using the jigsaw technique through computer-assisted instruction, CAI English vocabulary test and reading comprehension test. The target took English vocabulary test and English reading comprehension test before and after being taught through the use of the jigsaw technique through computer-assisted instruction. The data obtained were analyzed for mean and standard deviation.

The findings revealed that the students' English vocabulary and English reading comprehension increased at good level after being taught through the jigsaw technique through computer – assisted instruction.

Winun (2014) conducted the Learning Provision by Using Jigsaw Technique to develop English reading comprehension skills of Pratom Suksa 3 students. The purposes of this study were to construct and use English reading comprehension instructional plans using Jigsaw Technique for Prathom Suksa 3 students and to study student's English reading comprehension skills after learning through Jigsaw Technique. The research found that the students' English reading comprehension average score was 73.75 percent which was higher than the set criterion of 60.00 percent.

Phayuha (2015) conducted the research on the use of Jigsaw reading to promote English reading, Summary Writing Abilities and social skills among Mathayom Suksa 4 students, the results showed that students' English reading ability increased from a poor level to an average level after learning through jigsaw reading. Students' summary writing ability met the pre-set criteria of an average level after learning through jigsaw reading. Students' social skills were at a very good level after learning through jigsaw reading.

Keawsithiwong (2017) conducted the research on the using Jigsaw Technique for developing reading comprehension and critical thinking skills using English printed media in grade 11 at Thung Udomwittaya School, Lampang Province.

The finding of this study revealed that 1) after studying through Jigsaw technique, students' reading comprehension skill reached at the average of 57.50 and 2) students' critical thinking skill reached the average of 63.98.

Wongkrajang (2017) conducted the research on the using the jigsaw technique to develop English reading comprehension skills of Mathayom Suksa 3 Students. The purpose of this study was to compare the abilities in reading comprehension of Mathayom Suksa 3 students by using concept maps. The sample consisted of 35 Mathayom Suksa 3 students in the first semester of the 2006 academic year at Mae Chaem School, Mae Chaem District, Chiang Mai. The instruments used in this study were 1) 8 lesson plans based on concept map for developing reading comprehension skills: with after-teaching notes 2) a reading comprehension test. 3) a concept map evaluation form. The study procedures included a pretest, the division of three levels competences of students i.e. high, average and low, teaching by using 8 lesson plans, taking notes after teaching each plan, an evaluation of the students' concept maps in the eighth lesson plan, followed by a posttest. The collected data were analyzed through means, percentage, standard deviations, and t-test.

The findings revealed that the students' competence level and reading behavior after the instruction are higher in all level groups. The students' abilities in using concept maps to conclude the text is in good level. The students' competence in reading comprehension after the instruction was found to be significantly higher at the .01 level.

2.8.2 Related Past Research Conducted in Other Countries

Sami Ali (2001) conducted the research on effect of using the jigsaw reading technique on the EFL pre-service teachers' reading comprehension. The experimental group was instructed to read reading passages using the Jigsaw reading technique while the control group read the same passages individually. Participants' comprehension was checked via a TOEFL test and their anxiety was evaluated using a questionnaire designed by the author. Results showed that the lower anxiety among the experimental group participants led to their better performance in the comprehension of the reading passages.

Ural (2017) conducted the study aiming to investigate the effects of jigsaw technique on 6th graders' learning their English learning motivation and their attitudes towards English classes.

The findings of the study show that students' academic achievement was developed and students' motivation was higher.

Kuntjaraningrat (2015) conducted the research on the learning provision by using technique to develop reading comprehension skill. The purpose of this study was to study student's comprehension reading skills after learning through jigsaw technique. The target group consisted of 24 EFL students. Tools used in the study included English achievement test. The data were analyzed in term of average percentage and compared with the set criteria of 60 percent. The results reveals that the students' comprehension reading average score was 73.75 percent which was higher than the set criterion of 60 percent.

Karakoyun (2016) conducted the research on English reading development through jigsaw technique. The aim of this study was studying the learning achievement of English reading comprehension after learning through jigsaw technique and to study students' participation during learning through this technique. The target group consisted 34 ESL student. The tool used was an achievement test on reading comprehension and an observation form for student's participatory behaviors. The collected data were analyzed by means, and percentage, then with the set criterion. The results revealed that after learning through jigsaw technique, students' learning achievement of English reading comprehension was higher than the set criterion of 60 percent and the students' participatory behaviors during class activities using jigsaw technique showed that they cooperated treated their friends, as well as participated in group activities very well and effectively.

Yahya and Supyan (2015) conducted the research on the effect of the jigsaw technique on the students' reading attitude towards reading English material. This aimed to examine the extent to which the jigsaw technique affects the Yemeni EFL students' reading attitude towards reading English materials. To achieve this objective, the data was collected from pre-and post-questionnaires of reading attitude. Additionally, the data was collected based on an interview and an observation. 20 students selected purposively from level one of an English proficiency course, Department of English, Faculty of Arts, Ibb University.

All participants answered the pre- and post- reading questionnaires, and five of them were further interviewed. The study used both quantitative and qualitative analyses of the data including descriptive statistics of the responses from the questionnaires and thematic analysis of responses from the interviews. The results

revealed that all participants showed their positive attitudes toward reading English materials especially after they joined the class of reading via the jigsaw technique. In addition, it was found that the jigsaw technique positively affected the participants' attitudes towards reading English materials.

According to the related past studies discussed above, the researcher for the present study considered that the jigsaw cooperative learning technique is an effective, useful technique to help improve the students' English reading comprehension ability; therefore, she is interested in using the Jigsaw technique in this research study in order to help her students develop their reading comprehension ability and enhance their attitudes toward learning English by using the Jigsaw technique. What follows is the framework of her present study:

2.9   Framework of The Study

Reading Comprehension using Jigsaw Technique	→	-Reading Comprehension Improvement - Attitude Improvement
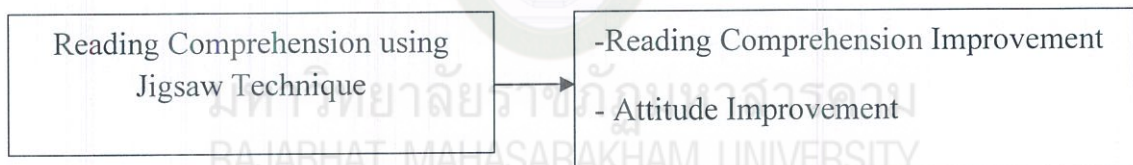
Figure 2.4 demonstrates framework of the present study

CHAPTER 3
RESEARCH METHODOLOGY

Methodology for this research is explained through the following subtopics:

1. Population and participants
2. Research instruments
3. Construction and efficiency of the instrument
4. Attitude Questionnaire
5. Research methodology and data collection
6. Statistics used in the research

3.1 Population and Participants

The paticipants in this research included 20 students of Pratom Suksa 6 who were studying in Khok khon Wittayakom School, Mueang Kalasin, Kalasin Province. the second semester of the 2017 academic year.

3.2 The Research Instruments

The instruments used in this research consisted of the following:

3.2.1 Lesson plans

3.2.2 Pretest and posttest on reading comprehension

3.2.3 Attitude questionnaire

3.3 Construction and Development of the Instrument

3.3.1 Lesson Plans

3.3.1.1 Lesson plans included the jigsaw technique in teaching process. The lesson plans were taken from 5 lessons which were divided into 5 topics as shown in Table 3.1. The researcher constructed the lesson plans as in the following steps:

3.3.1.2 Study the principles and elements of the plans by analyzing curriculum, indicators, learning standards, learning and teaching methodology as well as assessment.

3.3.1.3 Study elements of lesson plan from other educators and other researchers.

3.3.1.4 Conduct the lesson plans that corresponded to the research objectives and teaching methodology. There were five lesson plans, one plan is for approximately one week (2 periods per week). Each lesson plan consisted of a heading that consisted of the number of the lesson plan; learning strands area; class; topic; time and date; concept use of the plan, objectives of learning and teaching, activities used in the plan, learning processes; materials or media and the assessment of learning. The learning process of the lesson plans consisted of three stages: warm up, during reading and summary for students.

Table 3.1 The students' activities

Lesson	Activities	Duration/hours	week
1. Our Neighbor	Regular activities	4	1-2
	Jigsaw activity	2	
2. We are Friends	Regular activities	4	3-4
	Jigsaw activity	2	
3. Famous People	Regular activities	4	5-6
	Jigsaw activity	2	
4. My Plan	Regular activities	4	7-8
	Jigsaw activity	2	
5. Good Children	Regular activities	4	9-10
	Jigsaw activity	2	

3.3.1.5 Design the lesson plans evaluation form for experts to check before using them. For the lesson plans evaluation, the researcher used a rating scale evaluation. The scale started from strongly disagree to strongly agree using Likert's scale and Boonchom Srisa-ard (2010, p. 100)

3.3.1.6 The lesson plans were reviewed and checked by five experts, namely:

1) Narongrit Sopa, Ph.D. Assoc. Prof. in English.

2) Upit Muantong, Ph.D.in the Secondary Educational Service Area Office 27 (Roi Et).

3) Karanyawan Kainunsing, M.Ed. in Education. In the Secondary Educational Service Area Office 27 (Roi Et).

4) Nipharat Thumasarn, M.Ed. (Measurement and Evaluation) Senior Professional Level Teachers in Chumchonchiangmaipattana School.

5) Sanidapron Punnongwha, M.Ed. (Measurement and Evaluation) Senior Professional Level Teachers in Satri Suksa School.

The expert's suggestions for improving were:

1. Add more activity in warm up stage.

2. Quiz in the end of passage should be more than 5 items.

3. Some of quiz should be suitable for students' level.

3.3.2 Pretest and Posttest.

This test was constructed by the researcher. It consisted of 30 multiple choice items. The pre-test and the post-test will be used to measure the students' comprehension.

The tests were based on objectives of the lesson and vocabularies from lessons in the text of Pratom Suksa 6, in 5 units: Our Neighbors, We Are Friend, Famous People, My Plan, and Good Children.

3.3.2.1 The pretest-posttest were checked by five experts to check the validity of the test by using the index of item objective congruence (or IOC). The usable items should be 0.5 or higher. The experts who checked the achievement tests were the same group as those who checked the lesson plan.

The results of expert's suggestions for improving were:

1) The pretest and posttest should be contained all content in the textbook.

2) Some vocabulary is difficult.

3) Some items is too easy

4) There are duplicate questions in the test.

Then the contents and details of the test were adjusted based on their suggestions

      3.3.2.3   All the tests were reviewed again before the final version were completed and used for testing the participant.

Table 3.2 The result of the efficiency of the achievement test checked by five experts

Achievement test item	Opinion of the experts					Total	IOC	Translat:
	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
1	+1	+1	+1	+1	+1	5	1	usable
2	+1	+1	+1	+1	+1	5	1	usable
3	+1	+1	+1	+1	+1	5	1	usable
4	+1	+1	0	+1	+1	4	0.8	usable
5	0	+1	+1	+1	+1	4	0.8	usable
6	+1	+1	+1	+1	0	4	0.8	usable
7	+1	+1	+1	+1	+1	5	1	usable
8	+1	+1	+1	+1	+1	5	1	usable
9	+1	+1	0	+1	0	3	0.6	usable
10	+1	+1	0	+1	0	3	0.6	usable
11	+1	+1	+1	+1	+1	5	1	usable
12	+1	+1	+1	+1	+1	5	1	usable
13	+1	+1	+1	+1	+1	5	1	usable
14	+1	+1	+1	+1	+1	5	1	usable
15	+1	+1	+1	+1	+1	5	1	usable
16	+1	+1	+1	+1	+1	5	1	usable
17	+1	0	+1	+1	0	3	0.6	usable
18	+1	0	+1	+1	0	3	0.6	usable
19	+1	0	+1	+1	+1	4	0.8	usable
20	+1	+1	+1	+1	+1	5	1	usable
21	+1	+1	+1	+1	+1	5	1	usable
22	+1	+1	+1	0	+1	4	0.8	usable
23	+1	+1	0	+1	+1	4	0.8	usable
24	+1	+1	+1	+1	+1	5	1	usable
25	+1	+1	+1	+1	+1	5	1	usable
26	+1	+1	+1	+1	0	4	0.8	usable
27	0	+1	+1	+1	+1	4	0.8	usable
28	0	+1	0	+1	+1	3	0.6	usable
29	+1	+1	0	0	+1	3	0.6	usable
30	+1	+1	+1	+1	0	4	0.8	usable

Table 3.3 Difficulty and Discriminate analysis of the achievement test items.

Items	P	R	Result	Items	P	R	Result
1	0.35	0.23	usable	16	0.27	0.20	usable
2	0.37	0.27	usable	17	0.33	0.33	usable
3	0.20	0.27	usable	18	0.22	0.23	usable
4	0.23	0.20	usable	19	0.33	0.33	usable
5	0.27	0.20	usable	20	0.38	0.23	usable
6	0.20	0.27	usable	21	0.33	0.20	usable
7	0.27	0.27	usable	22	0.28	0.23	usable
8	0.35	0.23	usable	23	0.22	0.30	usable
9	0.30	0.20	usable	24	0.35	0.30	usable
10	0.28	0.23	usable	25	0.22	0.30	usable
11	0.20	0.33	usable	26	0.20	0.20	usable
12	0.30	0.27	usable	27	0.23	0.20	usable
13	0.35	0.30	usable	28	0.27	0.40	usable
14	0.38	0.23	usable	29	0.28	0.23	usable
15	0.33	0.20	usable	30	0.30	0.27	usable

Reliability = 0.965

Table 3.4 The students' score of pretest and posttest

Student number	Score		difference	Squared difference
	Pretest (30)	Posttest (30)		
1	10	21	11	729
2	13	21	13	400
3	12	27	15	676
4	14	24	10	400
5	15	20	5	36
6	16	24	8	121
7	15	22	7	625
8	11	21	10	400
9	12	24	12	289
10	12	25	13	576
11	13	23	10	900
12	11	24	13	144
13	12	25	13	484
14	12	27	15	1
15	12	25	13	441
16	11	24	13	625
17	17	24	7	256
18	11	23	12	400
19	15	26	11	900
20	17	27	10	676
$\sum x$	261	477	216	13,380
$\bar{X}$	13.05	23.85		
SD.	2.11	2.08		

3.4　　Attitude Questionnaire

The attitudes questionnaire consisted of two parts. The first part contained questions collecting the student's personal information, i.e. name and student number. The second part contained 15 items for the subject to express their opinions, feelings, and/or beliefs about reading in English. In this part, they were asked to indicate whether they agree or disagree with the 15 statements. The procedures of conducting the questionnaire were:

3.4.1 The questionnaire was designed by studying how to construct a questionnaire and adapted questionnaire from other researchers.

3.4.2 The questionnaire was reviewed for correctness, appropriateness and validity by the advisor.

3.4.3 The questionnaire was reviewed for correctness, appropriateness and validity by five experts. Then it was improved and was tried out with 20 students in Pratom Suksa 6 who were not the same group as the participants before the final version was completed.

3.4.4 The questionnaire was used to collect the data about attitude toward learning and teaching methodology with the participants.

3.5　Research Methodology and Data Collection

The research was undertaken according to one-group pretest- posttest design.

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ONE-GROUP PRETEST-POSTTEST
DESIGN

Pretest　　　posttest

Group 1:　O_1　X　O_2

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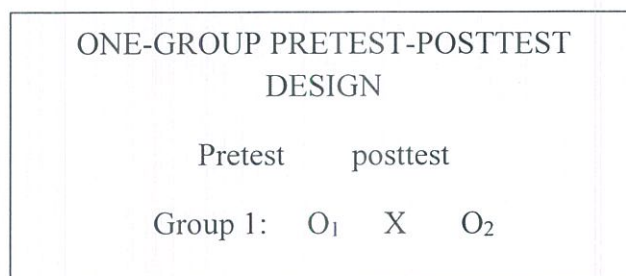
Figure 3.1 One-group pretest-posttest designs

In a one-group pretest-posttest design, a pretest was constructed to evaluate participants' background knowledge (O1), followed by teaching using jigsaw technique (X), then the posttest was conducted (O2). The experimental procedures were divided into 4 stages:

3.5.1 The week before starting the activity, the participants including 20 Pratom Suksa 6 students were informed of the purposes of the course syllabus. Then, they were tested by a pretest exam that consisted of thirty items. The purpose of this pretest was to investigate the background knowledge of the population. The scores of each population were collected as data for this study.

3.5.2 In week1-10, teaching and learning was carried out, using the lesson plans that the researcher had constructed. One plan covered 2 periods in each week.

3.5.3 After completed 10 weeks, the participants was tested again by posttest which was the same test as pretest. They answered the questionnaire asking about their attitude towards English reading comprehension by using the jigsaw technique. The scores of the opinions of the participants were collected as data for this study.

3.6   Statistics Used for Data Analysis

In this study, the researcher used descriptive statistics to analyze the effectiveness of reading comprehension by using the jigsaw technique for Pratom Suksa 6 students.

Statistics for quality of the Instrument

3.6.1 Index of Item-Objective Congruence (or IOC) to evaluate the congruence between the objective and the content and the test item. (Patthiyatanee, 2003, pp. 218-220):

$$IOC \quad = \quad \frac{\sum R}{N} \tag{3-1}$$

IOC	is	Index of Item-Objective Congruence
$\sum R$	is	the total points of expert opinion
N	is	number of experts

3.6.2 The difficulty of the test is evaluated by this formula of Srisa ard, (2011, p. 95)

$$P = \frac{R}{N} \tag{3-2}$$

P   is   the item difficulty index

R   is   the number of test takers who were correct

N   is   the total number of test takers

3.6.2 The item-discrimination index. (Boonchom Srisa-ard, 2010, p. 96)

$$r = \frac{R_H - R_L}{N} \tag{3-3}$$

where;

R_H is   the number of test takers in the upper group

R_L is   the number of test takers in the lower group

N   is   the total number of test takers in the total group

3.6.3 The reliability of the test is evaluated by KR-20 of Kuder-Richardson

$$r_n = \frac{k}{k-1}\left(1 - \frac{\sum_{j=1}^{k} p_j q_j}{\sigma^2}\right) \tag{3-4}$$

where

k is   number of questions

p_j is   number of people in the sample who answered question j correctly

q_j is   number of people in the sample who didn't answer question j correctly

σ^2 is   the square of the variance of the total scores of all the people taking the test = VARP (R1) where R1 = array containing the total scores of all the people taking the test.

3.6.2 Basic Statistics (Paisarn Worakum, 2015, pp. 313-385):

   3.6.2.1 Mean ($\bar{x}$)

$$\bar{x} = \frac{\sum x}{n} \tag{3-5}$$

      x   is   each of the values of the sample

      n   is   the number of samples

   3.6.2.2 Standard Deviation (S.D.)

$$S.D. = \sqrt{\frac{\sum (x_1 - \overline{x_2})^2}{n-1}} \tag{3-6}$$

      x   is   each of the values of sample

      n   is   the number of samples

3.6.3 Statistics for the hypothesis test, a t-test was used to test the hypothesis that the students' English reading comprehension after studying (posttest) is higher than before studying through the jigsaw technique (pretest). (Boonchom Srisa-ard, 2010, p. 96):

$$t\text{-test} = \frac{\sum D}{\sqrt{\frac{n \sum D^2 - (\sum D^2)}{n-1}}} \tag{3-7}$$

When df = n-1

      D   is   the difference between posttest and pretest

      n   is   the number of participants

3.6.4 The effectiveness of the instructional plan, English vocabulary learning ability by using games was analyzed by effectiveness index (E.I.) (Somnuk Patthiyatane, 2010, pp. 218-220):

$$\text{E.I.} = \frac{P_2 - P_1}{(\text{number of student} \times \text{number of test item}) - P_1} \qquad (3\text{-}8)$$

P2   is   summation of posttest score

P1   is   summation of pretest score

CHAPTER 4
RESULTS OF RESEARCH

This chapter presents the result of the research on reading comprehension by using the jigsaw technique and the attitudes towards using the jigsaw technique. The presentation is divided into the following issues.

4.1 Results

To find out whether the jigsaw technique helped students develop English reading comprehension, the pre- and post-tests were given to the students. The following table shows the scores obtained from the two tests.

Table 4.1 The students' pre-and post- tests scores

Number of students	Total score of the test	Pre-test	Post-test	Effectiveness Index: E.I.
20	30	261	477	0.6371

Table 4.1 demonstrates that the effectiveness index (E.I.) was 0.6371 showing the English learning ability of students after using the lesson plans rose up at 0.6371 levels or 63.71%. The teaching of English reading comprehension by using the jigsaw technique helped the participants develop their reading comprehension ability.

The results of the comparison of the pretest and posttest scores are shows in the table below.

Table 4.2 The comparison of the pretest and posttest scores

	N	$\bar{x}$	SD.	t	p
Pretest	20	13.05	2.11	17.593	.000*
Posttest	20	23.85	2.08		

Table 4.2 demonstrates the result of the comparison of mean scores before learning and after learning. The English reading comprehension ability scores of pretest and posttest were different at the .05 (P=.000*) level of significance. The different mean scores $\overline{(X)}$ of posttest and pretest were 10.80000, t-test was 17.08485 and the standard deviation (S.D.) was 2.08.

After the researcher taught the participants through the jigsaw technique, the participants' attitude was evaluated by using a questionnaire and the data from the questionnaire were rated by 5 rating scales as in the table below:

Table 4.3 The results of students' attitudes towards English reading comprehension ability by using the jigsaw technique

The attitudes of students towards the English reading activities using the jigsaw technique	$\bar{x}$	S.D.	Rating Scale
1. I like reading in English	4.9	0.218	Strongly Agree
2. I find it easy to learn to read in English	4.8	0.476	Strongly Agree
3. I often practice reading in English out of class.	4.9	0.300	Strongly Agree
4. I want to improve English reading ability	5	0	Strongly Agree
5. Going to English reading classes is a good time	4.9	0.300	Strongly Agree
6. I have no problem with all the tests I read.	4.7	0.622	Strongly agree
7. I like to learn new vocabulary through games.	5	0	Strongly Agree
8. I enjoy learning English through jigsaw technique with my friends.	5	0	Strongly Agree

Table 4.3 (continue)

The attitudes of students towards the English reading activities using the jigsaw technique	$\bar{x}$	S.D.	Rating Scale
9. I often read in English for whatever purpose I have.	4.9	0.477	Strongly agree
10. Reading English texts makes me happy.	4.8	0.357	Strongly agree
11. There should be more time for practicing in reading classes.	4.7	0.556	Strongly agree
12. In my future day, I will take an English reading course as my subject choice.	4.9	0.734	Strongly agree
13. I wish there were more time for learning to read in English.	4.9	0.476	Strongly agree
14. I got much knowledge and vocabulary when I study in English class.	4.9	0.3	Strongly agree
15. I feel confident when I speak English.	4.8	0.357	Strongly agree
Total	4.84	0.47	Strongly agree

Table 4.3 demonstrates the attitude of students after learning English reading by using the jigsaw technique. The results show that the students' attitude towards learning reading by using the jigsaw technique rated at 4.84, showing that they strongly agree with using the jigsaw technique to improve their English reading comprehension. Moreover, the highest scores of students' attitudes towards English reading, comprehension were No.7 and 8 "like to learn new vocabulary through games, and enjoy learning English through jigsaw".

CHAPTER 5
CONCLUSION, DISCUSSION AND SUGGESSION

This chapter presents the discussion of research results, the discussions on the results and the suggestions for implementation and further studies.

5.1 Purposes of the Study

5.1.1 To study the effectiveness index (E.I.) of reading comprehension lesson plans based on the jigsaw technique.

5.1.2 To compare the students' English reading comprehension ability before and after learning by using the jigsaw technique.

5.1.3 To study the attitudes of students' English reading comprehension by using the jigsaw technique.

5.2 Conclusion

5.2.1 The effectiveness index (E.I.) of reading comprehension ability lesson plans based on the jigsaw technique was 0.6371 showing the English learning ability of students after using the lesson plans rose up at 0.6371 levels or 63.71%.

5.2.2 The students' English reading comprehension ability after learning by using the jigsaw technique was higher than that before of learning at the .05 level of significance (P=.000*). The different mean scores ($\bar{x}$) of posttest and pretest were 10.80000, t-test was 17.08485 and the standard deviation (S.D.) was 2.08.

5.2.3 The attitude of students after learning English reading comprehension by using the jigsaw technique was 4.84, showing that they strongly agree with using the jigsaw technique to improve their English reading comprehension ability.

5.3 Discussion

5.3.1 The effective index (E.I.) of the lesson plans to improve Pratom Suksa 6's English reading comprehension ability by using the jigsaw technique was 0.6371, showing that the English learning ability of students after using the developed lesson plans increased 63.71 percent. This was because the jigsaw lesson plans are effective because the researcher for the present study also designed the lesson plans considerably based on the ideas or suggestions of Moonkhum (2006, p.58) and Tardthong (2009, p.134) who said that a lesson plan is a teaching manual that it assists teachers to prepare the methodologies, materials and evaluations for every lesson of teaching. The instructional plan will make teachers easier in teaching and reach the objectives set in each lesson and Poosara (2002, p. 159) asserts that a lesson plan is a tool in setting learning experiences for learners based on learning strand areas. Tardthong (2009, p. 134) states that a lesson plan has numbers of importance as follows: 1) it assists learning and teaching methodologies meaningfully; 2) teacher has a teaching manual; 3) it is an academic work that reflects competence of professional instructors; 4) co-teacher can use it when teacher absents; 5) It assists teacher to manage learning activities; 6) learners perceive whole learning approach as they can learn everything at the same time; 7) it can integrate in other learning areas unlimitedly; 8) it assists teacher to teaching activities based on objects of the lesson and school curriculum and 9) it promotes perfect learning activities in unlimited period of time. The research is also consistent with approach hence the jigsaw learning is the activity of teamwork and cooperation. As Coelho (1992) mentioned that Jigsaw is one of the best-known cooperative learning techniques. So, it is clear that jigsaw lesson plans help students learn cooperation as group members share responsibility for each other's learning by using critical thinking and social skills to complete an assignment. Subsequently, this technique helps improve listening, communication, problem-solving skills, work towards a common goal and reduce their anxiety. Lesson plans is one of learning and teaching management activities in classroom and it guides instructors in the learners' learning process

5.3.2 The improvement of English reading comprehension ability for Pratom Suksa 6 (6th grade) students after learning by the jigsaw technique was higher than before learning that was because learning English reading comprehension through the jigsaw technique present language in real situation. Vocabulary, structures and pronunciation are presented to practice step by step with cooperative technique because jigsaw is accepted to be one of an effective technique to improve English reading. It is so named because each student in a Jigsaw group has to become an expert on a part of a larger of the academic "puzzle" so that everyone in the group learns all the component parts. Each student is in a position to bring to their group unique knowledge that is not readily available and allows group members to treat each other as resources (Aronson, 2006). Jigsaw supports students learn cooperation as group members. It means that students will use critical thinking and social skills to accomplish the assignment. Moreover, students can be improved their communication, listening, cooperative work and solving problems with working with their peers (Siriwan, 2012 and Slavin 1995).

The result of the present study goes along side with Keawsithiwong (2017) who conducted the research on the using jigsaw technique for developing reading comprehension and critical thinking skills using English printed media in grade 11 at Thung Udomwittaya School, Lampang Province, and the finding of this study revealed that 1) after studying through Jigsaw technique, students' reading comprehension skill reached at the average of 57.50 and 2) students' critical thinking skill reached the average of 63.98; and Phayuha (2015) who conducted the research on the use of Jigsaw reading to promote English reading, summary writing abilities and social skills among Mathayom Suksa 4 students, and the results showed that students' English reading ability increased from a poor level to an average level after learning through jigsaw reading. Students' summary writing ability met the pre-set criteria of an average level after learning through jigsaw reading. Students' social skills were at a very good level after learning through jigsaw reading. This is similar to Kuntjaraningrat. (2015) who also conducted the research on the learning provision by using technique to develop reading comprehension skill and the results reveal that the students' comprehension reading average score was 73.75 percent which was higher than the set criterion of 60 percent.

5.3.3 Students' mean score of attitudes toward English reading comprehension by using the jigsaw technique was 4.84 which means that students were satisfied with the jigsaw learning activities at a highest level. Students had positive attitudes toward the jigsaw technique because while doing all activities, they looked relaxed. They learned with laughter and relax of stress because they knew that they were not alone in learning. They had peers to help them to learn. For example, when they did not get the meaning of many words, they had their friends to give them explanation. The students who gave the answer felt good about themselves since they were able to help their friend to learn. Moreover, students had tangible goals for all tasks. They felt free to design what they want to present in front of the class. In this light, the present study yields the similar results to

Based on the attitude questionnaire form, the most enjoyable activity was learning together with their friends. The students enjoyed learning because they could share and learn together through activity is process of jigsaw. This made the class have a relaxing and enjoyable atmosphere (Siriwan, 2012, Coelho, 1992, and Aronson, 2006, Slavin, 1995).

5.4 Suggestions

5.4.1 Suggestions for Classroom

5.4.1.1 English teachers should create an interesting atmosphere in classroom by managing the class and using appropriate activities which depending on student needs.

5.4.1.2 English teachers should give motivation to his/her students in learning English because motivation is one of the most important factors in learning.

5.4.1.3 In order to motivate students in reading, it is better for a teacher to divide the jigsaw groups randomly and each jigsaw group should consist of various students (different social background, intelligent background, and gender).

5.4.2 Suggestions for Further Studies

        5.4.1.2   In order to use various techniques of enhancing students' English reading, different techniques might be used, for example, electronic texts, card games, fairy tales, etc.

        5.4.1.3   For further studies, different groups of participants or education levels with also diverse text might be used. Moreover, this study can be used with another school at the same level in order to see the variability of the research.

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APPENDIX

APPENDIX A
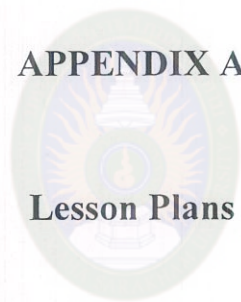
Lesson Plans

Lesson Plan 1
Unit 6: Our Neighbors

Course Title: English

Topic: Our Neighbors   **Time:** 2 hrs.

Learning Objectives:

    1. To understand the meaning of words in the story.

    2. To be able to complete the story's event through answering the questions.

    3. To share ideas and participate in classroom discussion.

Vocabulary: capital, location, flag, citizens, cultivators, mention, popular, meal, tropical, attraction.

Teaching Materials:

    1. Handouts of text for students

    2. Worksheet

Warm up: (30mintues)

    Revise vocabulary; capital, location, flag, citizens, cultivators, mention, popular, meal, tropical, attraction by putting the words on cards. Hold up the cards and have students to pronounce and ask each other for the meanings.

Game Vocabulary Ball

Materials; Multicolored-beach ball and erasable marker.

Directions:

    1. Write the current vocabulary words on the different color panels of the beach ball.

    2. Have students take turns tossing the ball to one another while singing a song then the teacher blows the whistle to stop singing.

    3. The student who's holding the ball read aloud the word that his or her right thumb lands on.

    4. The teacher checks whether the student read correctly or not. If not, have other students read, (or teacher). (1 point for 1 correctly)

During Reading: (1hour)

    1. Students are divided into 5 groups (4 or 5 students each) which is called Jigsaw or original group. Have each group set up the name of their group. Each student in the jigsaw group is assigned to study different piece of the text.

    2. Each student gets a piece of jigsaw and check the number of the piece. Then, the students who get the same number from the original group move to the new group consisting of students who get the same of the jigsaw. This group is called Expert group.

    3. Student in the Expert group read the piece of text together; share their idea about the story in the text.

    4. Each student returns to the original group and tell the group member about what he/she learns from the expert group.

    5. Then the students do the exercise about whole story. (10 items)

Summary for students

    Now many of you can read a passage or the whole story on your own. You know how to spell or guess about the words you don't understand or know in English. When you're reading, you don't have to know all the new words before you start reading. If you come across a difficult word, you can always ask your teacher what that words means and if the teacher isn't around you can look it up in the dictionary.

Worksheet 1

1 Our neighbors are those people who stay near our countries. To the east is Cambodia. To the west is the Myanmar. To the north is Laos and to the south is Malaysia. Those mentioned countries are in the Southeast Asia. I will describe about each country as follow:

Kingdom of Cambodia is bordered by the Gulf of Thailand to the southwest. We can go there by car or plane. The capital and the largest city is Phnom Penh. Angkor Wat is one of the most popular attractions in Cambodia. Rice is main food, as in other Southeast Asian. Popular meals are tropical fruits, meat soups, vegetable soups and noodles.

2 Myanmar is bordered by Thailand and Laos to its east. We can go there by car or plane. Its capital city is Naypyidaw, and its largest city and former capital is Yangon. Shwedagon Pagoda also known as the Great golden Pagoda and it is the tourist attraction in Myanmar. Mohinga is Myanmar's popular national dish.

3 Lao is bordered by Thailand to the west and southwest. We can go there by car or plane. The capital and largest city of Laos is Vientiane and other major cities are Luang Prabang, Savannakhet, and Pakse. Pha That Luang is the well-known tourist attraction in Laos. The popular meals for Lao people are larb or meat salad and sticky rice, which is eaten by hand.

4 Malaysia is to the south of Thailand. We can go there by car or plane. The capital city is Kuala Lumpur. The Mulu Cave is the tourist attraction in Malaysia. It is located in the Gunung Mulu National Park in Malaysian Borneo. Malaysia foods are Nasi Lemak, Curry Fishhead, Roti Canai and Sambal.

Worksheet 2

1. If you want to go to Malaysia, How can you go there?

    a. car

    b. plane

    c. walk

    d. both of a and b

2. What is Malaysia's food?

    a. larb

    b. meat soup

    c. nasi lemak

    d. Mohinga

3. Which country is located in the south of Thailand?

    a. Malaysia

    b. Laos

    c. China

    d. Myanmar

4. Where is the Mulu cave located in?

    a. in the Luang Pra bang

    b. in the Gunung Mulu National Park

    c. in the cave

    d.in the national park

5. What is the present capital of Myanmar?

    a. Bangkok

    b. Yangon

    c. Naypyidaw

    d. all are true

6. What is Myanmar's national dish?

    a. larb

    b. meat soup

    c. nasi lemak

    d. Mohinga

7. What is the popular tourist attraction in Laos?

    a. Mulu caves

    b. Pha That Luang

    c. Ang Kor Wat

    d. Great Dagon Pagoda

8. What is the popular meal in Lao?

    a. larb

    b. meat soup

    c. nasi lemak

    d. Mohinga

9. How many countries are in this passage?

    a. one country

    b. two countries

    c. three countries

    d. four countries

10. Mana lives in the capital city. He likes to eat meat soup and noodle? Where does Mana live?

    a. Kuala Lumpur

    b. Naypyidaw

    c. Vientiane

    d. Bangkok
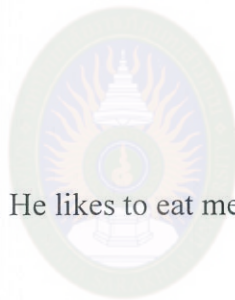
Singapore	Citizens	Plane	Tourist	Merlion	Singaporean

This is the _____ of _____. _____ is to the south of Thailand. We can go there by _____, car or ship.

_____ is one of the _____ attractions in Singapore. The _____ of Singapore are _____.

Lesson Plan 2

Unit7: We are friends

****

Course Title: English

Topic: We are friends   **Time:** 2 hrs.

Learning Objectives:

     1. To understand the meaning of words in the story.

     2. To be able to complete the story's event through answering the questions.

     3. To share ideas and participate in classroom discussion.

Vocabulary: parents, each other, spend, sometimes, always, never, together, necklace, knowledge, bring, clean up.

Teaching Materials:

     1. Handouts of text for students

     2. Worksheet

<u>**Warm up: (30mintues)**</u>

     Revise vocabulary; parents, each other, spend, sometimes, always, never, together, necklace, knowledge, bring, clean up by putting the words on cards. Hold up the cards and have students to pronounce and ask each other for the meanings.

     <u>**Game Up and Down**</u>

     Teaching Materials; Vocabulary cards

     Directions:

     1. Teacher prepares two vocabulary cards sets and gives one set to students.

     2. Teacher gives the vocabulary cards to the students; 2-5 cards per one student and have they seated properly.

     3. Teacher shows the vocabulary to the students, word by word. If students have the same word with the teacher, the will need to stand up the match one and pronounce that word with the meanings. If the students cannot read and tell the meanings, the teacher leads them and have them repeat and then do the whole process one more time.

During reading: (1hour)

1. Students are divided into 5 groups (4 or 5 students each) which is called Jigsaw or original group. Have each group set up the name of their group. Each student in the jigsaw group is assigned to study different piece of the text.

2. Each student gets a piece of jigsaw and check the number of the piece. Then, the students who get the same number from the original group move to the new group consisting of students who get the same of the jigsaw. This group is called Expert group.

3. Student in the Expert group read the piece of text together; share their idea about the story in the text.

4. Each student returns to the original group and tell the group member about what he/she learns from the expert group.

5. Then the students do the exercise about whole story. (10 items)

Summary for students

Now many of you can read a passage or the whole story on your own. You know how to spell or guess about the words you don't understand or know in English. When you're reading, you don't have to know all the new words before you start reading. If you come across a difficult word, you can always ask your teacher what that words means and if the teacher isn't around you can look it up in the dictionary.

Worksheet 1

1
It is very lucky and happy for everyone to have good friends. I have lots of friends from my childhood and Bette is my best friend forever. She came from England. She lives next to my house with her parents. We have known each other since we were 6 years old. She and I are always talking or laughing together.

2
We both enjoy reading, music and singing. Our favorite subjects are English and Math. When we have free time, we spend our time drawing and swimming. Sometimes I go with her and her family to catch fish in the big sea. We make the necklace from shells which we find on the beach. She is my neighbor. We like to play together after school time. We always go together for a picnic on weekend.

3
When I was in Pratom 6, I didn't have money to buy a book. She asked me what happened and I told her my story. She laughed and told me don't worry; we can share all books in the school and at home. From that time, Bette and I always used all books together. Sometime we helped each other doing homework and shared knowledge. Now I'am happy to have a good friend like Bette.

4
Today is a good day. It is Bette's birthday. She is giving a birthday party at home. Our friends come to the party. They bring birthday presents for her. She is very happy. Bette's mother cooks the food. Bette has got a CD player. She plays it loudly. We are dancing. After lunch, we clean up the house. Bette's house is near the river, so we are going boating and fishing in the river before going back home.

Worksheet 2

1. What is Bette's nationality?
    a. Thai
    b. England
    c. English
    d. Canadian
2. Who does Bette live with?
    a. Her father
    b. Her mother
    c. Her parents
    b. Her aunt
3. When they have free time, what do they do?
    a. To swim
    b. To sing
    c. To read
    d. To talk
4. We both enjoy………
    a. talking
    b. dancing
    c. reading
    d. jogging
5. What do we make when we are on the beach?
    a. necklace
    b. bracelet
    c. ring
    d. all of them
6. Why couldn't I buy all necessary books in the class 6?
    a. Because the books were expensive.
    b. Because I didn't have money.
    c. Because the books were cheap.
    d. Because I wanted to use with my friend.
7. Why is Bette special in my life?
    a. She is like my mother.
    b. We do everything together.
    c. She does everything by herself.
    d. all are true.
8. What activity don't Bette and her friends do in birthday party?
    a. Sing songs.
    b. Eat some food.
    c. Go fishing.
    d. Go jogging

9. Why is Bette very happy?

       a. Because she has a CD player.

       b. Because today is her birthday.

       c. Because her mother cooks food.

       d. Because her friends sing and dance.

10. What will Bette's friends do after lunch?

       a. Watch television and sleep.

       b. Dance and sing many songs.

       c. Take the tables and chairs outside.

       d. Go boating and fishing in the river.

Lesson Plan 3

Unit 8: Famous people

Course Title: English

Topic: Famous People   **Time:** 2 hrs.

Learning Objectives:

1. To understand the meaning of words in the story.

2. To be able to complete the story's event through answering the questions.

3. To share ideas and participate in classroom discussion.

Vocabulary: serve as, president, office, term, grew up, good at, transfer, return, finish, practice, employ, engage, couple, speech, responsibility, guardians, democracy.

Teaching Materials:

1. Handouts of text for students

2. Worksheet

Warm up: (30mintues)

Revise vocabulary; serve as, president, office, term, grew up, good at, transfer, return, finish, practice, employ, engage, couple, speech, responsibility, guardians, democracy by putting the words on cards. Hold up the cards and have students to pronounce and ask each other for the meanings.

Game Rolling words

Teaching Materials; word cards, a dice

Directions:
1. In a group, there are piles of word cards in the middle of the group.
2. Students take turn picking up a card. Then read out and tell the definition/meaning. If it is correct, that student rolls the dice and count the points on the dice. If it is incorrect, the student gets no points until all the cards have read.
3. The next student takes turn.

During reading: (1hour)

1. Students are divided into 5 groups (4 or 5 students each) which is called Jigsaw or original group. Have each group set up the name of their group. Each student in the jigsaw group is assigned to study different piece of the text.

2. Each student gets a piece of jigsaw and check the number of the piece. Then, the students who get the same number from the original group move to the new group consisting of students who get the same of the jigsaw. This group is called Expert group.

3. Student in the Expert group read the piece of text together; share their idea about the story in the text.

4. Each student returns to the original group and tell the group member about what he/she learns from the expert group.

5. Then the students do the exercise about whole story. (10 items)

Summary for students

Now many of you can read a passage or the whole story on your own. You know how to spell or guess about the words you don't understand or know in English. When you're reading, you don't have to know all the new words before you start reading. If you come across a difficult word, you can always ask your teacher what that words means and if the teacher isn't around you can look it up in the dictionary.

Worksheet 1

1

Barack Hussein Obama was born on 4 August 1961. He is the first African American who served as the 44th President of the United States from 2009-2016. He was in his office for 2 terms, each term took 4 years. He was born in Honolulu, Hawaii. He grew up largely in Hawaii. He also spent one year of his childhood in Washington State and four years in Indonesia.

2 He studied in the Punahou Acadeemy. He was good at basketball and graduated with academic honor in 1979. He is one of only three black students at the school. After high school, he studied at Occidental College in Los Angeles for two years. Then, he transferred to Columbia University in New York City. After he finished his law school, he returned to Chicago to practice as a civil rights lawyer. He also taught at the University of Chicago Law School between 1992-2004.

3 In June 1989, Obama met Michelle Robinson when he was employed as a summer associate at the Chicago law firm. They became engaged in 1991, and were married on October 3, 1992. They moved to Kenwood, on Chicago's south side. The couple's first daughter is Malia Ann, was born on July 4, 1998. And a second daughter is Natasha, on June 10, 2001.

4 The Obama family moved to a home in the Kalorama neighborhood of Washington, DC to allow their youngest daughter to continue school there. In his final official speech as President, he spoke about the important role of citizens and how all Americans have a responsibility to be the guardians of democracy.

Worksheet 2

1. Where did he spend **four years** of his childhood?
    a. In Hawaii
    b. In New York
    c. In Washington DC
    d. In Indonesia
2. Which year does Barack Obama served as the President?
    a. 2009- 2016
    b. 1992-2004
    c. 1991-2001
    d. 2009- 2017
3. How many black students who graduated with academic honors?
    a. One
    b. Two
    c. Three
    d. Four
4. Which university did Obama study in his **first year**?
    a. In Columbia University
    b. In New Jersey University
    c. In Occidental College
    d. In Columbia College
5. When did he married?
    a. August 3.
    b. August 2
    c. October 3
    d. October 2
6. How long does Obama served as the president?
    a. one year
    b. two years
    c. three years
    d. eight years
7. How long has Obama got married?
    a. 22 years
    b. 23 years
    c. 24 years
    d. 25 years

8. How old is Obama?
     a. 55 years old
     b. 56 years old
     c. 57 years old
     d. 58 years old

9. How old is Malia Ann?
     a. 17 years old
     b. 18 years old
     c. 19 years old
     d. 20 years old

10. At the end of his president office, what did Obama want American to do?
     a. To study about citizen's role.
     b. To learn more about democracy.
     c. To work hard for the economy.
     d. To be responsible citizens and democratic citizens.

Lesson Plan 4
Unit 9: My Plan

Course Title: English

Topic: My Plan   **Time:** 2 hrs.

Learning Objectives:

    1. To understand the meaning of words in the story.

    2. To be able to complete the story's event through answering the questions.

    3. To share ideas and participate in classroom discussion.

Vocabulary: excited, during, prepare, perfect, sneakers, restaurant, reserve, shrimp, crab, so on, exploring, seaside, nearby, lighthouse, sunbathe.

Teaching Materials:

    1. Handouts of text for students

    2. Worksheet

Warm up: (30mintues)

    Revise vocabulary; excited, during, prepare, perfect, sneakers, restaurant, reserve, shrimp, crab, so on, exploring, seaside, nearby, lighthouse, sunbathe by putting the words on cards. Hold up the cards and have students to pronounce and ask each other for the meanings.

Game Categories

Teaching Materials; word cards, worksheet of word

Directions:

    The teacher show word cards, all students read and students write the word into the correct category (Noun, Verb, Adjective etc.)

During reading: (1hour)

    1. Students are divided into 5 groups (4 or 5 students each) which is called Jigsaw or original group. Have each group set up the name of their group. Each student in the jigsaw group is assigned to study different piece of the text.

2. Each student gets a piece of jigsaw and check the number of the piece. Then, the students who get the same number from the original group move to the new group consisting of students who get the same of the jigsaw. This group is called Expert group.

3. Student in the Expert group read the piece of text together; share their idea about the story in the text.

4. Each student returns to the original group and tell the group member about what he/she learns from the expert group.

5. Then the students do the exercise about whole story. (10 items)

Summary for students

Now many of you can read a passage or the whole story on your own. You know how to spell or guess about the words you don't understand or know in English. When you're reading, you don't have to know all the new words before you start reading. If you come across a difficult word, you can always ask your teacher what that words means and if the teacher isn't around you can look it up in the dictionary.

Worksheet 1

1

 I'm always excited when summer is coming. We are going to the beach during the school holiday next week. So, I need to prepare a perfect plan. I will get up early to help my mother prepare food to eat during the way; bacon, eggs and hamburgers. I will wear white dress and white sneakers.

2 On the first day, our trip will start from my home to the beach by car. After that, we will reserve room in a hotel and have lunch together at a restaurant with seafood, such as shrimp, crab, and so on. After lunch, we will walk around places and the beach. I will enjoy getting wet at the beach and exploring the seaside nearby. I may fish there too. I hope I will catch some fish to eat.

3 On the second day, we will have breakfast at the hotel and then we will go to watch the sunrise in the morning by hiring a motorbike. After that we will go to the water park, and I will run through the water and get wet. Next, we will go to visit natural places there, especially the lighthouse. Then, we will take a sunbathe and look at the sunset together.

4 On the third day, we will go to the market in the morning to buy fresh seafood. We have breakfast together with the seafood we bought. My mother and I helped each other to make food. Before we will go back home, we will water skiing together. There is nothing better than having a good time with my family.

Worksheet 2

1. Where will they go during school holiday?
   - a. To the waterfall
   - **b. To the beach**
   - c. To the department store
   - d. To the amusement park
2. Which is **not** the food we prepare?
   - a. eggs
   - b. bacon
   - **c. cheeseburger**
   - d. hamburger
3. How do we go to the beach?
   - a. by motorbike
   - b. by walking
   - **c. by our car**
   - d. by bus
4. What will we have for lunch on the first day?
   - a. Thai food
   - b. Italian food
   - **c. seafood**
   - d. seefood
5. On the second day, how do we go to watch the sunrise?
   - **a. By hiring the motorbike**
   - b. By buying the motorbike
   - c. By borrowing the motorbike
   - d. By our car
6. Which one is not in the second day's plan?
   - a. going to the water park
   - b. visiting natural places
   - c. visiting the lighthouse
   - **d. exploring the seaside nearby**
7. What day will we take a sunbath and look at the sunset together"?
   - a. on the first day
   - **b. on the second day**
   - c. on the third day
   - d. on the fourth day
8. How is my feeling when the summer is coming?
   - a. bored
   - b. nervous
   - **c. excited**
   - d. happy

9. What will we do on the third day morning?

     a. having breakfast

     b. going the market

     c. going the supermarket

     d. going the seafood supermarket

10. How will we go back home?

     a. by our car

     b. by bus

     c. by plane

     d. by motorbike

Lesson Plan 5

Unit 10: Good Children

Course Title: English

Topic: Good Children   **Time:** 2 hrs.

Learning Objectives:

 1. To understand the meaning of words in the story.

 2. To be able to complete the story's event through answering the questions.

 3. To share ideas and participate in classroom discussion.

Vocabulary: attend, Girl Guide, conducted, kind, build, rural, donate, announce, loud, identify card, matched, wallet.

Teaching Materials:

 1. Handouts of text for students

 2. Worksheet

Warm up: (30mintues)

 Revise vocabulary; attend, Girl Guide, conducted, kind, build, rural, donate, announce, loud, identify card, matched, wallet by putting the words on cards. Hold up the cards and have students to pronounce and ask each other for the meanings.

Game looking for a partner

Teaching Materials; word cards, definition cards

Directions:
1. The teacher provides 10 word cards and 10 cards of definition of the ten cards.
2. Give each student a word card or a definition card/one card for each.
3. Let students read the card and look for their partners and then each pair read the word and its definition.

During reading: (1hour)

1. Students are divided into 5 groups (4 or 5 students each) which is called Jigsaw or original group. Have each group set up the name of their group. Each student in the jigsaw group is assigned to study different piece of the text.

2. Each student gets a piece of jigsaw and check the number of the piece. Then, the students who get the same number from the original group move to the new group consisting of students who get the same of the jigsaw. This group is called Expert group.

3. Student in the Expert group read the piece of text together; share their idea about the story in the text.

4. Each student returns to the original group and tell the group member about what he/she learns from the expert group.

5. Then the students do the exercise about whole story. (10 items)

Summary for students

Now many of you can read a passage or the whole story on your own. You know how to spell or guess about the words you don't understand or know in English. When you're reading, you don't have to know all the new words before you start reading. If you come across a difficult word, you can always ask your teacher what that words means and if the teacher isn't around you can look it up in the dictionary.

Worksheet 1

1

My name is Jitra. I am twelve years old. I have one brother and one sister. I live with my parents. I study in Prathom 6. Every day before I go to school, I have to help my mother prepare food and help her to do house's work such as washing dishes, mopping, cleaning room. I always listen to my mother.

2

I am a girl guide in my school with my best friend, Penny. After school time, we go to attend the Girl Guide meeting. I join the Girl Guide because there are many activities, games and songs that conducted during the meetings. A Girl Guide has to do one good deed every day.

3 Penny and I will become a Girl Guide next year. Girl Guide and is taught to be helpful and polite to everyone and to be kind to animals and hard-working. Every year, we always join a Girl Scout camp with other students. We build the toilet and library in the rural school. We also donate money and things to poor people.

4 One day when I was shopping. I found a green wallet. Inside were several banknotes. I went to the information counter at the shopping mall. "I have just found this wallet on the floor", I said. The manager announced over the loud speaker that a green wallet had been found. Soon, a woman rushed to the counter and said "I think that is my wallet. Here is my identify card." The card matched the information in the wallet. She said smiling. "Thank you for your honesty."

Worksheet 2

1. How many brother and sister do Jitra has?
    a. one brother and two sister
    b. one brother and three sisters
    c. one brother and one sister
    d. one brother

2. What cub does Jitra join in her school?
    a. dancing club
    b. Girl Guide club
    c. reading club
    d. volleyball club

3. Who is Jitra's best friend?
    a. Shalon
    b. Pei Pei
    c. Penny
    d. Babara

4. Why does Jitra join Girl Guide club?
    a. because her friend invited her to join.
    b. because She wants to find new friends.
    c. because She love donating money.
    d. because there are many activities, games and songs that conducted during the meetings.

5. What did Jitra do when she went to a spiritual camp?
    a. making food
    b. building toilet and library
    c. helping poor people
    d. Donating clothes

6. Who does Crystal live with?
    a. her boyfriend
    b. her friends
    c. her brother
    d. her parents

7. Where Crystal took the hurt dog?
    a. hospital
    b. home
    c. veterinary hospital
    d. school

8. What happened after the woman got the wallet?

    a. The woman ignored Jitra.

    b. The woman thanked Jitra.

    c. The woman celebrated Jitra.

    d. The woman went back home.

9. How did the owner react when the manager announced her wallet was found?

    a. She was happy.

    b. She was sad.

    c. She felt nervous.

    d. She felt sick.

10. What did Jitra find?

    a. A red wallet

    b. A blue wallet

    c. A green wallet

    d. A green bag

APPENDIX B

Achievement test

Pre test and Post test (Mixed test)
English for Pratomsuksa 6
The Department of Foreign Languages

Passage 1

Thailand is in the southeast of Asia. There are about sixty-five million people in Thailand. It is famous for silk clothes. Thai silk and silk clothes are the signatures of the country. There are many famous cities in Thailand. **Bangkok** is the capital of Thailand. There are about 8 million people in this capital city. Phad thai and Toyam kung are the famous dishes in Bangkok. **Chiang Mai** is in the North of Thailand. It is the second-largest province of Thailand. There are 1.401 million people in this province. Nam phrik ong and Khanom chin nam ngiao are the traditional northern dishes. **Songkhla** is one of the southern province of Thailand. Songkhla is not the largest city in the province. The larger city in the province is Hat Yai, with a population of 359,813. The popular meals of Songkhla are Kaeng tai pla, Kua kling and Kaeng lueang. **Khon Kaen** is a province in the northeast of Thailand. There are 1,790,049 people in this province. Popular meals for Khon Kaen are larb or meat salad, Papaya salad and Kai yang.

1. What is the famous product of Thailand?
      a. Thai food
      b. Thai silk clothes
      c. Thai costume
      d. Thai dress

2. Mana eats Khanom chin nam ngiao every day, where does Mana live?

    a. Bangkok

    b. Songkhla

    c. Khonkaen

    d. Chiang Mai

3. Which is NOT popular meals in Songkhla?

    a. larb

    b. Kaeng lueang

    c. Kaeng tai pla

    d. Kua kling

4. Which is popular meal in Khon Kaen?

    a. Khanom chin nam ngiao

    b. Kaeng lueang

    c. Meat salad

    d. Kua kling

5. Which the biggest city in this passage?

    a. Bangkok

    b. Chiang Mai

    c. Khon Kaen

    d. Hat Yai

Table 1 **Look at the table below.**

Name	Height	Weight	Age
Mary	148 cms.	57 kgs.	11
Jane	150 cms.	52 kgs.	13
Weena	152 cms.	57 kgs.	15
Pim	156 cms.	50 kgs.	13

6………………….. is as old as ……………….. .

    a. Mary, Jane

    b. Jane, Pim

    c. Pim , Weena

    d. Weena, Jane

7. Which sentence is **true**?

    a. Pim is taller than Weena

    b. Mary is older than Jane.

    c. Jane is the shortest.

    d. Weena is the tallest .

8. Which sentence is **NOT** true?

    a. Pim is not the oldest.

    b. Pim is younger than Weena.

    c. Jane is younger than Mary.

    d. Mary is the youngest.

9. Jane is weighs more than………………

    a. Mary

    b. Weena

    c. Pim

    d. Pim and Weena
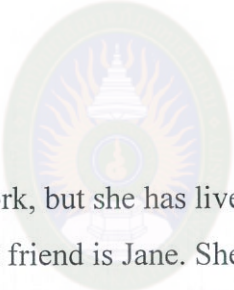
Table 2 Look at the pictures below

1	2.	3.	4
Tom	Tim	Ted	
			Top

10. Who works in the hospital?

    a. Tom

    b. Tim

    c. Ted

    d. Top

11. Who works with young children?

    a. Tom

    b. Tim

    c. Ted

    d. Top

Passage 2

Bette's story

    Betty was born in New York, but she has lived in Madrid since she was 5 years old. She is now 15. Her best friend is Jane. She is as old as Betty. She moved to Madrid with her family when she was 10 years old because her parents moved to work here. Betty's mother has been a Spanish teacher for twenty years, since she was 22. Last year, Betty and Jane went on holiday to the USA. They also visited Las Vegas and Los Angeles. They had a lot of fun in the USA and Betty didn't want to go home, because she didn't like planes. On the way home, Betty felt sick during the flight.

12. How long has Bette been living in Spain?

    a. 9 years

    b. 10 years

    c. 11 years

    d. 12 years

13. How old is Jane?

    a. 10 years old

    b. 12 years old

    c. 15 years old

    d. 20 years old

14. Why didn't Bette want to go back home from the USA?

    a. Because she got a lot of fun in USA.

    b. Because she didn't want to go to school.

    c. Because she felt sick from the airplane.

    d. Because she wanted to live in USA.

Passage 3

Donald Duck

    Donald Duck first appeared in the cartoon movie "The Wise Little Hen" in 1934. The film was first showed on June 9th 1934. This date is recognized as Donald's birthday. Donald is a funny animal cartoon character and was created by Walt Disney Productions. He has a yellow-orange mouth, legs, and feet, He usually wears a blue sailor suit with a cap and a red bowtie.

    Donald Duck is one of the most popular Disney characters in the world and has appeared in more films than any other Disney characters. His voice was created by Clarence Nasha and was played by him for 50 years. The painters who drew Donald were Al Taliaferro, Carl Barks, and Don Rosa.

15. What year did Donald Duck first appear in a cartoon?

    a. 1937

    b. 1934

    c. 1935

    d. 1936

16. When is Donald's birthday?

     a. June 7th

     b. June 8th

     c. June 9th

     d. June 10th

17. Which cartoon movie did Donald first appear in?

     a. Mickey Mouse

     b. The little penguin

     c. Happy feet

     d. The Wise Little Hen

18. Who did not draw Donald Duck?

     a. Al Taliaferro

     b. Clarence Nasha

     c. Carl Barks

     d. Don Rosa

19 What does NOT Donald Duck look like?

     a. He has a yellow-orange mouth.

     b. He has yellow-orange legs.

     c. He has a yellow-orange head.

     d. He has yellow-orange feet.

Passage 4

Who was Steve Jobs?

     Do you know an iPad, iPod, iPhone, a smartwatch or a Mac computer? Steve Jobs made a company – Apple- that created these things. They are now important parts of the lives of millions people.

     Steve Jobs was born on February 4, 1955, in San Francisco, California. When he was a boy, he had a special hobby; he liked to take apart televisions and put them back together again. He was a very good student in school and even skipped a grade. After he finished grade four, he went into grade six. In 1972, he graduated from high

school. He then began his studies in Reed College, in Portland, Oregon, but stopped after six months. Two years later in 1974, he travelled to India to learned Buddhism.

After Steve Jobs returned to the United States, he found a job as a video game designer at Atari company. Two years after that, in 1976, when he was only twenty-one years old, he created his own company – Apple Computer- with his friend, Steve Wozniak. Steve Jobs got married in 1991 and had four children. Unfortunately, doctors discovered that he had cancer in 2003 and in he died in 2011.

20. What is NOT product by Steve Job?

    a. iTune

    b. Mac computer

    a. iPod

    d. iPad

21. Who started the company "APPLE" with Steve Jobs?

    a. Daniel Kottke

    b. Steve Wozniak

    c. Ronald Wayne

    d. None of the above

22. What did Steve Jobs like to do when he was a boy?

    a. He liked to take apart televisions.

    b. He studied about computer.

    c. He skipped the classroom.

    d. He liked to work in a company.

23. Why did Steve Jobs go to India?

    a. He went to travel.

    b. He visited his friends.

    c. He studied about computer.

    d. He learned about Buddhism.

24. What did Steve Jobs do first after he finished his college?

    a. He worked in a computer company.

    b. He worked in a video company.

    c. He worked in his own company.

    d. He worked in his friends company.

Passage 5

Kids and their daily routines (unit 9; my plan)

    Sally gets up at 6.30 am. She has breakfast at 7.30 am. She goes to school at 8 o'clock. Then she gets to school at 8.30 am. School starts at 9 o' clock. School finishes at 4 pm. After school, she gets home at 4.30 pm. Then she plays with her friends or watches TV. She always does her homework from 6 pm to 8 pm. At 10 o'clock she goes to bed.

    Bobby gets up at 7.30 am. Then he has breakfast. He eats cornflakes with milk. After breakfast he puts on his clothes. Then Bobby says goodbye to his mom and goes to school at 8 c'clock. He gets to school at 8.30 am. School starts at 9 o'clock and finishes at 4 pm. After school Bobby goes home, does his homework and plays with his dog. At six o'clock his mom comes home from work. They have dinner and watch TV. Sometimes he plays computer games. Bobby goes to bed at 9.30 pm.

    Candy gets up at 7.30 am. Then she has breakfast at 8 c'clock. She goes to school at 8.30 am and gets to school with her brother at 8. 50 am. School starts at 9.30 am. She gets home from school at 3.45 pm. Then Candy sometimes plays tennis with her friends. Later she does her homework or plays guitar. After that she watches TV or reads a book. She goes to bed at 9 c'clock.

25. Who gets up earliest?

    a. Sally

    b. Bobby

    c. Candy

    d. Sally and Candy

26. How long does sally do homework?

    a. 4 hours

    b. 5 hours

    c. 3 hours

    d. 2 hours

27. How long does sally take to go to school?

    a. 20 minutes

    b. 30 minutes

    c. 25 minutes

    d. 10 minutes

28. How long does Bobby take to go to school?

    a. 5 minutes

    b. 10 minutes

    c. 15 minutes

    d. 30 minutes

29. How long does Candy take to go to school?

    a. 20 minutes

    b. 30 minutes

    c. 40 minutes

    d. 50 minutes

30. Whose house is nearest to school?

    a. Sally's house

    b. Candy's house

    c. Bobby's house

    d. Sally and Candy's house

Table B.1 The result of the efficiency of the achievement test checked
by five experts

Achievement test item	Opinion of the experts					Total	IOC	Translat
	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5			
1	+1	+1	+1	+1	+1	5	1	usable
2	+1	+1	+1	+1	+1	5	1	usable
3	+1	+1	+1	+1	+1	5	1	usable
4	+1	+1	0	+1	+1	4	0.8	usable
5	0	+1	+1	+1	+1	4	0.8	usable
6	+1	+1	+1	+1	0	4	0.8	usable
7	+1	+1	+1	+1	+1	5	1	usable
8	+1	+1	+1	+1	+1	5	1	usable
9	+1	+1	0	+1	0	3	0.6	usable
10	+1	+1	0	+1	0	3	0.6	usable
11	+1	+1	+1	+1	+1	5	1	usable
12	+1	+1	+1	+1	+1	5	1	usable
13	+1	+1	+1	+1	+1	5	1	usable
14	+1	+1	+1	+1	+1	5	1	usable
15	+1	+1	+1	+1	+1	5	1	usable
16	+1	+1	+1	+1	+1	5	1	usable
17	+1	0	+1	+1	0	3	0.6	usable
18	+1	0	+1	+1	0	3	0.6	usable
19	+1	0	+1	+1	+1	4	0.8	usable
20	+1	+1	+1	+1	+1	5	1	usable
21	+1	+1	+1	+1	+1	5	1	usable
22	+1	+1	+1	0	+1	4	0.8	usable
23	+1	+1	0	+1	+1	4	0.8	usable
24	+1	+1	+1	+1	+1	5	1	usable
25	+1	+1	+1	+1	+1	5	1	usable
26	+1	+1	+1	+1	0	4	0.8	usable
27	0	+1	+1	+1	+1	4	0.8	usable
28	0	+1	0	+1	+1	3	0.6	usable
29	+1	+1	0	0	+1	3	0.6	usable
30	+1	+1	+1	+1	0	4	0.8	usable

Table B.2 Difficulty (p) and Discriminate (r) analysis of the achievement test items.

Items	P	R	Result	Items	P	R	Result
1	0.35	0.23	usable	16	0.27	0.20	usable
2	0.37	0.27	usable	17	0.33	0.33	usable
3	0.20	0.27	usable	18	0.22	0.23	usable
4	0.23	0.20	usable	19	0.33	0.33	usable
5	0.27	0.20	usable	20	0.38	0.23	usable
6	0.20	0.27	usable	21	0.33	0.20	usable
7	0.27	0.27	usable	22	0.28	0.23	usable
8	0.35	0.23	usable	23	0.22	0.30	usable
9	0.30	0.20	usable	24	0.35	0.30	usable
10	0.28	0.23	usable	25	0.22	0.30	usable
11	0.20	0.33	usable	26	0.20	0.20	usable
12	0.30	0.27	usable	27	0.23	0.20	usable
13	0.35	0.30	usable	28	0.27	0.40	usable
14	0.38	0.23	usable	29	0.28	0.23	usable
15	0.33	0.20	usable	30	0.30	0.27	usable

Reliability = 0.965

Table B.3 The students' score of pretest and posttest

Student number	Score		Differen1ce	Squared difference
	Pretest (30)	Posttest (30)		
1	10	21	11	729
2	13	21	13	400
3	12	27	15	676
4	14	24	10	400
5	15	20	5	36
6	16	24	8	121
7	15	22	7	625
8	11	21	10	400
9	12	24	12	289
10	12	25	13	576
11	13	23	10	900
12	11	24	13	144
13	12	25	13	484
14	12	27	15	1
15	12	25	13	441
16	11	24	13	625
17	17	24	7	256
18	11	23	12	400
19	15	26	11	900
20	17	27	10	676
$\sum x$	261	477	216	13,380
$\bar{X}$	13.05	23.85		
SD.	2.11	2.08		

APPENDIX C

Questionnaire

The Questionnaire

Questionnaire on attitudes towards reading comprehension

Objective: This questionnaire is designed to get information about student's attitudes towards English reading comprehension. Please give all the information as best as you can. All the information will be kept confidential and would have no effect on tour English grade at all.

Directions: Do you agree or disagree with these following statements? Then please put a tick ( ) in the appropriate column.

5	for	Strongly Agree,
4	for	Agree,
3	for	Neutral
2	for	Disagree,
1	for	Strongly Disagree

Item	Details	Satisfaction level				
		5	4	3	2	1
		Strongly Agree	Agree	neutral	Disagree	Strongly Disagree
1	I like reading in English					
2	I find it easy to learn to read in English					
3	I often practice reading in English out of class.					
4	I want to improve English reading ability					
5	Going to English reading classes is a good time					
6	I have no problem with all the tests I read.					
7	I like to learn new vocabulary through games.					
8	I enjoy learning English through jigsaw technique with my friends.					
9	I often read in English for whatever purpose I have.					
10	Reading English texts makes me happy.					

Item	Details	Satisfaction level				
		5	4	3	2	1
		Strongly Agree	Agree	neutral	Disagree	Strongly Disagree
11	There should be more time for practice in reading classes.					
12	In my future day, I will take an English reading course as my subject choice.					
13	I wish there were more time for learning to read in English.					
14	I got much knowledge and vocabulary when I study English class.					
15	I feel confident when I speak English.					

Other Recommend

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Evaluation form of attitude questionnaire on English reading comprehension

Please consider the following questionnaire. The scales are as follow:

+1   mean   Make sure the questions are appropriate or consistent with the terminology.

0   mean   Not sure if the question is appropriate or consistent with the terminology.

-1   mean   Make sure the questions are not appropriate or do not match the terminology.

Terminology	Items	Questions	Rating scale		
			+1	0	-1
attitude level refers to the level of student satisfaction with the learning activity	1	I like reading in English			
	2	I find it easy to learn to read in English			
	3	I often practice reading in English out of class.			
	4	I want to improve English reading ability			
	5	Going to English reading classes is a good time			
	6	I have no problem with all the tests I read.			
	7	I like to learn new vocabulary through games.			
	8	I enjoy learning English through jigsaw technique with my friends.			
	9	I often read in English for whatever purpose I have.			
	10	Reading English texts makes me happily.			
	11	There should be more time for practice in reading classes.			
	12	In my future day, I will take an English reading course as my subject choice.			
	13	I wish there were more time for learning to read in English.			
	14	I got much knowledge and vocabulary when I study English class.			
	15	I feel confident when I speak English.			

Table C.1 The result of expert evaluation

Terminology	Items	Questions	Rating scale					IOC	Result
			1	2	3	4	5		
attitude level refers to the level of student satisfaction with the learning activity	1	I like reading in English	+1	+1	+1	+1	0	0.8	useable
	2	I find it easy to learn to read in English	0	+1	+1	+1	+1	0.8	useable
	3	I often practice reading in English out of class.	+1	+1	+1	+1	+1	1	useable
	4	I want improve better English reading ability	+1	+1	+1	+1	+1	1	useable
	5	Going to English reading classes is a good time	+1	+1	+1	+1	+1	1	useable
	6	I have no problem with all the tests I read.	+1	+1	0	+1	+1	0.8	useable
	7	I like to learn new vocabulary through games.	0	+1	+1	+1	+1	0.8	useable
	8	I enjoy learning English through jigsaw technique with my friends.	+1	+1	+1	+1	+1	1	useable
	9	I often read in English for whatever purpose I have	+1	+1	+1	+1	+1	1	useable

Table C.1 (continued)

Terminology	Items	Questions	Rating scale						
			1	2	3	4	5	IOC	Result
attitude level refers to the level of student satisfaction with the learning activity	10	Reading English texts makes me happily.	+1	+1	+1	+1	+1	1	useable
	11	There should be more time for practice in reading classes.	+1	+1	+1	0	+1	0.8	useable
	12	In my future day, I will take an English reading course as my subject choice.	+1	+1	+1	0	+1	0.8	useable
	13	I wish there were more time for learning to read in English.	0	+1	+1	+1	+1	0.8	useable
	14	I got much knowledge and vocabulary when I study English class.	+1	0	+1	+1	+1	0.8	useable
	15	I feel confident when I speak English.	+1	+1	+1	+1	+1	1	useable

Selection Criteria 0.5 and up

The analysis of the validity of the questionnaire revealed that the questions generated were content validity and all items can be used for all.

Table C.2 Students' attitudes towards English reading comprehension learning by using the jigsaw technique

| The attitudes of students towards the English reading comprehension by using the jigsaw technique	Rating				
	5	4	3	2	1
	strongly agree	agree	neutral	disagree	strongly disagree
1. I like reading in English	19	1	-	-	-
2. I find it easy to learn to read in English	18	1	1	-	-
3. I often practice reading in English out of class.	18	2	-	-	-
4. I want to improve English reading ability	20	-	-	-	-
5. Going to English reading classes is a good time	18	2	-	-	-
6. I have no problem with all the tests I read.	17	1	2	-	-
7. I like to learn new vocabulary through games.	20	-	-	-	-
8. I enjoy learning English through jigsaw technique with my friends.	20	-	-	-	-
9. I often read in English for whatever purpose I have.	18	1	1	-	-
10. Reading English texts makes me happily.	17	3	-	-	-
11. There should be more time for practice in reading classes.	15	4	1	-	-
12. In my future day, I will take an English reading course as my subject choice.	19	1	-	-	-
13. I wish there were more time for learning to read in English.	18	1	1	-	-
14. I got much knowledge and vocabulary when I study English class.	18	2	-	-	-
15. I feel confident when I speak English.	17	3	-	-	-

Table C.3 English attitudes scores of students after application of the jigsaw technique

The attitudes of students towards the English reading comprehension by using jigsaw technique	$\bar{x}$	S.D.	Rating scale
1. I like reading in English	4.9	0.218	Strongly Agree
2. I find it easy to learn to read in English	4.8	0.476	Strongly Agree
3. I often practice reading in English out of class.	4.9	0.300	Strongly Agree
4. I want to improve English reading ability	5	0	Strongly Agree
5. Going to English reading classes is a good time	4.9	0.300	Strongly Agree
6. I have no problem with all the tests I read.	4.7	0.622	Strongly agree
7. I like to learn new vocabulary through games.	5	0	Strongly Agree
8. I enjoy learning English through jigsaw technique with my friends.	5	0	Strongly Agree
9. I often read in English for whatever purpose I have.	4.9	0.477	Strongly agree
10. Reading English texts makes me happy.	4.8	0.357	Strongly agree
11. There should be more time for practice in reading classes.	4.7	0.556	Strongly agree
12. In my future day, I will take an English reading course as my subject choice.	4.9	0.734	Strongly agree
13. I wish there were more time for learning to read in English.	4.9	0.476	Strongly agree
14. I got much knowledge and vocabulary when I study English class.	4.9	0.3	Strongly agree
15. I feel confident when I speak English.	4.8	0.357	Strongly agree
Total	4.84	0.47	Strongly Agree

1. English classes are enjoyable.

2. I get bored in English classes.

3. I want to become an English teacher.

4. English is a course I am good at.

5. I can get higher scores in English, if I study harder
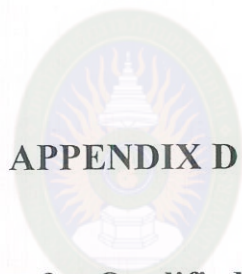
APPENDIX D

**The Request for Qualified Specialists
to Assess a Research Instrument**

ที่ ศธ ๐๕๔๐.๐๔/ว พิเศษ

คณะมนุษยศาสตร์และสังคมศาสตร์
มหาวิทยาลัยราชภัฏมหาสารคาม
อ.เมือง จ.มหาสารคาม ๔๔๐๐๐

๑๕ กุมภาพันธ์ ๒๕๖๐

เรื่อง เรียนเชิญเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือการวิจัย

เรียนนางสนิดาภรณ์   พันธ์หนองหว้า

           ด้วย นางสาวปิยะวดี คณะมะ รหัสประจำตัว ๕๗๘๒๓๐๓๑๐๑๒๑ นักศึกษาปริญญาโท สาขาวิชา
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วัตถุประสงค์

           คณะมนุษยศาสตร์และสังคมศาสตร์ มหาวิทยาลัยราชภัฏมหาสารคาม จึงใคร่ขอเรียนเชิญท่านเป็น
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           ด้าน

           ☐ ตรวจสอบความถูกต้องด้านเนื้อหา ภาษา

           ☑ ตรวจสอบด้านการวัดและประเมินผล

           ☑ ตรวจสอบด้านสถิติ การวิจัย

                      ☐ อื่นๆ ระบุ..

           จึงเรียนมาเพื่อโปรดพิจารณา และหวังเป็นอย่างยิ่งว่าจะได้รับความร่วมมือจากท่านด้วยดี ขอขอบคุณมา
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                      ขอแสดงความนับถือ

                      ๖.๗.

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เรียน รศ.ดร. ณรงค์ฤทธิ์ โสภา

ด้วย นางสาวปิยะวดี คณะมะ รหัสประจำตัว ๕๗๘๒๓๐๓๑๐๑๒๑ นักศึกษาปริญญาโท สาขาวิชา
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เรียน นางสาวกรัณยวันณ์ ไคร่นุ่นสิงห์

         ด้วย นางสาวปิยะวดี คณะมะ รหัสประจำตัว ๕๗๘๒๓๐๓๑๐๑๒๑ นักศึกษาปริญญาโท สาขาวิชา
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ผู้เชี่ยวชาญตรวจสอบความถูกต้องของเนื้อหาการวิจัย

         ด้าน

☑ ตรวจสอบความถูกต้องด้านเนื้อหา ภาษา

☐ ตรวจสอบด้านการวัดและประเมินผล

☐ ตรวจสอบด้านสถิติ การวิจัย

                  ☐ อื่นๆ ระบุ...

         จึงเรียนมาเพื่อโปรดพิจารณา และหวังเป็นอย่างยิ่งว่าจะได้รับความร่วมมือจากท่านด้วยดี ขอขอบคุณมา
ณ โอกาสนี้

ขอแสดงความนับถือ

(ผู้ช่วยศาสตราจารย์ ดร.พรทิพย์ วรกุล)
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โทรศัพท์, โทรสาร ๐ - ๔๓๗๔- ๒๖๒๓

ที่ ศธ ๐๕๔๐.๐๔/ว พิเศษ

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มหาวิทยาลัยราชภัฏมหาสารคาม
อ.เมือง จ.มหาสารคาม ๔๔๐๐๐

๑๕ กุมภาพันธ์ ๒๕๖๐

เรื่อง เรียนเชิญเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือการวิจัย

เรียน นางนิภารัตน์ ธรรมสาร

        ด้วย นางสาวปิยะวดี คณะมะ รหัสประจำตัว ๕๗๘๒๓๐๓๑๐๑๒๑ นักศึกษาปริญญาโท สาขาวิชา
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ประถมศึกษาปีที่ ๖   (The Improving of English Reading Comprehension by Using Jigsaw
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วัตถุประสงค์
        คณะมนุษยศาสตร์และสังคมศาสตร์ มหาวิทยาลัยราชภัฏมหาสารคาม จึงใคร่ขอเรียนเชิญท่านเป็น
ผู้เชี่ยวชาญตรวจสอบความถูกต้องของเนื้อหาการวิจัย
        ด้าน
        ☐ ตรวจสอบความถูกต้องด้านเนื้อหา ภาษา
        ☑ ตรวจสอบด้านการวัดและประเมินผล
        ☑ ตรวจสอบด้านสถิติ การวิจัย
        ☐ อื่นๆ ระบุ...

        จึงเรียนมาเพื่อโปรดพิจารณา และหวังเป็นอย่างยิ่งว่าจะได้รับความร่วมมือจากท่านด้วยดี ขอขอบคุณมา
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๑๕ กุมภาพันธ์ ๒๕๖๐

เรื่อง   ขออนุญาตให้ผู้วิจัยเข้าเก็บรวบรวมข้อมูลการวิจัย
เรียน ผู้อำนวยการโรงเรียนโคกคอนวิทยาคม จังหวัดกาฬสินธุ์

        ด้วย นางสาวปิยะวดี คณะมะ รหัสประจำตัว ๕๗๘๒๓๐๓๑๐๑๒๑ นักศึกษาปริญญาโท สาขาวิชา
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วัตถุประสงค์

        คณะมนุษยศาสตร์และสังคมศาสตร์ มหาวิทยาลัยราชภัฏมหาสารคาม จึงขออนุญาตให้ผู้วิจัยเก็บ
รวบรวมข้อมูลเพื่อการวิจัยกับประชากรจากนักเรียนชั้นประถมศึกษาปีที่ ๖ จำนวน ๒๐ คน ของโรงเรียนโคก
คอนวิทยาคม เพื่อนำข้อมูลไปทำการวิจัยให้บรรลุตามวัตถุประสงค์ต่อไป

        จึงเรียนมาเพื่อโปรดพิจารณา และหวังเป็นอย่างยิ่งว่าจะได้รับความร่วมมือจากท่านด้วยดี ขอขอบคุณมา
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เรื่อง ขออนุญาตให้ผู้วิจัยเข้าทดลองใช้เครื่องมือและเก็บรวบรวมข้อมูลการวิจัย
เรียน ผู้อำนวยการโรงเรียนโคกคอนวิทยาคม จังหวัดกาฬสินธุ์

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ทดลองใช้เครื่องมือและเก็บรวบรวมข้อมูลเพื่อการวิจัยกับกลุ่มตัวอย่างจากนักเรียนชั้นประถมศึกษาปีที่ ๖
จำนวน ๒๐ คน ของโรงเรียนโคกคอนวิทยาคม เพื่อนำข้อมูลไปทำการวิจัยให้บรรลุตามวัตถุประสงค์ต่อไป

      จึงเรียนมาเพื่อโปรดพิจารณา และหวังเป็นอย่างยิ่งว่าจะได้รับความร่วมมือจากท่านด้วยดี ขอขอบคุณมา
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Work Place	Baan Seeda Sakaew School, Maha Sarakham
Position	Teacher

Work Experiences

2010 - 2012	General Staff in faculty of education, Maha Sarakham University.
2013 - 2016	Bank teller at Krung Thai Bank.
2018- 2019	English Teacher in Nonkhun Wittayakom School, Trakan Phut Phon District, Ubon Rachathani province.
2020- NOW	English Teacher in Baan Seeda Sakaew School, Chiang Yuen District, Maha Sarakham province.

Education Background

2007 – 2010	Bachelor Degree in English major, Maha Sarakham University, Maha Sarakham, Thailand.
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2014 - 2021	Master Degree in English Studies Language, Faculty of Humanities and Social Sciences, Rajabhat Maha Sarakham University, Thailand.