



**AN EXPLORATION OF THE USE OF PROJECT-BASED
LANGUAGE LEARNING TO DEVELOP CRITICAL
READING SKILLS OF THAI UNIVERSITY STUDENTS**

BY

MISS SIRION LADA

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF
PHILOSOPHY PROGRAM IN ENGLISH LANGUAGE STUDIES**

**ENGLISH DEPARTMENT
FACULTY OF LIBERAL ARTS
THAMMASAT UNIVERSITY**

ACADEMIC YEAR 2015

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DISSERTATION

BY

MISS SIRION LADA

ENTITLED

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STUDENTS

was approved as partial fulfillment of the requirements for
the degree of Doctor of Philosophy

on August 9, 2016

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Member



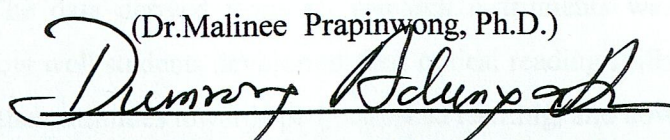
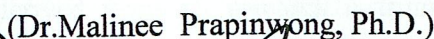
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ABSTRACT

The project-based learning approach has been well established in several different fields of education and has been recognized commonly in the field of foreign language instruction. Researchers and teachers from many different fields have investigated the effect of project-based learning on student performance and outcomes, however, the teaching practices of using project-based learning in critical reading instruction have not been clearly established. This study was conducted to explore how students developed critical reading skills through the project-based learning approach, student attitudes towards the approach, and its impact and effect on students' critical thinking abilities. All procedures, materials and stages of project completion in this study were specifically designed to explore and enhance and measure the critical reading skills of university students. This study was conducted with twenty non-English major students in one faculty of a public university in Bangkok, Thailand. The research instruments used in this study included observations, interviews, response journals, and questionnaires. The data derived from all research instruments was triangulated in order to assess how well students developed their critical reading skills through project-based learning, their attitudes towards project-based learning, and how well the students' end products reflected their critical thinking. The results revealed that

the learning activities in all stages of the project facilitated students' critical reading skills. Students could identify the author's purpose, however, student improvement was inconsistent when identifying the author's tone, point of view, intended audience, inferences and conclusions, bias, facts and opinions, argument, and evidence. Students demonstrated positive attitudes towards project-based learning particularly regarding the learning activities, their collaborative learning behaviors, the teacher' roles in facilitating collaborative learning, and their critical reading skills development. The students' end products reflected their critical thinking and were solidly related to the texts used in their projects.

Keywords: Project-based learning, collaborative learning, critical reading skills

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Miss Sirion Lada

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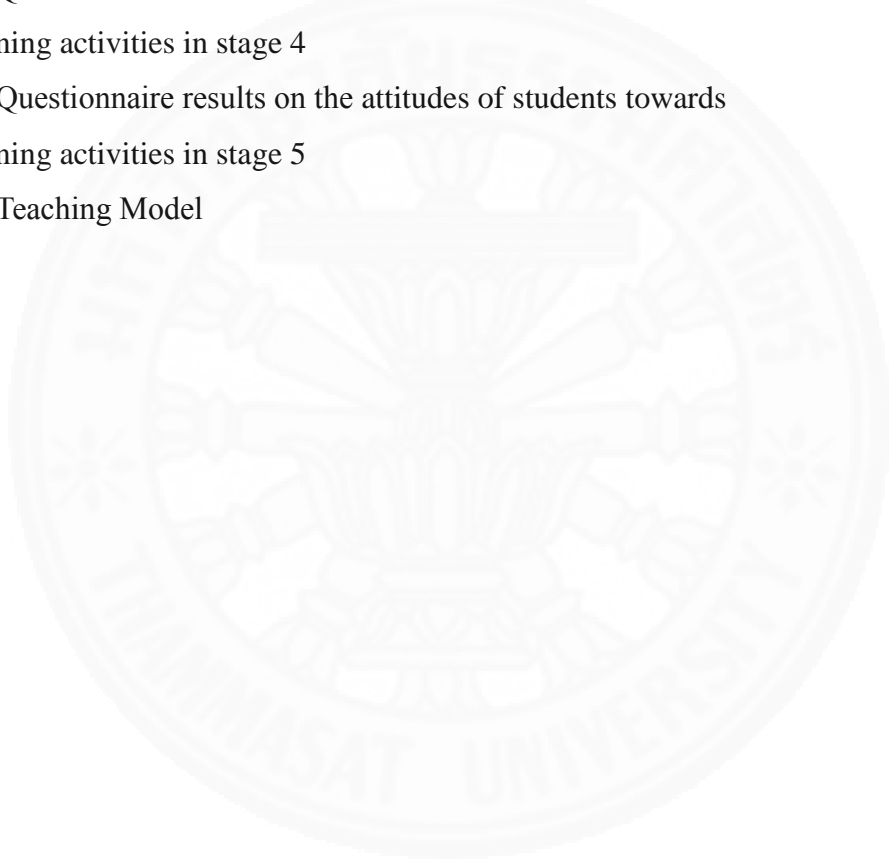
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Chapter 1

Introduction

The intent of this chapter is to provide a brief overview of the present study. The presentation of this chapter is organized into 7 sections covering the following topics: (1.1) the background and rationale of the study, (1.2) research objectives, (1.3) research questions, (1.4) the scope of the study, (1.5) the significance of the study, (1.6) the definitions of terms, (1.7) chapter summary, and (1.8) organization of the study.

1.1 Background and rationale of the study

Critical reading is one of the most demanding requirements individuals need to acquire due to the fact that it significantly influences the ways they read texts in this information age (Spears, 2006; Muller, 2016). The primary benefits that individuals can gain from being critical readers are that they are able to deal with texts in depth. They tend not to be deceived by distorted truth and they are able to make thoughtful decisions about the information presented in texts. As for students, critical reading is considered as a key starting point to success in learning (Kenney, 2013). Students who have critical reading skills read texts carefully and this results in a better understanding of what they have learned. According to Browne & Keeley (2010), Vygotsky stated that even though humans brought some basic mental abilities with them when they were born, they were not born with the ability to think critically. It is nearly impossible for individuals to master critical reading skills by themselves without any training and interaction with others. Being equipped with critical reading skills requires training and instruction so that individuals are in possession of these skills.

In Thai context, students in both high school and university displayed low levels of English critical reading and they did not have much opportunity to practice these skills and master them (Chaisuriya, 2000). The context of this study was not different. Based on informal interviews, students revealed that compared to other English skills, their English reading skills were less practiced despite the fact that English reading skills were necessary for various subjects where English was part of the course requirements. Written reports were required where the content, information, references and sources were largely derived from English texts. The students needed

to possess strong English reading skills to help them carefully read the texts. Students also reported that most reading activities in class textbooks required them to tackle English exercises related to literal comprehension and reading for details. Although the students were non-English majors, they were required to take four compulsory English courses, which included English for Everyday use, English skills development, English communication skills I, and English communication skills II. The goal of the four courses was to enable students to develop four basic skills in the English language: speaking, listening, writing, and reading. The main teaching materials were commercial textbooks designed for students at an intermediate skill level. Students practiced using all four skills through activities based on the textbook. Where reading activities were concerned, students were required to read text for details. Insufficient English reading skills was a major obstacle for the students who experienced difficulty in successfully completing their English-related course requirements.

Much attention has gone into devising methods by which students can acquire critical reading skills. Many researchers acknowledged the necessity of finding effective methods and practices for teaching critical reading skills. Studies have been conducted to investigate and determine which methods provided the highest potential for enhancing students' critical reading skills. Direct instruction was one critical reading teaching approach that was assessed for effectiveness. A study by Okeke (2000) investigated the use of direct instruction to improve disadvantaged adolescents' critical reading skills. The components of direct instruction outlined in the study included grouping students based on skill level, explicit step-by-step strategies or modeling, student mastery of each step in the process, strategy (or process) correction for student errors, gradual fading from teacher-directed activities toward independent work, and adequate, systematic practice using examples. Although Okeke stated that these components could help improve students' critical reading skills, the students were not provided with the opportunities to discuss the text with their peers. This absence of support for collaborative learning, which engages students in comparing and analyzing viewpoints put forward by others, was a significant disadvantage for the direct instruction approach. Another popular method was the inquiry approach. This approach was used in a study conducted by Shin-ying Huang (2011). The study highlighted the importance of asking questions regarding topics, authors, and the way language was

used in the reading material. Students were required to read the text and answer the questions. They were also required to write a reflection essay based on their reading. In a study by Simla IcMez, (2009), the students were given the chance to select the reading material that they would like to read. They were encouraged to express their opinions through discussions after reading. No modeling was implemented to inform the students on what to do when reading texts and on what reading strategies to use thus limiting the effectiveness of the approach. Although the studies revealed some development in the students' critical reading skills, some studies were deficient as they were not highly dependent on collaboration among students. Studies that did open up opportunities for interaction between students were hindered by the lack of student and peer training and instruction prior to reading commencement.

Amidst the various critical reading approaches particular interest was placed on project-based learning, which was viewed as an approach that could engage students in learning situations that would promote student-centered, collaborative and skill-based learning (Stoller, 2006; Bell, 2010). In the project-based approach, students were dominant in making decisions on their learning while teachers provided support and encouragement in order to facilitate learning growth. The project-based approach started with establishing a group, determining an area of interest that they need to investigate together, practicing skills necessary for doing the project, gathering relevant information, generating new ideas or solutions for problems, and creating an end product which is the concrete result of the group's collaborative efforts. When students were placed in such learning situations, they were able to obtain greater benefits in learning compared to the derivative knowledge acquisition passed directly from teachers (Boss & Krauss, 2007). The rationale behind project-based learning was that it placed emphasis on engaging students in the activities that would challenge them to think and would ensure that students were given ample and equal opportunities to do so. This would turn students into active thinkers while reading (Jay & Tishman, 1993). Project-based learning highlights the importance of collaborative learning. In the words of Browne & Keeley, "much of our thinking is not a solo activity; it involves other people" (p.11). Critical reading skills development is mainly dependent on interactions with others because interaction necessitates the students' involvement, which forces them to clarify their thoughts, criticize ideas from others, provide a focus for reasons

behind their ideas, monitor their own understanding, and make solid conclusions. As Palloff & Pratt (2005) remarked,

By learning together in a learning community, students have the opportunity to extend and deepen their learning experience, test out new ideas by sharing them with a supportive group, and receive critical and constructive feedback. The likelihood of successful achievement of learning objectives and achieving course competencies increases through collaborative engagement. (p.8)

Another important aspect of project-based learning is that it encourages students to become questioners. As Sousa (2014) remarked,

If the teachers want to develop critical reading strategies, they should create a classroom climate that fosters inquiry by encouraging students to question, to make predictions, and to support their value judgments. (p.107)

Students who are questioners and critical readers are not easily swayed by an author's viewpoint. They learn to check the accuracy of the information before believing what they have read. Critical readers are also open to changing their conclusions when presented with more reliable evidence and information (Langer, 1990).

The increased attention from researchers and teachers from many different fields and the general consensus over the positive effect on student outcomes (Boaler, 1997; Keskla, 2001; Tragoolsrid, 2002; Doppelt, 2003; Mioduser & Betzer, 2003; Kwok & Tan, 2004; Gultekin, 2005; Chanlin, 2008; Chu, 2009; Ocak & Uluyol, 2010;) have revealed that the project-based approach promotes student learning growth and generates student satisfaction with learning. Several studies have also demonstrated its positive impact on thinking skills (Brown & Campione, 1996; Horan, Lavaroni, & Beldon, 1996).

Despite the rise in popularity of project-based learning and an increasing number of studies investigating its contribution to different subjects, the implementation of project-based learning specifically in critical reading instruction at the university level has not received much attention. Although project-based learning can be used for the purpose of teaching reading, there is insufficient data about how it can be used for critical reading instruction. The contribution of project-based learning to students' critical reading skills is still in question and requires further exploration.

Therefore, this study was conducted to explore the critical reading skills development of university students through project-based learning, attitudes of the students towards the approach, and the students' end products.

1.2 Research Objectives

1. To explore students' critical reading skills development after participating in project-based learning.
2. To investigate students' attitudes towards project-based learning
3. To explore students' critical thinking through their end products.

1.3 Research Questions

1. How do students develop their critical reading skills after learning through project-based learning?
2. What are the attitudes of students towards project-based learning?
3. How do students' end products reflect their critical thinking?

1.4 Scope of the study

The research objectives were to explore the development of university students' critical reading skills through project-based learning and investigate the attitudes of students towards project-based learning.

The study was conducted at a public university in Bangkok, Thailand. Based on convenience sampling, 20 students majoring in French were chosen to participate in the study. Participants were second year bachelor's degree students enrolled in a three-credit compulsory course entitled "English Communication Skills I". The course was available in the first semester of the academic year. The "English Communication Skills I" course prerequisites were "English for Everyday Use" and "English Skills Development". One class with a three-hour duration was held each week. The goal of the course was to enable students to develop four basic skills in the English language: speaking, listening, writing, and reading. The textbook was entitled, "Navigate in Intermediate Level" and published by Oxford University Press.

The intervention was project-based learning. There were a series of five stages for completing the assigned project, which was specifically designed for this study: (1) setting a group, (2) teacher modeling, (3) selecting a reading topic and set learning objectives, (4) selecting a reading passage and do critical reading activities, and (5)

project presentation and evaluation. The five stages within the project were aimed at enhancing the critical reading skills of university students. These skills included: (1) identifying the author's purpose, (2) identifying the author's tone, (3) identifying the author's point of view, (4) identifying the author's intended audience, (5) making inferences and draw conclusions, (6) distinguishing facts from opinions, (7) identifying the author's bias, (8) evaluating the author's argument, and (9) evaluating the author's evidence. The students learned through project-based learning for 14 weeks, one 50-minute class per week.

The teaching materials consisted of lesson plans, supplementary reading worksheets, group record, and a project rubric. The lesson plans were constructed by the researcher and were used for all 14 weeks. The lesson plans included goals, objectives, materials and equipment, procedures, and assessments. The supplementary reading worksheets were designed to give students regular practice in using the reading strategies necessary for completing the project. The group record existed to make students aware of the relevance between project-based learning and language learning. The project rubric informed both the teacher and the students on what would be assessed, consisting of how well the groups absorbed the information from the passages, how well the groups reacted to the passages, how well they proposed their ideas, solutions, or suggestions based on what was read, how well the group collaborated together and how well the groups made presentations. In the remaining hours, the students performed activities based on the textbook where they studied grammar and practiced pronunciation, reading, listening and speaking skills.

The research instruments were observations, response journals, interviews, and questionnaires. The observations were conducted for 14 weeks. The response journals were distributed at the fourth stage of the project. Interviews were conducted and questionnaires were administered at the end of each stage.

1.5 Significance of the study

Each student gained direct benefits from learning via the project-based approach as the activities and teaching materials were adjusted and adapted into the appropriate level for developing their critical reading skills. Students received assistance from both teachers and peers in order to reach the targeted goals. After learning through project-based learning, the students could make use of critical reading skills in other subjects

with extensive reading and in real-life situations where critical reading was also beneficial.

This study provided a concrete demonstration for implementing project-based learning in critical reading instruction. The explanation of teaching procedures, the ways in which students were helped and motivated in reading, and the issues that needed to be taken into consideration were all outlined in detail throughout the study. The construction of teaching materials was described and the teaching materials were also provided. All the procedures and materials developed in this study could serve as useful guidelines for the teachers who are interested in integrating project-based learning in critical reading instruction with non-English major students at the university level.

This study will be valuable for researchers who are specifically interested in conducting studies on project-based learning and critical reading skills at the university level, particularly within a Thai context. Although project-based learning has gained popularity in various fields and many studies have been conducted to investigate its contributions, studies attempting to explore the use of project-based learning in critical reading instruction in Thai contexts have not been found. This study outlines a research methodology comprised of the five stages of completing project, the construction of teaching materials and the research instruments, validation process, data collection process, and data analysis which other researchers can consider and utilize as a basis for their own studies.

Researchers could also compare the results of this study with the results of other studies or studies of their own to find useful similarities and differences in outcomes in project-based learning. Although the implementation of the project-based approach in teaching reading within a Thai context was found in the study of Sudrung (2004) and Kongkapetch (2007), the emphasis of both studies was on literal and inferential comprehension. The evidence of using project-based learning in critical reading instruction as hardly found. The results of this study may lead to a better understanding of the contributions of project-based learning to students' critical reading skills.

1.6 Definition of Terms

1. Project-based learning

Project-based learning is a process and product orientation (Stroller, 2006). In project-based learning, the product is viewed as a direct result of dealing with a series of tasks under the project. The product is important because it demonstrates what students learn from their investigation. Project-based learning consists of a series of five stages of completing a project: setting groups, teacher modeling, selecting a reading topic and setting learning objectives, selecting a reading passage and do critical reading activities, and project presentation and evaluation. The teacher determines the scope of the project providing a targeted goal for students to achieve while the students decide for themselves what actions to take and how the project needs to be completed.

2. Critical reading skills

Critical reading skills refer to the ability to (1) identify the author's purpose, (2) identify the author's tone, (3) identify the author's point of view, (4) identify the author's intended audience, (5) make inferences and draw conclusions, (6) distinguish facts from opinions, (7) identify the author's bias, (8) evaluate the author's argument, and (9) evaluate the author's evidence.

3. Attitude

Attitudes refer to the students' attitudes towards project-based learning. The attitudes can be divided into four categories based on the students' attitudes towards: (1) learning activities, (2) students' collaborative learning behaviors, (3) the teacher's role in facilitating collaborative learning, and (4) critical reading skills.

1.7 Chapter summary

This chapter started by describing the background of the study and the rationale of the study in terms of intervention, research methodology, and population and setting. The research objectives and research questions were addressed. The scope of the study was stated, including the context of the study, population and sampling, intervention, teaching materials, and research instruments. The significance of the study was divided in to pedagogical and research purposes and definitions of terms were given.

1.8 Organization of the thesis

Chapter 1 presents an overview of the thesis. An introduction to the thesis is followed by the rationale for the study. The research questions and research objectives are stated. The chapter also presents definitions of term.

Chapter 2 provides the theoretical foundation from which this study was developed. It covers critical reading, project-based learning, and the theoretical foundations for project-based learning.

Chapter 3 describes the research methodology employed in the study. It covers the context of the study, the population and sampling, ethical considerations, implementing project-based learning, research design, research procedures, research instruments, and data analysis.

Chapter 4 presents the results of the pilot study and revisions made prior to conducting the main study. The pilot study was conducted with the express purpose of revising all instruments, data collection procedures, and instructional procedures.

Chapter 5 presents the results of the study. The results demonstrated how students developed their critical reading skills through project-based learning, the attitudes that the students had towards the approach in terms of learning activities, their collaborative learning behaviors, the teacher's roles in facilitating collaborative learning, and their critical reading skills development. In addition, the products that each group of students completed during the project were described along with how well they reflected the students' critical thinking.

Chapter 6 discusses the results of the study. It includes discussions related to the students' critical reading skills development after learning via project-based learning. Discussions related to the theoretical foundations for project-based learning are also included.

Chapter 7 reports the conclusions and recommendations of the study. It covers the summary of the study, pedagogical implications, and recommendations for future research.

Chapter 2

Literature Review

The intent of this chapter is to provide the theoretical foundation from which this study was developed. The presentation is organized into 3 sections covering the following topics: (2.1) critical reading, (2.2) project-based learning, and (2.3) theoretical foundations for project-based learning

2.1 Critical reading

The presentation of this section is organized into 4 subsections covering the following topics: (2.1.1) definitions of critical reading, (2.1.2) critical reading skills, (2.1.3) the teaching of critical reading, and (2.1.4) reading assessment.

2.1.1 Definitions of critical reading

Definitions of critical reading vary greatly. The definition by McDonald (2004) takes the form of a short statement and defines critical reading as “an alternative way of reading that goes beyond the typical approaches to reading such as information processing or personal response” (p.118).

Richards & Schmidt (2002)’s definition is not far from McDonald’s however they provide more details by defining critical reading as:

Reading in which the reader reacts critically to what he or she is reading, through relating the content of reading material to personal standards, values, attitudes, or beliefs, i.e. going beyond what is said in the text and critically evaluating the relevancy and value of what is read (p.134).

More objective definitions include lists of critical reading skills that readers should acquire. Pirozzi, Starks-Martin, & Dziewisz (2008) offer the following definition:

Critical reading is very high-level comprehension of written material requiring interpretation and evaluation skills that enable the reader to separate important from unimportant information, distinguish between facts and opinions, and determine a writer’s purpose and tone. It also entails using inference to go beyond what is stated explicitly, filling in informational gaps and coming to logical conclusions.

Another definition by Adams & Patterson (2008) states that,

Critical comprehension is level of understanding that entails the distinguishing of fact from opinion; the recognition of an author's intent, attitude, or bias; the drawing of inferences; and the making of critical judgment. (p.141)

Based on the various definitions provided, critical reading can be broadly categorized into two ways. One is associated with individuals' interpretation based on the text and their background knowledge. The response to the text would be varied and there would be no single right answer so long as a claim can be supported with reason and evidence. In the second approach, individuals would place emphasis on determining the author's intention and what the author wished to convey in his or her writing when reading a text.

2.1.2 Critical reading skills

Various educators identify a variety of critical reading skills as follows:

Leo (1994)

- Distinguishing fact and opinion
- Making inferences
- Recognizing tone and purpose
- Evaluating and forming arguments

Mather & McCarthy (2005)

- Fact and opinion
- Point of view
- Bias
- Analyzing and evaluating arguments
- Evaluating the evidence

Adams & Patterson (2008)

- Distinguishing fact from opinion
- Recognizing tone, figurative language, and point of view
- Recognizing inferences
- Drawing conclusions
- Evaluating arguments

Pirozzi et al. (2011)

- Using inference
- Distinguishing between facts and opinions
- Recognizing purpose and tone

Carter (2014)

- Recognizing bias and tone
- Distinguishing fact from opinion
- Evaluating arguments
- Identifying an intended audience

	Educators				
	Leo (1994)	Mather & McCarthy (2005)	Adams & Patterson (2008)	Carter (2011)	Pirozzi et al. (2011)
1. Determining the author's purpose	X				X
2. Determining the author's tone	X		X	X	X
3. Determining the author's point of view		X	X		
4. Determining the author's intended audience				X	
5. Making inferences and drawing conclusions	X		X		X
6. Distinguish facts from opinions	X	X	X	X	X
7. Identifying bias		X		X	
8. Evaluating an author's argument	X	X	X	X	
9. Evaluating the evidence		X			

Table 2.1: Critical reading skills

The focus of the present study was centered on critical reading including the following: (1) identifying the author's purpose, (2) identifying the author's tone, (3) identifying the author's point of view, (4) identifying the author's intended audience, (5) making inferences and drawing conclusions, (6) distinguishing facts from opinions, (7) identifying the author's bias, (8) evaluating the author's argument, and (9) evaluating the author's evidence.

2.1.3 The teaching of critical reading

Wallace (2003) states that the focus of critical reading is placed on developing linguistic, conceptual, critical, and cultural aspects. Wallace's conclusion correlated with Williams (2006) who stated that critical reading derives "from critical discourse analysis, which attempts not only to describe texts, but also to interpret and explain them." Critical reading of texts typically examine one or more of the following: 1) linguistic issues, such as choice of vocabulary, or the manipulation of grammar (e.g., the expression or suppression of agency in verb phrases); 2) rhetorical issues such as the overall text structure and organization; 3) issues of text type and discourse convention (e.g., an advertisement for a beauty product, or a newspaper report on migration into the UK)" (p.370).

Tomasek (2009) also suggested some basic practices that teachers can implement to encourage students to read critically:

- When they raise vital questions and problems from the text,
- When they gather and assess relevant information and then offer plausible interpretations of that information,
- When they test their interpretations against previous knowledge or experience and current experience.
- When they examine their assumptions and the implications of those assumptions, and
- When they use what they have read to communicate effectively with others or to develop potential solutions to complex problems. (p.127)

Similar to Tomasek, Collins (1993) asserted that in order to develop critical reading skills, students would need to be in an environment that fosters student-centered learning, collaboration, and inquiry. Students would need to be given opportunities to

select written material based on a topic or subject that they prefer so that students will be more motivated to read. According to Wallace (1992), it was worth allowing students to select written materials on their own since they were able to relate prior knowledge about a topic to what they were presently reading. This would lead to a higher possibility that students could effectively evaluate the written material. Allowing students to work together with their peers would be useful in that they would tend to develop a better understanding of the text that they had read (Davies, 1995; Nuttal, 1996; Rasool, Banks, & McCarthy, 2002). This is because collaborative learning could bolster students' confidence in expressing their thoughts and sharing information with others, without struggling with the text alone.

Referring to Garrigus (2002) and Pirozzi (2003), Huijie (2010) concluded that in order to enable students to be critical readers, teachers needed to train students to: (1) have purpose and set goals, (2) ask questions and find answers, (3) monitor progress in reaching reading goals, (4) reading flexibly: looking forward or checking back if necessary, (5) a lot of time and effort, (6) adjust reading rate to difficulty level, (7) relate new information to previous knowledge, and (8) come to logical conclusions.

Axelrod & Cooper (2002) indicated that equipping students with critical reading skills would require strategy training. These strategies included annotation, previewing, contextualizing, outlines, analyzing opposition, summary, paraphrasing, syntheses, questioning, and reflection. The distinction between skills and strategies have also been made by various educators. The following explanation of skills and strategies was given by Grabe & Stoller (2011):

Skills represent linguistic processing abilities that are relatively automatic in their use and their combinations (e.g. word recognition, syntactic processing). In most educational psychology discussions of skills, they are seen as general learning outcomes of goal-driven tasks, acquired gradually and eventually automatized (Anderson, 1995; Proctor and Dutta, 1995; Schunk, 2000). Strategies are often defined as a set of abilities under conscious control of the reader, though this common definition is not likely to be entirely true (see Afflerbach, Pearson and Paris, 2008; Anderson, 2009). In fact, many abilities that are commonly identified as strategies are relatively automatic in their use by fluent readers (e.g. skipping an unknown word while reading, rereading to

re-establish text meaning). Thus the distinction between skills and strategies is not entirely clear precisely because of the very nature of reading (not because of a definitional problem)(cf. Anderson, 2009). (P. 9)

Grabe & Stroller (2011:146-7) proposed the following ways teachers can teach their students reading strategies:

1. Teachers should introduce a strategy and talk about how, when and why to use it. The strategy should then be added to a list that is visible for easy class consultation. After it is introduced, the strategy must be practiced and revisited multiple times during the course, with accompanying whole-class discussions.

2. Teachers need to model combinations of strategy uses while reading aloud to the class so that students can witness strategies being used. Over time, students should be encouraged to verbalize strategies that they are using and then discuss them as ways for understanding texts.

3. Teachers need to promote ways to monitor comprehension. Options for students include asking if the text is making sense, rethinking their goals for reading, and deciding at certain points what the main ideas of the text are.

According to Stahl & García (2015), teachers would also need to consider several factors that influence reading such as, “text factors (genre, topic, and readability), reader factors (decoding abilities, prior knowledge, strategic control, self-regulation, and engagement), and contextual factors (level of instructional support and purpose for reading or writing)” (p.71). In terms of the reader, Bailin & Grafstein (2016) stated that there are three basic concepts related to textual comprehension: linking of units of information, ambiguity, and background knowledge. Linking is defined as the ability of a reader to connect units of information on the word sentence, or discourse level. Ambiguity refers to the possibility of multiple meanings and much like complexity may be a property of the word, sentence, or discourse. Contextual (background) knowledge is defined as any information a reader uses to make inferences from a segment of a text.

2.1.4 Reading Assessment

According to Alderson (2000), multiple-choice questions are most frequently used in assessing reading. This is because it enables test makers to design tasks that meet their own needs. Creating the choices contained in a multiple-choice questionnaire

is a challenge for test makers as the choices must bear the potential to separate proficient readers from less proficient readers. The resulting process of constructing multiple-choice questions requires time spent in piloting for improvements. Although multiple-choice questions are commonly used in reading assessments, O'Malley & Pierce (1996) stated that authentic assessment has also gained its position in reading assessment since it can give detailed information about students' learning process when the multiple-choice questions cannot. Anderson (2003) states, however, that there is need to implement both qualitative and quantitative assessments to assess reading and both are believed to be necessary in reading instruction.

According to Serafini (2010), researchers may draw upon three main sources to understand students' literate abilities:

- **Artifacts:** the products students create when they read and respond to what is being read. Anything tangible that can be collected and put in a portfolio is an artifact. For example, literature response notebook entries, charts, response activities, or book reviews are all types of artifacts.
- **Observations:** the notes we create by watching students engage in literate activities. For example, observations of students' responses during whole group read aloud, notes taken during a literature discussion, general observational notes about students' reading preferences or selection of books, and notes taken when listening to a student read aloud all fall into this category.
- **Interactions:** the discussions and communications we have with students on a daily basis. Unlike observations, interactions require the teacher to interact with the student, rather than passively observe. This type of information is generated by asking particular questions from an interview protocol, or conducting daily "check-in conferences" with students. (p.23)

The artifacts used in this study were response journals because journal writing could remind students of their thoughts, feelings or questions about their reading and help them in their discussions with others (Baker, Dreher & Guthrie, 2000; Gambrell, Mazzoni, & Almasi, 2000). Observations were conducted in the classroom to assess students' behaviors while they were dealing with reading material and interacting with their group members. (Deleted "In terms of") Interactions were achieved via interviews.

Interviews were conducted in this study because “a student’s interview responses can reveal feeling about reading and reading instruction, strategies used in reading, and an overall self-assessment” (Mariotti & Homan: 2010, p.139). The rationale for using three instruments for assessing reading was based on Alderson’s (2000) recommendation that the use of only one tool to assess reading would not provide sufficient evidence on both reading outcomes and reading behaviors.

2.2 Project-based learning

The presentation of this section is organized into 11 subsections covering the following topics: (2.2.1) a historical overview of project-based learning, (2.2.2) definitions of project-based learning, (2.2.3) types of project-based learning, (2.2.4) stages of doing a project, (2.2.5) teacher and student roles in project-based learning, (2.2.6) challenges in project-based learning, (2.2.7) materials in project-based learning, (2.2.8) assessments in project-based learning, (2.2.9) project-based learning in EFL contexts, and (2.2.10) project-based learning and critical thinking.

2.2.1 A historical overview of project-based learning

The history of project-based learning was traced by Henry (1994) to the period where the connection between learning in the classroom and in a real-world context had yet to be established. Around that time, John Dewey, one of the most revered educators, expressed his concern that students were repeating what they learned from memory whilst lacking true understanding of what they had learned. He expressed the need to drive students to gain knowledge by encouraging them to enter an experience of investigating and engaging in subjects that of their own personal interest, by regulating how students pursued their investigation through raising questions and coming up with the answers on their own.

John Dewey asserted that learning required social interaction. That is to say, students could learn from others and learn to accept the equality among people. Students received great benefits from learning via social interaction. Students could learn how to become good members of society and learn how to deal with situations similar to real-life settings. Project-based learning originated from these perspectives, which highlighted the necessity of allowing students to be engaged, interactive and interdependent in learning (Legutke & Thomas, 1991).

According to Henry (1994), project-based learning garnered much interest and was soon applied in childhood education in the UK and the USA during the 1930s. With the persuasive evidence of its benefits, the project-based learning approach gained notoriety in higher education in the 1970s and 1980s and was viewed as one of the most effective instructional approaches. The project-based learning approach entered the field of foreign language instruction in the mid-1970s when language teachers conducted initial studies into the use of the project approach in different educational contexts. Based on successful results from these studies, the approach has been recognized and commonly used since then (Legutke & Thomas, 1991).

2.2.2 Definitions of project-based learning

Various definitions for project-based learning have been proposed by numerous educators. Thomas (2000) defined project-based learning as “a model that organizes learning around projects” (p.1). This first definition may not be clear enough to imprint a clear understanding of what project-based learning really is. The broader definitions are illustrated in Table 2.2.

Scholar	Definition
Moss & Van Duzer (1998)	An instructional approach that contextualizes learning by presenting learners with problems to solve or products to develop
Beckett (2002:54)	A long-term (several weeks) activity that involves a variety of individual or cooperative tasks such as developing a research plan and question, and implementing the plan through empirical or document research that includes collecting, analyzing, and reporting data orally and/or in writing
Fried-booth (2002:6)	A project is “student-centered and driven by the need to create an end-product”
Nunan (2004:133)	Projects can be thought of as maxi-tasks, that is a collection of sequenced and integrated tasks that all add up to a final project
Asan & Haliloglu (2005)	A model for classroom activity that shifts away from the classroom practices of short, isolated, teacher-centered lessons and instead emphasizes learning activities that are long-term, interdisciplinary, student-centered, and integrated with real world issues and practices.

Bell (2010:39)	A student-driven, teacher-facilitated approach to learning. Learners pursue knowledge by asking questions that have piqued their natural curiosity.
Katz, Chard & Kogan (2014:3)	An extended in-depth investigation or study of a particular topic-uncovering as well as covering the subject of the study

Table 2.2: Samples of project-based learning definitions

With reference to the various existing definitions, some key characteristics of project-based learning can be defined as follows:

a) project-based learning as process and product oriented learning

The emphasis of the definitions by Moss & Van Duzer (1998), Fried-booth (2002), and Nunan (2004) are placed on the word ‘product’. The product is viewed as a direct result of dealing with a series of tasks under the project. This emphasis on product is important in that it demonstrates what students learn from their investigation. The learning process that happens while undertaking a project is also of crucial importance. As Fried-booth notes:

The route to achieving this end product that makes project work so worthwhile. The route to the end-product brings opportunities for learners to develop their confidence and independence and to work together in a real-world environment by collaborating on a task which they have defined for themselves and which has not been externally imposed. (p.6)

b) Project-based learning as student-centered and teacher-facilitated approach

Project-based learning, as defined by Fried-booth (2002), Asan & Haliloglu (2005), and Bell (2010) includes key phrases such as ‘student-centered’, ‘student-driven’ and ‘teacher-facilitated’. These phrases are useful because they draw attention to the roles of students and teachers in project-based learning. The first focus is on the phrases ‘student-centered’ and ‘student-driven’, which can be used synonymously. According to European Students Union (2010b)

Student-centered learning represents both a mindset and a culture within a given higher education institution and is a learning approach which is broadly related to, and supported by, constructivist theories of learning. It is characterized by innovative methods of teaching which aim to promote learning in communication with teachers and other learners and to take students seriously

as an active participants in their own learning, fostering transferable skills such as problem-solving, critical thinking, and reflective thinking. (p.5)

This definition clearly implies that project-based learning challenges students to take personal responsibility for their learning. The planning and implementation necessary for project completions were mainly determined by the students themselves.

In an attempt to acquire required knowledge and skills the interaction with teachers and peers cannot be avoided. The second focus was therefore on the phrase ‘teacher-facilitated’. According to Fenstermacher & Soltis (2004),

the teacher as facilitator places a great deal of emphasis on student as persons. She is a facilitator in the sense that she encourages and nurtures the growth of students. Her students are her primary concern. As such, the facilitator does not elevate mastery of subject-matter knowledge, to the most prominent position in the roster of educational outcomes. The teacher as facilitator values subject-matter knowledge, but less for its own sake and more for the contributions it makes to the growth of her students. (p.25)

In project-based learning, the teacher would not simply introduce new knowledge and skills to the students but would also elicit assistance from students in achieving their desired goals. This is the defining function of a teacher in project-based learning and would be performed with the intention to support and promote students’ learning so that students can advance their knowledge through project-based learning.

c) Project-based learning as a time-consuming activity

The definitions by Katz, Chard, & Kogan (2014), Beckett (2002), and Asan & Haliloglu (2005) shared a common thread: they indicate that project-based learning is considered to be time-consuming due to the amount of time that must be dedicated to completing a project. This is largely due to the number of sequential steps required for students to complete a project (Hedge, 2000).

d) project-based learning as inquiry-driven approach

The importance of inquiry only appeared in the definition by Bell (2010). Bell posits that an understanding of a topic is broadened when students raise questions about a topic and attempt to answer their questions on their own. The teacher is expected to encourage students to what they have learned, to pay attention to students’

responses to questions, and to urge further exploration of a subject matter in order to enhance understanding.

The key characteristics of project-based learning found in the stated definitions are partly similar to ten characteristics of effective project-based learning outlined by Stoller (2006). According to Stoller, effective project-based learning should:

- (1) have a process and product orientation
- (2) be defined, at least in part, by students to encourage students ownership in the project
- (3) extend over period of time (rather than a single class session)
- (4) encourage the natural integration of skills
- (5) make a dual commitment to language and content learning
- (6) oblige students to work in groups and on their own
- (7) require students to take some responsibilities for their own learning through the gathering, processing, and reporting of information from target language resources
- (8) require teachers and students to assume new roles and responsibilities (Levy, 1997)
- (9) result in a tangible final product
- (10) conclude with student reflections on both process and product.

The definitions of project-based learning reviewed in this study establish an understanding of the similarities and differences in perspectives of the various educators who have defined the term “project-based learning”. It can be summarized that project-based learning involves students in exploring a task over a prolonged period of time and in creating the end products related to their task. Students are viewed as active persons in learning. Exploration enables them to develop knowledge and skills and strengthens the connection between learning in the classroom and confronting real-life situations. Project-based learning hinges on students’ taking responsibility and control over their own learning experience while teachers provide support and assistance to ensure their efforts garner success.

2.2.3 Types of project-based language learning

Legutke & Thomas (1991) offer a classification of project-based learning. The obvious differences among the following types of project-based learning are the forms of interaction that take place within a project and around a particular skill focus.

An encounter project

In the encounter project, students are involved in verbal communication with native speakers whom students encounter in their home countries or while traveling abroad. Prior to any encounters with native speakers, students would need to be equipped with the necessary knowledge and skills to ensure that they are able to converse with native speakers in real-life settings. The necessary skills required to accomplish the encounter project would be speaking and listening.

A text project

This type of project involves student interaction with written texts. Students must be given sufficient time to practice their reading skills for project completion. Using relevant knowledge of the language along with existing reading skills, students would be required to work extensively with written materials. The necessary skill required to accomplish the text project would be reading.

A class correspondence project

The class correspondence project is the combination between the encounter project and the text project. The project involves students in interacting with native speakers through written communication. Students would have to practice the required skills so that they would be able to successfully correspond with native speakers. The necessary skills required to accomplish the project would be writing and reading.

In addition to the types presented above, Henry (1994) classifies projects into three types by which teachers and students take part in differing degrees.

An unstructured project

Decision making in relation to this project type would be mainly assigned to students. Students would have the freedom to plan and execute the necessary actions to successfully complete the project. Students would be required to actively and responsibly fulfill their roles within the project as dependence on the teacher would be largely reduced. Where students experience difficulty, teachers would still be relied upon to provide the necessary assistance to ensure successful project completion. The

unstructured project would be appropriate for the students who are already familiar with project-based learning.

A structured project

Unlike the unstructured project, which focuses mainly on the dominance of students as independent decision makers in learning, the structured project stresses dependence on teachers. Decision-making in relation to the project is mainly assigned to the teacher. The teacher would specify what is to be learned and how it will be learned. The teacher would provide an introduction to project-based learning, along with specifications for ways in which students can complete the project. The students' roles within a structured project would be shaped and assigned by the teacher. This project type would be appropriate for the students who have little to no acquaintance with project-based learning.

A semi-structured project

The scope of the project is decided and assigned by the teacher, although students play a dominant role in determining what they need to learn and how to learn it. The teacher would elicit assistance when necessary. Table 2.3 summarizes types of project-based learning.

Educator	Types	Description
Henry (1994)	Unstructured project	student-dominated
	Structured project	teacher-dominated
	Semi-structured project	both teacher and students
Legutke & Thomas (1991)	Encounter project	interacting with native speakers
	Text project	interacting with written texts
	Class correspondence project	interacting with native speakers through written communication

Table 2.3: Different types of project-based learning

The types of projects in project-based learning are varied therefore it is important for teachers to determine which project types to use, depending on learning purposes. Different project types would have a different impact on students' learning. In determining the project type for this study, the ultimate goal of enhancing critical reading skills of university students was considered and the semi-structured text project was selected. The semi-structured project was selected for two main reasons.

Firstly, it was determined that this project type would focus the students' attention on dealing with the text material in depth as well as engaging them in critical reading activities. Secondly, it would allow the teacher to determine the scope of the project and place needed emphasis on critical reading skills yet allowing the students the freedom to determine what material to read.

The necessary skill required to accomplish the semi-structured text project in this study was critical reading. The teacher decided the stages of the project, the sequence of the stages, the time allocation for project completion, and the format of presentation. Students were responsible for member selection, reading topics, learning objectives, and reading material selection. Students also conducted text discussions and made presentations to the class. This type of project highlighted the importance of student-centered learning along with the teacher's assistance in learning.

2.2.4 Stages of doing a project

Educators have proposed a number of different stages of completing a project (See Table 2.4). They are as follows:

Legutke & Thomas (1991) proposed 5 stages of doing a project. These include opening topic orientation, research and data collection, preparing data presentation, presentation, and evaluation. Students were provided the opportunity to work on a topic of their own interest. They were required to gather information related to their chosen topic and work collaboratively towards project completion. Students were then required to present their findings and new knowledge on their topic.

Ribe' & Vidal (1993) offered 9 stages of doing a project: create a good class, atmosphere, get the class interested, select the topic, create a general outline of the project, do basic research around the topic, report to the class, process feedback, put it all together, present the project, and assess and evaluate the project. There is a difference between Ribe' & Vidal's framework and those of others. Ribe' & Vidal added the stages of reporting to the class, processing feedback, and putting it all together in their framework. These additional stages allowed students to rehearse their presentation and revise their final product. It was believed that the quality of the final product and presentation would improve due to the feedback received.

Sheppard & Stoller (1995) proposed 10 stages of doing a project after they implemented their first eight-step model in English for specific purposes and teacher-

training courses. The first stage required an agreement from both teachers and students on the stipulations of the project. The outcome was specified and agreed before the project started. This was followed by tasks on gathering information, compiling and analyzing information, and presenting the final product. Students were prepped for any language demands prior to tackling each task. Sheppard & Stoller stated that the language intervention steps (4, 6, and 8) were designed specifically for teacher-education courses. The usage of either of these stages was decided based on the language proficiency and needs of the teachers-in-training. The final stage was to evaluate the project.

Fried-Booth (2002) proposed 3 stages of doing a project. The first stage was classroom planning and was intended to motivate students into learning by making them responsible for specifying their own learning objectives and practicing necessary skills. The second step was carrying out the project where students worked with group members and gathered information to accomplish the project. The third stage was concluding the project where students were required to present their investigations and knowledge.

Katz et al. (2014) are well-known educators in childhood education who proposed 3 stages of doing a project for childhood education, aiming “to support and strengthen children’s lively and growing minds” (p.9). These stages include getting started, a project in progress, and concluding a project. The first stage engaged students in determining the area they wished to study, in asking questions about their chosen topic and in devising potential answers. Several sources to aid students in responding to questions were also provided. The second stage encouraged students to gather information in order to obtain answers to their questions. Via information gathering students developed a better understanding of the subject matter. During the final stage students were required to make a presentation demonstrating what they had learned. Although these stages were specifically designed for childhood education, they would be practical for other fields of education.

Although the stages of all five frameworks, as shown in table 2.4, have been named differently and the numbers of stages have varied, these frameworks share similarities in how projects are implemented. The similarities can be summarized as follows:

Stages of preparation

The initial stages were primarily concerned with preparation for undertaking a project. Students were required to form groups, specify objectives, practice skills and knowledge necessary for the project, and planning what was actions and timelines for project completion. Students needed to understand the value of project-based learning to get them motivated about learning. A sense of personal responsibility and the importance of working together had to be ingrained and developed in the students' minds. Students were provided a comfortable and supportive environment conducive to learning.

Teachers and students were required to explore the possibilities within different topics together. Katz & Chard (2000) stated that the teachers' role did not require much effort as they simply assisted the students in their efforts to determine specific actions and set appropriate time constraints necessary to complete the projects. Henry (1994) pointed out that there were two difficulties in deciding a topic: finding an appropriate topic and having to change topics. Henry referred to the work of Jankowicz (1991) and suggested that choosing a familiar topic would allow students to better tackle a project successfully. Changing topics during project was commonly the result of lack of information, too much time spent on one topic, greater interest in other topics, and difficulty accessing information.

Stages of conducting a project

The next few stages were viewed as the stages of conducting the project. These stages placed great emphasis on teacher-student and student-student collaborations during the process of completing a project. After the topic selection, students gathered relevant information while teacher's assisted them with any specific challenges or needs. As experts on the subject matter, students occupied a central role in creating their products and preparing for their presentations. Each individual student experienced decision-making situations with others and was encouraged to engage with the teacher and group members throughout all aspects the project.

Stages of presentation and evaluation

The final stages were viewed as the stages of presentation and evaluation. Students were required to make a presentation on their project. The presentation was to reflect on their efforts across all stages of the project and to demonstrate what they

had learned through their explorations. After the presentations, both teachers and students were required to provide reflections on what had been done. Teacher and students were given the chance to evaluate outcomes and determine whether or not learning objectives had been achieved. According to Gardner (1991), students should be required to think back over their learning processes and identify their learning growth as a result of doing a project. It was important for the students to assess themselves and receive feedback in order to realize how well they have done throughout the project. These enable them to know what they should develop.

All of the frameworks reviewed in this study have provided the fundamentals for language teachers to engage learners in project-based learning. These frameworks facilitate better understanding of what teachers and learners are expected to do in project-based learning. Each framework views students as active persons in taking responsibility for their learning and views teachers as active facilitators in helping students to successfully fulfill their roles and complete their projects. The challenge in implementing project-based learning in language a classroom is that language teachers must customize their methods in response to the needs of each student so that each individual would learn the target language and develop their language skills. The stages of the project implemented in this study were drawn from the frameworks proposed by the educators and reviewed in this chapter. (See more details about the stages of doing a project in section 3.4.1)

	Educators				
Three main stages	Fried-Booth (1986, 2002)	Legutke & Thomas (1991)	Katz, Chard, & Kogan (2014)	Ribe & Vidal (1993)	Sheppard & Stoller (1995)
stages of preparation	1. Planning stage	1. Opening 2. Topic orientation	1. Getting started	1. Create a good class atmosphere 2. Get the class interested 3. Select the topic 4. Create a general outline of the project	1. agree on a theme for the project 2. determine the final outcome 3. structure the project 4. prepare students for language demands of Step 5
Stages of conducting the	2. Implementation stage	3. Research and data collection	2. A project in progress	5. Do basic research around the topic	5. gather information

Project		4. Preparing data presentation		6. Report to the class 7. Process feedback 8. Put it all together	6. prepare students for the language demands of Step 7 7. compile and analyze information 8. prepare students for the language demands of Step 9
Stages of presentation and evaluation	3. The creation of the end-product	5. Presentation 6. Evaluation	3. Concluding a project	9. Present the project 10. Assess and evaluate the project	9. present final product 10. evaluate the project

Table 2.4: Stages of doing a project

2.2.5 Teacher and student roles in project-based learning

Fried-booth (2002) illustrated the main function of the teacher. She stated that “the more passive you appear to be, the more successful the project is in terms of student autonomy and independent learning.” This definition does not imply that a teacher does nothing in project-based learning. To develop student independence, the teacher is required to provide encouragement and assistance to students with little interference. Katz & Chard (2000) also asserted that the teachers were to provide practical suggestions for students to help them with their projects. Under a suggestion-and-assistance approach students were more likely to complete their projects. The type of project was a semi-structured text project, which required the teachers to extend the opportunity for the students to be decision-makers in their learning process and to provide assistance for the students where necessary resulting in successful project completion.

The benefits of project-based learning on students was also apparent. Boss & Krauss (2007) pointed out that project-based learning emphasizes student-centered learning where students were required to take part in every stage of a project. Students were made responsible for choosing a topic of interest to investigate, for determining how to get the information, for deciding how to assign work amongst group members, for pinpointing what information would be relevant to their project, and on the project would be presented. Nunan & Lamb (1996) listed the roles of learners in students

centered-learning as illustrated in Table 2.5. Role identifications are crucial in project-based learning.

Curriculum stage	Role of learner
Planning	Learners are consulted on what they want to learn and how they want to go about learning. An extensive process of needs analysis facilitates this process. Learners are involved in setting, monitoring, and modifying the goals and objectives of the programs being designed for them.
Implementation	Learner's language skills develop through the learners actively using and reflecting on the language inside and outside the classroom. They are also involved in modifying and creating their own learning tasks and language data
Assessment and evaluation	Learners monitor and assess their own progress. They are also actively involved in the evaluation and modification of teaching and learning during the course and after it has been completed.

Table 2.5: Learner roles in student-centred curriculum (Nunan & Lamb, 1996)

The semi-structured text project required both the teachers and students to take various responsibilities for project completion. The teacher was responsible for making students understand what project-based learning entailed and in motivating the students to learn through project-based learning. The teacher was responsible for creating the modeled reading strategies necessary for completing the project and for providing guidance and suggestions for the students during the process of selecting their topic and searching for reading sources for their chosen topic. Students were placed in charge of forming groups, selecting a reading topic, specifying objectives, practicing necessary reading strategies, selecting their reading passages, participating in critical reading activities, and making presentations and evaluations.

2.2.6 Challenges in project-based learning

Although the interest in project-based learning are largely influenced by the advantages that students can gain from the approach there are some challenges to be considered. Frank & Barzilai (2004:43) provided a list of possible challenges of using project-based learning: teachers' content knowledge, students' lack of experience in this new approach and their preference for traditional-structured approach; their preference for a learning environment which requires less effort on their part; and

problems arising from time stress.

2.2.7 Materials in project-based learning

It will be helpful for students who are exposed to project-based learning to have materials that support their learning through project-based learning. As Bell (2010) notes:

Students are involved in a discovery process when they first learn the structures of project-based learning and they require much support and monitoring. Scaffolded instruction occurs in project-based learning when teachers use organizers that aid students in bridging the gaps that exists in knowledge and skill, and it makes the tasks manageable and achievable (p.41).

The notion of Bell is correlated with Beckett & Slater (2005) who create a tool for use in project-based learning named “the project framework”. This tool was made with intention to clearly inform students of the language, content, and skills they could gain from project-based learning. Beckett & Slater stated that “the project framework serves as a mediation tool (Vygotsky, 1978) which provides a bridge to new ways for students to think about language learning, and the new learning activities being carried out in the new institutional context” (p.110). The rationale for the project framework is that some students have had difficulty understanding the contribution of project-based learning to their language development. Students mistakenly believed that they only needed to experience language-learning activities in the language classroom and did not understand the benefits of collaborative and explorative learning. Beckett and Slater’s project framework sought to demonstrate the relevance of project-based learning in language learning.

The project framework consisted of the project graphic and the project diary. The project graphic illustrated in Figure 2.1 was aimed at reinforcing students’ awareness of the language, content, and skills that they had learned. The project diary illustrated in Figure 2.2 allowed students to record their completed tasks and accomplishments each week.

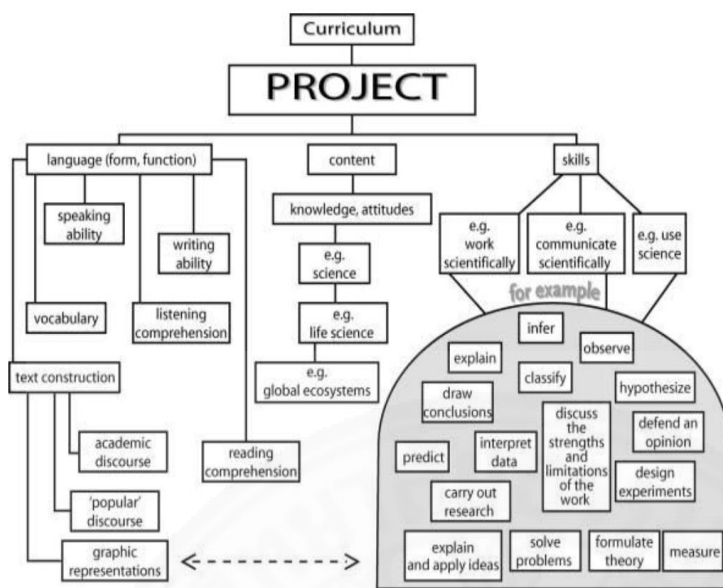


Figure 2.1: Project graphic (Beckett & Slater, 2005)

Project Diary		Name _____	
Week _____			
Activity	Knowledge and skills		
Things I did this week.	Things I learned this week.		
☞ I spoke English to _____	Language (e.g. vocabulary expressions, grammar)	Content (new information about your topic)	Skills
☞ I talked English about _____	☞ _____	☞ _____	☞ _____
☞ I read _____	☞ _____	☞ _____	☞ _____
☞ I looked for and found _____	☞ _____	☞ _____	☞ _____
☞ I looked for and didn't find _____	☞ _____	☞ _____	☞ _____
☞ I wrote _____	Things I hoped to learn this week, but didn't. (State reasons for not learning.)		
☞ I observed _____	☞ _____	☞ _____	☞ _____
☞ I created a key visual about _____	☞ _____	☞ _____	☞ _____

Figure 2.2: Project diary (Beckett & Slater, 2005)

Beckett & Slater conducted a study using the project framework with university-level ESL students in course called “Language and Language Learning”. The study revealed that most of the students were content using the project framework since it required students to think about what they learned through the project in terms of language learning. The project framework helped students become active monitors and language learners throughout the project.

The project framework by Beckett & Slater has become a guideline for preparing teaching materials for the purpose of making students aware of the language,

content, and skills that they have learned through project-based learning. This teaching material were named the group record. (See more details of the group record in section 3.4.4)

2.2.8 Assessments in project-based learning

According to Frank & Barzilai (2004), traditional standardized assessment strategies cannot be used to measure learning through project-based learning. Alternative assessments may be more appropriate. This is because standardized tests cannot provide an exact explanation for student performance and for how students actually progress in their learning (Muijs & Reynolds, 2001) and are unlikely to furnish teachers with a thorough understanding of learning behaviors or hidden problems which are important factors when customizing teaching practices. Debski (2006) further asserts that,

Most standard methods of assessment are not suitable for project learning. Project-oriented learning is most successful in educational settings that recognize that a number of additional factors play an important role in language development besides mastering grammatical, lexical and functional inventories. Assessment in project classrooms can be done by the students themselves, their peers and/or the teacher. (p.66)

According to Muijs & Reynold (2005), there are various types of alternative assessments which are far more appropriate for monitoring and assessing student performance. Grading with rubric was used in assessing students, with emphasis placed on performance task rubrics and product-related rubrics. According to Goggins Selke (2013), performance task rubrics “aid in the assessment of student work that focuses on demonstration of a specific skills or set of skills rather than on the production of a tangible product” (p.13) and product-related rubrics “are designed to aid in the assessment of student work that focuses on the development and construction of specific, tangible artifacts” (p.17).

Rubrics were designed to emphasize critical reading skills, collaborative learning, and presentation-making. The critical reading skills category included 9 critical reading skills. The collaborative learning category, focused on both individual accountability and positive interdependence. The presentation-making category

included language and fluency, engaging audience, and organization. (See more details about the project rubric in section 3.4.5)

2.2.9 Project-based learning in EFL contexts

In the field of English language instruction, a variety of studies were conducted to investigate the effect of project-based learning on learning and teaching. The results from these studies have provided a broader understanding of how project-based learning is implemented and of its benefits and drawbacks within different contexts.

In an experiment designed to enhance English language skills in upper secondary school students, Sudrung (2004) developed the project-based process curriculum. Student participants were required to complete five projects. Student groups formulated the plans, completed the tasks and reported results of the project. The finding revealed that students improved their English abilities and developed a positive attitude towards project-based learning. Project-based learning had created the ideal conditions for students to learn by doing thus creating an opportunity for students to learn a great deal about topics of interest. Through group work, each student took part in gathering information, exchanging ideas and engaging in discourse over their final decisions. Students began to understand the importance of taking on a supporting role in group work in order to develop a quality final product. Repetition of doing projects led to better group learning and performance although students expressed time constriction concerns for gathering information and presenting a product. The students also voiced discomfort over being forced to speak English all the time in class. Due to the existing language barrier, students were unable to clearly state their thoughts and lost enthusiasm for expressing and exchanging ideas with others.

In a qualitative study designed to assess how project-based learning worked in Asia, Ge (2007) conducted an investigation at a tertiary institution in China. The participants were second year students majoring in English. They were assigned to carry out three projects under the topic “severe acute respiratory syndrome” or SARS. Project 1 was concerned with the beginning of the outbreak. Project 2 covered the peak time and Project 3 focused on the post-outbreak period. Students were required to gather information from various sources, to brainstorm with each other and to make an oral and written presentation detailing their end products. The finding showed that project-based learning allowed the students to develop critical thinking skills. Students were

able to consider the information in detail and made good use of the derived information. It was observed that the students preferred group work and tended to succeed when learning through group interaction. Students improved their interpersonal skills, worked well with others and were also open-minded to different opinions. In the study, Ge expressed the view that a lack of certainty in implementing project-based approach had led teachers away from the approach even though the benefits were substantial and clear.

Siritaratn (2007) also investigated the effectiveness of project-based learning on enhancing oral communication skills in Thai EFL undergraduate students enrolled in an English oral communication course. In the first few weeks of the study, the students learned how to develop a project and practiced skills and reviewed knowledge essential for carrying out a project. Students were asked to complete three projects in this study. Findings revealed that all participants expressed the view that it was worth learning through project-based approach since this approach supported collaborative learning, which promoted personal growth. Students took charge of their assigned work as group members, elicited assistance from fellow group members and realized that their devoted effort had a positive effect on their group performance. They developed learning and interpersonal skills, became active learners and made a personal commitment to their projects. The findings also exposed some disadvantages to project-based learning. Project-based learning was seen as time-consuming approach. Students complained about the length of time spent in completing their projects. To solve the problem, it was suggested that teachers should place more emphasis and help students realize the benefits and learning outcomes derived from project-based instruction.

Another study examined project-based learning amongst English minor students at Khon Kaen University (Suphawat Srikrai, 2008). The study found that students rarely interacted with native speakers because they found it difficult to speak the target language. Interview projects were therefore created to strengthen the students' language skills particularly their speaking skills. Each group of students selected the topic that they wanted and prepared interview questions to use on teachers at the university who were native speakers. Results showed that some of the students could not understand what the native speakers were saying, however, they were satisfied at getting the opportunity to use the target language in a real-life scenario. Students realized the

importance of group work and obtained more knowledge about their selected topics through interactions with native speakers. The results also revealed that some students did not dare to actively participate in the group activities because they felt discouraged or had disagreements with their friends. It was determined that the project-based approach was more appropriate for small groups of students rather than large classes. To use this approach in large classes was sometimes difficult to implement.

One study examined the project-based approach in the teaching and learning of reading by focusing on its effects on literal and inferential levels of reading comprehension. (Kongkapetch, 2007) The findings revealed that project-based learning significantly contributed to student proficiency in reading. The most important finding from the study, however, was that students experienced difficulties with reading skills and had insufficient exposure to the reading skills necessary in developing a project. It was suggested that prior reading strategies needed to be taught for successful implementation of the approach.

The studies stated above are important in that they add to the understanding of the use of project-based learning. First, the studies revealed how project-based learning could be applied to various settings. The studies outlined different teaching procedures based on learning objectives within various contexts, the differences of which, could serve as guidelines for developing teaching procedures. Secondly, the studies exposed several variables to consider when using considerations project-based learning. The evidence from the studies could help others prepare and inform solution for potential difficulties and challenges that could be encountered when implementing project-based learning.

2.2.10 Project-based learning and critical thinking

According to Cottrell (2011), “critical thinking is associated with reasoning or with our capacity for rational thought. The word ‘rational’ means ‘using reasons’ to solve problems.” (p.3). Cottrell (2011:3) also stated that reasoning includes: having reasons for what we believe and do and being aware of what these reasons are, critically evaluating our own beliefs and actions and being able to present the reasons for our beliefs and actions to others. Individuals also need to apply critical analysis to other people’s reasons and beliefs. This involves identifying peoples’ reasons and conclusions, analyzing how their reasons and conclusions were selected, combine and

organize their reasons to construct a personal assessment of their reasoning, evaluating whether their reasons support one's personal conclusions, evaluating whether other people's reasons are well-founded or based on good evidence and identifying flaws in other people's reasoning. According to Krauss & Boss (2013), "project-based learning asks students to arrive at their own meaning. In a typical project cycle, students learn important content and apply their understanding to create something new. This process causes students to meld their creativity with higher-order thinking skills of analysis, synthesis, and evaluation. With practice, critical thinking becomes a habit" (p.19). Several studies have demonstrated the positive impact of project-based learning on critical thinking skills (Brown & Campione, 1996; Shepherd, 1998). A study by Horan, Lavaroni, & Beldon (1996) revealed that both low and high-ability students developed critical thinking skills such as synthesizing, evaluating, predicting and reflecting through project-based learning.

2.3 Theoretical foundations for project-based learning

Project-based learning is based on the sociocultural perspectives proposed by Vygotsky (Doppelt, 2003; Deski, 2006). It adopts the view that people can learn best when they collaborate with others. The presentation of this section is organized into 2 subsections covering the following topics: (2.3.1) sociocultural theory and (2.3.2) collaborative learning.

2.3.1 Sociocultural theory

The origin of sociocultural theory lies in the work of Vygotsky (Gibbon, 2002; Ohta, 2013). Sociocultural theory has made important contributions to the understanding of the influence of social contexts on human mental functioning and to the knowledge transfer from others to individuals (Scott & Palinscar, 2009).

The presentation of this section is organized into 5 subsections covering the following topics: (2.3.1.1) mediation, (2.3.1.2) regulation and internalization, (2.3.1.3) zone of proximal development, (2.3.1.4) scaffolding, and (2.3.1.5) private and inner speech

2.3.1.1 Mediation

Mediation is seen as one of the most important concepts of sociocultural theory (Lantolf, 2000; Lantolf & Thorne, 2006; Gass, Behney, & Plonsky, 2013; Ohta, 2013). Vygotsky states that all humans have basic innate mental abilities, however, complex

thought processes are the result of social interaction (Ellis & Shintani, 2014). It is through mediation that humans make sense of their environments (Lantolf & Thorne, 2006) and a complete success of the individual's mental development can be proven through mediation (Ohta, 2013). A description of the term "mediation" was provided by Lantolf (2000):

The central and distinguishing concept of sociocultural theory is that higher forms of human mental activity are mediated. Vygotsky (1987) argued that just as humans do not act directly on the physical world but rely, instead, on tools and labor activity, we also use symbolic tools, or signs, to mediate and regulate our relationships with others and with ourselves. Physical and symbolic tools are artifacts created by human culture(s) over time and are made available to succeeding generations, which often modify these artifacts before passing them on to future generations. Included among symbolic tools are numbers and arithmetic systems, music, art, and above all, language. As with physical tools, humans use symbolic artifacts to establish an indirect, or mediated, relationship between ourselves and the world. The task for psychology, in Vygotsky's view, is to understand how human social and mental activity is organized through culturally constructed artifacts and social relationships. (p.80).

From the perspective of sociocultural theory, language is the most important mediator for humans (Mitchell, Myles, & Marsden, 2013; Orlich et al., 2013; Gass et al., 2013). In highlighting the significance of language, Lantolf et al. (2015) stated that, Language in all its forms is the most pervasive and powerful cultural artifact that humans possess to mediate their connection to the world, to each other, and to themselves. The key that links thinking to social and communicative activity resides in the double function of the linguistic sign, which simultaneously points in two directions-outwardly, "as a unit of social interaction (i.e., a unit of behavior)," and inwardly, "as a unit of thinking (i.e., as a unit of mind" (Prawat, 1999, p.268;italics original). (P.210)

Language is seen as a medium of communication that satisfies the human desire for interaction with others. Through language, humans can understand themselves and others by sharing ideas, expressing their feelings and conveying their intended meaning together. Referring to second language learning, Swain (2000) pointed out that

language serves two main purposes. First, language is used to communicate making it necessary for individuals to acquire a target language. Second, language plays a role in shaping an individuals' thoughts related to the target language, also referred to as private speech.

2.3.1.2 Regulation and internalization

Regulation can be divided into three main categories. Object-regulation refers to the use of objects in stimulating the conscious mental process of an individual. Other-regulation refers to the process in which others provide assistance in order to make it easier for another individual to perform tasks. Self-regulation involves the ability of an individual to perform tasks without being helped by others. These regulations bring about gradual change from “collaborative inter-mental activity to autonomous intra-mental activity” (Mitchell et al., 2013, p. 195). These regulations can lead to internalization, which is defined as “the developmental process whereby humans gain the capacity to perform complex cognitive and physical-motor functions with progressively decreasing reliance on overt external assistance, or mediation” (Thorne & Tasker, 2011, p. 490).

2.3.1.3 Zone of proximal development

At the root of the zone of proximal development is Vygotsky's particular concern surrounding the assessment of an individual's intellectual abilities and the evaluation of instructional practices (Shayer, 2002). From Vygotsky's perspective, measuring the actual level of development rather than the potential ability of individuals provides insufficient evidence on learning. Vygotsky therefore proposed the zone of proximal development, involving two levels of development. First is the actual level of development, which refers to abilities already acquired by a person. Second is the potential level of development, which refers to abilities that a person lacks yet could acquire under the guidance of more competent people.

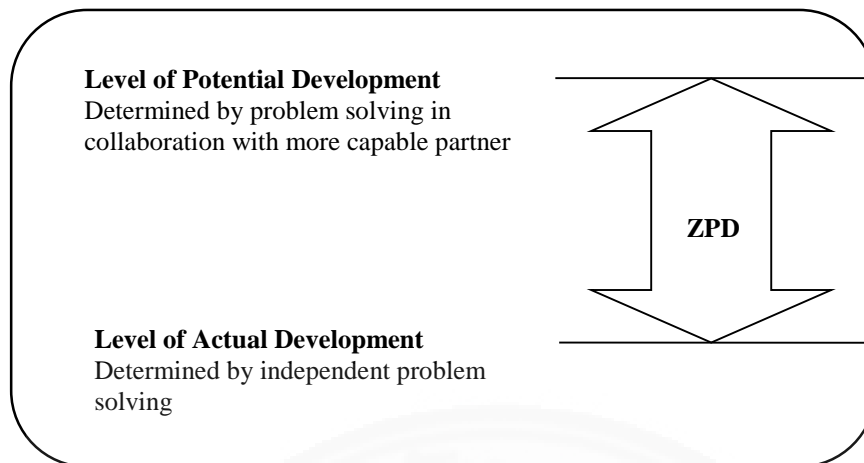


Figure 2.3: The zone of proximal development (Hamilton & Ghatala, 1994)

a) Expert-novice interaction

In the zone of proximal development, a person engages with more competent people who expose him or her to something that he or she never knew before. Adults or experts are considered to be the sources of knowledge. They play a key role in introducing new knowledge or skills to individuals and provide assistance in enabling them to master the required knowledge or skills. When individuals demonstrate a clear ability to apply what was learned on their own, adult or expert involvement will fade. It is evident that expert-novice interaction can contribute to an individual's learning (Lantolf, 2000; Nassaji & Cumming, 2000).

Gallimore & Tharp (1990) have identified four stages associated with expert-novice interaction in the zone of proximal development. The model is illustrated in Figure 2.4 and described as follows:

Stage 1 Assistance provided by more knowledgeable

In this stage it is obvious that students cannot handle tasks on their own due to the numerous ability limitations. Adults and peers play an important part in helping students perform tasks as their depth of knowledge along with their experience can contribute to students' understanding of the knowledge and skills necessary to handle tasks. Adults and peers provide repeated opportunities for students to get in some practice so that the students can become familiar with tasks. Adults and peers would also consider different ways to assist students based on their individual characteristics and task types. The role of the student is to be active and responsible so that they can learn from others over a period of time.

Stage 2 Assistance provided by self

Individuals enter an experience in which they are fully engaged in applying skills and knowledge even though they may not completely acquire them. This stage challenges individuals to perform the task on their own without any help from others. Individuals are required to check their understanding, to monitor their learning, and to make decisions about what they should do to successfully complete tasks. Such actions lead to progress in learning.

Stage 3 Internalization, automatization, and fossilization

During this stage, learners already possess the requisite knowledge and skills. They easily absorb ideas and methods on how to perform tasks and automatically implement the relevant knowledge and skills without being conscious of their actions. At this stage it is important that learners perform task without requiring thought. Being aware of what they are doing blocks their progress in learning. Support from adults and peers is no longer needed as their involvement would block a learner's independence and cause feelings of dissatisfaction. This stage is considered to be beyond self-control and social control.

Stage 4 De-automatization; recursiveness through prior stages

When individuals have a personal interest in learning something new but are unable to do so on their own it becomes necessary for them to go through the first three stages again. This cycle will repeat whenever a person seeks to learn something new and will repeat numerous times throughout a person's life.

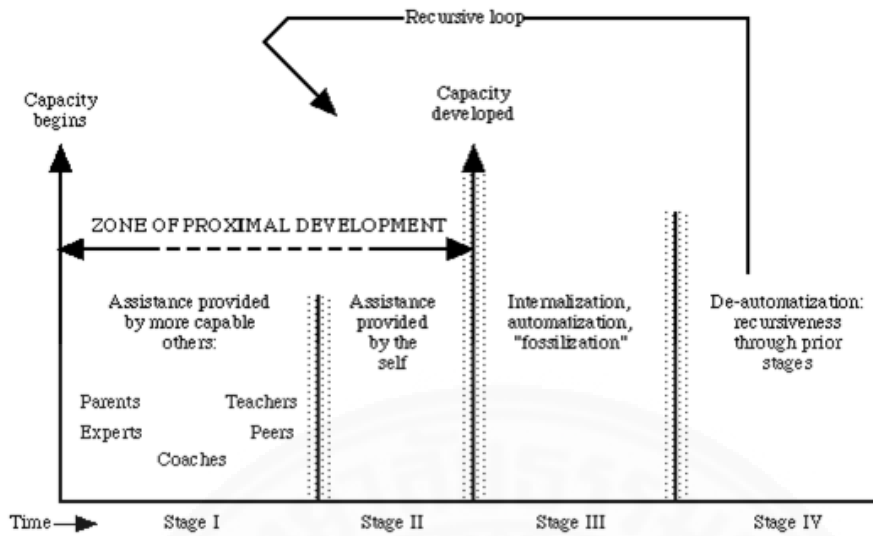


Figure 2.4: Model of four stages of the zone of proximal development (Gallimore &Tharp, 1990)

b) Novice-novice interaction

In recent years, novice-novice interaction has also been highlighted in the zone of proximal development (Well, 1999; Ohta, 2001). The concept of the zone of proximal development expressed by Vygotsky was extended by Van Lier (2014) through four multiple zones of proximal development. (Sees Figure 2.5.) The multiple zones of proximal development were associated with different resources of assistance: (1) assistance from more capable peers or adults; (2) interaction with equal peers; (3) interaction with less capable peers; and (4) inner resources related to learning about something on their own. Van Lier stated that learning with the help of more competent people gains popular acceptance in childhood education. Higher education, however, requires various forms of assistance. Van Lier suggested that teachers involve students in activities that promote various types of interaction.

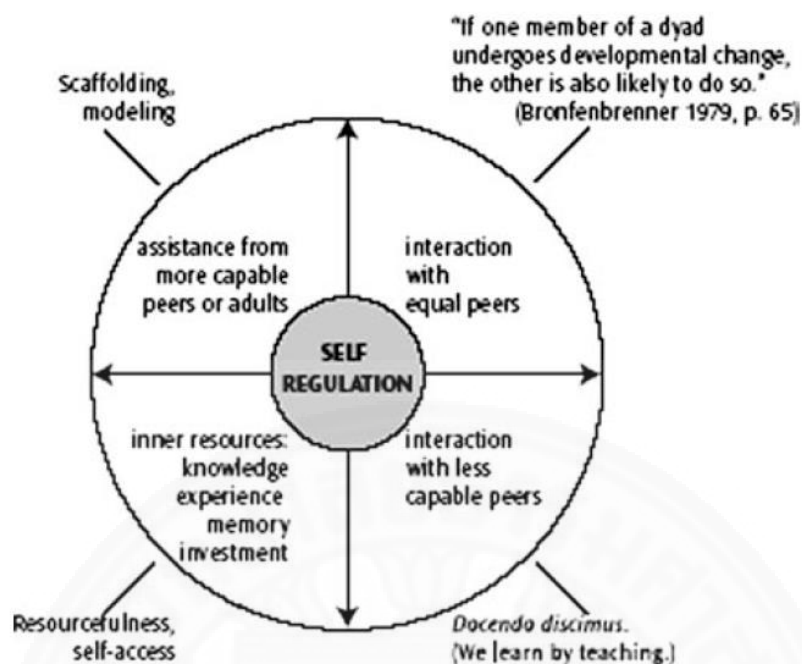


Figure 2.5: Multiple zones of proximal development (Van Lier, 2014)

c) Zone of proximal development in second language learning

There has been a growth of interest in the zone of proximal development concept from the field of education particularly in second and foreign language acquisition (Ohta, 2013). The value of the zone of proximal development to language learning lies in its usefulness in enabling teachers to modify and enhance the practice of language teaching and learning. Hedegaard (1990) pointed out that the zone of proximal development served as a starting point for teachers to adjust their instruction to ensure that students were engaged in their zone. Teachers needed to be aware of the importance of the actual level of development of students and the potential level of development (Shayer, 2002) since both were vital influences on students' learning development.

There also existed the following factors to consider in selecting learning activities: the characteristics of the learner, the situation, and the linguistic skill or subject matter to be learned. Students needed to be challenged with tasks that required them to exert effort and be in need of assistance from others. The tasks that students could complete on their own should not be emphasized since students were unable to make progress in learning through these kinds of tasks (Ohta, 2000; Tracey & Morrow, 2006). A study by Nassaji & Swain (2000) investigated the importance of the zone of

proximal development in student learning. Nassaji & Swain examined whether negotiated help provided within the learner's zone of proximal development was more effective than help provided randomly and irrespective of the learner's zone. The study took place during tutorial sessions in English writing and composition. Two Korean English learners participated. One Korean ESL learner received randomly selected feedback and another received negotiated ZPD-related feedback. The results indicated that negotiated ZPD-related feedback produced independent learners while randomly selected feedback did not. Assistance from teachers and peers during collaborative learning should therefore take place within a learners' zone of proximal development.

The zone of proximal development concept was used to design the semi-structured text project in this current study. Students in this study were only assigned activities that were appropriate for their level and were able to complete their projects with support from the teacher and peers.

2.3.1.4 Scaffolding

a) Definitions of scaffolding

The concept of scaffolding owes its origin to Wood, Bruner, & Ross who investigated the relationship between first language acquisition in children and adult guidance (Hammond & Gibbons, 2001). Scaffolding was closely associated with the sociocultural theory by Vygotsky (Van de Pol, Volman, & Beishuizen, 2010).

Donato (1994) stated that “scaffolded performance is a dialogically constituted interpsychological mechanism that promotes the novice’s internalization of knowledge co-constructed in shared activity” (p.41). In the field of education scaffolding was viewed as “the temporary assistance that the teacher provide for their students in order to assist them to complete a task or develop new understandings, so that they will later be able to complete similar tasks alone” (Hammond & Gibbons, 2001, p.15). In recent years the concept of scaffolding was broadened to include assistance from both the teacher and peers. It was also revealed that scaffolding from peers also has a positive influence on students’ learning (Cohen, Manion, & Morrison, 2004).

The features of pedagogical scaffolding identified by Van Lier (2014: 195) include:

- The principle of continuity: There are repeated occurrences, often over a

protracted period of time, of a complex of actions, characterized by a mixture of ritual repetition and variations

- The principle of contextual support: The activity is structured so as to create a safe environment within which the participation of the child is encouraged without being forced, and within which errors are tolerated if not expected.
- The principle of intersubjectivity: Throughout the activity the emphasis is on mutual engagement and intersubjectivity of attention (Wells 1985;).
- The contingency principle: Elements in the activity event can be changed, deleted, or repeated, depending on actions and reactions of each of the participants, in other words, all actions are contingent.
- The handover principle: The child (or to speak in more general terms, the learner) is observed closely as the parent (or teacher) watches for opportunities to hand over parts of the action as soon as the child shows signs of being ready for them
- The flow principle: Actions of participants are jointly orchestrated, or synchronized, in rhythmic terms, so that the interaction flows in a natural way

b) Contingent shift principle

Ellis (2003) viewed contingency as the main feature of scaffolding. Teachers would be required to provide continued and strong support for students when they were unable to deal with tasks alone and teachers were expected to withdraw their support once students were capable of completing tasks on their own. This method is known as the contingent shift principle. The contingent shift principle is reflected in the work of Mariani (1997) who provided more details on classroom consequences of teacher support and challenge. The four quadrants illustrated in Figure 2.6 represent the different levels of support and challenge. A high-level challenge with low-level support would make it difficult for students to deal with tasks. The pressure of trying to complete tasks beyond their level without sufficient support from a teacher could add problems in learning. A low-level challenge with high-level support would cause students to cease participation in activities, which would lead to undesirable behaviors in the classroom. A low-level of both challenge and support would boost student

confident to engage in activities and would make students feel good about what they do. A high-level of both challenge and support would enable students to progress quickly in learning such that students would eagerly seek to acquire more new knowledge or skills.

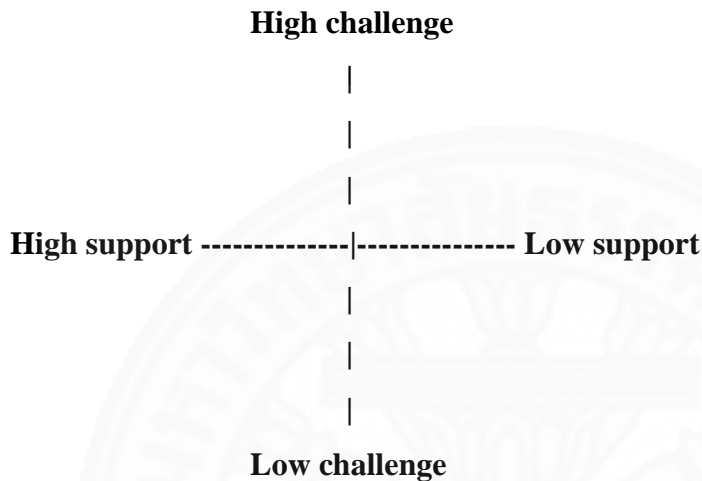


Figure 2.6: Framework of learning contexts (Mariani, 1997)

c) Factors in selecting scaffolding techniques

There is no singular scaffolding strategy that is effective in every class or with every group of students (Larkin, 2002). Some scaffolding strategies may produce results in one context and little to no results in another context. As Van de Pol et al. (2010) pointed out,

because scaffolding is such a dynamic intervention finely tuned to the learner's ongoing progress, the support given by the teacher during scaffolding strongly depends upon the characteristics of the situation like the type of task (e.g., well-structured versus ill-structured) and the responses of the student. Therefore, scaffolding does never look the same in different. (p.272)

To determine the appropriate scaffolding techniques to be used, several influential factors should be considered. These include learners' characteristics, task types (Cohen et al., 2004), learners ZPD (Schunk, 2008) and learners' needs (Dennen 2004). Larkin also expressed a need to place emphasis on the expertise of the teacher in learning materials and activities which are relevance to the quality of scaffolding.

d) Considerations for effective scaffolding

It would be a mistake to assume that all kinds of assistance is scaffolding. According to McKenzie (1999) scaffolding would consist of eight characteristics: (1) scaffolding provides clear direction, (2) scaffolding clarifies purpose, (3) scaffolding keeps students on task, (4) scaffolding offers assessment to clarify expectations, (5) scaffolding points students to worthy sources, (6) scaffolding reduces uncertainty, surprise and disappointment, (7) scaffolding delivers efficiency, and (8) scaffolding creates momentum. Maybin, Mercer, & Stierer (1992) also provided suggestions to consider when determining whether the assistance could be considered as scaffolding:

We would need to have at the very least some evidence of a teacher wishing to enable a child to develop a specific skill, grasp a particular concept or achieve particular level of understanding. A more stringent criterion would be to require some evidence of a learner successfully accomplishing the task with the teacher's help. An even more stringent interpretation would be to require some evidence of a learner having achieved some greater level of independent competence as a result of the scaffolding experience (that is, demonstrating their increased competence or improved level of understanding in dealing independently with some subsequent problem. (p.188)

Maybin et al. stressed the values of evidence in evaluating the quality of scaffolding. Analysis of evidence would reveal whether or not scaffolding works with students. Larkin (2002) also stressed the value of evidence in the selection of scaffolding strategies. The decision on which scaffolding strategies should or should not be used would be made rationally based on the analysis of evidence. Teachers would need to be active in gathering as much data as is necessary for an effective use of scaffolding.

e) Scaffolding in second reading instruction

There are studies that support the notion that scaffolding can help students in L2 reading. Chung (2006) attempted to investigate whether technological university EFL students improved reading comprehension after instructional scaffolding using a think-aloud method. Chung found that because of teacher scaffolding students were able to link their previous knowledge with what they were reading resulting in better understanding of their reading material. Chung noted that low-achieving students also

gained benefits from scaffolding and performed better in post-tests for reading comprehension. The results of the post-tests showed that scaffolding played an important role in developing both lesser and more proficient students.

Like Chung, (2006), Mehdian (2009) examined at the teachers' role in developing pre-college EFL learners' reading literacy. In this study, the instructions were split into a sequence of four steps: a) model the strategy, b) do the first reading task together with the class, c) on the second task, let peers help each other and discuss their thoughts aloud while the teacher monitored, observed and listened carefully to identify where, when and to whom 'scaffolding' should be offered, and d) have learners do the reading tasks with minimum support from both their peers and the teacher. The results revealed that the students agreed that modeling and the think-aloud method used by teachers and peers helped students in developing the use of reading strategies.

The numerous studies reviewed show that scaffolding is an important part of teaching that enhances student learning. Teachers need to use the most appropriate scaffolding to match their contexts. In the present study, scaffolding was taken into consideration when designing the stages of doing the project and creating teaching materials that could assist the students in learning through project-based learning.

2.3.1.5 Private and inner speech

According to Manning (1991), private speech refers to 'overt speech-to-self' (p. 10) and both Lantolf & Thorne (2006) expressed a similar view. Lantolf & Thorne defined private speech as the "form of externalized speech deployed by adults to regulate their own mental (and possibly physical) activity. Private speech may be fully externalized to the extent that it is audible to some potential observer or it may be whispered or even subvocal, audible only to the speaker" (p. 75). From their perspective, private speech was related to self-talk amongst adults rather than a child's speech.

According to Mitchell et al. (2013), Vygotsky stated that there were three forms of speech activity, which resulted in internalization: social speech (or external speech), private speech (or egocentric speech), and inner speech. Social speech refers to the utterances of an individual to others during social interaction. Private speech refers to the utterances of an individual to himself or herself as means of facilitating thinking. When private speech is related to a process of self-regulation rather than

communication it becomes inner speech. Inner speech involves ‘a use of language to regulate internal thought, without any external articulation’ (Mitchell et al., 2013. p. 226). According to Lidstone, Meins, & Fernyhough (2010), both private speech and inner speech are known as self-directed speech. When people were unfamiliar with tasks, they would use private speech in order to stimulate thinking while completing tasks. When people were accustomed to their tasks, they would use inner speech while completing them. (John-Steiner, 2007). According to Ellis (2012),

the L1 can serve the function of mediating learning of the L2. Mediation can occur collaboratively through social talk but also through private speech. Both social mediation and private speech can take place in the L2 but learners often elect to use their L1 (p.169).

L1 is embedded in individual thinking (Cook, 2002) and is seemingly inseparable from learning another language. As Stern (1992) pointed out, “the L1-L2 connection is an undisputable fact of life, whether we like it or not the new knowledge is learnt on the basis of the previously acquired language” (p. 282).

From the bilingual view, both teachers and students could take advantage of using L1 in L2 teaching and learning. In a study by Ellis & Shintani (2014), the teacher used L1 to (1) convey L2 meaning, (2) maintain discipline, (3) explain tasks and tests, (4) explain grammar, (5) practice codeswitching, (6) build personal relationships with students, (7) avoidance of unnecessary input modification, (8) develop translation skills, (9) prepare for activities conducted in the L2, (10) reduce anxiety in the learner, and (11) demonstrate respect for the learner by acknowledging their L1 identity.

According to Ellis (2012: 171), students used L1 in both social talk and private speech. L1 serves three main functions. First, it serves an interpersonal function, enabling learners to socialize with each other. Secondly, it plays an important role in meta-talk, helping learners to establish reciprocity regarding their goals and procedures for carrying out an activity. Finally, it enables learners to solve problems associated with their limited L2 resources.

The decision to use L1 in L2 language learning depends on four factors (Cook, 2001: 413). These include:

(1) Efficiency: Can something be done more effectively through the L1?;

(2) Learning: Will L2 learning be helped by using the L1 alongside the L2?; (3) Naturalness: Do the participants feel more comfortable about some functions or topics in the first language rather than the second language, as studies in code-switching have shown?

(4) External relevance: Will the use of both languages help the students to master specific L2 uses that are necessary in the world beyond the classroom?

In a study investigating the relationship between L2 proficiency levels and the use of private speech among ESL university students in New Mexico University, McCafferty (1994) compared a group of low-intermediate students against a group of advanced students. Both groups were required to complete the same tasks. The results revealed that the low-intermediate students used private speech more than the advanced students. McCafferty concluded that students who attained proficiency in a target language tended to reduce their use of private speech.

Abadikhah & Khorshidi (2013) also explored the phenomenon of private speech in the collaborative interactions of adult EFL learners. They found that both beginner and advanced groups used both L1 and L2 in their private speech. Beginner groups, however, used more L1 in their private speech than did advanced groups. It was concluded that students tended to use L2 in their private speech when they developed proficiency in a target language.

Rahimi & Tahmasbi (2010) studied the private speech and collaborative interaction amongst EFL freshmen students during a reading course. One control group and one experimental group were established. For the control group, the teacher paraphrased and discussed the reading while students in the experimental group were required to do a number of tasks. The findings revealed that private speech played a role in assisting students to accurately complete tasks. Both groups used private speech while completing their tasks, however, the advanced learners used L2 in their private speech.

The private speech and inner speech related studies were helpful for data collection in that the students' behaviors in the classroom were carefully observed in the anticipation that the speech could be found when the students performed activities. Collecting data demonstrating students using private speech could result in a better understanding of the students' learning process while developing their critical reading

skills. The students were allowed to use L1 as a mediating tool for project completion. Using L1 is determined by the factors proposed by Cook (2001). Students found it more efficient and easier to use L1 in discussions with their group members regarding reading materials and in their journal writing. Students did not experience difficulty in expressing ideas about their topic selection through both verbal and written communication. This absence of a language barrier created an equal opportunity for students to demonstrate their understanding of the text. In terms of learning, when using L1, the students had the advantage of refining their understanding of the text in the target language. They were able to interact with others and seek help from their teacher and peers who clarified complex concepts found in the texts. Students felt relaxed and comfortable using L1. Anxiety over using L2 did not arise. In terms of external relevance, the students were aware of the relevance between what was done in the classroom and what they encountered in real-life settings. The use of L1 in L2 reading better reflected their real life situations when compared to using only L2. Students were still allowed to use L1 when necessary. The decision to use L1 in the study was based on the learning objectives. The students were allowed to use L1 if L1 could facilitate their learning and help them achieve their learning objectives. During the stages of teacher modeling, selection of a reading passage and critical reading activities, the students were allowed to use L1 as it allowed them to freely express their views on the reading material with their peers and helped them develop better understanding of the text written in L2. In the stages of setting groups, selecting a reading topic and objectives, and project presentation and evaluation, the students were required to use L2 yet were allowed to use L1 to complete the activity whenever language barriers arose.

2.3.2 Collaborative learning

Based on sociocultural perspectives, collaborative learning has made a significant contribution to second language learning. Through collaborative learning a people have the potential to develop into independent language learners by communicating with others and receiving assistance from them in order to acquire the target language.

The presentation of this section is organized into 7 subsections covering the following topics: (2.3.2.1) definitions of collaborative learning, (2.3.2.2) stages of

implementing collaborative learning, (2.3.2.3) teacher and student roles in collaborative learning, (2.3.2.4) outcomes in collaborative learning, (2.3.2.5) issues in relation to collaborative learning, (2.3.2.6) collaborative learning in second language learning, and (2.3.2.7) collaborative learning in second language reading instruction.

2.3.2.1 Definitions of collaborative learning

Oxford (1997) describes collaborative learning as “less technique oriented, less prescriptive, and more concerned with acculturation into the learning community. Collaborative L2 learning is more explicitly oriented to negotiating and fulfilling the potential (traversing the ZPD) of each L2 learner” (p. 449). She further describes five fundamental aspects that form a complete picture of collaborative learning, shown in Table 2.6.

Aspects	Collaborative learning
Purposes	Acculturates learners into knowledge communities
Degree of structure	Variable
Relationships	Learner engages with "more capable others" (teachers, advanced peers, etc.), who provide assistance and guidance
Prescriptiveness of activities	Low
Key terms	Zone of proximal development, cognitive apprenticeship acculturation scaffolding, situated cognition, reflective inquiry, epistemology

Table 2.6: Collaborative learning (Oxford, 1997)

Unlike Oxford in the aspect of relationships, Dooly (2008) states that:

collaboration entails the whole process of learning. This may include students teaching one another, students teaching the teacher, and of course the teacher teaching the students, too. More importantly, it means that students are responsible for one another's learning as well as their own and that reaching the goal implies that students have helped each other to understand and learn. (p.22)

It is apparent that in knowledge construction, dependence on more competent people is stressed as they viewed as an important source of knowledge. People with higher competence introduce individuals to new knowledge or skills by showing and telling students and causing them to follow. They also provide individuals with support,

warn of difficulties that individuals may encounter and advise ways to overcome difficulties for task completion. Through this manner individuals would acquire desired skills and knowledge. The contribution of experts in learning is supported by considerable evidence, however, in Dooly's view requiring the contribution of less or equally competent people is also demanding. All stakeholders in collaborative learning would need to be intentional in working towards the targeted goals and facilitating each others learning to achieve goals together. Participation would not be relegated to more competent people alone and less competent people would not be excluded.

Collaborative learning is fundamentally concerned way individual students take responsibility for working interdependently with others in order to achieve targeted goals together. There is certainly a need to focus on facilitating teacher-student and student-student interaction, requiring both the teacher and students to be active in sharing and gaining knowledge. The responsibility of all stakeholders, including teachers, students and peers is to ensure that contributions are made to facilitate both personal learning as well as the learning of others. When joint effort goes into learning, an understanding of what has been learned can be advanced and true learning can be accomplished.

2.3.2.2 Teacher and student roles in collaborative learning

According to Palloff & Pratt (2005),

the instructor is an important member of the learning community, helping to form and shape it and empowering learners to take on the responsibility to nurture it, extend it, and use it as the vehicle for co-created knowledge and meaning. (p.5)

Rockwood (1995) pointed out that achieving collaborative learning success requires teachers who are open and willing to let students make their own decisions, learn on their own and take responsibilities for their own decisions. This is especially important since only teachers are can make it possible for students to take control of their own learning and encourage their increased participation with peers in collaborative learning contexts. Although the dominance of students in determining what is related to their learning needs to be established, it does not mean that the teacher is obsolete. The teacher is needed to elicit practical assistance for students but only when necessary so that students can fully engage in collaborative learning (Brufee,

1995). Teacher also need to take on a planning role and are required to make plans and preparations with an emphasis on the joint effort of every student, to ensure that students will actually experience collaborative learning (Schunk, 2008).

Students have number of roles in collaborative learning. Brufee (1995) stated that collaborative learning requires students to actively participate in groups and to take responsibilities for knowing what they need to do and on deciding how to do it without relying too heavily on their teachers. The roles of students in collaborative learning identified by MacGregor (1990: 25) are as follows:

- They need to be active problem solvers, contributors, and discussion participants
- They are highly expected to prepare for class
- Public presence with many risks
- Their attendance is dictated by community expectation
- They need to collaborate with peers
- They have responsibilities and self-definitions associated with learning interdependently
- They need to see peers, self, and the community as additional and important sources of authority and knowledge.

Defining roles and duties of both teacher and students are crucial for helping students to achieve their targeted goals and develop their critical reading skills. Teachers would need to provide an explanation of the students' duties and responsibilities, prepare them for the assigned work, encourage them to continually interact with their group members on written materials, stimulate their thinking, monitor their learning, and give suggestions and guidance when necessary. Students would take responsibilities in making decision about their project. They would the freedom to select their reading topic and read materials, to set objective, assign roles within their groups, and participate in group presentations.

2.3.2.3 Outcomes in collaborative learning

Panitz (1999:2) grouped the primary benefits of collaborative learning into four main categories: academic, social, psychological, and assessment benefits.

In terms of academic benefits, collaborative learning develops higher level thinking skills and actively involves students in the learning process. Classroom results

are improved and appropriate models for student problem solving techniques are chosen. The two academic benefits are that large lectures can be personalized and collaborative learning is especially helpful in motivating students in a specific curriculum.

In terms of social benefits, collaborative learning develops a social support system for students, builds diversity understanding among students and staff and establishes a positive atmosphere for modeling and practicing cooperation. Collaborative learning also contributes to developing learning communities.

In terms of psychological benefits, student-centered instruction increases students' self-esteem. Cooperation reduces anxiety and students develop positive attitudes towards teachers.

In terms of assessment benefits, collaborative teaching techniques utilize a variety of assessments

In the field of language learning, Nunan (1992: 3) summarizes the benefits of collaborative learning as follows:

- Learners have an opportunity to learn about learning, to learn better
- Learners can increase their awareness about language, and about self, and hence about learning
- Learner can develop, as a result, meta-communicative as well as communicative skills
- Learners have an opportunity to confront, and come to terms with, the conflicts between individual needs and group needs, both in social, procedural terms as well as linguistic, content terms
- Learners tend to recognize the decision-making tasks themselves as genuine communicative activities.

2.3.2.4 Issues in relation to collaborative learning

Barkley, Cross, & Major (2005) also points out that problems in collaborative learning cover a number of possibilities and also offer several suggestions for dealing with them. The first is inequitable participation. One possible way to encourage equitable participation is through role assignments. If role assignments fail to make students into active participants, teachers may speak privately with students about their reasons behind their lack of contribution to their group project or teachers can create

activities to strengthen group relationships. If these solutions are not workable, changing group members can be used. The second problem is student resistance to group work. The teacher needs to encourage every student to take part in establishing group ground rules so that they can feel like they are part of the group and also make them aware of the benefits of collaborative learning. Tasks need to focus on both interdependence and individual accountability so that all individuals are in charge of the task completion. The third problem comes from off-task behavior. To encourage students to collaborate with others, time devoted to complete tasks should be set aside to make them active in learning. It is possible for teachers to give compliments to the groups that perform well in order to motivate other groups. The fourth problem involves group that don't get along. The teacher should allow students to deal with their own conflict yet must be available to suggest and help find solutions for problems where necessary. If conflict cannot be solved, the teacher can re-form groups. The fifth problem arises when several students or no students want to assume the leadership position. Teachers need to stress the importance of both leaders and followers to make students aware of why they need to perform leadership roles. Another method is to award students who are leaders or switch roles among group members so that individuals get benefits when they take various responsibilities. The sixth problem is related to different ability levels. For high proficiency learners, it will be helpful for them to perform roles that are challenging for them. The teacher can select tasks that require different skills to complete so that these students can work together with their peers who are less competent but have required skills. For low proficiency learners, the teacher should allocate enough time for them to deal with tasks and encourage more competent students to assist them in doing tasks. The seventh problem regards attendance. Student attendance rules are necessary and if students continue to be absent, teachers need investigate the reasons why students are failing to attend class so that they can assist their students in changing their behavior. Where groups encounter problems with individual member's absences teachers may need re-form groups. The eighth problem is cheating. Barkley et al. refer to McKeachie (2002) who identifies strategies for preventing cheating in both individual and collaborative work:

- Reduce the pressure by providing a number of opportunities for students to demonstrate achievement so that their entire grade isn't dependent upon a single activity.
- Address academic honesty in the syllabus, so that students know what constitutes cheating
- Create interesting assignments that make reasonable demands on students.
- Develop group norms that encourage academic honesty.
- If groups are not doing well, talk to them and try to help them find ways to improve so that they don't feel compelled to resort to cheating.

2.3.2.5 Collaborative learning in second language learning

There are a number of studies that have been conducted into the use of collaborative learning in different educational contexts and highlighted its importance on interpersonal skills (Johnston, James, Lye & McDonald, 2000; Bartle, Dook & Mocerino, 2011), critical thinking (Johnston et al., 2000), and academic achievement (Norhayati et al., 2005; Bartle et al., 2011). In the field of language teaching, collaborative learning has also received interest by many researchers and evidence has shown that students could benefit from collaborative learning.

Storch (2005) investigated the writing performance of 23 ESL students in a writing class at an Australia university. The participants were allowed to work individually or in pairs. Participants asked to write a text after which the written works created by pairs and individuals were compared. Storch found evidence that the language learners who were in pairs performed better than those who worked alone. Text written by pairs were more accurate and more complex.

Compatible with the findings of Storch were the findings of Watanabe & Swain (2007) who attempted to investigate the effects of L2 proficiency differences in pairs and patterns of interaction in L2 learning. The participants of the study comprised of Japanese learners enrolled in an ESL program at a Canadian university. The participants were divided into core and non-core participants. Each core participant was paired with one non-core participant who was more competent than him or her and were also paired with one non-core participants who was less competent. The core participants were required to do tasks twice. Those in pairs were required to complete a three-stage task: pair writing, pair comparison and individual writing. The findings revealed that the core

participants learned more when working with a less competent peer, however, proficiency differences had little effect on peer assistance and L2 learning. Watanabe and Swain asserted that the development of the learners' language abilities resulted from peer-to-peer interaction.

The reviewed studies illustrated a number of important points about collaborative learning in language classrooms. The outcome and method in each studies could serve as guidelines to facilitating collaboration between students and peers in order to improve and develop students' critical reading skills.

2.3.2.6 Collaborative learning in second language reading instruction

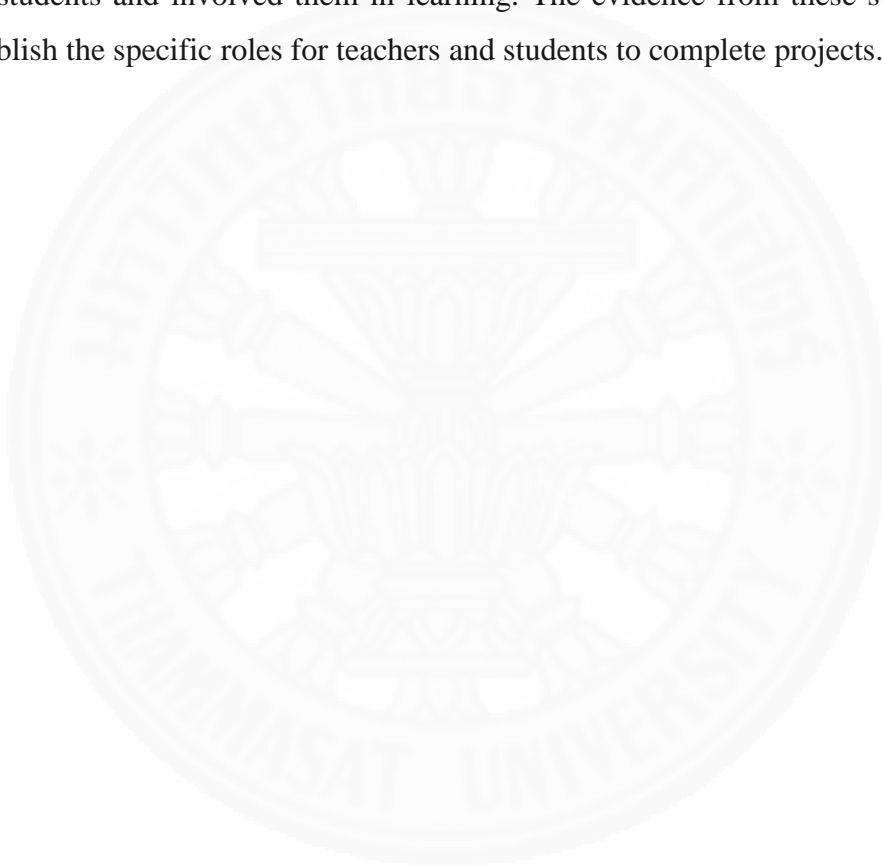
According to Ur (2012), in collaborative learning, students have an opportunity to check their understanding of a text with their peers. They can find similarities and differences in their interpretation, rethink about their interpretation, and develop a better understanding of the material. Ur's findings were correlated by Richards & Rodgers (2001) and Borich (2007) who stated that it is through interaction with others that students practice clarifying their ideas and learn how support their perspectives. Students learn from peers via defending ideas with reasoning and are likely to absorb different ways to think. Each individual contributes insights about the importance of collaborative learning on L2 reading.

A study by Gibbons (2003) attempted to investigate how teacher-student talk in a content-based classroom contributes to learners' language development. The teacher worked directly with students and elicited their assistance and engaged the students in learning the material content and the target language by asking questions and providing feedback. It was found that the interaction between teachers and students enabled students to use an academic register and develop language skills.

In another study, Ghafar Samar & Dehqan (2013) investigated EFL learners from two Iranian universities. Participants were split into two group comprised of both high and low level proficiency learners. One group was a control group and another was an experimental group. The experimental group received teacher and peer scaffolding while they were doing reading comprehension tasks. The control group were assigned tasks absent the assistance from teachers or peers. Three instruments were used to collect the data which included a language proficiency test, a reading comprehension test, and a reading strategy questionnaire. It was found that

collaboration with the teacher and peers led to better reading comprehension and reading strategy use for EFL learners.

The reviewed studies revealed that collaborative learning contributed significantly to improved student reading ability. The studies helped prepare the learning activities that made the students collaborate with others in order to develop their critical reading skills. The studies also revealed the roles of both the teacher and students in collaborative learning, the ways in which teachers provided assistance to the students and involved them in learning. The evidence from these studies helped establish the specific roles for teachers and students to complete projects.



Chapter 3

Research methodology

The intent of this chapter is to explain the research methodology employed in this study. The presentation is organized into 9 sections covering the following topics: (3.1) the context of the study, (3.2) the population and sampling, (3.3) ethical consideration, (3.4) implementing project-based learning, (3.5) research design, (3.6) research procedures, (3.7) research instruments, (3.8) data analysis, and (3.9) chapter summary

3.1 The context of the study

The study was conducted at one faculty of a public university in Bangkok, Thailand. The reason for selecting this site was based on the convenience sampling method. According to Kumar (2014), “convenience sampling is primarily guided by the convenience to the researcher, whatever this might be easy accessibility, geographical proximity, known contacts, ready approval for undertaking the study, or being a part of the group” (p.368).

This faculty offered six bachelor’s degree programs: Archaeology, Art History, Anthropology, Thai, English and French, six master’s degree programs: Archaeology, Art History, Epigraphic Studies, Sanskrit, Cultural Resource Management, and Archives and Records Management, and four doctoral degree programs: Archaeology, Art History, Sanskrit, and Epigraphic Studies.

The study was conducted in the bachelor’s degree course entitled “English communication skills I”. It was a three-credit compulsory course for the second year students who majored in Archaeology, Art History, Anthropology, Thai, and French, available in the first semester of academic year. The goal of this course was to enable students to develop four basic skills in the English language: speaking, listening, writing, and reading. The course prerequisites were “English for Everyday Use” and “English Skills Development”.

There was one three-hour class session per week, which lasted sixteen weeks. The main teaching materials were a commercial textbook for intermediate level students and an interactive CD-Rom. Selection of the textbook was undertaken by an English

committee within the faculty. The selection criteria focused on content and course objectives and the selection was approved by the English department head. The textbook was entitled “Navigate in Intermediate Level” by Oxford University Press.

Teaching methods and activities included lectures, role-playing activities, and presentations. The students worked individually, in pair, or in groups, depending on the tasks that they dealt with. The evaluation plan was as follows: class attendance and participation (10%), speaking (10%), listening (10%), class work (10%), mid-term exam (30%), and final exam (30%). The mid-term and final exams consisted of three main components: grammar, vocabulary, and reading. There were 90 items: grammar 45 items (15%), vocabulary 20 items (5%), and reading 25 items (10%). In the evaluation plan, the project that the students completed was in the category of class work, speaking, and participation. The alphabetical grades were given on a scale 1-100. The grade ranges were as follows: A (80-100), B+ (75-79), B (70-74), C+ (65-69), C (60-64), D+ (55-59), D (50-54), and F (0-49).

3.2 The population and sampling

The population was comprised of university students. According to Nunan & Bailey (2009), “it would not, of course, be practical to obtain data from the entire population” (p. 127) thus there was certainly a need use sampling. Sampling is defined as “the process of selecting a few (a sample) from a bigger group (the sampling population) to become the basis for estimating or predicting a fact, situation or outcome regarding the bigger group” (Kumar, 2013, p 148). Based on the convenient sampling method, the participants in this study were second year non-English major students. Participants were French major students, comprising a total of 20 participants (19 females and 1 male). The ages ranged from 19 to 20 years old. The native language of all students was Thai. The students’ years of English learning experience ranged between 12 and 17 years. Their level of English proficiency was high to middle intermediate.

Prior to determining whether to participate in the study, the students were informed about the details of the study and the ethical issues. After they agreed to participate in the study they were instructed through project-based learning for 14 weeks, one fifty-minute class meeting per week. The students were required to go through the five stages of doing a project: setting a group, teacher modeling, selecting

a reading topic and setting learning objectives, selecting a reading passage and doing critical reading activities, and project presentation and evaluation. In the remaining hours of class, students learned grammar and practiced pronunciation, reading, listening, and speaking skills through the exercises in the textbooks.

The participants were observed throughout the 14 weeks. The students were required to write response journals during the selecting a reading passage and doing critical reading activities stages. At the end of each stage, questionnaires were distributed and some of students were interviewed.

3.3 Ethic consideration

Because participants were human beings ethical issues had to be addressed. After the proposal defense, the required ethical documents were submitted to the Human Ethics Committees of Thammasat University. The documents included: the research proposal, application form, consent form, and an information sheet. The committee was responsible for examining crucial issues related to justice, risks, benefits, confidentiality, and the rights of the participants.

After the approval from the Human Ethics Committees, a letter to request permission to conduct research was sent for approval of the head of Western language department of the faculty at which the study would be conducted. Prior to conducting the main study, the participants were informed about the details of the study and the ethical issues. They were presented with the information sheets and consent forms both of which were written in Thai so that it was easy for the students to gain a clear understanding about the study before deciding to participate in the study. Students were required to read and complete the form if they were willing to be the participants.

3.4 Implementing project-based learning

The presentation of this section is organized into 2 subsections covering the following topics: (3.4.1) stages of doing the project in the present study and (3.4.2) teaching materials.

3.4.1 Stages of doing the project in the present study

There was a series of five stages of doing the project: setting a group, modeling, selecting a reading topic and setting learning objectives, selecting a reading passage and do critical reading activities, and project presentation and evaluation, as illustrated in Table 3.1. The details of each stage were as follows:

Stage 1 Setting groups

This stage started with an explanation of project-based learning and the stages of doing the project given by the teacher. The purpose was to provide familiarity with new concepts, especially to for students with little or no experience with the concepts, and to make students understand what was expected of them (Ur, 2012).

After the explanation, the students were required to set their own groups on the basis of self-selection. Allowing them to do so was useful for two reasons. The first reason was that the type of project-based learning was semi-structured text project, which places emphasis on student-centered learning and the teacher's assistance in learning. Self-selection was a good start for students to perform the roles of decision makers in their learning. The second reason was that self-selection yielded psychological benefits to students (Harmer, 2001; Brookfield & Preskill, 2005). Familiarity with their peers generated a satisfaction with group work and enhanced their confidence in exchanging information and expressing feeling. The students worked in groups of five. The group size was considered appropriate since all members could be recognized and tended to participate more actively in group work (Harmer, 2001).

After group formation, the groups were required to exchange information about their background knowledge and interests. They then discussed topics relevant to group work. The topics included anticipated problems of group work, and the solutions to the problems. The reason for the discussion was that group preparation would reduce any difficulties that could possibly arise during future collaborative activities. Students were also required to discuss their desired and undesired behaviors with their group members. The group expectations for each member needed to be established to ensure that individual responsibilities could be recognized.

Stage 2 Teacher modeling

This stage aimed to demonstrate how to use reading strategies and how execute a project while enabling students to get practice in reading strategies necessary for reading the texts. The teacher demonstrated how to

- identify the author's purpose
- identify the author's tone
- identify the author's point of view
- identify the intended audience

- make inferences and draw conclusions
- distinguish facts from opinions
- identify the author's bias
- evaluate the author's argument
- evaluate the author's evidence.

Modeling involved showing and telling students how to gain new knowledge or develop new skills in order to assist them in dealing with tasks by themselves (McNamura, 2007).

After teacher modeling, the students were required to individually practice reading strategies through supplementary reading worksheets. Allowing the students to work individually opened an opportunity for the teacher to monitor how well they could gain an understanding of what was taught (Richard, 1994).

The teacher then spent some time on an actual step-by-step demonstration on how to complete the project even though a verbal explanation on how to execute a project was explained during the first stage. According to Ur (2012), a better understanding of information can be achieved by presenting the information more than once.

Stage 3 Selecting a reading topic and setting learning objectives

In this stage, the groups were involved in determining a reading topic that they had an interest in and setting learning objectives. The examples of the texts to be used for critical reading activities were given to the students and the criteria for text selection were explained.

Stage 4 Selecting a reading passage and do critical reading activities

This stage started with the group selection of texts. According to Hedge (2000), it would be satisfying if students have a chance to select reading texts based on their interest. This notion was supported by Fry (1991) who stated that in order to develop students' reading skills students must be interested in what they are reading making them more likely to be committed to reading.

After each group agreed on various reading material, the teacher wrote the title of all reading texts on the board for the students to vote on their preferred titles. The texts were read in order based on the votes generated. One different text was selected for each week. Every student was required to repeatedly participate in a series of critical reading activities:

- reading the texts individually
- writing response journals about the answers to the questions about the author's purpose, tone, point of view, the intended audience, inferences and conclusions, facts and opinions, argument, evidence, the student's feeling, and reflection about the text
- discussing about the texts with the group members
- revising their understanding

The groups who owned a particular text were further required to make a presentation on their text in relation to critical reading skills along with their ideas, solutions, or alternatives related to what they had read. This created a cycle of continual did critical reading experiences for the students.

Stage 5 Project presentation and evaluation

The groups were required to make a presentation about the project. After presentations were finished, the groups received comments from their classmates and the teacher. Each member of the group evaluated the group performance throughout the project. According to Gardner (1991), students should be required to think back over their learning processes and consider whether project-based learning contributed to their learning development.

Three main steps in developing a project	Stage of the project	Objectives
Preparation	1. Setting a group	<ul style="list-style-type: none"> ▪ To enable students to form groups ▪ To promote a positive atmosphere in learning
Conducting a project	2. Teacher modeling	<ul style="list-style-type: none"> ▪ To enable students to identify the author's purpose ▪ To enable students to identify the author's tone ▪ To enable students to identify the author's point of view ▪ To enable students to identify the author's intended audience ▪ To enable students to make inference and draw conclusion ▪ To enable students to distinguish facts and opinions ▪ To enable students to identify the author's bias ▪ To enable students to evaluate the author's argument ▪ To enable students to evaluate the author's evidence
	3. Selecting a reading topic and setting learning objectives	<ul style="list-style-type: none"> ▪ To enable students to select a reading topic ▪ To enable students to set learning objectives
	4. Selecting a reading passage and do critical reading	<ul style="list-style-type: none"> ▪ To enable students to select a reading passage ▪ To enable students to identify the author's purpose ▪ To enable students to identify the author's tone ▪ To enable students to identify the author's point of view

		<ul style="list-style-type: none"> ▪ To enable students to identify the author’s intended audience ▪ To enable students to make inference and draw conclusion ▪ To enable students to distinguish facts and opinions ▪ To enable students to identify the author’s bias ▪ To enable students to evaluate the author’s argument ▪ To enable students to evaluate the author’s evidence
Product presentation and evaluation	5. Project presentation and evaluation	<ul style="list-style-type: none"> ▪ To enable students to make a presentation about their end product related to the texts that they read ▪ To enable students to evaluate their performance ▪ To enable students to evaluate their group performance

Table 3.1: Stages of the project in the present study

3.4.2 Teaching materials

There were four teaching materials used in this study. These included lesson plans, supplementary reading worksheets, group records, and a project rubric. The teaching materials were constructed by the researcher and the researcher’s advisor was consulted for improvements prior to being validated by experts. After validation, the index of item objectives in related to each material was interpreted. Revisions were made based on the comments and suggestions from the experts. Teaching materials with IOC scores lower than 0.50 were sent back to the experts for additional validation. The teaching materials were then piloted. Three validators were invited to validate the teaching materials: two from the field of English language teaching and one from the field of education.

The presentation of this section is organized into 4 subsections covering the following topics: (3.4.2.1) lesson plans, (3.4.2.2) supplementary reading worksheets, (3.4.2.3) group record, and (3.4.2.4) project rubric.

3.4.2.1 Lesson plans

The lessons plans in this study focused on critical reading skills and on achieving “the psychomotor learning objectives” (Singh, 2008, p.39).

a) Construction of the lesson plans

The lesson plans were constructed by the researcher to be used for 14 weeks. The format of the lesson plans was based a studied conducted by Brown (2007) who introduced the six keys elements of a lesson plan: designing goals, objectives, materials and equipment, procedures, assessments, and extra-class work.

(i) Goals

The study was concerned with the teaching of reading, particularly on critical reading. Therefore, the specific goal was to enable students to develop critical reading skills.

(ii) Objectives

The learning objectives were aimed at enabling students to:

- (1) identify the author's purpose
- (2) identify the author's tone
- (3) identify the author's point of view
- (4) identify the author's intended audience
- (5) make inferences and draw conclusions
- (6) distinguish facts from opinions
- (7) identify the author's bias
- (8) evaluate the author's argument
- (9) evaluate the author's evidence

(iii) Contents

The contents were related to critical reading as presented above.

(iv) Materials and equipment

Materials consisted of supplementary reading worksheets, group record, and response journals. The supplementary reading worksheets were designed to make students practice reading strategies. (See more details of the supplementary reading worksheets in section 3.4.3) The group record was designed with the aim of making students aware of the relevance between project-based learning and language learning and making students understand the importance of fulfilling roles as group members and of undertaking collaborative efforts to complete the material together. (See more details of the group record in section 3.4.4.) The response journal was designed to make individual students demonstrate their understanding of the text. (See more details of the response journals in section 3.7.3)

(v) Procedures

Procedures were based on a the five stages of doing a project: setting groups, teacher modeling, selecting a reading topic and setting learning objectives, selecting a

reading passage and do critical reading activities, and project presentation and evaluation. (See more details of stages of doing the project in Section 3.4.1)

(vi) Assessment

As stated in the literature review, Serafini (2010) identified three main sources of information from which researchers could draw upon to understand students' literacy abilities as follows: artifacts, observations and interactions. All such sources of information were used to assess the students and determine if objectives were achieved in this study. The artifacts were response journals, observations were conducted for 14 weeks and interviews were conducted at the end of each stage.

(vii) Extra-class work

Extra-classwork was in the form of supplementary reading worksheets and response journals. The supplementary reading worksheets were done class, however, students that could not complete the worksheets within time limit were allowed to take them as homework. The response journal was assigned as homework material. (See more details about the supplementary reading worksheet in section 3.4.3 and the response journal in section 3.7.3) (See an example of lesson plans in Appendix A)

b) Validation of the lesson plans

Evaluation forms were constructed for experts to validate the lesson plans. The forms consisted of two sections. The first section required the experts to indicate how they responded to each item in the evaluation form. The items addressed the appropriateness of learning objectives, instructional procedures, sequences of activities instructional materials, elements of the lesson plans, and language. Each individual expert was requested to rate each item based on a three-point scale, -1 = not appropriate, 0 = not sure, and +1 = appropriate. Mean scores of each item were calculated. Items which scored were lower than 0.50 were revised. The second section required the experts to write down any additional comments or suggestions in the boxes provided. (See the evaluation form of the lesson plans in Appendix B)

Item	Expert (N=3)			Total	IOC	Interpretation
	1	2	3			
1. The objectives of the lesson plans are appropriate.	+1	+1	+1	3	1	accepted
2. The instructional procedures in the lesson plans are appropriate.	+1	+1	+1	3	1	accepted
3. The sequence of activities in the lesson plans is appropriate.	+1	+1	0	2	0.6	accepted
4. The instructional materials used in the lesson plans are appropriate.	+1	+1	+1	3	1	accepted
5. The lesson plans include all essential elements.	0	+1	0	1	0.3	revised
6. The language used in the lesson plans is clear.	+1	+1	+1	3	1	accepted

Table 3.2: Scores of the index of item-objective congruence of the lesson plans

Table 3.2 showed that all experts agreed on items 1, 2, 4, and 6, which were found to have the IOC score of 1. The experts agreed that the objectives, procedures, materials were appropriate and the language used in the lesson plans was clear. Item 3 garnered an acceptable mean IOC score of 0.6. Item 5 received the lowest IOC mean score of 0.3 and required revision.

Based on the comments and suggestions from the experts several issues needed to be considered and addressed during the revision of the lesson plans. The first was concerned with the elements of the lesson plans. It was suggested that assessment portions needed to be included in the lesson plans. Assessment portions were deemed important because they provide an indication of whether or not the students were achieving objectives. The experts also suggested that conclusion parts be clearly separated from the procedure parts within the lesson plans. The second issue concerned with time allocation. Clear time allocation was significant in ensuring how long each sub-stage would take. Based on the comments and suggestions from the experts, the revisions were made after consultation with the advisor.

3.4.2.2 Supplementary reading worksheets

The supplementary reading worksheets were needed for the students to practice using the reading strategies necessary for completing project. The worksheets included exercises to: 1) identify the author's purpose, (2) identify the author's tone, (3) identify the author's point of view, (4) identify the author's intended audience, (5) make inferences and draw conclusions, (6) distinguish facts from opinions, (7) identify the

author's bias, (8) evaluate the author's argument, and (9) evaluate the author's evidence.

a) Construction of the supplementary reading worksheets

Ur (2012) listed four stages of making worksheets: preparation, first draft, feedback, and second draft.

Stage 1 Preparation

Since the worksheets were aimed at enabling students to practice reading strategies, the first attempt was made to find appropriate ready-made exercises. The rationale for this was based a study by Crookes (2013) wherein he stated that “the availability of a good textbook or locally developed materials will make a considerable difference to the confidence of a teacher taking on a new course” (p.9). The selection of the exercises was determined by seven factors proposed by Day (1994) to ensure reading selection. They included (1) interest, (2) exploitability, (3) readability (consisting of lexical knowledge, background knowledge, syntactic appropriateness, organization, discourse phenomena, and length), (4) topic, (5) political appropriateness, (6) cultural suitability, and (7) appearance (layout and type side and font).

Stage 2 First draft

The first draft of the worksheets was made and organized into 9 parts by reference to critical reading skills. Each part focused on one critical reading skill and covered a description of what each critical reading skill was, followed by a related exercise. One last exercise that focused on all the critical reading skills was also included. The exercises were drawn from a variety of sources on the Internet. The response formats for the exercises were short-answer responses.

Stage 3 Feedback

The worksheets were validated by the experts and then piloted.

Stage 4 Second draft

The final version of the supplementary reading worksheets was revised based on what was suggested by the experts and what was found in the pilot study. It was divided into 9 parts by reference to critical reading skills. Each focused on one critical reading skills. It covered a description of each critical reading skill, followed by the exercise in relation to it. There was one last exercise, with its emphasis on all nine critical reading skills. These separate exercises were drawn from a variety of sources

on the Internet. The response formats of all exercises were short-answer response, except the first and second exercises that the response formats were multiple-choice due to the comments of the experts.

The worksheets were used in the second stage of doing the project – teacher modeling. The students were required to do the worksheets individually and their responses were checked with their peers and the teacher. (See the supplementary reading worksheets in Appendix C)

b) Validation of the supplementary reading worksheets

Evaluation forms were constructed for the experts to validate the supplementary reading worksheets. The forms consisted of two sections. The first section required the experts to indicate how they responded to each item in the evaluation form. The items addressed the relevance between the supplementary reading and its objectives, the appropriate of the reading topic, the level of difficulty, the appropriateness of exercise items, the directions, and the format. Each individual expert was requested to rate each item based on a three-point scale, -1 = not appropriate, 0 = not sure, and +1 = appropriate. Mean scores of each item were calculated. Items that scored lower than 0.50 were revised. The second section required the experts to write down any additional comments or suggestions in a box provided. (See the evaluation form of the supplementary reading worksheets in Appendix D)

Item	Expert (N=3)			Total	IOC	Interpretation
	1	2	3			
1. The supplementary reading meets the desired objectives.	+1	+1	+1	3	1	accepted
2. The topics of the reading selection are appropriate.	+1	+1	+1	3	1	accepted
3. The level of difficulty of the supplementary reading is appropriate.	+1	+1	0	2	0.6	accepted
4. The number of exercise items is appropriate.	+1	+1	+1	3	1	accepted
5. The directions of the exercises are clear.	+1	+1	+1	3	1	accepted
6. The format of the supplementary reading is appropriate.	+1	+1	+1	3	1	accepted

Table 3.3: Scores of the index of item-objective congruence of the supplementary reading worksheets

Table 3.3 showed that all experts agreed on items 1,2,4,5 and 6, which were found to have the same IOC score of 1 indicating that the supplementary reading

worksheets met the desired objectives. The topics of the reading selection, the number of exercise items, the format, and the direction of the exercises were all deemed appropriate. Item 3, which referred to the difficulty level of the texts also received an acceptable IOC score of 0.6.

There were issues that needed to be considered for revising the supplementary reading worksheets according to comments and suggestions from the experts. In the exercise for identifying the author's purpose, it was suggested that the multiple-choice answer formats should be used over the short answer formats in order to make it possible for the students to get the answers. In respect to the exercise for making inferences and drawing conclusions, it was suggested that the answers to the first question should be given as an example. In the exercise for distinguishing facts from opinions, to encourage more discussions students were required to highlight both facts and opinions, and were encouraged to underline any unclear statements that could be either fact or opinion, depending on the context. Experts also recommended deleting the yes-no question in the final exercise judging it better to ask students to identify evidence and make judgments on whether evidence was strong enough to support the author's view. Additional questions about inference and bias were also required. Based on the comments and suggestions from the experts, the revisions were made after consultation with the advisor.

3.4.2.3 Group record

The group record was needed for two reasons. The first reason was based on the notion of Beckett & Slater (2005) who stressed the importance of creating materials that would make students aware of the relevance between project-based learning and language learning. The second reason make students understand the importance of fulfill their roles as group members and of engaging in collaborative efforts to complete the material together.

a) Construction of the group record

The group record was adapted from the Project Framework by Beckett & Slater (2005). (See more details of the Project Framework in chapter 2 section 2.4.5) The group record was organized in 7 sections as follows:

Section 1 A description about the steps of doing the project

This section was aimed at providing the groups with an understanding of what they were expected to do in order to complete the project.

Section 2 An activity of knowing more about group members and group work

This section was aimed at establishing the relationship among group members and preparing them for group work. The group members were required to tell the groups about their interests and background knowledge. Students were also required to exchange ideas about desired and undesired behaviors of group members, to raise any potential problems that may arise in the future during group work and to pose possible solutions for addressing these problems.

Section 3 A project chart

This section was aimed at making the groups aware of the knowledge and skills that could be acquired after learning through project-based learning. The groups were required to write down their reading topic, learning objectives, ideas, solutions, or suggestions to be proposed. They were also required to write about content, language (vocabulary and grammatical structures) and any working skills gained through project-based learning.

Section 4 A time frame

This section was aimed at helping the groups allocate time in completing the project. The groups were required to track what tasks were already completed so that they could know what they needed to be done next and how much time to allocate to the remaining tasks.

Section 5 A critical reading summary

This section was aimed at making the groups read the texts and to practice critical reading skills by finding the author's purpose, tone, point of view, the intended audience, inferences and conclusions, facts and opinions, argument, and evidence. The groups were required to demonstrate their understanding of written texts, supported with reasons and evidence from within the texts.

Section 6 A project presentation summary

This section was aimed at helping the groups in presentation preparation. The groups were required to summarize what they intended to present and how it was related to the text.

Section 7 Evaluation

This section was aimed at encouraging the groups to evaluate project-based learning. The groups were required to evaluate their collaborative learning behaviors, stages of doing a project, and materials. (See the group record in Appendix E.)

b) Validation procedure of the group record

Evaluation forms were constructed for the experts to validate the group record. The forms consisted of two sections. The first section required the experts to indicate how they responded to each item in the evaluation form. The items addressed the relevance of the group record and research objectives, the practicality of the group record, the format of the group record, language, and the length of the group record. Each individual expert was requested to rate each item based on a three-point scale, -1 = not appropriate, 0 = not sure, and +1 = appropriate. Mean scores of each item were calculated. Items which scored lower than 0.50 were revised. The second section required the experts to write down any additional comments or suggestions in a box provided. (See the evaluation form of the lesson group record in Appendix F)

Item	Expert (N=3)			Total	IOC	Interpretation
	1	2	3			
1. The weekly group record meet the research objectives.	+1	+1	+1	3	1	accepted
2. The weekly group record can help students in doing a project.	+1	+1	+1	3	1	accepted
3. The format of the weekly group record is appropriate.	+1	+1	+1	3	1	accepted
4. Language used in the weekly group record is appropriate.	+1	+1	+1	3	1	accepted
5. The length of the weekly group record is appropriate.	+1	+1	+1	3	1	accepted

Table 3.4: Scores of the index of item-objective congruence of the group record

Table 3.4 showed that all experts agreed on all five items all of which received an IOC score of 1. This meant that the group record met the research objectives and would help students in completing a project and that the format, length, and language were appropriate.

According to comments and suggestions from the experts some issues were raised and considered for revision. Experts suggested that the wording in the group record was unclear. The first word mentioned “strengths” and the experts suggested that a clear explanation on the scope of strengths should be included to clarify whether

the strength was academic or something more general. Another ambiguous word was “language”. A proper definition was required so that students would not get frustrated when writing answers under the “language” column. Based on the comments and suggestions from the experts, revisions were made after consultation with the advisor.

3.4.2.4 Project rubric

Stevens & Levi (2005) defined a rubric as “a scoring tool that lays out the specific expectations for an assignment” (p.3) and proposed four key stages in constructing a rubric.

a) Construction of the project rubric

Stage 1 Reflecting

Rubric construction, needed to focus on the use of project-based learning. Expectation about what the students needed to achieve after learning through via the project-based approach and the evidence that could show whether or not the students could meet the expectation were included.

The study was aimed at helping students develop critical reading skills. The learning objectives were to enable students to (1) identify the author’s purpose; (2) identify the author’s tone; (3) identify the author’s point of view; (4) identify the intended audience; (5) make inferences and draw conclusions; (6) distinguish facts from opinions; (7) identify the author’s bias; (8) evaluate the author’s argument; (9) evaluate the author’s evidence. The expectations for the students who engaged in project-based learning was that they would be able to make sense of texts in terms of the author’s purpose, tone, point of view, intended audience, inferences and conclusions, facts and opinions, bias, arguments, and evidence. Students would also be expected to give their responses with supporting reasons and evidence from the text. Evidence demonstrating whether or not the students could accomplish the objectives could be seen from their responses written in the group record.

Stage 2 Listing

The learning objectives were used as a basis for creating a list of performance expectations. A list of performance expectation related to collaborative learning and group presentation were included alongside project objectives. This was because the project in this study followed a collaborative learning approach requiring students to work together for the purpose of completing the project and making a presentation

which reflected what they had learned through project-based learning. The detailed performance description also written in the rubric.

Stage 3 Grouping and labeling

The performance description in stage 2 was grouped and labeled. The rubric was in the form of tables. It was piloted and validated by the experts.

Stage 4 Application

The final version of the project rubric used in the main study was revised based on the comments of the experts and the findings from the pilot study. It consisted of two main parts. The first was related to project work. There were three categories: (1) how well the groups got the information from the passage, involving identifying the author's purpose, tone, point of view, intended audience, making inferences and conclusions, distinguishing facts and opinions, evaluating arguments and evidence, with the support from reasons and evidence found in the text; (2) how well the groups reacted to the passages and proposed their ideas, solutions, or suggestions based on what was read including whether the groups could pinpoint the issues that they agreed or disagreed on reading the passages and how strongly they supported their perspectives; whether their ideas, suggestions, or solutions related to the passages and how well they supported by reasons and evidence found in the passages; and (3) how well the group collaborated based on positive interdependence and individual accountability. The second part involved how well the groups made their presentations. This part was subdivided into organization, audience engagement, language and fluency. (See the project rubric in Appendix G.)

b) Validation of the project rubric

The evaluation forms were constructed for the experts to validate the project rubric. The forms consisted of two sections. The first section required the experts to indicate how they responded to each item of the group record. The items addressed the objectives of the supplementary reading, the appropriateness of the reading topic, the level of difficulty, the appropriateness of exercise items, the directions, and the format. Each individual expert was requested to validate the lesson plans by rating each item based on a three point scale, -1 = not appropriate, 0 = not sure, and +1 = appropriate. Mean scores of each statement will be calculated. Items which scored lower than 0.50 were revised. The second section required the experts to write down their additional

comments or suggestions in the boxes provided. (See the evaluation form of the project rubric in Appendix H.)

Item	Expert (N=3)			Total	IOC	Interpretation
	1	2	3			
1. The rubric for the project is practical.	0	+1	+1	2	0.6	accepted
2. The rubric for the project is appropriate.	0	0	+1	1	0.3	revised
3. The description of each criterion is easy to understand.	0	+1	0	1	0.3	revised
4. The rubric covers all relevant criteria.	+1	+1	0	2	0.6	accepted

Table 3.5: Scores of the index of item-objective congruence of the project rubric

Table 3.5 showed that item 1 and item 4 had acceptable IOC scores of 0.6. Item 2 and item 3 had unacceptable IOC scores of 0.3 and needed to be revised.

According to comments and suggestions from the experts some issues needed to be considered for revising the project rubric. The first issue was the table design which made it difficult to understand how to rate the students' performance. Redesigning the rubric table was required. The second issue involved the subjective statements. Some performance descriptions were subjective, some were not clear enough, and others contained no clear difference between levels. Rewriting the description was required. The revisions were made after consultation with the advisor and the project rubric was sent back to the validator for a second validation.

3.5 Research design

The first research question was crafted to explore how students develop their critical reading skills after learning through project-based learning. The qualitative research design was used in answering the research question. According to Patton & Cochran (2002), "qualitative research is characterized by its aims, which relate to understanding some aspect of social life, and its methods which (in general) generate words, rather than numbers, as data for analysis" (p.2).

According to Nunan & Bailey (2009: 413), qualitative data in second language classroom research can take many forms:

- (1) narrative accounts of a typical school day by a teacher or a student
- (2) observers' notes about lessons
- (3) maps showing the position (s) of the participants and furniture

- (4) transcripts of lessons
- (5) lesson plans and teachers' notes
- (6) open-ended questionnaire responses
- (7) video or audio recordings of classroom interaction
- (8) stimulated recall responses from students or teachers based on viewing video recordings of lessons
- (9) focused interview protocols
- (10) entries in teachers' or learners' diaries
- (11) copies of students' work.

According to Franenkel & Wallen (2006),

qualitative researchers use three main techniques to collect and analyze their data: observing people as they go about their daily activities and recording what they do; conducting in-depth interviews with people about their ideas, their opinions, and their experiences; and analyzing documents or other forms of communication (content analysis)" (p.449).

In addition to qualitative research instruments, quantitative research instruments were also used for data collection. The qualitative research instruments were the observations, interviews, and response journals. According to Murray (2003), quantitative methods "focus attention on measurements and amounts (more and less, larger and smaller, often and seldom, similar and different) of the characteristics displayed by the people and events that the research studies." (p.1). The quantitative research instrument in this study was the questionnaires.

3.6 Research procedures

Research procedures were divided into four phases and described the following details:

Phase 1 Development of project-based learning to enhance critical reading skills

Related literature and previous studies related to critical reading, project-based learning, sociocultural theory, collaborative learning, and L1 in L2 learning were reviewed in order to gain valuable insights into the theoretical framework. The teaching procedures and teaching materials were then developed and the research instruments

were constructed for data collection to answer the research questions. All the teaching materials and research instruments were validated by experts before being piloted.

Phase 2 A Pilot study

Prior to the main study, all materials and instruments placed under trial. A pilot study was conducted with the students whose backgrounds were comparable with the participants of the study. Any ambiguities revealed in the pilot study were revised. The final versions of the materials and instruments to be used in the main study were then constructed. The results of the pilot study were used to improve the teaching materials and research instruments before conducting the main study.

Phase 3 The main study

In the main study, the participants learned through project-based learning for 14 weeks. The participants were required to follow the five stages of doing a project. At the end of each stage, the students were required to complete the questionnaires and some of them were interviewed individually. Students were also required to complete the response journals during completion of the stage for selecting a reading passage and doing critical reading activities. Participants' behaviors were observed throughout the project.

Phase 4 Data analysis and interpretation

The data derived from the observations, semi-structured interviews, response journals required qualitative data analysis. Content analysis was used to interpret the qualitative data. The quantitative data derived from the completed questionnaires was interpreted using Statistical Packages for the Social Sciences (SPSS), including descriptive statistics of the mean. The data from all research instruments was merged for interpretation.

3.7 Research instruments

There were four research instruments used in this study, which included observations, interviews, response journals, and questionnaires. The research instruments were constructed by the researcher and presented to the advisor for improvement prior to being validated by the experts. After validation was completed, the index of item objective congruence of each material was interpreted. Revisions were made based on the comments and suggestions from the experts. Research instruments that scored lower than IOC 0.50 were sent back to the experts for additional

validation. The research instruments were then piloted. Three validators were invited to validate the research instruments: two from the field of English language teaching and one from the field of education.

This section is about qualitative and quantitative research instruments for data collection. The presentation is organized into 4 sections covering the following topics: (3.7.1) observations, (3.7.2) interviews, (3.7.3) student response journals, and (3.7.4) questionnaires.

3.7.1 Observations

According to Merriam (2009), an observation is defined as “a major means of collecting data in qualitative research. It offers a firsthand account of the situation under study and, when combined with interviewing and document analysis, allows for a holistic interpretation of the phenomenon being investigated” (p.136). It can be said that observation is used for “complementing other research methods to triangulate and strengthen interpretation of emerging findings” (Menter et al, 2011, p.163).

The type of observation used was participant observation. “Participant observation demands firsthand involvement in the social world chosen for study-the researcher is both a participant (to varying degrees) and an observer (also to varying degrees. Immersion in the setting permits the researcher to hear, see, and begin to experience reality as the participants do” (Marshall & Rossman, 2011, p.140). There were two main ways in which participant observation could be made. Observations could be made overtly or covertly. In this study, overt observation was used. The rationale for this was related to ethical issues. The participants needed to be informed that they were being observed and their permission was required.

However, when overt observation was used, it was common to find certain participants adjusting their behaviors due to the awareness of being observed (Fraenkel & Wallen, 2006; Merriam, 2009; O’leary, 2014). Such changes would affect the outcome of the study (Fraenkel & Wallen, 2006). It was said that changes in behaviors tended to be reduced when participants became familiar with the observer over a period of time. The duration of observation was 14 weeks, once a week for fifty minutes.

3.7.1.1 Observation recordings

In order to systematically record observation data, an observation form was needed so that the behaviors of the students and all relevant information could be consistently recorded.

The most important factor in constructing the observation form was indicating what researchers needed to observe. As Merriam (2009) points out, “what to observe is determined by several factors. The most important is the researcher’s purpose in conducting the study in the first place. In other words, the conceptual framework, the problem, or the questions of interest determine what to be observed” (p.96). Merriam (2009: 120) lists observable elements that are present in any setting: physical setting, the participants, activities and interactions, conversation, subtle factors, and observer’s behaviors.

The list proposed by Merriam was a basis for developing the observation forms in this study. The form was divided into two components: physical setting and activities and interaction. In the first component, seating arrangement, facilities, and other related factors needed to be recorded prior to the lesson. Interruptions or distracting noises and others similar elements needed to be recorded during the lesson. The second component consisted of 2 main categories. The first category was related to collaborative learning, consisting of 5 behaviors. The second category was critical reading skills, consisting of 29 behaviors. The category was divided into 9 subcategories:

- (1) identify the author’s purpose
- (2) identify the author’s tone
- (3) identify the author’s point of view
- (4) identify the intended audience
- (5) make inferences and draw conclusions
- (6) distinguish facts from opinions
- (7) identify the author’s bias
- (8) evaluate the author’s argument
- (9) evaluate the author’s evidence.

A rating scale indicating Y = yes, N = no, and U = unsure was used to track whether target behaviors were observed or not observed. Boxes were provided for writing about the interactions in the classroom, including teacher-student interaction,

student-student interaction, and nonverbal communications. Boxes were also included for writing comments about observed behaviors. (See the observation form in Appendix I) Video and audio recording was also used to record the behaviors of students for complete observation.

3.7.1.2 Validation procedure of the observation form

Evaluation forms were constructed for the experts to validate the observation form. The forms consisted of two sections. The first section required the experts to indicate how they responded to each item in the evaluation form. The items addressed the form's practicality in answering the research question, the format, and the appropriateness of statements. Each individual expert was requested to rate each item based on a three-point scale, -1 = not appropriate, 0 = not sure, and +1 = appropriate. Mean scores of each item were calculated. Items that scored lower than 0.50 were revised. The second section required the experts to write down any additional comments or suggestions in the boxes provided. (See the evaluation form of the observation form in Appendix J)

Item	Expert (N=3)			Total	IOC	Interpretation
	1	2	3			
1. The observation form is practical in answering the research question.	+1	+1	0	2	0.66	accepted
2. The format of the observation form is appropriate.	+1	+1	+1	3	1	accepted
3. The observation form covers all behaviors that should be observed.	+1	+1	+1	3	1	accepted
4. The statements in English are appropriate.	+1	+1	+1	3	1	accepted

Table 3.6: Scores of the index of item-objective congruence of the observation form

Table 3.6 showed that all experts agreed on items 2, 3, and 4, which had acceptable IOC scores of 1. The experts agreed that the format of the observation form and the statement in English was appropriate and that the form covered all behaviors that needed to be observed. Item 1 in the observation form was deemed practical in answering the research question and obtained an acceptable IOC mean score of 0.6.

According to comments and suggestions from the experts, there were some issues that needed to be considered for revision. The first was related to component 1 (physical setting) which included seating arrangement, interruption, distracting noise, and others. The experts commented that these factors were being mixed up. Some participants needed to be observed prior to the lesson, while some needed to be

recorded during the lesson. It was suggested to make this component more organized. The second issue was concerned with some unclear statements, which required the use of clearer expressions for expected actions. Based on the comments and suggestions from the experts, revisions were made after consultation with the advisor.

3.7.1.3 Classroom observation process

For ethical reason, the participants were informed that they would be videotaped and audio recorded throughout the project prior to commencing the first observations. Video and audio recordings and observation forms were used by the researcher to record the behaviors of the students for complete observation of all sessions for 14 weeks. The video and audio recordings and the observation form were then sent to two other observers to record their observations from the video and audio recordings. The two observers were university teachers. One observer held a doctorate degree and had 11 years of English teaching experience. The second observer was a Ph.D. candidate who had 9 years English teaching experience. A level of agreement on observed behaviors was checked and the interpretations of the researcher and another two observers were compiled for the reliability of the data.

3.7.2 Interviews

Interviews are considered to be research instruments that provide detailed information about participants' thoughts, opinions, and experiences related to particular issues (Kendall, 2008; Roulston, 2010). As Pattan (2002) explains,

We interview people to find out from them those things we cannot directly observe. We cannot observe feelings, thoughts, and intentions. We cannot observe behaviors that took place at some previous point in time. We cannot observe situations that preclude the presence of an observer. We cannot observe how people have organized the world and the meanings they attach to what goes on in the world. We have to ask people questions about those things. (p.341)

Menter, Elliot, Hulme, Lewin, & Lowden (2011) further point out that

The information, gathered using interviews, therefore, is not meant to provide generalizable findings but rather to enhance understanding of social actions and processes. Informants' accounts can be compared and contrasted and triangulated with other evidence gathered from surveys, observations and

documentary sources this process helps promote the robustness of the research findings. (p. 127)

The type of interviews conducted in this study was the semi-structured interviews, which are considered as “non-standardized, and are often used in qualitative analysis” (Gray, 2014). The benefit of this interview type is that a researcher can get all relevant information from each interviewee based on the interview guide and the researcher is also allowed make follow-up questions when they encounter something interesting from the responses of the interviewee (Bernard, 2006; Lichtman, 2013).

3.7.2.1 Construction of the interview guide

After the type of project was selected and the learning activities were created, a prepared set of questions covering what needed to be investigated, known as an interview guide, was constructed. According to Rubin & Babbie (2010), “an interview guide is a qualitative measurement instrument that lists in outline form the topics and issues that the interviewer should cover in the interview, but it allows the interviewer should cover in the interview, but it allows the interview to adapt the sequencing and wording of questions to each particular interview” (p.104). This instrument can also help the researcher consistently gather relevant information based on the set questions (Guthrie, 2010; Merriam, 2009). In this study, five interview guides were used to interview the participants on the steps in completing a project, each consisting of open-ended questions. See the observation form in Appendix K.

3.7.2.2 Validation procedure of the interview

Evaluation forms were constructed for the experts to validate the interview guides. The forms consisted of two sections. The first section required the experts to indicate how they responded to each item in the evaluation form. The items addressed the guides’ practicality in answering the research question, the appropriateness of questions, language, and the sequences of the questions. Each individual expert was requested to rate each item based on a three-point scale, -1 = not appropriate, 0 = not sure, and +1 = appropriate. Mean scores of each item were calculated. Items that scored lower than 0.50 were revised. The second section required the experts to write down any additional comments or suggestions in the boxes provided. See the evaluation form of the interview guides in Appendix L.

Item	Expert (N=3)			Total	IOC	Interpretation
	1	2	3			
1. The questions in the interview guide meets the research objectives.	+1	+1	+1	3	1	accepted
2. The questions in English and Thai are clear and easy to understand.	+1	+1	0	2	0.66	accepted
3. The interview guide does not contain leading questions or biased questions	+1	+1	+1	3	1	accepted
4. The interview guide does not contain double barreled questions.	+1	+1	+1	3	1	accepted
5. The interview guide does not contain double barreled questions.	+1	+1	+1	3	1	accepted

Table 3.7: Scores of the index of item-objective congruence of the interview guide

Table 3.7 showed that all experts agreed on items 1, 3, 4, and 5, which received an acceptable IOC score of 1. The experts agreed that the questions in the interview guide met the research objectives. The interview guide did not contain leading questions or biased questions and double barreled questions. Item 2 received an acceptable IOC mean score of 0.6.

There were several practical comments and suggestions that the experts gave for revision. The first was concerned with the unparalleled statement in Thai and English. The second indicated questions that could be omitted. The experts suggested that the question with the word ‘feel’ should be avoided as the word “feel” was vague and fairly useless for interpretation and discussion. Based on the comments and suggestions from the experts, revisions were made after consultation with the advisor.

3.7.2.3 Selecting the interviewees

A question was raised over how many participants were to be interviewed. Menter et al (2011) suggested that the reason may lie in time, funds, and resources. As Lichtman (2013) describes,

The goal in qualitative research is to describe and interpret rather than to generalize, there are no hard rules about how many participants you should study. I know that the issue of sample size is not fully resolved in the literature. My sense of the prevailing viewpoint is that those who take a fairly traditional and conservative view of qualitative research would prefer larger and more representative samples. In contrast, those who see qualitative research in a freer fashion are less concerned with the issue (p.193).

Another key question centered on how to select the interviewee. In this study, purposeful sampling was used to select the students who would be interviewees. As stated by Richie and Lewis 2006, “the participants are chosen because of particular features or characteristics that can relate to behaviors, roles and characteristics. This approach has two aims, first, to ensure that the participants are relevant to the research subject, and second, to ensure some diversity is included.” This correlates to King & Horrocks (2010) study where they state that “researchers seek to recruit participants who represent a variety of positions in relation to the topic, of a kind that might expect to throw light on meaningful differences in experience.”

The number of interviewees per interview was 3. The total number of interviewees was 15. The selection of the interviewees was based on the purposive sampling method. The interviewees needed to be students who regularly engaged in the activities designed to gain experience in each stage within the project. This enabled them to express their opinions, feelings, and perspectives on the project. Interviewees needed to be representatives of the characteristics found in the participants of the study. In the main study, there were four main characteristics of the participating students. The first group was comprised of students who were dominant in speaking during the discussions and performed the roles of leaders in discussions by encouraging their group members to do the activities and join in the conversation, asking fellow members about their answers and evidence, and providing assistance fellow members required help. Five students were selected as the representatives for the first group. The second group was comprised of students who were active in learning but performed the roles of members by participating in the conversations, expressing their views about the reading material, asking questions about each member’s views, listening to others, and providing assistance when fellow members required help. Seven students were selected as representatives for the second group. The third group was comprised of students who were passive in learning. These students rarely expressed their views about the reading material and hardly questioned fellow members’ answers and evidence during the stages related to critical reading. Three students were selected from for the third group. Participation in the interviews had to be voluntary and subject to ethical principles.

3.7.2.4 Conducting the interview

The interviews were conducted in the classroom for a duration of 30 minutes to 40 per interview, depending on the responsiveness of the participants. The interviews were conducted in the Thai language in order for interviewees to feel free and comfortable answering questions without being hindered by language barriers. Each individual was interviewed using the same set of questions. The interviewees were interviewed individually.

Before the start of an interview, interviewees were informed of the rationale behind the interviews, the details of the interview, and relevant ethical issues. Interviewees were also informed that their responses were recorded and noted. For confidentiality, interviewee ID numbers from IN 1 to IN 15 were used to identify each interviewee without the usage of names. The ID numbers were also used during the reporting of findings and the discussion sections.

3.7.3 Response journal

Response journals are defined as “informal, written communications between two or more people about something one person has read about” (Fulp & Young, 1991, p.109). In the field of education, writing journals was seen as “a dialogue between student and teacher, journals afford a unique opportunity for a teacher to offer various kinds of feedback to learners” (Brown, 2007, p. 476). In terms of reading instruction, response journals open up an opportunity for readers “to clarify their thinking and the response journal provides a meaningful context for them to be reflective readers” (Swartz, 2002, p. 43). This is because journal writing assists learners in “monitoring comprehension, making comprehension visible, fitting in new knowledge, applying knowledge, and gaining language proficiency” (Aebersold and Field, 1997, p.168).

The purpose of using journals in this study was to make students demonstrate their understanding of and express their feelings and opinions on the text material. Journals were also used as research tools for data collection. As Marshall & Rossman (2011) noted, “researchers often supplement participant observation, interviewing, and observation with gathering and analyzing documents produced in the course of everyday events or constructed specifically for the research at hand” (p.116).

3.7.3.1 Construction of student response journal sheet

In terms of journal formats, Fulp & Young stated that “there is no one physical

appearance for reading response journals” (p.111). Students could be encouraged to take part in determining the format of response journals or teachers could shoulder the full responsibility for developing response journals. In this study, the researcher was responsible for developing the format of the response journal. The response journal consisted of three main sections:

Section 1 Before discussion

This section was aimed at helping individual students develop their understanding of written texts. The students were required to write down the author’s purpose, tone, point of view, intended audience, inferences and conclusions, facts and opinions, argument and evidence. They were also required to write down their feelings and opinions about the written texts prior to group discussions.

Section 2 After discussion

This section was aimed at helping individual students revise their understanding of written texts. The students were required to write down language, content and the skills they gained through group discussion.

Section 3 Self-assessment

The students were required to evaluate their own performance, their group performance and their own critical reading skills. (See the student response journal in Appendix M)

3.7.3.2 Validation procedure of the response journals

Evaluation forms were constructed for the experts to validate the response journal. The forms consisted of two sections. The first section required the experts to indicate how they responded to each item in the evaluation form. The items addressed the relevance of the response journal and research objectives, the appropriateness of the language, the sequence of questions and statements, the format, and the length of the journal. Each individual expert was requested to rate each item based on a three-point scale, -1 = not appropriate, 0 = not sure, and +1 = appropriate. Mean scores of each item were calculated. Items that scored lower than 0.50 were revised. The second section required the experts to write down any additional comments or suggestions in the boxes provided. (See the evaluation form of the response journal in Appendix N)

Item	Expert (N=3)			Total	IOC	Interpretation
	1	2	3			
1. The response journal meets the research objectives.	+1	+1	+1	3	1	accepted
2. Language used in the response journal are clear and easy to understand.	+1	+1	+1	3	1	accepted
3. The sequences of questions and statements are appropriate.	+1	+1	0	2	0.66	accepted
4. The format of the response journal is appropriate.	+1	+1	0	2	0.66	accepted
5. The length of the response journal is appropriate.	+1	+1	+1	3	1	accepted

Table 3.8: Scores of the index of item-objective congruence of the response journal

Table 3.8 showed that all experts agreed on items 1, 2, and 5, which received an acceptable IOC score of 1. The experts concurred on the practicality of the response journal to meet objectives, the appropriateness of language used in the response journal and the length of the response journal. The sequence of questions and statements in the response journal and the journal format both received an acceptable IOC mean score of 0.6.

According to comments and suggestions from the experts there were issues that needed to be considered for revision. The first issue was concerned with self-assessment section. According to the experts, a description of each student's score would be needed to effectively rate individual performance, group performance and critical reading skills. A description would make it possible for students to determine which scores they deserved. The second issue centered on the rubric for the response journals. The experts commented that performance descriptions and assessments should focus on quality rather than quantity. Performance descriptions would thus emphasize 'good, relevant, strong' reasons as opposed to poor ones. Based on the comments and suggestions from the experts, revisions were made after consultation with the advisor.

3.7.3.3 Administration of the student response journal

The journals were distributed to students during the fourth stage of executing the project (selecting a reading passage and doing critical reading activities). Students were presented with the response journal and a thorough explanation on how to complete the journals was given to ensure that the students understood what they needed to write in the journals.

The journals were assigned as homework so that the students had time to complete the task. They were allowed to write the journals in Thai in order to encourage them to express their opinions freely. After finishing their journals, the students were required to bring them to class and discuss the contents with their group members. The students were then required to write down what had learned from these discussions and submitted the journals to the teacher.

3.7.4 Questionnaire

According to Brown (2001), questionnaires are “any written instruments that present respondents with a series of questions or statements to which they are to react, either by writing out their answers or selecting from among existing answers” (p.6). They are the most frequently used research instruments to judge the quality of instruction based on the information given by respondents (Colosi, 2006).

3.7.4.1 Construction of the questionnaire

The questionnaires were constructed based on the following eight steps established by Nunan & Bailey (2009): defining objectives, identifying target populations, carrying out a literature review, determining samples, identifying survey instruments, designing survey procedures, identifying analytical procedures, and determining reporting procedures.

(a) Defining objectives

The objective of the questionnaires was to explore the attitudes of students towards project-based learning.

(b) Identifying target population

The target population was the students who enrolled in the course entitled “English communication skills”, divided into 10 sections. The total number of the population were 201.

(c) Carrying out a literature review

The literature review covered 4 main topics: critical reading, project-based learning, theoretical foundations for project-based learning including sociocultural theory and collaborative learning, and L1 in L2 language learning. (See more details in Chapter 2)

(d) Determining sample

The sample was drawn from the target population by simple random technique. The sample was comprised of students who enrolled in section 1 and were willing to participate in the study. The total number of the students in the sampling group was 20.

(e) Identifying survey instruments

The researcher constructed five questionnaires, which were used in this study. The contents of each questionnaire was related to each stage of doing a project and were written in Thai in order to avoid language barrier issue from the participants.

The questionnaires consisted of two sections. The first section contained demographic information. There were three open-ended items related to age, sex, and years of English learning experience. The response format was fill-in questions. The second section was about the attitudes of the students towards stages of project-based learning, students' collaborative learning behaviors, teacher's roles in facilitating collaborative learning, and critical reading skills. Closed-ended items were used in this section. The response format was a five-point Likert rating scale. "The benefit of the Likert scale item is that it allows researchers to gather more fine-grained information about attitudes in the form of numerical data." (Nunan & Bailey, 2009 p.). (See an example of the questionnaires in Appendix O)

(f) Designing survey procedures

The questionnaire was administered via collective administration. Each questionnaire was administered and collected by the researcher in the classroom after students finished each stage of doing the project. Prior to completing the questionnaires, students were informed of the rationale behind questionnaires, the details of the questions, and ethical issues by the researcher and in the Thai language. The participants were then asked to complete the questionnaires. The time spent on completing the questionnaires was approximately 20 minutes. While filling their answers, participants were also allowed to ask questions to clarify any ambiguities. The questionnaires were then collected for data analysis.

(g) Identifying analytical procedures

The quantitative data obtained from the completed questionnaires were interpreted using Statistical Packages for the Social Sciences (SPSS), using descriptive statistics of frequency, percentage, mean, and standard deviation.

(h) Determining reporting procedures

The questionnaire results were reported in the form of a graph. (See the results in Chapter 5)

3.7.4.2 Validation procedure of the instructional instruments

Evaluation forms were constructed for the experts to validate the questionnaires. The forms consisted of two sections. The first section required the experts to indicate how they responded to each item in the evaluation form. The items addressed the research objectives, the language used in the statements, leading statements or biased statements, double barreled statements, the sequence of items, layout and format length. Each individual expert was requested to rate each item based on a three-point scale, -1 = not appropriate, 0 = not sure, and +1 = appropriate. Mean scores of each item were calculated. Items that scored lower than 0.50 were revised. The second section required the experts to write down any additional comments or suggestions in the boxes provided. See the evaluation form of the questionnaires in Appendix P.

Item	Expert (N=3)			Total	IOC	Interpretation
	1	2	3			
1. The questionnaire meets the research objectives.	+1	+1	+1	3	1	accepted
2. The statements in English and Thai are clear and easy to understand.	+1	+1	+1	3	1	accepted
3. The questionnaire does not contain leading statements or biased statements.	+1	+1	+1	3	1	accepted
4. The questionnaire does not contain double barreled statements.	+1	+1	+1	3	1	accepted
5. The sequences of questions are easy to follow.	+1	+1	+1	3	1	accepted
6. The layout of questionnaire is easy to read.	+1	+1	+1	3	1	accepted
7. The response format is appropriate.	+1	+1	+1	3	1	accepted
8. The length of the questionnaire is appropriate.	+1	+1	0	2	0.66	accepted

Table 3.9: Scores of the index of item-objective congruence of the questionnaires

Table 3.9 showed that all experts agreed on items 1, 2, 3, 4, 5, and 6, 7, which received an acceptable IOC score of 1. The experts agreed that the questionnaire had met the research objectives and that the statements in English and Thai were clear and easy to understand.

The questionnaire did not contain leading statements or biased statements. The questionnaire did not contain double-barreled statements. The sequence of questions were easy to follow and the layout of questionnaire was easy to read. The response format was also deemed appropriate. Item 8 regarding the length of the questionnaire, received an acceptable IOC mean score of 0.6.

According to comments and suggestions from the experts there were issues that needed to be considered for revising the questionnaires. The experts commented that the some items might not be relevant and should be omitted. The second issue concerned the repetition of items. In the first questionnaire, the item “You are not faced with the problems in choosing your own group members” was fairly repetitive and could be omitted. The third issue focused on wording changes in order to make items clear. The fourth issue addressed the categories in the questionnaires. The experts recommended that items related to the teacher should be placed in a separate category to reflect the distinct role of the teacher in facilitating collaborative learning. The fifth issue highlighted the inappropriateness of certain items which could not be rated by using an agreement scale. Based on the comments and suggestions from the experts, revisions were made after consultation with the advisor.

3.8 Data Analysis

According to Menter et al. (2011), qualitative analysis is “the process of working with non-numeric information to reach an understanding, explanation or interpretation that takes into account perceptions, interactions, processes, meanings and context. Qualitative analysis is based on an interpretative philosophy rather than one that seeks to generalize”.

Gray (2014) explained that there exists a wide range of approaches to qualitative analysis. In this study, content analysis was used to interpret the data collected from the qualitative research instruments. Gray also stated that content analysis “involves the making of inferences about data (usually text) by systematically and objectively identifying special characteristics (classes or categories) within them” (p.607). Like Gray, Patton defined content analysis as “any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings” (p.453).

Regarding the process of qualitative content analysis, Marshall (2009) identified seven phases: (1) organizing the data, (2) immersion in the data, (3) generating categories and themes, (4) coding the data, (5) offering interpretations through analytic memos, (6) searching for alternative understandings, and (7) writing the report or other format for presenting the study. This study adopted Marshall's framework for content analysis. The qualitative data was transcribed, categorized into themes, interpreted and written results were produced.

Content analysis was used to interpret qualitative data derived from the observations, interviews, and response journals. The questionnaires were used for quantitative data collection and required quantitative data analysis. The data derived from the completed questionnaire was interpreted using Statistical Packages for the Social Sciences (SPSS), using descriptive statistics of mean.

The data from all four research instructions was triangulated in order to determine the degree to which students' critical reading skills were developed and improved after learning through project-based learning and to determine gauge their attitude towards project-based learning. The type of triangulation used was data triangulation. Data triangulation occurs when "different data on the same phenomenon are collected" (Heaton, 2004, p. 101). The data derived from the observations, interviews, response journals, and questionnaires were triangulated to help answer the research questions. The benefit of including data triangulation analysis is "because every type of data has strengths and limitation, using a combination of techniques help compensate for the weaknesses found in one approach" (Salkind, 2010, p. 1538).

3.9 Chapter summary

This chapter addressed the key topics relating to the research methodology in this study. The first two topics were associated with the context of the study and the population and the sample group. The study was conducted at one faculty of a public university in Bangkok, Thailand and was based on convenient sampling. The population was comprised of students who enrolled in the course entitled "English Communication Skills I" in semester 1, academic year 2015. The participant group consisted of 20 students in total. This chapter was also concerned with implementing project-based learning, involving stages of doing the project, lesson plans, supplementary reading worksheets, group record, and project rubric. Students were

exposed to project-based learning, lasting 14 weeks. They were required to form groups and introduced to project-based learning and the required steps for completing a reading project. The groups selected their own reading topic and set their learning objectives together. They were then presented with critical reading strategies through teacher modeling after which they were required to seek one reading text that peaked their interest, to read the text individually, to engage in group discussions over their selection, and to brainstorm ideas generated from reading the reading material. Students were also required to make a presentation about their project. After completing the project, each group evaluated their learning performance.

Research design and research procedures were also described. Qualitative research design was highlighted together with quantitative research design. The research procedures consisted of four phases. First was the phase involving the development of the project. The researcher needed to review related theoretical literature, develop the instructional procedures and materials, and construct the research instruments. The second phase involved the pilot study. The researcher applied project-based learning in class, together with the designed instructional materials and research instruments in order to refine the instruments and procedures prior to the main study. The third phase involved the implementation of project-based learning where the researcher exposed the students in the main study to and provided them experience in project-based learning. The final phase covered data analysis and interpretation, reporting on findings derived from the instruments and discussions on the findings. This chapter also identified four research instruments used in this study. Observation, semi-interview, and response journals were used for qualitative data collection while questionnaires were used for quantitative data collection. The instruments were validated by experts and were revised and piloted prior to being used in the main study.

Chapter 4

The pilot study

The particular purposes of conducting the pilot study was described by Welman & Kruger (2001:141), who stated that the first purpose is to detect possible flaws in the measurement procedures. The second purpose is to identify unclear or ambiguously formulated items, and the final purpose is to allow researchers or their assistants to notice non-verbal behavior that could possibly signify discomfort or embarrassment about the content or wording of the questions. The pilot study was conducted with the express purpose of revising all instruments, data collection procedures, and instructional procedures prior to the main study.

The presentation of this chapter is organized into 5 sections covering the following topics: (4.1) research questions, (4.2) context of the study and participants, (4.3) methods, (4.4) results and discussion, (4.5) areas for improvement for the main study, and (4.6) chapter summary.

4.1 Research Questions

1. How do students develop their critical reading skills after learning through project-based learning?
2. What are the attitudes of students towards project-based learning?
3. How do students' end products reflect their critical thinking?

4.2 Context of the pilot study and participants

The pilot study was conducted at one faculty of a public university in Bangkok, Thailand. It was conducted in the bachelor's degree course. It was a three-credit compulsory course for the second year students. The pilot study was conducted during over one three-hour class meeting every week for a duration of sixteen weeks. The main teaching materials were a commercial textbook for intermediate level students and an interactive CD-Rom. It was vital to conduct a trial with a group of the students whose background was comparable with the students of the main study, as a result the students in the pilot study were also second year non-English major, French major students. The group of students consisted of male and female students with mixed abilities. Their ages ranged from 19-20 years old. The pilot participants were enrolled in a course with

similar characteristics in goals, course syllabus, teacher materials, and class duration as the course used in the main study.

4.3 Methods

The participants in the pilot study learned through project-based learning, including the predefined series of five stages for doing a project: setting a group, modeling, selecting a reading topic and setting learning objectives, selecting a reading passage and do critical reading activities, and project presentation and evaluation. The teaching materials used in the pilot study included lesson plans, supplementary reading worksheets, group record, and a project rubric. The research instruments in the pilot study included observations, interviews, response journals, and questionnaires.

The students were observed for ten weeks during the pilot study. During the stage for selecting a reading passage and doing critical reading activities, the students were required to write journals after they finished their reading. At the end of each stage, questionnaires were administered in class and some students were interviewed.

4.4 Results and discussion

4.4.1 Research question 1: How do students develop their critical reading skills after learning through project-based learning?

Results from the pilot study demonstrated that the five stages of a project linked well with and facilitated critical reading skills. Groups were comprised of students with mixed abilities. Students practiced necessary strategies through teacher modeling, and selected reading topics and set learning objectives. Students were encouraged to find their own answers to questions related to critical reading skills through using strategies that included questioning, rereading and citing evidence. Students were also encouraged to find answers to questions related to critical reading skills through collaborative learning. Group discussion on reading materials was also required. Being together allowed students to learn how to get find answers as a group. Students were also encouraged to think, clarify their views and their peers' views on the reading material. They also learned to compare their answers and revise their understanding of the reading material. Students given the opportunity to freely express their views and feelings about the reading material. Through journal writing, they were able to apply what they learned from text material discussions with their group members and were able to understand and the reading strategies that were needed to improve.

4.4.2 Research question 2: What are the attitudes of students towards project-based learning?

4.4.2.1 Students' attitudes towards learning activities in project-based learning

Figure 4.1 presents the questionnaire results on the attitudes of students towards learning activities. Student responses produced mean scores ranging from 4.07 to 4.41 on the 5-point Likert scale. The mean scores indicated students' positive attitudes towards learning activities.

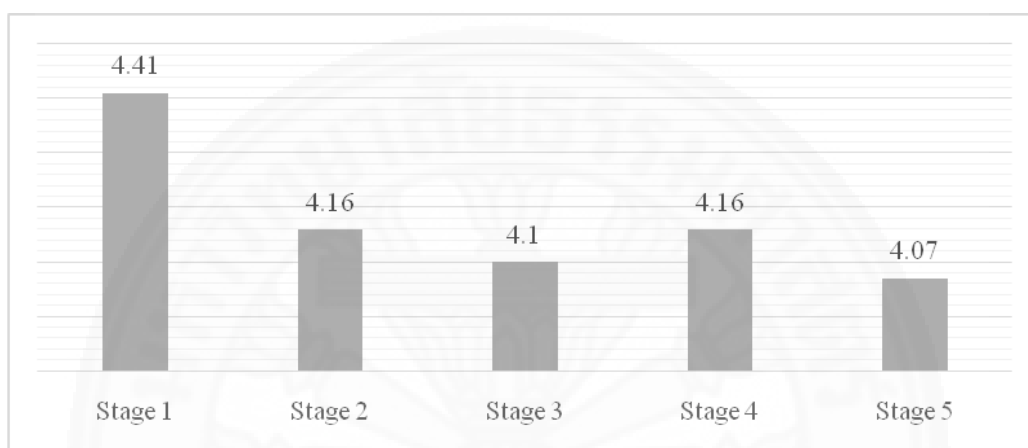


Figure 4.1: Questionnaire results on the attitudes of students towards learning activities

Figure 4.1 showed that the mean score started at 4.41 in stage 1 followed by a drop to 4.16 in stage 2 and 4.10 in stage 3. There was a slight increase to 4.16 in stage 4 followed by another drop to 4.07 in stage 5.

The highest mean score of this category was the mean score of stage 1. The explanation for this was that the students were familiar with group formation. They had no difficulty in setting groups and did not spend much time on this activity. Students were also required to set their own groups on the basis of self-selection. The lowest mean score was the mean score in stage 5. In this stage, the students were required to make a presentation and it was found that the students did not pay attention to the presentations of others as they were worried about their own presentation.

4.4.2.2 Students' attitudes towards collaborative learning behaviors in project-based learning

Figure 4.2 presents the questionnaire results on the attitudes of students towards collaborative learning behaviors. Student responses produced mean scores

ranging from 4.07 to 4.34 on the 5-point Likert scale. The mean scores indicated students' positive attitudes towards learning activities.

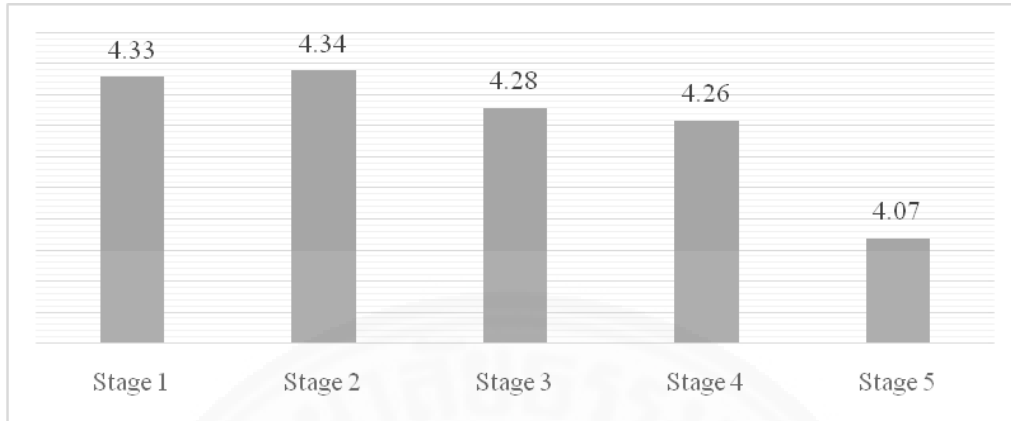


Figure 4.2: Questionnaire results on the attitudes of students towards their collaborative learning behaviors

Figure 4.2 showed that the mean score started at 4.33 in stage 1 and slightly increased to 4.34 in stage 2. The mean score gradually dropped from stage 3 to stage 5 from 4.28, 4.16, and 4.07 respectively.

4.4.2.3 Students' attitudes towards their critical reading skills development through project-based learning

Figure 4.3 presents the questionnaire results on the attitudes of students towards critical reading skills. Student responses produced mean scores ranging from 4.16 to 4.28 on the 5-point Likert scale. The mean scores indicated students' positive attitudes towards critical reading skills.

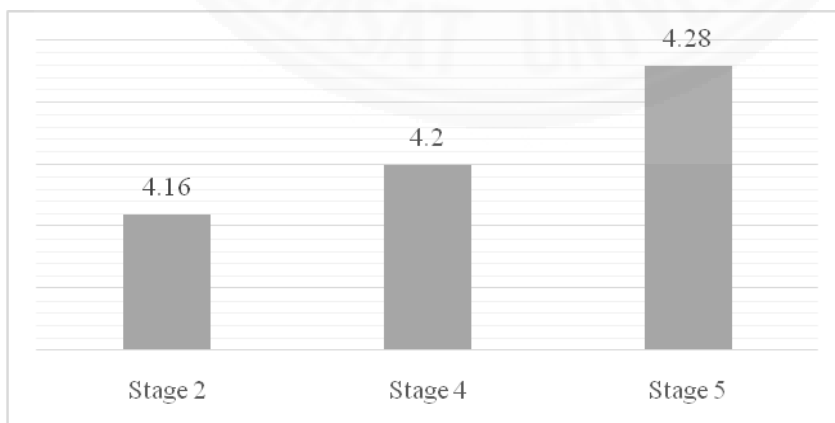


Figure 4.3: Questionnaire results on the attitudes of students towards their critical reading skills development

Figure 4.3 showed that the mean score started at 4.16 in stage 1. The mean score gradually increased from 4.20 in stage 4 to 4.28 in stage 5. According to the questionnaire results, the students developed their critical reading skills over time.

4.4.3 Research question 3: How do students' end products reflect their critical thinking?

After doing critical reading activities, each group needed to create their end products based on the reading materials selected within their groups. Following class discussions, students created leaflets for their end products. They were required to propose ideas related to the reading used for their end products. Before creating the end products, the students read the texts, performed critical reading exercises in order to find the answers related to critical reading skills. Students were also required to think about what they would like to propose for their end product, how the ideas proposed would relate to their reading material, and what reasons they used to support their ideas.

In the presentations, three groups of the students proposed ideas related to the texts. It was observed that the classmates could express and exchange their ideas with the presenters when they were allowed the chance to read the texts of all four groups. Only one group of students did not express their ideas related to the reading materials and merely expressed their agreement and disagreement with the text they had read. Based on the interviews, the student in this group reported that the group members misunderstood what was needed to be included and written in the leaflets. Members of this diverging group thought that simply stating their agreement or disagreement about the text was sufficient. The end products in the pilot study were used as examples for the students in the main study to clarify expectations for creating their end products.

4.5 Areas for improvement for the main study

The pilot study was conducted to revise all instruments, data collection procedures, and instructional procedures. After a pilot study was completed there were three areas for improvement prior to conducting the main study.

In terms of teaching materials, students commented that some items in the exercises in the supplementary reading worksheets for practicing critical reading skills were too difficult and needed to be changed. Ninety-five percent of the students reported that the last exercise related to nine critical reading skills was too long and difficult. It was suggested that the passage needed to be changed. Eighty-percent of

the students reported that the directions in the group record were not clear and the space for writing down information was not sufficient. The project rubric also contained some ambiguities. The teaching materials were revised for the main study.

In terms of the stages of a project, during the activities required in the fourth stage, it was found that some students copied the answers of other groups. This was because each group read the group-selected text in the first week. Therefore, each group read their selected texts and received the answer for their own texts. When other groups were required to read the texts, they asked the group who was the owner of the text for the answers. The students did not read the texts to find the answers themselves but copied the text owners. Based on the cheating discovery from the pilot, every group in the main study was required to vote on texts that they would like to read and then read each text at the same time and in the same order. It was hoped that this would force students to read the texts and find the answers on their own.

In terms of research instruments, the observation forms and video and audio recordings were used in the pilot study. For the observation forms, there were two components: physical settings and activities and interaction. Under the activities and interaction component there were 2 main categories. The first category was related to collaborative learning. The second category was critical reading skills. It was found that some items in the category of critical reading skills could not be observed thus needed to be changed. The researcher also used video and audio recordings, and observation forms to obtain a comprehensive record of the students' behavior. The video and audio recordings and the observation forms were then sent to two other observers to report on their own observations from the recordings. A level of agreement on observed behaviors was checked and the interpretations of the researcher and the other two observers were compiled for reliability of data. Apart from issues involving subjective items, the observers and the researcher did not have difficulties in using the observation forms in the pilot study. The two additional observers were the same observers in the main study. In the pilot study, only two video-recordings were used as it was discovered that recording all the students in the classroom was not possible. Video-recordings would need to cover all participants in order to accurately assess student behaviors in the main study. During the process for selecting interviewees in the pilot study, the participants were chosen based on the observation. The selected students represented

the same characteristics of the students found in the pilot study. After the pilot study, the process of selecting the interviewees needed further refining to ensure a more careful selection in the main study. The interview guides used in the pilot study contained some irrelevant questions while some items in the interview guides and questionnaires were unclear or redundant and required revision. Although response journals were required to do in the classroom it was revealed that the students could not finish all their reading and journal writing due to time restrictions. It was determined that students in the main study would need to be allowed to work on their response journals outside the classroom. Some students did not know what was content was required for the response journals although teachers had explained the writing requirements. It was suggested that students should be given journal writing examples for their reference and instruction.

4.6 Chapter summary

According to the results of the pilot study, the students could develop critical reading skills through using reading strategies, collaborative learning, and individually interacting with the texts through journal writing. They had a positive attitudes towards project-based learning in terms of learning activities, their collaborative learning behaviors, and their critical reading skills development. However, there were teaching materials, learning activities, and research instruments that needed to be revised in order to ensure the possibility to conduct the main study.

Chapter 5

Results

The intent of this chapter is to present the results of the study. The presentation is organized into 3 sections covering the following topics: (5.1) research question 1: how do students develop their critical reading skills after learning through project-based learning?, (5.2) research question 2: what are the attitudes of students towards project-based learning?, and (5.3) research question 3: how do students' end products reflect their critical thinking?.

5.1 Research question 1: How do students develop their critical reading skills after learning through project-based learning?

Stage 1 Setting group

In this stage, the teacher introduced project-based learning to the students and explained what they needed to do for project completion. The teacher asked the students to form groups leaving the selection of group members to the students alone. Members within each newly formed groups were then required to exchange information on their background knowledge and interests followed by a discussion on topics relevant to group work. Topics included desired and undesired behaviors, anticipated problems during group work, and the solutions to these problems.

According to the observation results, students selected group members from peers sitting near themselves. There were 2 students who appeared to be dominant in group formation. The dominant students tried to help form groups by picking peers who were good at English to be in their group. Other students did not express their displeasure with these dominant students. Group size had an effect on determining how group members were selected. Group formation depended on three main factors: familiarity, English proficiency level, and group size. There were 4 groups of students. Each group consisted of 5 members with mixed ability. Groups 1, 2, and 4 each consisted of five all-female close peers. Group 3 consisted of three close peers and two classmates, four of which were female and one male. Following group formation, the groups were required to exchange information about their background knowledge and interests. During this portion students were actively involved since they were relaying

personal individual information to other group member. Groups then moved on to discuss relevant topics for group work. Topics included desired and undesired behaviors, anticipated problems of group work, and the solutions to the problems. Students were again very active in expressing their thoughts. Throughout this stage, students made few requests for assistance from the teacher.

The interview results supported the observation results. Three students reported that member selection was determined by the type relationship they had with their peers. The students reasoned that they were more confident and comfortable exchanging ideas when their familiarity and level of intimacy with group members was higher. One student reported that member selection was partly determined by minor subjects reasoning that peers with the same minor subjects could more easily meet outside class to work on the project. The dominant student during group formation was also interviewed and was asked why she tried to select more capable peers in her group. She reported that it was ideal to have at least one peer member with higher capabilities in her group as more capable peers could assist less capable peers to ensure project completion.

It could be concluded that member selection was influenced by social and educational factors. These included the depth of relationships amongst the students, the potential ease and convenience of meeting outside class to work on the project, and English proficiency level. Being responsible for member selection allowed to students to feel more comfortable discussing text material together. All groups also consisted of students with mixed-ability. This had an influence on the students' performance in critical reading activities.

Stage 2 Teacher modeling

In this stage, the teacher introduced critical reading skills to the students and modeled strategies necessary for reading text and finding answers to questions related to critical reading skills, which involved (1) identifying the author's purpose, (2) identifying the author's tone, (3) identifying the author's point of view, (4) identifying the author's intended audience, (5) making inferences and draw conclusions, (6) distinguishing facts from opinions, (7) identifying the author's bias, (8) evaluating the author's argument, and (9) evaluating the author's evidence. Teachers checked the students' understanding and only provided the assistance necessary to enable students

to find answers on their own. Students practiced finding answers through the reading worksheets.

Observation results revealed that during teacher modeling, eighty-five percent of the students were actively listening to the teacher, were highlighting the information presented in the texts, were asking questions and discussing the texts with the teacher and classmates. The remaining fifteen percent of students were passive. Students were then required to do the exercises relevant to critical reading skills from within reading worksheets. During such exercises, it was observed that ninety percent of the students tackled the exercises in pairs or in groups of three comprised of peers who were sitting nearby. Students read the texts in the worksheets individually and then checked the answers with nearby peers while explaining the reasons behind their answers. The remaining ten percent of students worked alone. These students read the text and wrote down the answers to the questions found in the worksheets on their own and only waited for the full class discussions on the reading material to check their answers. The students requested assistance from the teacher when they had difficulty finding the answers.

The interview results supported the observation results and revealed that students recognized the necessity and contribution of teacher modeling in helping them understanding what they needed to look for while reading and what reading strategies to use in order to obtain answers.

Teacher modeling make me understand what I have to do when reading the texts. I used the questions to ask myself about the clues and ask my friends about the clues when we did not get the same answer as the teacher did. (IN5, interview 2, Stage 2, translated)

The interview results also helped explain the reasons why some students chose to work together while others chose to work alone. The interview results also revealed that students felt secure when they engaged in joint efforts with their peers while completing their exercises. Students reported that interactions peers and teachers along with discussions on the text material contributed a great deal in helping them find and arrive at the correct answers to exercise questions.

I was not good at English so sometimes I was confused about what I should look at when I read the text. Sometimes I could not follow what the teacher did. I

asked my friends for help but if my friends could not help. I asked the teacher. After finishing the worksheet, my friends and I compared the answers. If the answer were different, my friends told me why they answered that. Mostly, I could get the correct answers. (IN 7, interview 2, Stage 2, translated)

Students who preferred to work on exercises alone reported that working alone was indeed more challenging, however, doing so allowed them to gauge their personal skill level and competence more accurately. The one passive student reported that she did not like reading and felt that the activities were not interesting.

The students also recognized the necessity and acknowledged the value of supplementary worksheets in assisting them in practicing reading strategies, which opened up the opportunity for them to exchange ideas about the texts and the useful strategies with others.

When doing the worksheets, sometimes I could not get the answers but my friends could. They explained to me how to get the answers. I felt that I could not do the worksheets alone. I think doing critical reading was different from what I used to do when reading in the classroom. It was a bit difficult. (IN6, interview 2, Stage 2, translated)

According to the worksheets completed by the students, it was found that in identifying the author's purpose, eighty percent of the students received all five correct answers to the questions related to the author's purpose. Fifteen percent of the students received four correct answers and five percent of the students received three correct answers. In identifying the author's tone, thirty-five percent of the students received all five correct answers to the questions related to the author's tone. Forty-five percent of the students received four correct answers. Five percent of the students received three correct answers. Fifteen percent of the students received two correct answers. In identifying the author's point of view, sixty percent of the students received all five correct answers to the questions related to the author's point of view. Thirty percent of the students received four correct answers and ten percent received three correct answers. In identifying the author's intended audience, fifty-five percent of the students received all correct answers related to the author's intended audience. Thirty percent of the students received four correct answers and fifteen percent received three correct answers. In making inferences and drawing conclusions, seventy percent of the students

received all five correct answers related to inferences and conclusions. Twenty-five percent of the students received four correct answers and five percent of the students received three correct answers. In distinguishing facts from opinions, fifty percent of the students received all correct answers related to facts and opinions. Forty percent of the students received four correct answers and ten percent of the students received three correct answers. In identifying the author's bias, fifty-five percent of the students received all correct answers related to the author's bias. Forty-five percent of the students received four correct answers. In evaluating the author's argument and evidence, forty-five percent of the students received all correct answers related to the author's argument and evidence. Thirty percent of the students received four correct answers and twenty five percent received three correct answers.

It was concluded that ninety percent of the students preferred working together with peers and helped each other complete the worksheets while ten percent of the students preferred to work alone. According to the worksheets, more than fifty percent of the students received all five correct answers related to identifying the author's purpose, point of view, and intended audience. Students could make inferences and conclusions, distinguish facts from opinions, and identify the author's bias, however, less than fifty percent of the students received all five correct answers related to identifying the author's tone and evaluating the author's argument and evidence.

Stage 3 Selecting a reading topic and setting learning objectives

In this stage, the teacher modeled selecting a reading topic and setting learning objectives. Then, the teacher explained the criteria for text selection and gave the examples of the texts used for critical reading activities. After that, the groups selected the reading topics and setting the learning objectives.

According to the observation results, all members in groups 2 and 4 were encouraged to suggest options for the groups topic for reading, upon which the final topic was determined by vote. In groups 1 and 3, some members proposed the topics while the other members listened and commented on the proposed topics. The final reading topic was determined by vote. The reading topics selected by groups were related to general issues in life. The groups were then required to set the learning objectives based on their reading topics and nine critical reading skills. Group 1 and 4 set their objectives and consulted with the teacher on their reading topics and the

objectives. Group 2 and 3 had difficulty setting learning objectives. Group 2 immediately requested assistance from the teacher when they were unable to set the learning objectives while Group 3 tried to request help from Group 4 before approaching the teacher. After selecting a reading topic and setting learning objectives, the teacher explained the criteria of text selection for doing the project. The criteria included the types of texts, level of difficulty, length of texts, and the students' interest and background knowledge. The teacher showed some examples of reading passages selected by students in the pilot study. The teacher also recommended several sources for reading passages and allowed students time in the library to search for the texts online.

The interview results revealed that topic selection by the students depended on their interests, personal background, and their members' agreement. Learning objectives were based on what the students were capable of reading and their critical reading skills. The students from the group that could not set their learning objectives commented that the teacher should have given more examples of setting objectives. The same group also stated that they unfamiliar with the process for setting their own learning objectives.

It was concluded that all groups of students could select their reading topics based on their interest, personal background, and their members' agreement. There were two groups that could not set their learning objectives, however, they were eventually able to do so with assistance from the teacher and classmates.

Stage 4: Selecting a reading passage and doing critical reading activities

After selecting the reading topic and setting learning objectives in stage 3, groups in this stage selected the text to be read. Every student was required to read four texts matching the total number of groups. Individual students voted on the final texts they wanted to read most. All groups read the texts at the same time and in the same order with one text assigned per week. Every student was required to repeatedly perform a series of critical reading activities that involved reading the texts individually, writing response journals about answers to questions related to critical reading skills, and discussing the texts with group members. Only groups who were owners of one particular text were required to make a presentation related to critical reading skills and their products based on the text in their ownership.

According to the observation results on text selection, in Group 1, two students brought two texts for the group members to read. Discussions were made about the possibility of using one text for the critical reading activities. The group members spent time reading the texts after. Members then compared the level of difficulty between both texts and decided to choose the text about pregnant girls. The text title was “Should pregnant girls be allowed to stay in school? (It’s school, not a maternity home)”.

The students in Group 2 brought one reading passage informing the teacher that they had selected the text after discussing with the group members outside class and noted that all members had already read the text. The Group 2 students all agreed that the text was suitable for doing critical reading activities. The text title was “Should students get paid for good grades?”.

The students in Group 3 brought one passage. The members read the text and then discussed the level of text difficulty first, followed by the length of the text and its appropriateness for critical reading skills. The members found that the text was too short and not suitable for doing critical reading activities. An internet search for a new text was unsuccessful as the student could not find a text they could like. The group then requested assistance from the teacher. From the teacher’s recommended sources the group finally settled on the text entitled “Facebook Is Just a Place for Narcissists and Neurotics to Show Off” by themselves.

Three students in Group 4 brought four texts for consideration. The members spent time reading the texts and discussed the text difficulty before selecting the text entitled “Employees should be able to work from home more often”.

According to observation results, all four texts selected by the students were authentic texts. The text type was persuasive texts. The average length of the text was one A4 page. Only the text selected by Group 3 had nearly a two A4 length. (See all four texts in Appendix Q)

The interview results revealed that text difficulty, personal background and interest, and length of texts were the important considerations in the text selection. One student reported that her group changed the reading topic and the learning objectives when they found randomly discovered a text that group members found interesting yet did not match the chosen reading topic and learning objectives they had defined in stage

3. The students chose to change their reading topic and learning objectives to match their preferred text.

According to the observation results on text discussions with the group members, the students used strategies to help receive answers to set questions related to critical reading skills. Some strategies were partly similar to the reading strategies reviewed in Chapter 2 and some strategies were found in the present study.

The first strategy frequently used by the students was the questioning strategy. The following extract comes from a student conversation discussing inferences and conclusions from the text:

Extract 1

- 1 S17: Why do I choose this sentence? (their members kept silence while S17 was looking at the journal). Okay. This sentence means that the author wants school to set the rule not allow pregnant girls to study. When the author says the school don't do, this means the author wants school to do, doesn't it? (pause) Yes. It means the authors wants school to set the rule.

(Group 4, week 7, translated)

In this conversation, S17 asked the question *'Why do I choose this sentence?'* and looked at her journal instead of looking at her group members and recited information presented in the text. She repeated the question, *'When the author says the school don't do, this means the author wants school to do, doesn't it?'* and answered it herself. Questions in this instance were rhetorical and used only to facilitate a thought process that resulted in an answer to what the author was implying without requiring a response from fellow members.

In the following extract, the students used questions to help analyze information presented in the text in order to evaluate the author's evidence. One example of this questioning method is as follows:

Extract 2

- 1 S1: Who is *'online experts'*?
2 S2: The author does not write anything about them.

3 S1: I search on the Internet. There are lots of the words '*online experts*' on the Internet but not sure which one is *online experts* that the author refers to .

4 S3: This seems to be reliable but not reliable.

(Group 1, week 7, translated)

In this conversation, S1 raised the question '*Who is online experts?*' in the author's writing (line 1). S2 supported S1's view by saying that there was no information on '*online experts*' in the text (line 2). S1 said that she had performed an Internet search but was not able to identify the persons the author was referring to (line3). S3 joined in the conversation and expressed her view that insufficient information given by an author is not convincing (line 4). It appeared that although the author referred to experts to make their position reliable, the students did not completely believe in the information. They questioned the author reasons for not supplying more information on the experts and one of the students even tried to find the information from other sources. In this conversation, the students paid attention to what the author wrote and questioned it before evaluating the author's evidence.

Another example was the conversation discussing the author's writing.

Extract 3

1 S6: Why does this author write lots of opinions? If the author uses evidence to support, her writing would be reliable.

2 S9: This text may be written to express the opinions of the author towards rewarding and it is not a serious topic so the author does not try to find the evidence to support.

3 S7: The author of the text is a student. That's why the author tries to write positive sides of getting reward.

(Group 2, week 7, translated)

From the conversation above, S6 raised the question about the author's content, '*Why does this author write lots of opinions?*' (line 1). S9 tried to make assumptions on the author's reason for writing the text (line 2) while S7 pointed out that the author

of the text was a student who could gain benefits from getting rewards for good grades thus motivating them to only expound on the positive aspects of the topic (line 3). The students questioned the background of the authors and the reasons behind the author's writing in order to identify the author's point of view and evaluate the author's evidence.

The interview results supported the observation results revealing that students recognized the importance of questioning and used it to find the answers when reading texts individually and when discussing the texts with fellow group members.

In my group, we asked the questions when we wanted to know why our friends answered like that. When one of the members said something or told the answer, I asked them why they think so. Other members also asked the questions. (IN12, interview 4, Stage4, translated)

Two of the interviewees reported using questioning strategies when dealing with text alone. Students said that using questions allowed them to remain focused on the text and helped them find the answers to the questions related to critical reading skills.

I asked myself while reading the text alone. I think it made me focus on what I needed to do while reading and what I needed to look at. (IN12, interview 2, Stage2, translated)

In journal writing, I tried to ask myself the questions when I was reading, why I answered this, what were the clues. I tried to follow the ways that the teacher did when we did the supplementary worksheet together. (IN11, interview 4, Stage 4, translated)

According to the observation results, the students could find the answers to set questions related to critical reading skills by searching for textual evidence. During text discussions, the students tried to find the correct answers by looking at the information presented in the texts and made use of the information to devise answers. When answers were well supported with text evidence, the students were confident of the answers.

The interview results revealed that students would attempt to find text evidence to help find the answers to the questions related to critical reading skills.

I think text evidence helped me a lot in getting answers. There were nine questions that I needed to answer so I focused only on what could make me get

the answers for the questions. If I needed to distinguish facts and opinions I would look at the word 'should' opinion or 'I think'. (IN11, Interview 4, Stage 4, translated)

For me, when I read the text, I tried to find out the words in the texts that helped me to get the answer. Sometimes I could find them easily at the first time I read the text but sometimes it took time to find out the evidence. (IN12, Interview 4, Stage 4, translated)

Data from the journals supported the observation and interview results. Journal data revealed that the students were aware of the author's use of words in the texts. The students used the words used by the authors to find the answers.

Figure 5.1 is used as an example of citing text evidence in the journals. The entry shows that the student identified the author's point of view based on four sentences presented in the text. These sentences included the phrase "stay home" and "stay away from school". The text evidence was relevant and reasonable to confirm her answer.

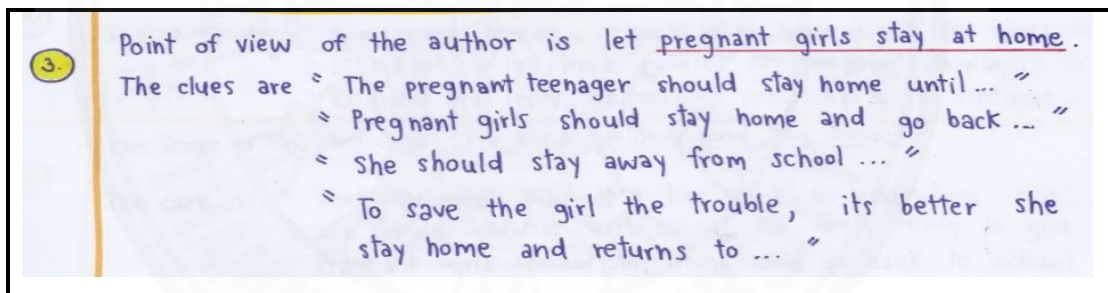


Figure 5.1: An example of using text evidence (The second journal writing, student 8, group 2)

Citing evidence was not only based on text evidence. Students also cited personal experiences to bolster or prove their answers. The following extract showed how a student used her real-life experience to distinguish facts from opinions.

Extract 4

1 S7: I think that most of people use Facebook for contacting with friends. It does not mean that everybody used Facebook to show off. For me, I think it saves money when I contact with friend by sending messages or calling them through Facebook. That's why I think this sentence is opinion.

The following extract is another example of the students using personal background knowledge or experience to support their views. The student's personal experience, however, prevented the student from distinguishing fact from opinion.

Extract 5

- 1 S12: I think this sentence is fact. For me, I see the status of my Facebook friends on news feed every day. Most of them pose their over-edited photos and check-in somewhere they go. I think Facebook is a fake world.

From the student's statement above, the student misunderstood the concept of facts. Agreeing with an author's statement, does not mean that what the author's views were fact.

According to the observation results, rereading was one of strategies that the students used in finding the answers to the questions related to critical reading skills, as illustrated in Extract 6.

Extract 6

- 1 S17: What does this sentence mean? I don't understand.
- 2 S19: I'm not sure but it's about if pregnant girls went to school fearing that other students would do the same. Let me read it. (the members looking at the text). Yes. It means that if pregnant girls came to school other will follow. The word 'indulge' means allowing

(Group 4, week 7, translated)

S17 asked the question to the group members, showing that she did not understand the meaning of the sentence presented in the text (line 1). S19 tried to respond to S17's question (line 2), however, appearing uncertain of her reply turned and reread the text to confirm her understanding before completing her response. Although S19 hesitated at the start, she became confident once she had reread the passage. S19 recited the meaning of the word 'indulge' to ensure that her understanding was correct.

The interview results confirmed that rereading was one of strategies that the students used to find the answers related to critical reading skills. The students would reread the whole text material when they wanted determine the meaning of the texts. When students wanted answers to the set questions, they would reread some parts of the text rather than the whole text.

I read the texts many times especially the third text because it was quite difficult. There were many vocabularies I did not know. Sometimes although I understood the meaning of the texts but to answer the set questions, I have to reread. It was not like reading I normally did in the previous subjects. It was difficult to complete all questions with one time reading. (IN11, Interview 4, Stage 4, translated)

For me, normally, I don't reread the texts when I get the meanings of the texts in my first-round reading but in the exercises that I did, some texts were a bit difficult and required time to understand so I needed to read them again. If not, I may not understand. (IN12, Interview 4, Stage 2, translated)

I am not good at reading. It takes time for me to understand the texts especially the texts in English. When I had to identifying the author' purpose, tone and other things I needed to read again and again to find the answers. (IN10, Interview 4, Stage 4, translated)

Although I mostly understood the texts that I had read, I had to read more than one time to find out the answers for the set questions especially the last few questions. (IN11, Interview 4, Stage 4, translated)

According to the observation results, in addition to strategy use, jointly working with group members helped facilitate the students' critical reading skills. The group members modeled reading strategies and verbalized their thoughts to the students. By doing this, the students could find the answers for the questions. The following extract can be taken as an example of peer modeling.

Extract 8

- | | | |
|---|-----|----------------------------------------------|
| 1 | S9: | Is this sentence fact or opinion? |
| 2 | S6: | I'm not sure but I think it is opinion. Some |

- students although you give them money, they still don't want to study. This cannot be fact. If I give you money, will you do my homework?
- 3 S8: Give me a lot. I will.
- 4 S6: But (the name of friends) will not do. So this sentence is just opinion of the author. Not everybody will be as the author says.
- 5 S9: So this sentence is opinion also. Not all kids love money but the author says all kids do.
- 6 S6: Like the example given by the teacher. You are beautiful. It is opinion because everyone may not agree with this. If you are Miss Tiffany, it is fact because we can prove it.

(Group 2, Week 9, translated)

S9 asked the group members *'Is this sentence fact or opinion?'* (line 1). Then S6 provided an answer and explanation of her view (line 2). She linked her explanation linked to the information in the text and then linked it to a real-life situation (line 2 and 4). S9 stated that another sentence was an opinion and supplied a reason to support her view (line 5) that was similar to S6. S6 also cited an earlier example provided by the teacher to confirm her view and explained the difference between facts and opinions to the members (line 6).

Students can learn from peers who verbalize their answers and describe their thought process in answering a question. In this conversation, S9 mirrored S6 by providing an answer and an explanation supporting her view.

Another example demonstrates how a student explained her answer to her fellow members.

Extract 9

- 1 S17: The audiences are students and ordinary people.
- 2 S19: My answer is students and parents. It may be for ordinary people but we can make it narrower. Look at the words in the text. The word 'student' always used in the text. (the members looking at the text)

3 S16: The word 'parents' also.

(Group 4, Week 9, translated)

S17 told the members what the intended audience was (line1). S19 partly disagreed with S17's answer and told fellow group members how she arrived with a differing answer by referring to the frequent appearance of certain relevant words in the text (line 2). After understanding S19's process, S16 was able to extract an answer by referring back to the text and applying the same process (line 3).

From the conversation, the explanation of how a peer arrived at an answer helped other students to realize what information to look for and how to look for it. S16 not only understood what the S19 said but learned to apply the same method to identify the author's intended audience.

It was also observed that when the students did not understand something during a discussion, they would spend a lot of time thinking about the parts that were confusing which pulled their focus away from the ongoing discussion. Sometimes the students asked for help from the members and sometimes they did not. When certain students did not join in the group conversations, other members realized that they were experiencing problems. The conversation was put on hold in order to check whether confused students were still paying attention as well as to offer them explanations and help so that they could get back into the conversations.

The interview results supported the observation results showing that students recognized the importance of peer modeling in helping them know how to receive the answers.

When discussing with the members, I found that the way the peers used to find the answer sometimes was easy and I could follow what they did when I read the text. (IN10, Interview 4, Stage 4, translated)

For me, I feel good to be with my friends. They helped me when I did not understand the text. Sometimes it took time to understand because I was easily confused. The members tried to make me understand but if I still did not understand. They would go to the next question and one of the member helped me instead while others discussing the answers of the next question.(IN11, Interview 4, Stage, 4, translated)

The questionnaire results could be used to support the observation and interview results. Table 5.1 presents the questionnaire results on students' attitudes towards group members' assistance in stage 4

Statement	Stage 4
All group members provide assistance when other members have difficulties in doing the activities.	4.25

Table 5.1: Questionnaire results on students' attitude towards group members' assistance

From Table 5.1, the responses of the students generated a mean score of 4.25 indicating that students agreed that all group members provided them assistance when they were experiencing difficulties doing the activities.

According to the observation results, students were encouraged to express their views about the texts during discussions. The following extract was from a conversation between students discussing whether a sentence presented in the text was a fact or an opinion.

Extract 10

- 1 S7: Are there any facts or opinions?
- 2 S9: I think this is an opinion.
- 3 S6: But this sentence has the phrase "*according to the work without walks survey*". It should be a fact.
- 4 S9: But it is an opinion survey. Why can it be the fact?
- 5 S7: The sentence is about the findings of the survey so it should be the fact.
- 6 S9: Why? The sentence is about the opinions of people who were surveyed. Why is it not the opinion?
- 7 S6: The survey is for getting the opinions of people but the findings of the survey are the actual information that we get from them. Then when we tell the actual information to others. It means we tell the facts of information. Do you understand?

8 S9: I think I understand.

(Group 2, week 6, translated)

According to the extract above, the conversation started with a question raised by S7 ‘*Are there any facts or opinions?*’ (line1). After that S9 responded to the question, without giving any reasons or evidence (line 2). S6 disagreed with S9’s response. S6 explained the reason for her differing answer to the group members and supported her answer by referring to the phrase ‘*according to the work without walks survey*’ presented in the text (line 3). S9 was still not convinced that S6’s answer was correct. S9 thought that the findings of opinion surveys were opinions. She wondered why S6 would call them facts so she asked the question “*Why can it be fact?*” (line 4). S7 responded to the question before S6. S7 tried to help S9 understand the reasons why the sentence would be a fact (line 5). Despite S7’s explanation, S9 continued to ask ‘*Why?*’. S9 tried to defend her view and asked again ‘*Why is it not an opinion?*’ (line 6). S6 gave another explanation then asked if S9 understood after the new explanation (line 7). S9 appeared to understand her fellow members explanations (line 8).

The first question “*Are there any facts or opinions?*” encouraged the group members to express their individuals thoughts on the texts. After the question was asked, the conversation was expanded when group members participated in the conversation. The next three questions “*Why can it be fact?*”, “*Why?*”, “*Why is it not an opinion?*” (line 4 and 6) were the questions that asked for clarification. When one student did not understand the group members’ explanations, these questions were asked. Questions that asked for clarification were not only used to help distinguish facts from opinions, but to show that students were interest in their fellow members’ views. Repeated questions could arise when the explanation was not clear enough and required further explanations. The fifth question “*Do you understand?*” (line 7) showed that students took the time to check that other members could understand their explanations.

Sometimes when the majority of group members arrived at the same answers students who arrived at different answers tended to agree with and defer to the majority. The following extract illustrates this tendency:

Extract 11

- 1 S1: The author's point of view is the author does not agree with pregnant girls being in school.
- 2 S3: Okay. I agree. I got the same answer
- 3 S4: I got the different answer but I am not sure about it. Maybe your answer is correct.

(Group 1, week 7, translated)

From the conversation, S1 shared her answer to fellow members without any supporting evidence or reasons (line 1). S3 agreed with S1 and did not ask for any clues (line 2). S4 also agreed with S1 and S3 although she had initially arrived at answer. When more than one member got the same answers, the students who got the different answers became reluctant with their answers and tried to accept the answers of the other members despite the lack of evidence or reasons to support their views.

The interview results supported the observation results in showing that students were aware of the usefulness of listening to different views. Students did not feel uncomfortable when their views were criticized by their peers and did not feel embarrassed in expressing their views even though their peers may not have agreed with them. Students realized that differences in the answers were common and disagreements over answers could happen.

The questionnaire results were used to support the observation and interview results. Table 5.2 presents the questionnaire results on student attitudes towards expressing their thoughts to group members in stage 4.

Statement	Stage 4
All group members freely express thoughts and feelings.	4.31

Table 5.2: Questionnaire results on students' attitude towards group members' expressing thoughts and feelings

From Table 5.2, the responses of the students generated a mean score of 4.31 indicating that students agreed that all group members could freely express their thoughts and feelings.

According to the observation results, students tended to be more dominant in text discussions when they received praise from their fellow members. Compliments

and praise encouraged students to broaden their explanations and made them active in expressing their views on the reading.

The interview results supported the observation results revealing that students tended to read the texts more actively when they received compliments from fellow group members and when their contributions were recognized and well received. One interviewee reported that she noticed another member being complimented and acknowledged for her contributions, which motivated the interviewee into finishing the reading and writing work, into actively joining the discussions and making contributions of her own.

In our group, (the name of group member) helped the group a lot in understanding the texts and getting the answers. She was really good at English and reading. The members always praised her for her help and this made me want to read so that I could help the group. I tried to finish reading and writing down what the possible answers should be and what I felt about the texts. When discussing with the members, I found that it could help our group. I felt really good. (IN10, Interview 4, Stage 4, translated)

Data from the interviews revealed that the students recognized the necessity of tackling the text and writing journals individually. They reported that when they were provided the opportunity to read the text alone, they tried to use what was learned from the teacher and members to find the answers. Students also acknowledged the usefulness of journals in creating a visual form of their thoughts on the reading material even though the students found journal writing to be a little difficult owing to lack of journal writing experience.

For me, reading the texts and writing journal as homework was good. I tried to find out the answers myself and learned to use reading strategies when reading. At first I thought it was difficult to write the journal but in the third and fourth journal writing, I thought it was easier to do. For me, my critical reading skills become better than in the past. (IN12, interview 4, Stage 4, translated)

One interviewee preferred taking the reading material home. Reading in a relaxing and familiar environment helped motivate the interviewee to read and allowed her to concentrate better on her reading.

For me, I think it is ok to read the texts at home. I prefer reading when I feel relaxed. I cannot concentrate on reading when there are lot of people talking nearby. (IN10, interview 4, Stage 4, translated)

One student suggested that the journals be written electronically or online as she did not like writing on paper. She admitted to laziness at having to physically write down all the thoughts, reasons and evidence. She said that if journals were online or electronic, students could drag information in the texts or they could type their experiences or background knowledge to support their views. She also believe that writing the journal online would be a far more interesting activity.

Figure 5.3 presents the overall results of the response journals for groups 1, 2, 3, and 4. The students were required to read a total of four texts (one text each week), find the answers to nine questions related to critical reading skills, and to write down their answers in the response journals. The average number of correct answers that all four groups could receive ranged from 4.8 to 8.6 out of 9.

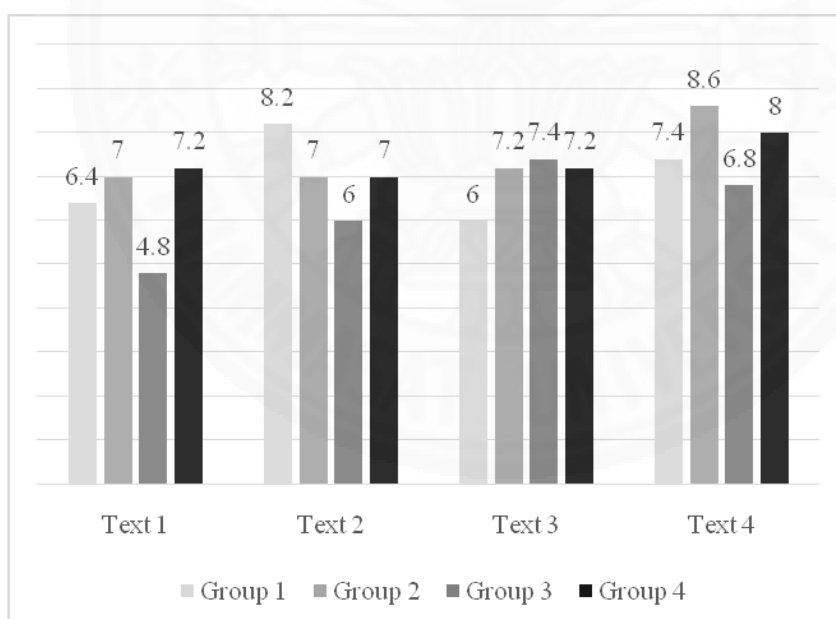


Figure 5.2: Overall results of the response journals of group 1, 2, 3, and 4

According to Figure 5.2, for the first text, the average number of correct answers for group 1 was 6.4. The average number of correct answers for group 2 was 7. The average number of correct answers for group 3 was 4.8 and the average number of correct answers for group 4 was 7.2. Group 4 had the most correct answers for the first text. The average number of correct answers for all four groups was 6.35.

In the second text, the average number of correct answers for group 1 was 8.2. The average number of correct answers for group 2 was 7. The average number of correct answers for group 3 was 6 and the average number of correct answers for group 4 was 7. Group 1 had the most correct answers for the second text. The average number of correct answers for all four groups was 7.05

In the third text, the average number of correct answers for group 1 was 6. The average number of correct answers for group 2 was 7.2. The average number of correct answers for group 3 was 7.4 and the average number of correct answers for group 4 was 7.2. Group 3 had the most correct answers for the third text. The average number of correct answers for all four groups was 6.95.

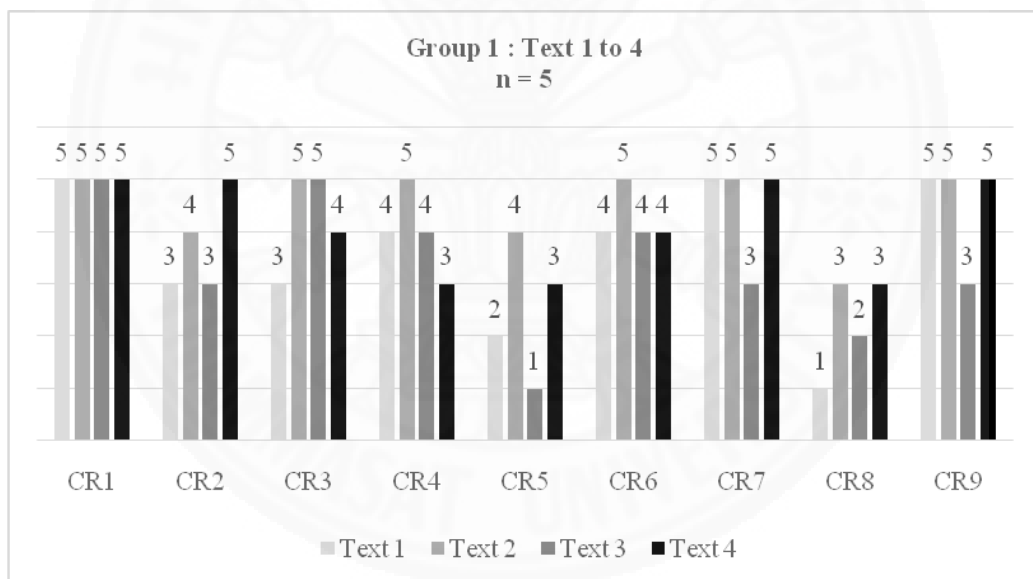
In the fourth text, the average number of correct answers for group 1 was 7.4. The average number of correct answers for group 2 was 8.6. The average number of correct answers for group 3 was 6.8 and the average number of correct answers for group 4 was 8. Group 2 had the most correct answers for the fourth text. The average number of correct answers for all four groups was 7.70.

The students received the most correct answers related to critical reading skills from the fourth text. The second text ranked second, the third text ranked third and the first text garnered the least number of correct answers. The groups that were the text owners received the most correct answers in their selected texts. Based on the data from the interviews, the most influential factor affecting the students' answers in the response journals was that text owners needed to do an end product presentation based on their selected text and as a result, student spent more time reading their own texts. Other influential factors included the students' interests in the text, text difficulty, and the students' background knowledge. Two students reported that compared to the other three texts, they did not feel motivated to read the first text as the topic on work was not interesting partly because they did not have any working experience themselves. Three students said that the second text related to pregnant girls was difficult. Two of these three students revealed that they did not enjoy reading the text on pregnant girls. Three students reported that the third text related to Facebook was interesting because they had experience and prior knowledge of Facebook, however, they reported that the text was too difficult and too long. The fourth text was related to getting rewards for

good grades. Three students found it easy and enjoyable to read. One student reported that her group members made active discussions about this topic.

Another issue was related to the students' inexperience in journal writing. In the interviews, three students stated that they did not have much experience in writing journals and finding answers related to critical reading. This affected their first journal writing. All students thought that they could write better by the third and fourth journals as they had become more familiar with the process and knew what content was needed.

Figure 5.3 presents the overall results of the response journals for group 1. The students in group 1 could identify the author's purpose. The students did not have consistent improvement in identifying the author's tone, point of view, intended audience, inferences and draw conclusions, facts and opinions, bias, evidence, and argument.



- CR 1 = identifying the author's purpose
- CR 2 = identifying the author's tone
- CR 3 = identifying the author's point of view
- CR 4 = identifying the author's audience
- CR 5 = making inferences and drawing conclusions
- CR 6 = distinguishing facts from opinions
- CR 7 = identifying the author's bias
- CR 8 = evaluating the author's argument
- CR 9 = evaluating the author's evidence

Figure 5.3 Overall results of the response journals of group 1

According to Figure 5.3, all five students in group 1 could identify the author's purposes of four texts. The number of the students who could identify the author's tone fluctuated from 3 in the first text, increased to 4 in the second text, dropped to 3 in the third text and increased to 5 in the fourth text.

The number of the students who could identify the author's point of view fluctuated from 3 in the first text, stayed at 5 in the second and third texts then slightly dropped to 4 in the fourth text.

The number of the students who could identify the author's audience fluctuated from 4 in the first text, increased to 5 in the second text, went back to 4 in the third text before dropping to 3 in the fourth text.

The number of the students who could make inferences and draws conclusions fluctuated from 2 in the first text, increased to 4 in the second text, dropped sharply to 1 in the third text and increased to 3 in the fourth text.

The number of the students who could distinguish facts from opinions fluctuated from 4 in the first text, increased to 5 in the second text, dropped to 4 in the third text and stayed the same in the fourth text.

The number of the students who could identify the author's bias fluctuated from 5 in the first text, stayed the same in the second text, dropped to 3 in the third text and increased to 5 in the fourth text.

The number of the students who could evaluate the author's argument fluctuated from 1 in the first text, increased to 3 in the second text, dropped to 2 in the third text and increased to 3 in the fourth text.

The number of the students who could evaluate the author's evidence fluctuated from 5 in the first text, stayed the same in the second text, dropped to 3 in the third text and increased to 5 in the fourth text. Figure 5.4 presents the first journal writing of the students in group 1.

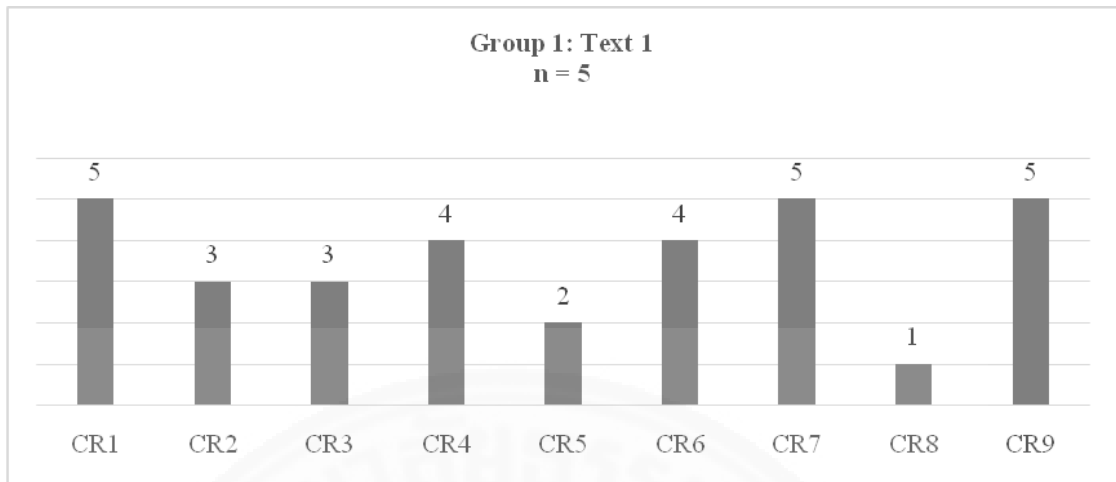


Figure 5.4: Results of the first response journals of group 1

In the first text, all students could identify the author's purpose, bias, and evidence for the first text. Four students could identify the intended audience and distinguish facts from opinions. Two students could make inferences and draw conclusions. Only one student could evaluate the author's argument. Figure 5.5 presents the second journal writing of the students in group 1.

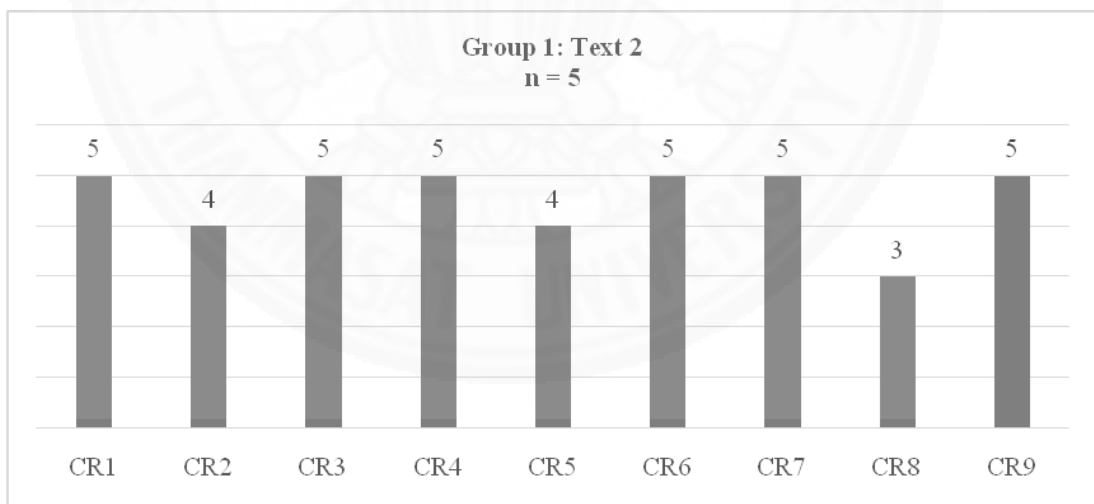


Figure 5.5: Results of the second response journals of group 1

Group 1 was the owner of the second text. All group 1 members could identify the author's purpose, point of view, intended audience, facts and opinion, author's bias, and the author's evidence. Four students could identify the author's audience and make inferences and draw conclusions. Three students could evaluate the author's argument. Figure 5.6 presents the third journal writing of the students in group 1.

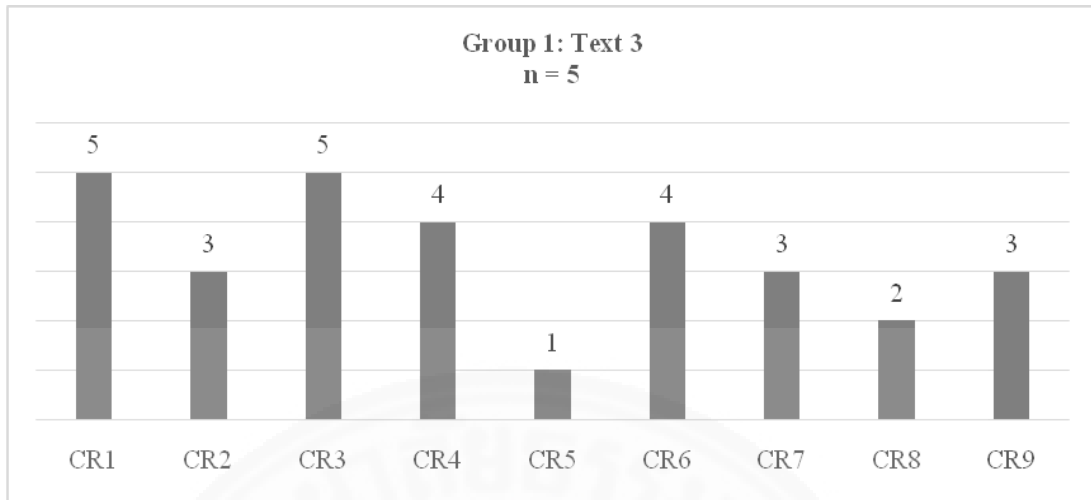


Figure 5.6: Results of the third response journals of group 1

For the third text, all group 1 students could identify the author's purpose and point of view. Four students could identify the author's intended audience and distinguish facts from opinions. Three students could identify the author's tone, bias, and evidence. Two students could evaluate the author's argument. Only one student could make inferences and draw conclusions. Figure 5.7 presents the fourth journal writing of the students in group 1.

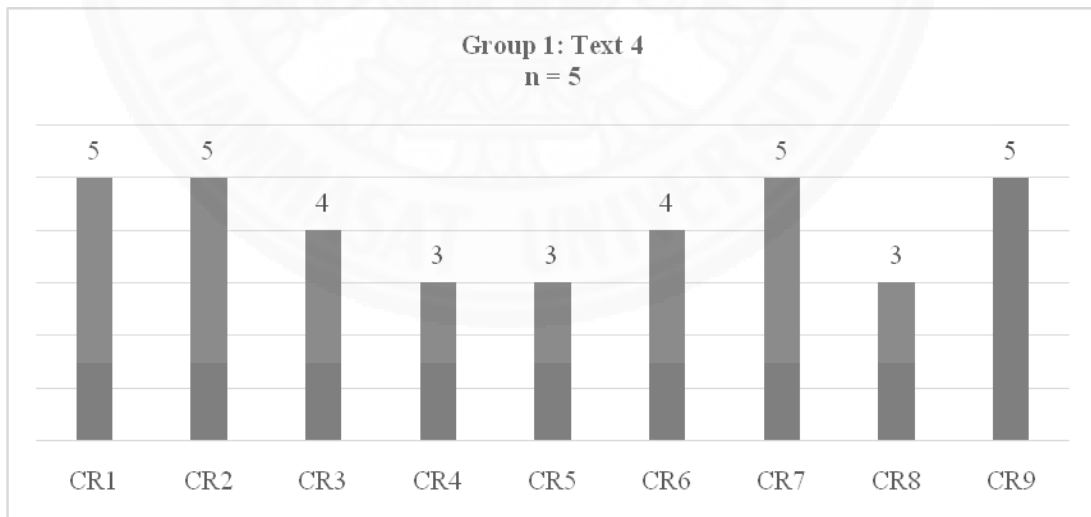
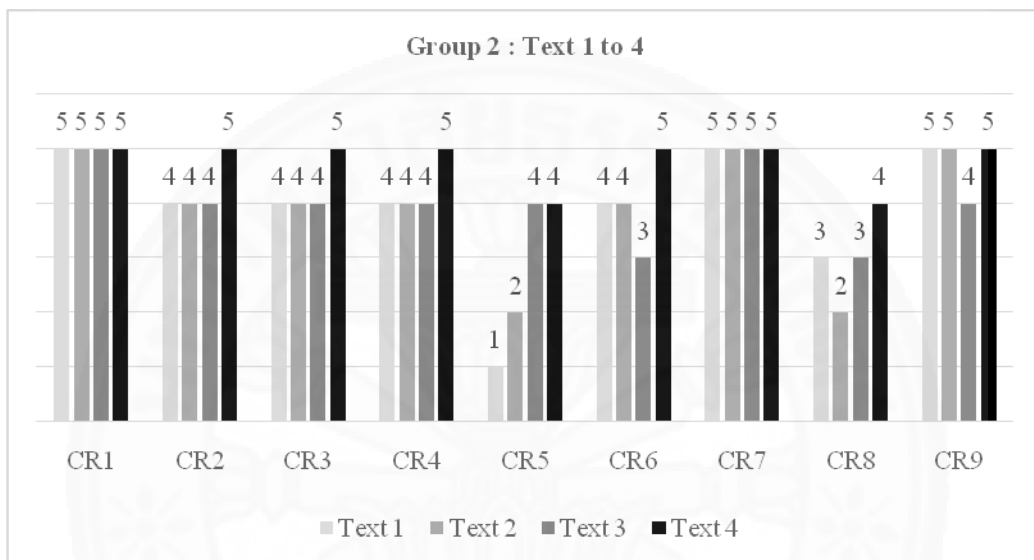


Figure 5.7: Results of the fourth response journals of group 1

For the fourth text, all group 1 students could identify the author's purpose, tone, bias, and evidence. Four students could identify the author's point of view and distinguish facts from opinions. Three students could identify the author's intended audience, make inference and draw conclusion, and evaluate the author's argument.

Figure 5.8 presents the overall results from response journals for group 2. The results of the response journals revealed that students in group 2 could identify the author's purpose and bias. The students showed improvement in identifying the author's tone, point of view, intended audience, and make inferences and draw conclusions. Improvement in distinguishing facts and opinions and evaluating the authors' argument and evidence was inconsistent.



- CR 1 = identifying the author's purpose
- CR 2 = identifying the author's tone
- CR 3 = identifying the author's point of view
- CR 4 = identifying the author's audience
- CR 5 = making inferences and drawing conclusions
- CR 6 = distinguishing facts from opinions
- CR 7 = identifying the author's bias
- CR 8 = evaluating the author's argument
- CR 9 = evaluating the author's evidence

Figure 5.8: Overall results of the response journals of group 2

According to Figure 5.8, all five students in group 2 could identify the author's purpose and bias in all four texts. The number of the students who could identify the author's tone stayed at 4 from the first text to the third text and then increased to 5 in the fourth text.

The number of the students who could identify the author's point of view stayed at 4 from the first text to the third text and then increased to 5 in the fourth text. The number of the students started from 4 in the first text and stayed the same at 4 in the second and third text before increasing to 5 in the fourth text.

The number of the students who could identify the author's audience stayed at 4 from the first to the third text and then increased to 5 in the fourth text. The number of the students started from 4 in the first text and stayed the same at 4 in the second and third text before increasing to 5 in the fourth text.

The number of the students who could make inferences and draws conclusions fluctuated from 1 in the first text, increased to 2 in the second text, increased to 4 in the third text and stayed the same in the fourth text.

The number of the students who could distinguish facts from opinions fluctuated from 4 in the first text, stayed the same in the second text, dropped to 3 in the third text and increased to 5 in the fourth text.

The number of the students who could evaluate the author's argument fluctuated from 3 in the first text, dropped to 2 in the second text, increased to 3 in the third text and increased to 4 in the fourth text.

The number of the students who could evaluate the author's evidence fluctuated from 5 in the first text, stayed the same in the second text, dropped to 4 in the third text and increased to 5 in the fourth text. Figure 5.9 presents the first journal writing of the students in group 2.

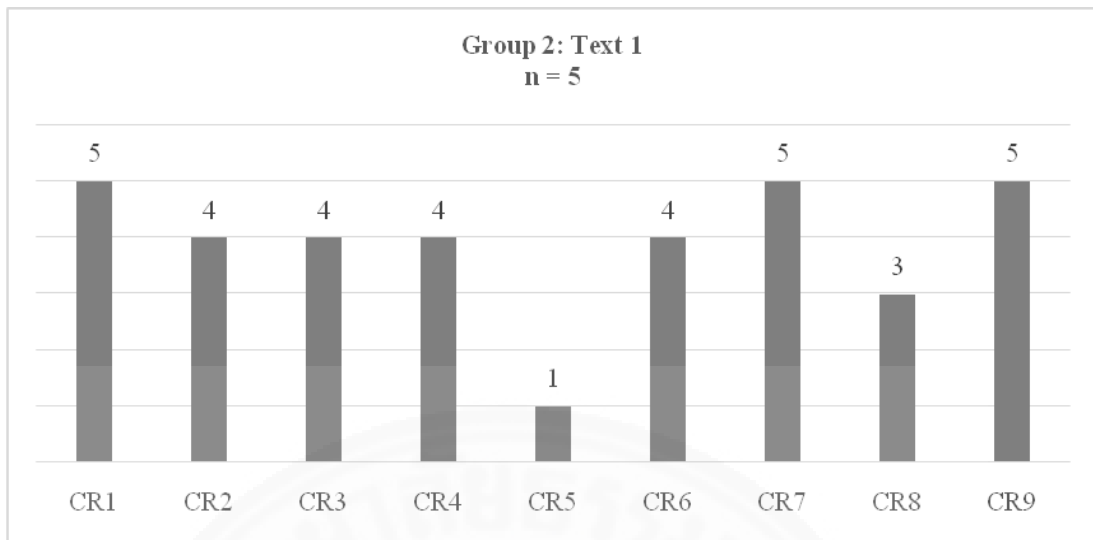


Figure 5.9: Results of the first response journals of group 2

In the first text, all students could identify the author's purpose, bias, and evidence of the first text. Four students could identify the author's tone, point of view, intended audience, and distinguish facts from opinions. Three students could evaluate the author's argument and there was only one student who could make inference and draw conclusion. Figure 5.10 presents the second journal writing of the students in group 2.

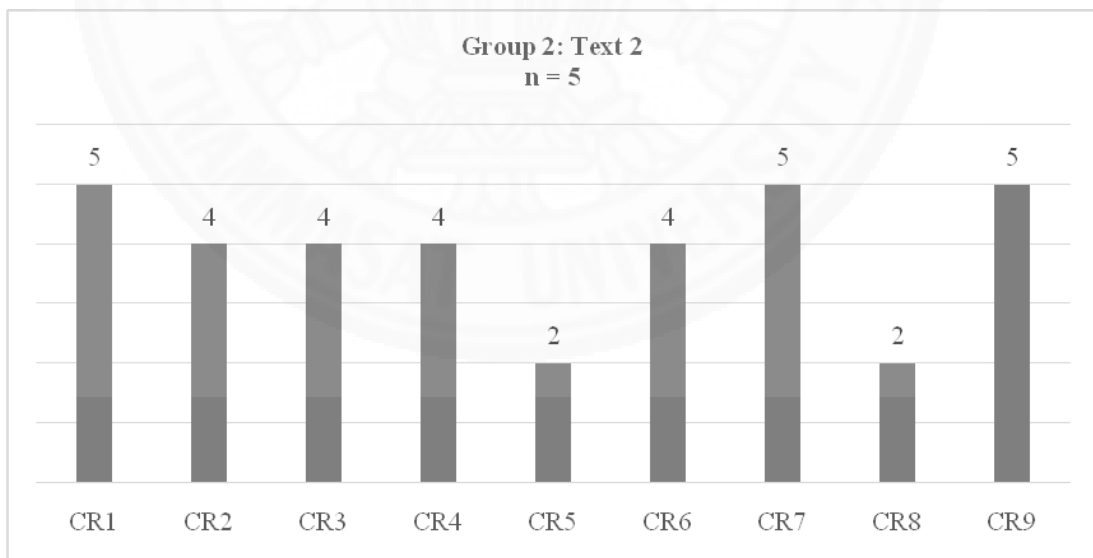


Figure 5.10: Results of the second response journals of group 2

In the second text, all students could identify the author's purpose, bias, and evidence. Four students could identify the author's tone, point of view, intended audience, and facts and opinions. Two students could make inferences and draw

conclusion and evaluate the author's argument. Figure 5.11 presents the third journal writing of the students in group 2.

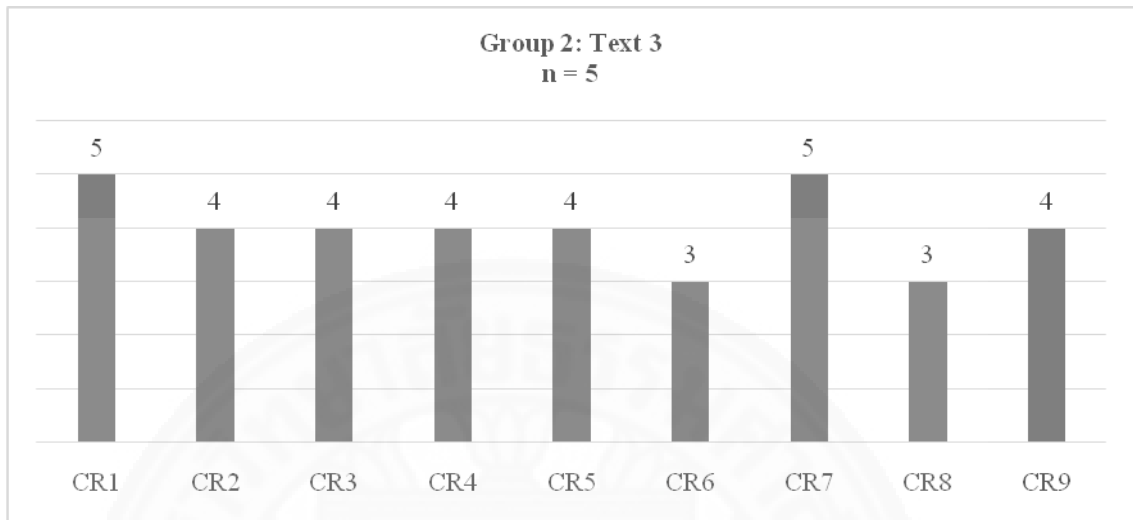


Figure 5.11: Results of the third response journals of group 2

In the third text, all students could identify the author's purpose and bias. Four students could identify the author's tone, point of view, intended audience, and inference and conclusion. Three students could distinguish facts from opinions and evaluate the author's argument. Figure 5.12 presents the third journal writing of the students in group 2.

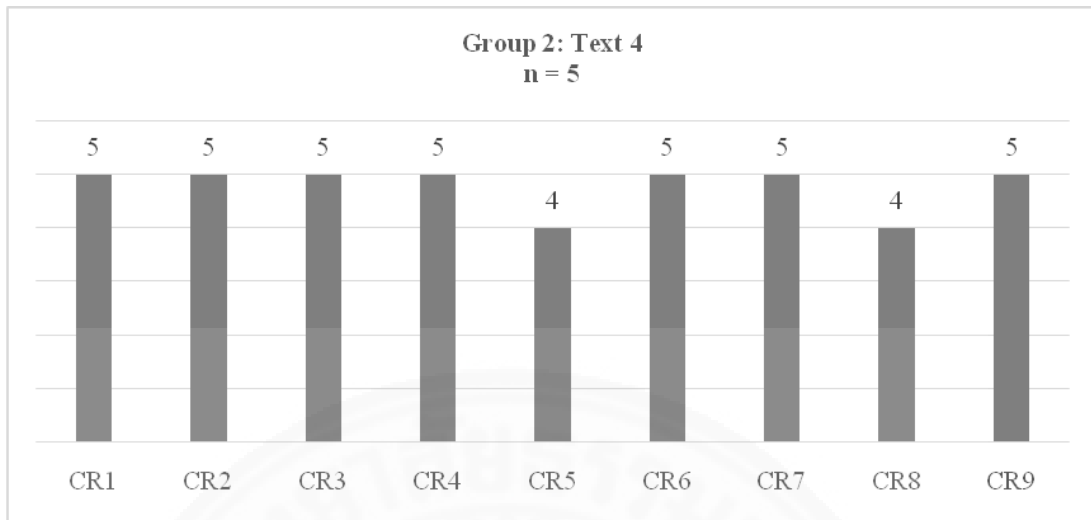
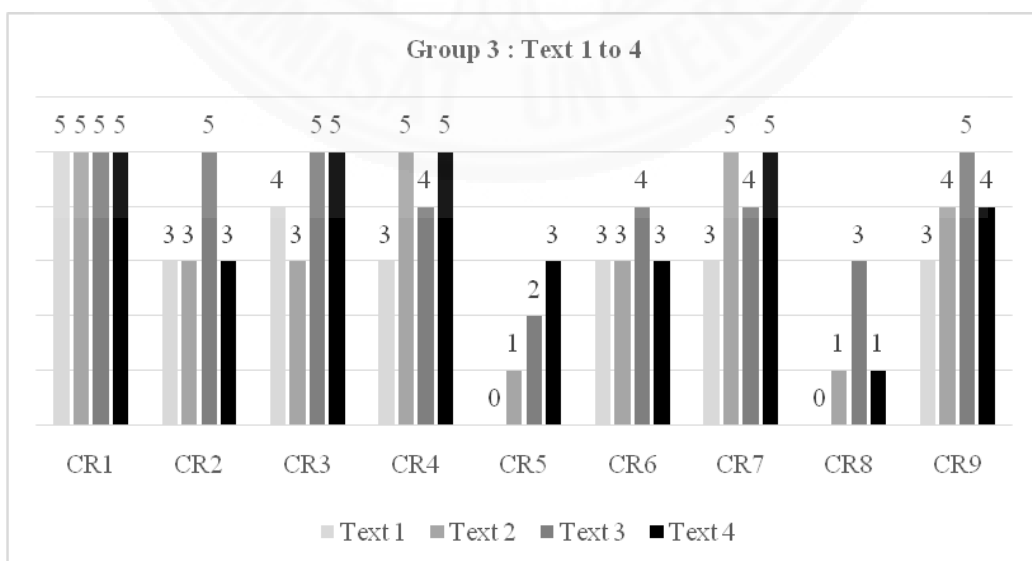


Figure 5.12: Results of the fourth response journals of group 2

Group 2 was the owner of the fourth text. All group 2 students could identify the author's purpose, tone, point of view, intended audience, facts and opinions, bias, and evidence. Four students could identify the author's intended audience and evaluate the author's argument.

Figure 5.13 presents the overall results from response journals for group 3. The results from the response journals revealed that the students in group 3 could identify the author's purpose and bias. The students showed improvement in making inferences and drawing conclusions. Improvement in identifying the author's tone, point of view, intended audience, facts and opinions, bias, arguments and evidence was inconsistent.



CR 1 = identifying the author's purpose

CR 2 = identifying the author's tone

CR 3 = identifying the author's point of view

CR 4 = identifying the author's audience
 CR 5 = making inferences and drawing conclusions
 CR 6 = distinguishing facts from opinions
 CR 7 = identifying the author's bias
 CR 8 = evaluating the author's argument
 CR 9 = evaluating the author's evidence

Figure 5.13: Overall results of the response journals of group 3

According to Figure 5.13, all five group 3 students could identify the author's purpose for all four texts. The number of the students who could identify the author's tone fluctuated from 3 in the first text, stayed the same in the second text, increased to 5 in the third text and dropped to 3 again in the fourth text.

The number of the students who could identify the author's point of view fluctuated from 4 in the first text, dropped to 3 in the second text, increased to 5 in the third text and stayed the same in the fourth text.

The number of the students who could identify the author's audience fluctuated from 3 in the first text, increased to 5 in the second text, dropped to 4 in the third text and increased again to 5 in the fourth text.

The number of the students who could make inferences and draws conclusions increased steadily. None of the students could make inferences and draw conclusions in the first text. The number of the students then steadily increased from 1 in the second text, to 2 in the third text and 3 in the fourth text.

The number of the students who could distinguish facts from opinions fluctuated. It started from 3 in the first text and stayed the same in the second text. Then, it increased to 4 in the third text before dropping to 3 in the fourth text.

The number of the students who could evaluate the author's argument fluctuated from 0 in the first text, increased to 1 in the second text, increased to 3 in the third text and dropped to 1 in the fourth text.

The number of the students who could evaluate the author's evidence fluctuated from 3 in the first text, increased to 4 in the second text, increased to 5 in the third text and dropped to 4 in the fourth text. Figure 5.14 presents the first journal writing of the students in group 3.

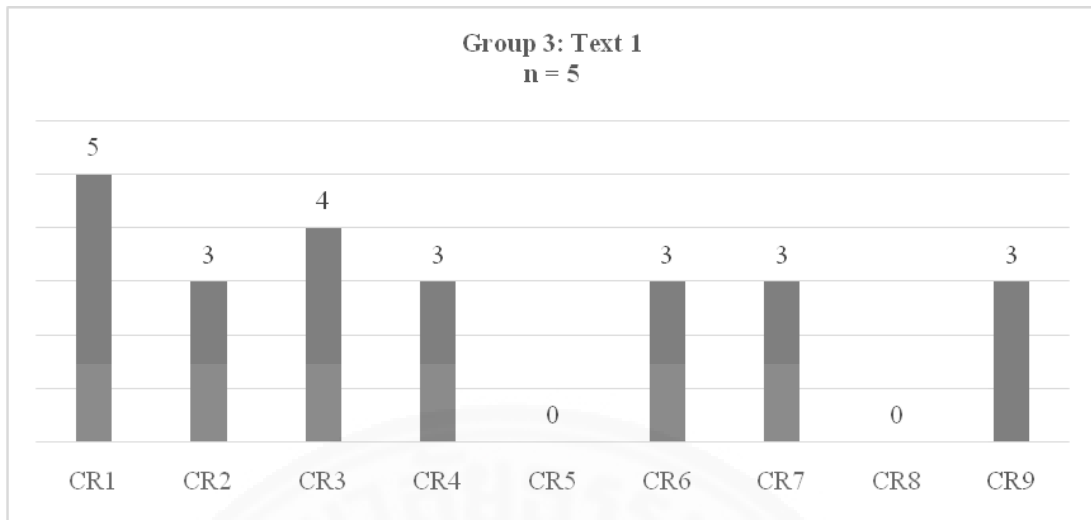


Figure 5.14: Results of the first response journals of group 3

For the first text, all group 3 students could identify the author's purpose. Four students could identify the author's point of view. Three students could identify the author's tone, intended audience, distinguish facts from opinions, bias, and evidence. None of the students could make inferences and draw conclusions and evaluate the author's argument. Figure 5.15 presents the second journal writing of the students in group 3.

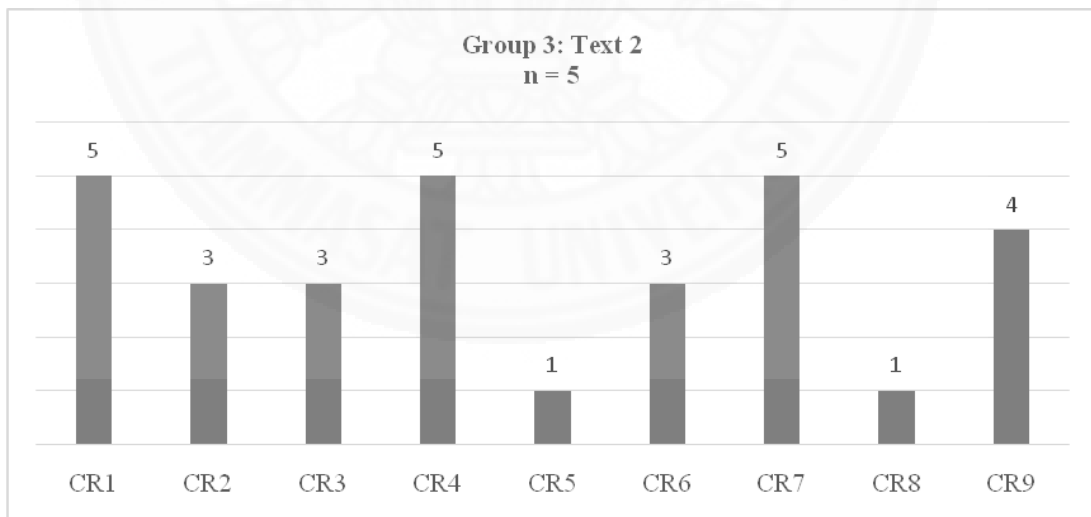


Figure 5.15: Results of the second response journals of group 3

For the second text, all group 3 students could identify the author's purpose, intended audience, and bias. Four students could evaluate the author's evidence. Three students could identify the author's tone, point of view. One student could make

inferences and draw conclusions and evaluate the author's argument. Figure 5.16 presents the third journal writing of the students in group 3.

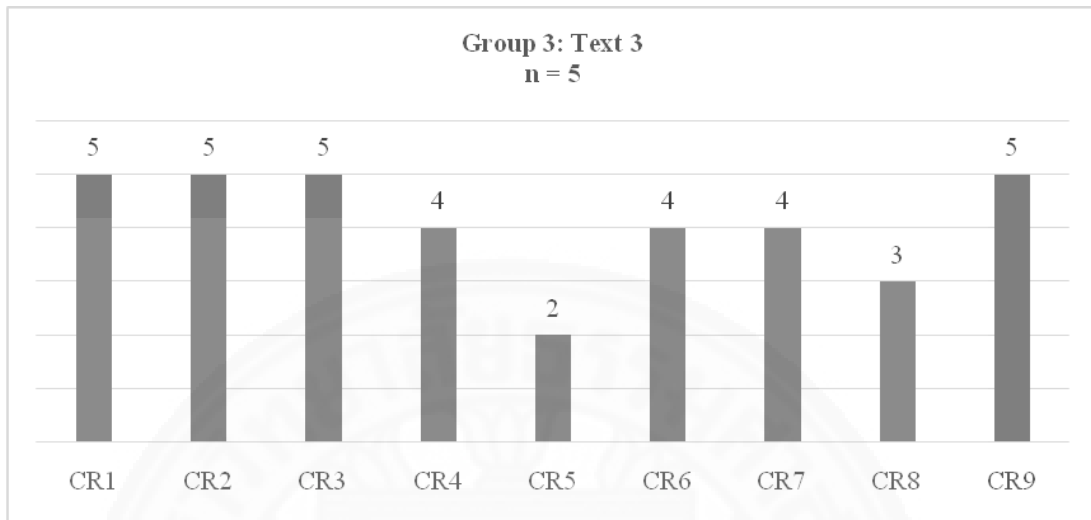


Figure 5.16: Results of the third response journals of group 3

Group 3 was the owner of the third text. All group 3 students could identify the author's purpose, tone, and point of view, evidence. Four students could identify the author's intended audience, distinguish facts and opinions, and bias. Three students could evaluate the author's argument and two students could make inferences and draw conclusions. Figure 5.17 presents the fourth journal writing of the students in group 3.

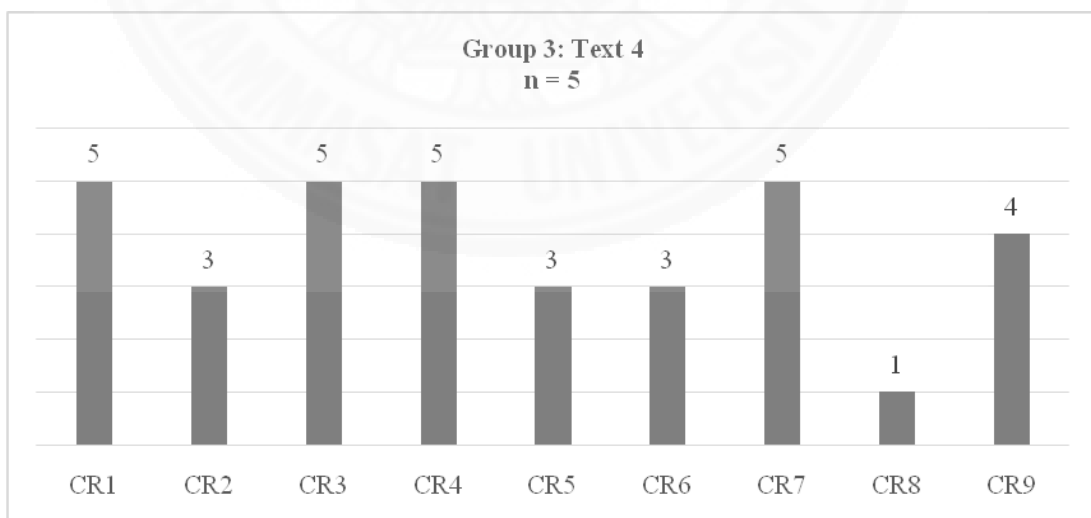
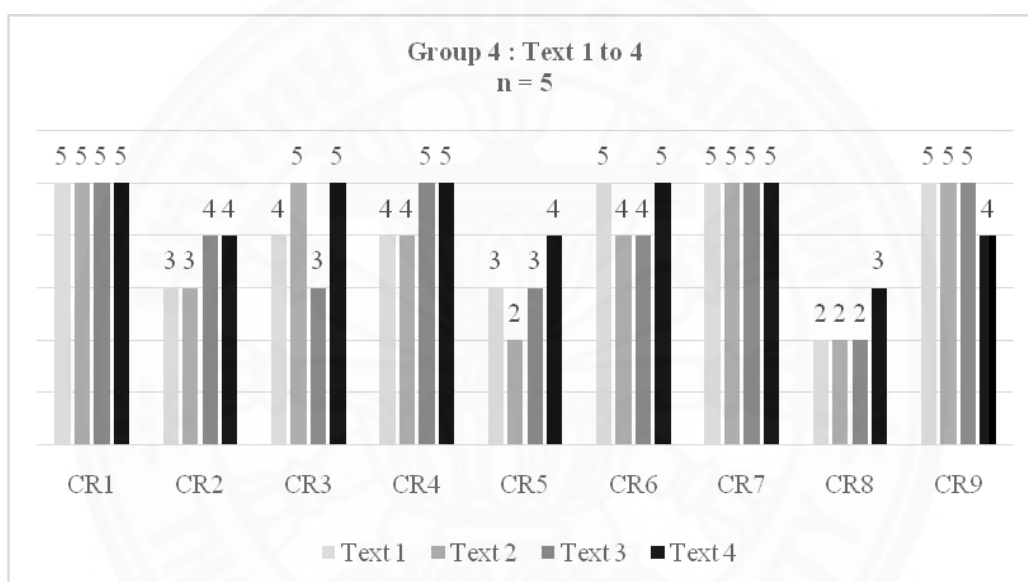


Figure 5.17: Results of the fourth response journals of group 3

For the fourth text, all group 3 students could identify the author's purpose, point of view, intended audience, and bias. Four students could evaluate the author's evidence. Three students could identify the author's tone, make inferences and draw

conclusions, and distinguish facts and opinions. One student could evaluate the author's argument.

Figure 5.18 presents the overall results from response journals of group 4. The results from the response journals revealed that the students in group 4 could identify the author's purpose and bias. The students showed gradual improvement in identifying the author's tone, intended audience, and evaluating the author's argument. Improvement in identifying the author's point of view, making inference and drawing conclusion, distinguishing fact from opinions, and evidence was inconsistent.



- CR 1 = identifying the author's purpose
- CR 2 = identifying the author's tone
- CR 3 = identifying the author's point of view
- CR 4 = identifying the author's audience
- CR 5 = making inferences and drawing conclusions
- CR 6 = distinguishing facts from opinions
- CR 7 = identifying the author's bias
- CR 8 = evaluating the author's argument
- CR 9 = evaluating the author's evidence

Figure 5.18: Overall results of the response journals of group 4

According to Figure 5.18, all five group 4 students could identify the author's purposes of four texts. The number of the students who could identify the author's tone gradually increased. The number of students started at 3 in the first text, stayed the same in the second text, increased to 4 in the third text and stayed the same in the fourth text.

The number of the students who could identify the author's point of view fluctuated from 4 in the first text before, increased to 5 in the second text, dropped to 3 in the third text and increased to 5 in the fourth text.

The number of the students who could identify the author's audience fluctuated from 4 in the first text, stayed the same in the second text, increased to 5 in the third text and stayed the same in the fourth text.

The number of the students who could make inferences and draws conclusions fluctuated from 3 in the first text, dropped to 2 in the second text, increased to 3 in the third text and increased to 4 in the fourth text.

The number of the students who could distinguish facts from opinions fluctuated from 5 in the first text, dropped to 4 in the second text, stayed the same in the third text and increased to 5 in the fourth text.

The number of the students who could evaluate the author's argument gradually increased from 2 in the first text, stayed the same from the second text to the third text, and increased to 3 in the fourth text.

The number of the students who could evaluate the author's evidence fluctuated from 5 in the first text, stayed the same from the second text to the third text and dropped to 4 in the fourth text. Figure 5.19 presents the first journal writing of the students in group 4.

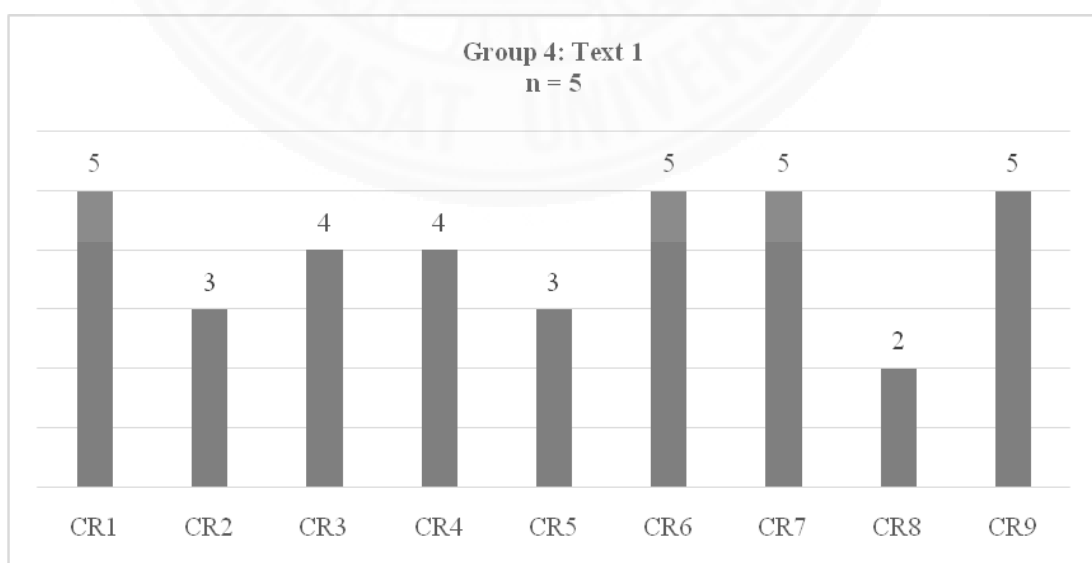


Figure 5.19: Results of the first response journals of group 4

Group 4 was the owner of the first text. All group 4 students could identify the author's purpose, facts and opinion, bias, and evidence. Four students could identify the author's point of view and intended audience. Three students could identify the author's tone and make inference and draw conclusion. Two students could evaluate the author's argument. Figure 5.20 presents the second journal writing of the students in group 4.

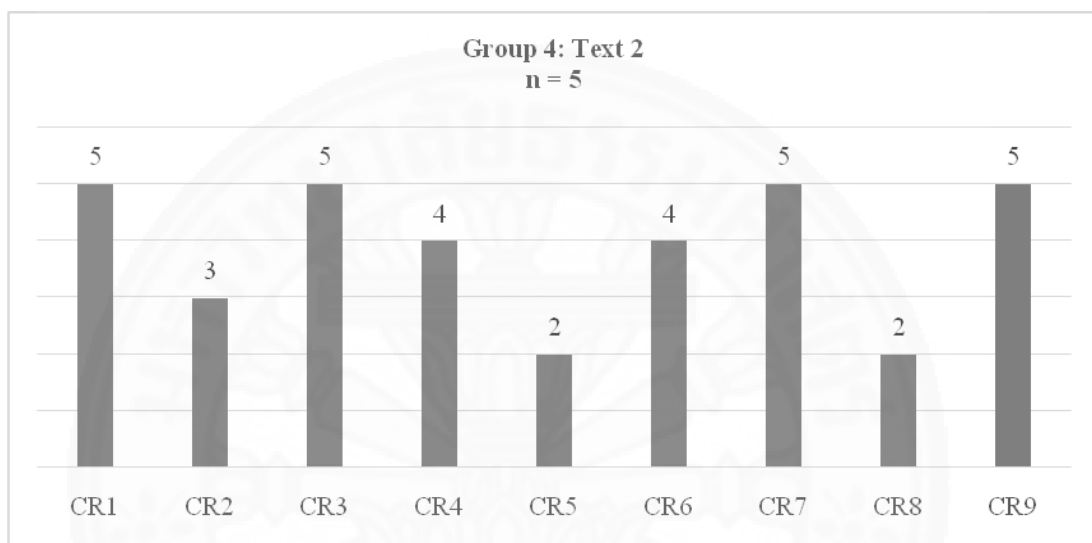


Figure 5.20: Results of the second response journals of group 4

In the second text, all students could identify the author's purpose, point of view, bias, and evidence. Four students could identify the author's audience and distinguish facts from opinions. Three students could identify the author's tone. Two students could make inferences and draw conclusions and evaluate the author's argument. Figure 5.21 presents the third journal writing of the students in group 4.

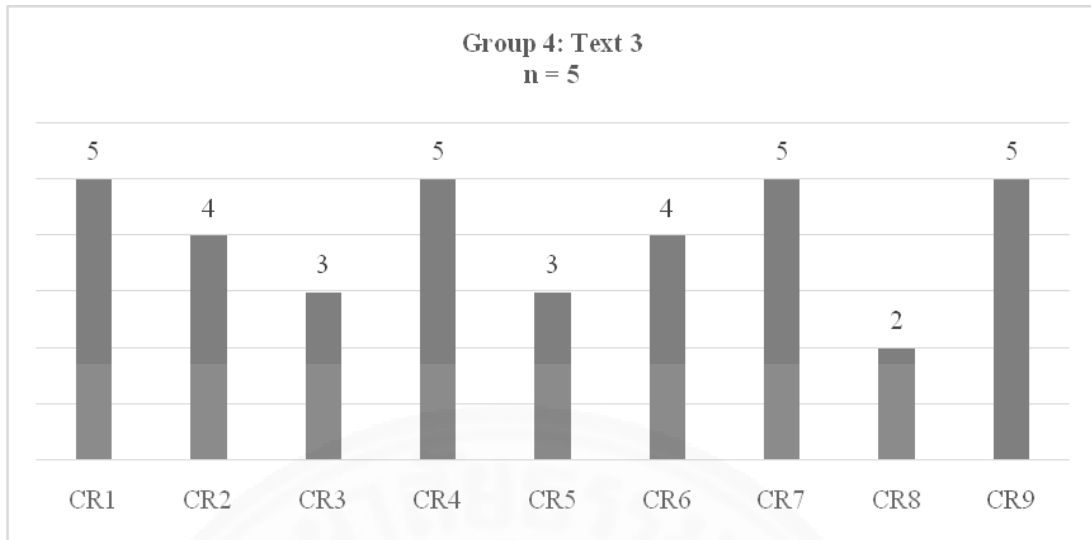


Figure 5.21: Results of the third response journals of group 4

For the third text, all group 4 students could identify the author's purpose, intended audience, bias, and evidence. Four students could identify the author's tone and distinguish facts from opinions. Three students could identify the author's point of view and make inferences and draw conclusions. Two students could evaluate the author's argument. Figure 5.22 presents the fourth journal writing of the students in group 4.

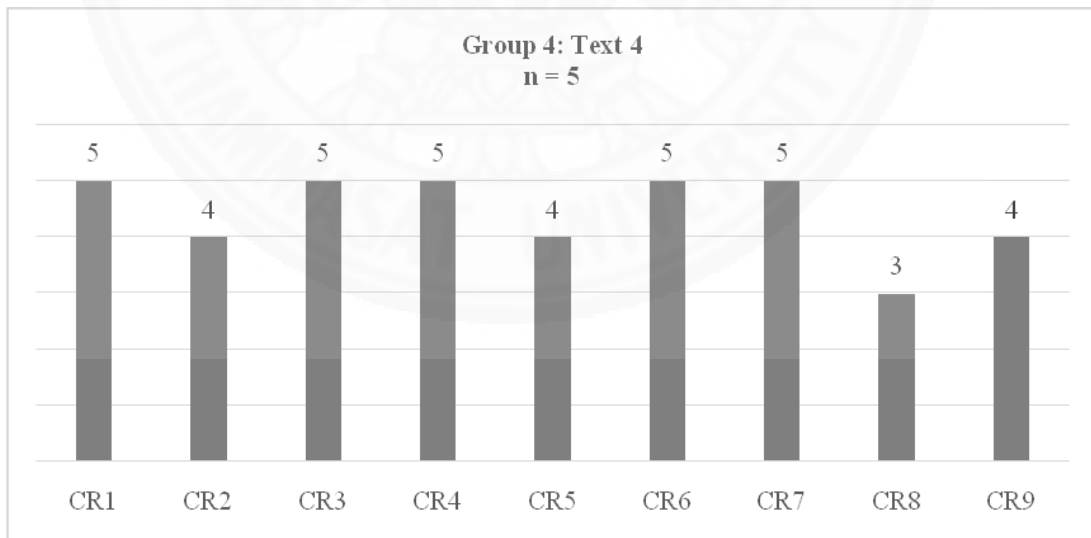


Figure 5.22: Results of the fourth response journals of group 4

For the fourth text, all group 4 students could identify the author's purpose, point of view, intended audience, distinguish facts from opinions and bias. Four

students could identify the author's tone, make inferences and draw conclusions, and evaluate the author's evidence. Three students could evaluate the author's argument.

The questionnaire results could be used to support the data from the interviews and response journals. Table 5.3 presents the questionnaire results on the attitudes towards reading the texts and writing journals.

Statement	Mean
You think that reading a passage and writing response journals help develop your critical reading skills.	4.00

Table 5.3: Questionnaire results on the attitudes of students towards journal writing

From Table 5.3, the responses of the students generated a mean score of 4.00 indicating that the students agreed that reading a passage and writing response journals helped develop their critical reading skills.

Stage 5 Project presentation and evaluation

The groups were required to make a presentation about their selected texts and products. Each group created an end product based on the group-selected text. All groups read their own selected text and found answers to the questions related to critical reading skills. All members brainstormed on the end product and created the end products based their selected reading. Groups proposed ideas related to the texts in the form of leaflets. After presenting their end products, each presenting group received comments from their classmates and discussed proposed ideas together. Each group also evaluated the group performance throughout the project. It was observed that eighty-five percent of the students paid attention to the presentation, asked the presenters questions and proposed ideas related to the presentation. Students were not passive listeners and actively exchanged ideas with the presenters since they had also the text owned by the presenting group. The other twenty-five percent of students did not pay attention to the presentations. The data from interview revealed that these students were more worried about their own group presentation causing them to pay less attention to what other groups were presenting.

Students learned through five stages within a project, which were linked together in order to facilitate the students' critical reading skills. In stage 1, the students formed their groups based on social and educational factors including the existing

relationships amongst the students, the time available to meet and work on projects outside classroom, and English proficiency levels. In stage 2, the teacher modeled strategies for finding answers to the questions related to critical reading skills and students practiced these skills using reading worksheets. Students were able to supply answers identifying the author's purpose, point of view, and intended audience. Students could also make inferences and conclusions, distinguish facts from opinions, and identify the author's bias. Only less than fifty percent of the students received all correct answers in identifying the author's tone and evaluating the author's argument and evidence. After doing the worksheets, the teacher provided explanations on how to find the answers for items in the exercises in order to help students understand expectations and complete the exercises correctly. In stage 3, all student groups were allowed select their reading topics. Topics were related to their own interests, personal backgrounds, and agreed by all the members. Two groups were able set their learning objectives on their own while the other two groups required assistance from the teacher and their classmates. In stage 4, the students selected the reading texts and tried to find answers related to critical reading skills by using defined strategies and discussing with peers. Students used four main reading strategies to help them develop their critical reading skills, which included questioning, citing evidence, rereading, and dealing with unknown words. Through peer modeling students were being motivated to think by their peers, were recognized for their contributions, and learned to be open-minded about differences between themselves and their peers, which helped the students facilitate their desired skills. Students also tried to use what they learned from their teacher and their group members when reading the texts individually. The opportunity to read and find answers individually also helped expedited their skills. Students in group 1 could identify the author's purpose, however, improvements in identifying the author's tone, point of view and intended audience, in making inferences and drawing conclusions, distinguishing facts and opinions, bias, evidence, and arguments was inconsistent. Students group 2 could identify the author's purpose and bias. The students showed improvement in identifying the author's tone, point of view, intended audience, and in making inferences and drawing conclusions. They did not demonstrate consistent improvement in distinguishing facts and opinions and evaluating the authors' argument and evidence. Students in group 3 could identify the author's purpose and

bias. Students showed improvement in making inferences and drawing conclusions but did not demonstrate consistent improvement in identifying the author's tone, point of view, intended audience, distinguishing facts and opinions, bias, arguments and evidence. Students in group 4 could identify the author's purpose and bias and demonstrated gradual improvement in identifying the author's tone, intended audience, and evaluating the author's argument. Improvement in identifying the author's point of view, making inference and drawing conclusion, fact from opinions, and evidence was inconsistent. In stage 5, all groups of students were able to create an end product related to their selected reading and were able to present their end product to the class.

5.2 Research question 2: What are the attitudes of students towards project-based learning?

Figure 5.23 presents the overall results on the attitudes of students towards project-based learning in terms of learning activities, students' collaborative learning behaviors, the teacher's roles in facilitating collaborative learning in all five stages of the project, and the students' critical reading skills development in stages 2, 4, and 5. Questionnaires distributed in stages 1 and 3 did not include the final category since the students did not do the activities related to critical reading skills. The responses of the students generated mean scores ranging from 3.90 to 4.75 on a 5-point Likert scale. The mean scores indicated positive to very positive attitudes toward project-based learning.

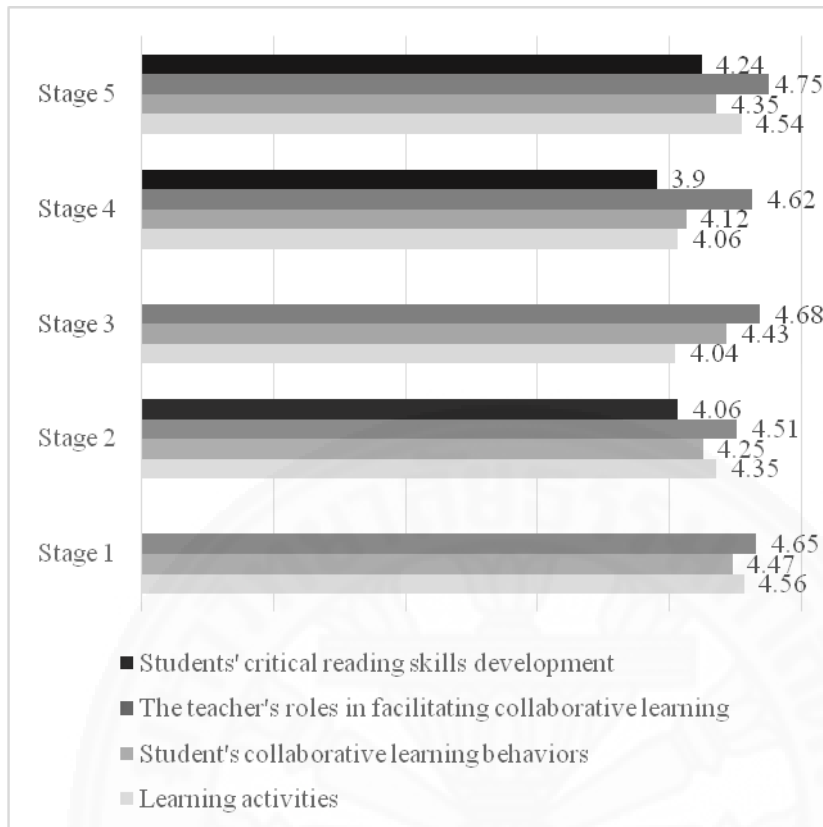


Figure 5.23: Overall results of the questionnaires on the attitudes of students towards project-based learning

According to Figure 5.23, in stage 1, the mean score for learning activities was 4.56. The mean score for students' collaborative learning behaviors was 4.47 and the mean score for the teacher's roles in facilitating collaborative learning was 4.65. The overall mean score was 4.56 indicating very positive attitudes toward stage 1.

In stage 2, the mean score for learning activities was 4.35. The mean score for students' collaborative learning behaviors was 4.25 and the mean score for the teacher's roles in facilitating collaborative learning was 4.51. The mean score for student's critical reading skills development was 4.06. The overall mean score was 4.29 indicating positive attitudes toward stage 2.

In stage 3, the mean score for learning activities was 4.04. The mean score for students' collaborative learning behaviors was 4.43 and the mean score for the teacher's roles in facilitating collaborative learning was 4.68. The overall mean score was 4.38 indicating positive attitudes toward stage 3.

In stage 4, the mean score for learning activities was 4.06. The mean score for students' collaborative learning behaviors was 4.12 and the mean score for the

teacher's roles in facilitating collaborative learning was 4.62. The mean score for student's critical reading skills development was 3.90. The overall mean score was 4.17 indicating positive attitudes toward stage 4.

In stage 5, the mean score of learning activities was 4.54. The mean score for students' collaborative learning behaviors was 4.35 and the mean score for the teacher's roles in facilitating collaborative learning was 4.75. The mean score for student's critical reading skills development was 4.24. The overall mean score was 4.47 indicating positive attitudes toward stage 5.

Students had the most positive attitudes towards stage 1. Stage 5 ranked second, stage 3 ranked third, stage 2 ranked fourth and stage 4 ranked fifth.

The mean scores for students' attitude towards learning activities from stage 1 to stage 5 ranged from 4.04 to 4.56 scores indicating positive attitudes to very positive attitudes toward this category. The mean score started at 4.56 in stage 1, decreased to 4.35 in stage 2, decreased to 4.04 in stage 3 and increased to 4.06 in stage 4 and 4.54 in stage 5. The overall mean score was 4.31.

Student attitudes towards collaborative learning behaviors from stage 1 to stage 5 ranged from 4.12 to 4.47 indicating positive attitudes towards this category. The mean scores started at 4.47, decreased to 4.25, increased to 4.43 in stage 3, decreased to 4.12 in stage 4 and increased to 4.35 in stage 5. The overall mean score was 4.32.

The mean scores for students' attitudes towards the teacher's roles in facilitating collaborative learning from stage 1 to stage 5 ranged from 4.51 to 4.75 indicating very positive attitudes towards this category. The mean scores started at 4.65 in stage 1, decreased to 4.51 in stage 2, increased to 4.68 in stage 3, decreased to 4.62 in stage 4 before going up to 4.75 in stage 5. The overall mean score was 4.64.

The mean scores for students' attitudes towards their critical reading skills development in stage 2, 4, and 5 ranged from 3.90 to 4.24 indicating positive attitudes towards this category. The mean scores started at 4.06 in stage 2, decreased to 3.90 in stage 4 and increased to 4.24 in stage 5. The overall mean score was 4.06.

Across all four categories, students had the most positive attitudes towards the teacher's roles in facilitating collaborative learning. Students' collaborative learning

behaviors ranked second, learning activities ranked third and students' critical reading skills development ranked fourth.

The questionnaire results for the students' attitudes towards project-based learning are presented in details in the following subsections.

5.2.1 Students' attitudes towards learning activities

The presentation of this section is organized into 5 subsections covering the following topics: (5.2.1.1) students' attitudes towards learning activities in general, (5.2.1.2) students' attitudes towards learning activities in Stage 1, (5.2.1.3) students' attitudes towards learning activities in Stage 2, (5.2.1.4) students' attitudes towards learning activities in Stage 3, (5.2.1.5) students' attitudes towards learning activities in Stage 4, (5.2.1.6) students' attitudes towards learning activities in Stage 5.

5.2.1.1 Students' attitudes towards learning activities in general

Figure 5.24 presents the questionnaire results on the attitudes of students towards learning activities in general. Student responses generated mean scores ranging from 4.06 to 4.56 on a 5-point Likert scale indicating positive attitudes to very positive attitudes toward learning activities in general.

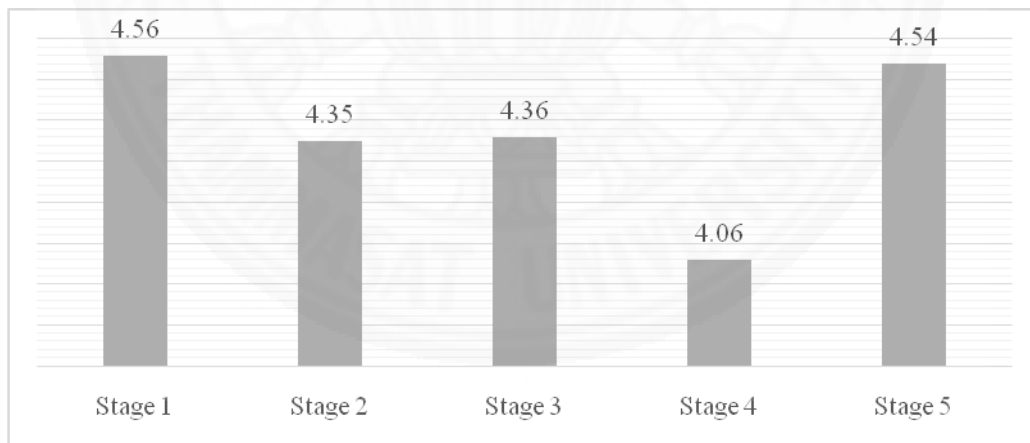


Figure 5.24: Questionnaire results on the attitudes of students towards learning activities in general

From Figure 5.24, the mean score started at 4.56 in stage 1, fell to 4.35 in stage 2, rose slightly to 4.36 in stage 3, dropped to 4.06 in stage 4 and increased 4.54 in stage 5.

5.2.1.1 Students' attitudes towards learning activities in stage 1

Table 5.4 presents the questionnaire results on the attitudes of students towards learning activities in stage 1. The overall mean score was 4.56 on the 5-point Likert scale indicating very positive attitudes towards learning activities in stage 1.

Item	Statement	Mean
1	You are satisfied with choosing your own group members.	4.80
2	You feel comfortable when working with the group members.	4.80
3	You are confident to express your thoughts and feeling with the group members.	4.65
4	You think that the group size is appropriate for working together.	4.65
5	You think that knowing personal strengths and interests of group members can help your group plan the project.	4.10
6	You think that discussing about the advantages of group work, the anticipated problems and solutions can help your group prepare for group work.	4.40
Total		4.56

Table 5.4: Questionnaire results on the attitudes of students towards learning activities in stage 1

According to Table 5.4, students strongly agreed with items 1,2,3, and 4, generating the mean scores of 4.80, 4.80, 4.65, and 4.65 respectively. Students were satisfied with setting groups and group size. They felt comfortable when working in groups and in express their thoughts and feeling with their fellow members. The students agreed with items 5 and 6, generating the mean scores of 4.10 and 4.40 respectively. Students agreed that knowing the personal strengths and interests of group members helped them in planning their project. Discussing advantages, problems, and solutions helped them prepare for group work.

The data from the interviews confirmed that the students were in agreement with setting groups based on student-selection. The member selection was determined by the depth of existing relationships between students and their peers. The students reasoned that working together with people they knew closely gave them the confidence to exchange ideas and allowed them to feel more comfortable. Some students reported that the selection partly depended on their minor subjects. Working with peers who

were taking the same minor subjects would make it easier to meet outside the class to work on projects rather than working with peers taking other subjects.

I prefer working with my close friends rather than other classmates. If I am grouped with the classmates, I may be quiet and do not express ideas much. If I disagree with them, I will keep quiet since I do not want to have a problem. (IN1, interview1, Stage 1, translated)

One of the interviewees, expressed concern over the irresponsibility of members, even though she was satisfied with self-selection in general. She was concerned that some members would advantage of the familiarity between peers by asking peers to complete their work for them or by not fully participating in group activities thinking that they would not be confronted or blamed by peers who were friends. She suggested that groups membership should be comprised of friends and other less familiar classmates reasoning that mixed groups would make students take better charge of their work but at the same time manage to remain comfortable working together.

I agree with self-selection. I feel good to be with my friends but if we are grouped with other classmates, we can learn lots of things from them. Being together with close friends sometimes was not ok. Some may not be responsible for their work and would like others to do it for them. In my opinion, if we are grouped with the mixture between close friends and classmates, it would be good. (IN3, interview 1, Stage 1, translated)

The data from the interviews also revealed that the students found it useful to discuss interests, strengths and any issues or difficulties that could arise when doing group work. Such discussions allowed them to know more about their fellow members and understand what was expectations and actions were required during group work.

The students' experience in setting groups was pleasant. The students did not encounter difficulties during group formation mainly because group formation was not new to them. Member selection was influenced by social and educational factors. These included the relationships among the students, their minor subjects, and availability to meet outside class to work on the project. The most important in member selection was the relationships amongst the students.

5.2.1.2 Students' attitudes towards learning activities in stage 2

Table 5.5 presents the questionnaire results on the attitudes of students towards learning activities in stage 2. The overall mean score was 4.35 on a 5-point Likert scale indicating positive attitudes toward learning activities in stage 2.

Item	Statement	Mean
1	You are satisfied with teacher modeling.	4.31
2	You think teacher modeling is necessary.	4.43
3	You think that teacher modeling can help you follow the steps of doing the project.	4.50
4	You feel confident to do the project after teacher modeling.	4.18
5	You get necessary information about doing the project from teacher modeling.	4.31
Total		4.35

Table 5.5: Questionnaire results on the attitudes of students towards learning activities in stage 2

Table 5.5 indicates that students strongly agreed with item 3, which garnered a mean score of 4.50. Students were satisfied with teacher modeling in that it helped them understand what to do for project completion. Students also agreed with the statements in items 1, 2, 4, and 5, which generated the mean scores of 4.31, 4.43, 4.18, and 4.31 respectively. Students were satisfied with teacher modeling and recognized its value in helping them feel confident and in providing information necessary for successful completion of their project.

The data from the interviews confirmed that the students recognized the necessity of teacher modeling in that it assisted them in developing an awareness of how to handle their texts in relation to critical reading. Teacher modeling showed them how to seek relevant information and showed them what reading strategies to use in order to make sense of reading material. Teacher modeling also assisted them in knowing how to do the project. Students also recognized the value of the supplementary reading worksheets, which gave them necessary practice in reading strategies and created opportunities for students to exchange ideas about the reading with others.

The students' experience in teacher modeling was pleasant. The students understood how to use reading strategies to help answer set questions and how to do the project. Students were fully capable of completing the exercises in the worksheets

when working jointly with peers. The majority preferred to complete the exercises with their peers reasoning that they felt more secure completing work together. The students who chose to work on the exercises individually, found them too challenging and difficult handle alone. When the students had difficulties following the teacher or completing exercises, they consulted and relied on peers first and teachers second.

5.2.1.3 Students' attitudes towards learning activities in stage 3

Table 5.6 presents the questionnaire results on the attitudes of students towards learning activities in stage 3. The overall mean score was 4.04 on a 5-point Likert indicating students' positive attitude toward learning activities in stage 3.

Item	Statement	Mean
1	You are satisfied with choosing the reading topic with your group members.	4.00
2	You want to read more when you choose topics by yourselves.	4.18
3	You are satisfied with setting learning objectives with your group members.	3.93
4	You think setting learning objectives by yourselves encourage you to learn more.	4.00
5	You are satisfied with making decisions about project work with your group members.	4.12
6	You think it is challenging for you to make decisions about project work by yourselves.	4.06
Total		4.04

Table 5.6: Questionnaire results on the attitudes of students towards learning activities in stage 3

Table 5.6 indicates that the students agreed with statements in all six items. The mean scores for items 1 to 6 were 4.00, 4.18, 3.93, 4.00, 4.12, and 4.06 respectively. The students were satisfied choosing the reading topic with their group members and were motivated to read more when they chose the topics themselves. Students were satisfied setting learning objectives with their group members and felt that setting learning objectives on their own encouraged them to learn more. Students were also satisfied making decisions about project work with their members and thought it was challenging to make decisions about project work by on their own.

The data from the interviews revealed that student were satisfied selecting a reading topic on their own. The topic selection depended on their interests, personal background, and member agreement. Students reported being confused about setting

learning objectives and required teachers to provide more explanations and examples on setting learning objectives.

It was concluded that the groups had no difficulties selecting reading topics but experienced difficulties setting learning objectives partly due to unclear explanations from the teacher and the students' lack of experience in setting learning objectives on their own.

5.2.1.4 Students' attitudes towards learning activities in Stage 4

Table 5.7 presents the questionnaire results on the attitudes of students towards learning activities in Stage 4. The overall mean score was 4.06 on a 5-point Likert scale indicating a positive attitude toward learning activities in Stage 4.

No.	Statement	Mean
1	You are satisfied with selecting a reading passage with your group members	4.00
2	You want to read more when you choose the passage by yourselves.	4.18
3	You think that reading passages and writing response journals facilitate you in doing the project.	3.93
4	You think that reading a passage and writing response journals help develop your critical reading skills.	4.00
5	You think writing response journals help you in discussing the reading selection with group members.	4.12
6	You are satisfied with discussing about the passages with your friends.	4.06
7	You think discussing about the passages help develop your critical reading skills.	4.12
Total		4.06

Table 5.7: Questionnaire results on the attitudes of students towards learning activities in stage 4

Table 5.7 indicates that students agreed with the statements in all six items. The mean scores for item 1 to 7 were 4.00, 4.18, 3.93, 4.00, 4.12, 4.06, and 4.12 respectively. Students were satisfied with selecting a reading passage with their group members and wanted to read more when they chose the passage by themselves. Students agreed that reading passages and writing response journals helped them complete the task for completing their project and helped develop their critical reading skills. Writing response journals helped produce better group discussions. Students were satisfied discussing passages with their friends and agreed that discussing the reading helped develop their critical reading skills.

The data from the interviews revealed that the students encountered difficulty finding the texts to read. The students reported that it was difficult to mate the the text options they chose with the critical reading activities and criteria. Their solution was to have group members conduct an individual search and present any new options to the group. After discussing the options and choosing the most appropriate texts, the students then brought the texts to consult with the teacher.

At first, my group cannot find the text to be read. The first text that we get was too short so we have to find a new one. Every member finds the new texts and bring the texts for the group to choose. We brainstorm which one we will read. (IN12, Interview 4, Stage 4, translated)

Data from the interviews also revealed that the students were aware of the importance of journal writing. They reported that journal writing helped them recognize their own thoughts, feelings, and their agreements or disagreements with the reading content making it easy to express their views during group discussions.

One interviewee complained that journal writing was too time-consuming activities although this interviewee acknowledge its benefits.

I think writing a journal helps me remember what I think while reading the texts but it took much time in completing it. Frankly speaking, sometimes there are the questions that I cannot answer. I left it and asked my friends about the answers. (IN11, interview 4, stage of selecting a reading passage and doing critical reading activities, translated)

It was concluded that the students' experience in selecting a reading passage and doing critical reading activities was pleasant. Although the groups had some difficulties selecting the reading passages, they solved the problem by themselves first before seeking teacher's assistance. The students found journal writing useful for improving conversations and maintaining flow during group discussions.

5.2.1.5 Students' attitudes towards learning activities in Stage 5

Table 5.8 presents the questionnaire results on the attitudes of students towards learning activities in stage 5. The overall mean score was 4.54 on a 5-point Likert scale indicating very positive attitudes towards learning activities in stage 5.

Item	Statement	Mean
1	You are satisfied with your group presentation	4.44
2	Presentation reflects what you have learned through the project.	4.44
3	You are satisfied with evaluating group performance.	4.55
4	Evaluating group performance can guide improvements in learning.	4.72
Total		4.54

Table 5.8: Questionnaire results on the attitudes of students towards learning activities in Stage 5

Table 5.8 indicates that students strongly agreed with the statements in items 3 and 4, which showed mean scores of 4.55 and 4.72 respectively. Students were satisfied with evaluating group performance and thought that evaluating group performance could facilitate improvements in learning. Students agree with the statements with items 1 and 2, which generated a mean score of 4.44. The students were satisfied with presentation-making and agreed that the presentation effectively reflected what they learned through project-based learning.

Data from interviews revealed that one student was worried about the group presentation causing her pay less attention when other groups were presenting their work. Two students reported that they had learned from their classmates' presentations about their end products and they could share their ideas with the presenters.

5.2.2 Students' attitudes towards students' collaborative learning behaviors in project-based learning

The presentation of this subsection is organized into 5 topics: (5.2.2.1) students' attitudes towards their collaborative learning behaviors in general, (5.2.2.2) students' attitudes towards the roles of all group members in learning activities, (5.2.2.3) students' attitudes towards group members' participation in group decision making; (5.2.2.4) students' attitudes towards the opportunity for all group member to express thought and feelings, (5.2.2.5) students' attitudes towards the interaction among group members, and (5.2.2.6) students' attitudes towards group members' assistance.

5.2.2.1 Students' attitudes towards students' collaborative learning behaviors in general

Figure 5.25 presents the questionnaire results on the attitudes of students towards their collaborative learning behaviors in general. The student responses

generated mean scores ranging from 4.12 to 4.47 on a 5-point Likert scale indicating positive attitudes towards collaborative learning behaviors in general.

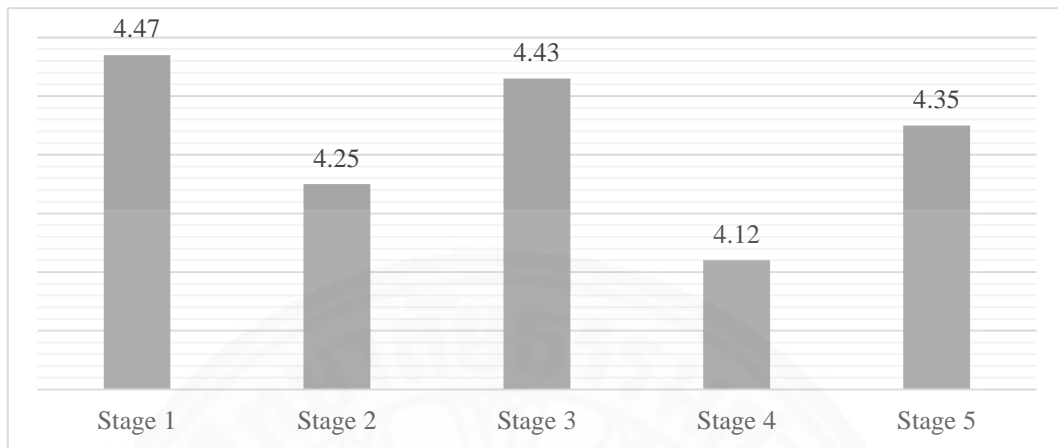


Figure 5.25: Questionnaire results on the attitudes of students towards their collaborative learning behaviors in general

From figure 5.25, the mean score started at 4.47 in stage 1, fell to 4.25 in stage 2, increased too 4.43 in stage 3, decreased to 4.12 in stage 4 and increased to 4.35 in stage 5.

Data from the interviews revealed that, overall, students thought they worked well with their group members. One interviewee reported that some fellow members did not read the texts and did not express their views on the reading as the groups expected. The groups dealt internally with such members by giving them tactful and informal warnings keeping a pleasant nature while maintain the importance and urgency of reading the material and joining the conversations.

Sometimes my friends did not finishing reading and they wanted me to tell them what the texts were about. Although I could tell them the story, it would be better if they read the text themselves because I was not sure whether I understood the text correctly. (IN12, interview 4, Stage 4, translated)

Normally, in other subjects we also work in groups so we know each other well. I do not think we have a serious conflict in doing the project together. Sometimes some members were off task when we were discussing about the text. I did so sometimes. Then there would be one of us who said that we needed to finish the work. (IN10, Interview 4, Stage 4, translated)

5.2.2.1 Students' attitudes towards the roles of group members in learning activities

Figure 5.26 presents the questionnaire results on the attitudes of students towards the active roles of group members in learning. Student responses generated mean scores ranging from 3.62 to 4.22 on a 5-point Likert scale indicating positive attitudes towards the active roles of group members in learning.

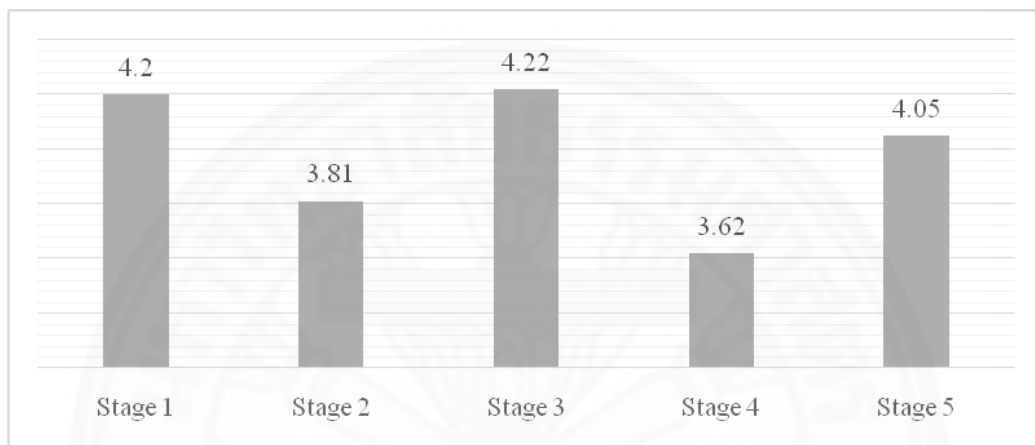


Figure 5.26: Questionnaire results on the attitudes of students towards the active roles of group members in learning

According to Figure 5.26, the mean score started at 4.20 in stage 1, fell to 3.81 in stage 2, increased to 4.22 in stage 3, decreased to 3.62 in stage 4 and increased to 4.05 in stage 5.

5.2.2.2 Students' attitudes towards group members' participation in group decision making

Figure 5.27 presents the questionnaire results on the attitudes of students towards group members' participation in group decision-making. Student responses generated mean scores ranging from 3.93 to 4.40 on a 5-point Likert scale indicating positive attitudes towards group members' participation in group decision-making.

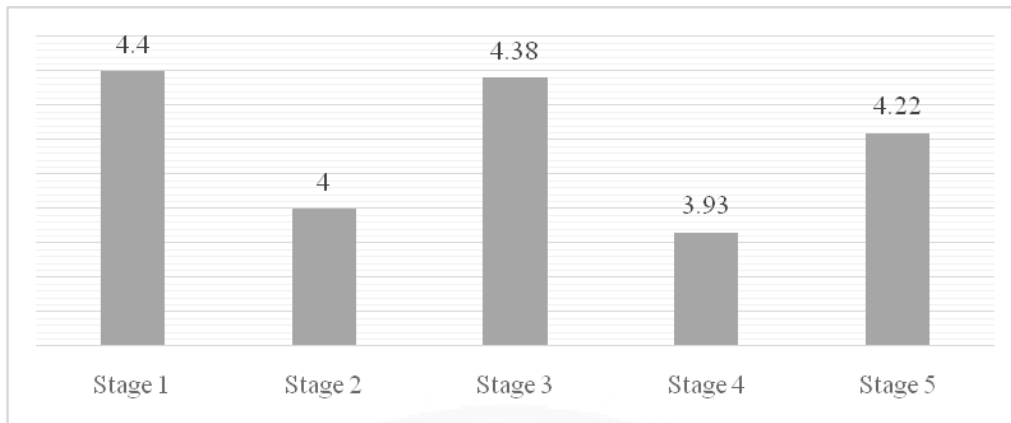


Figure 5.27: Questionnaire results on the attitudes of students towards group members' participation in group decision making

According to Figure 5.27, the mean score started at 4.40 in stage 1, fell to 4.00 in stage 2, increased to 4.38 in stage 3, decreased to 3.93 in stage 4 and increased to 4.22 in stage 5.

5.2.2.3 Students' attitudes towards the opportunity for group members to express thought and feelings

Figure 5.28 presents the questionnaire results on the attitudes of students towards the opportunity for group members to express thoughts and feelings. Student responses generated mean scores ranging from 4.31 to 4.50 on a 5-point Likert scale indicating positive attitudes to very positive attitudes towards the opportunity for group members to express thought and feelings.

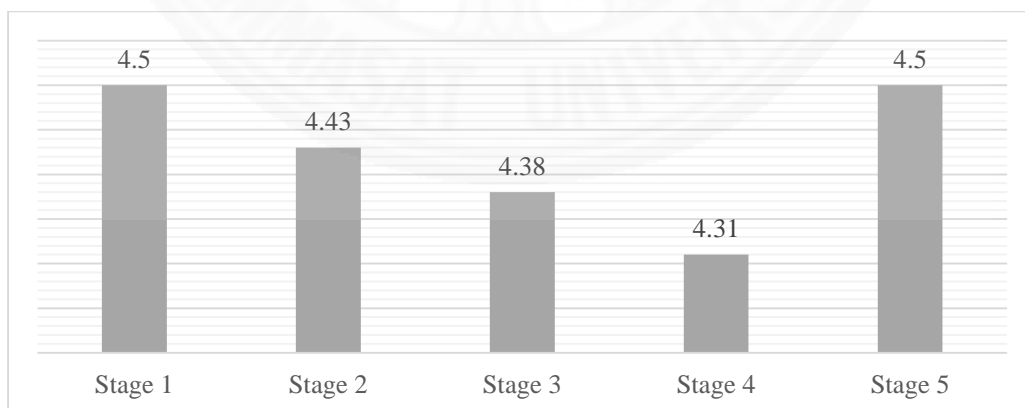


Figure 5.28: Questionnaire results on the attitudes of students towards the opportunity for all group members to express thought and feelings

According to Figure 5.28, the mean score started at 4.50 in stage 1, gradually fell from 4.43 in stage 2, 4.38 in stage 3, 4.38 in stage 3 and 4.31 in stage 4, and then increased to 4.50 in stage 5.

5.2.2.4 Students' attitudes towards the interaction among group members

Figure 5.29 presents the questionnaire results on the attitudes of students towards the interaction among group members. Student responses generated mean scores ranging from 4.50 to 4.70 on a 5-point Likert scale indicating very positive attitudes towards the interaction among group members.

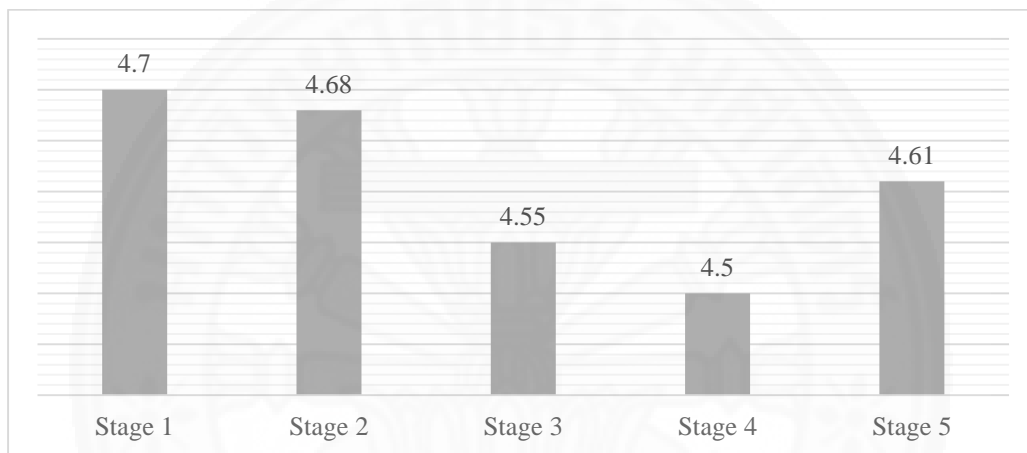


Figure 5.29: Questionnaire results on the attitudes of students towards the interaction among group members

According to Figure 5.29, the mean score started at 4.70 in stage 1, gradually fell from 4.68 in stage 2 to 4.55 in stage 3 and 4.50 in stage 4, and then increased to 4.61 in stage 5.

5.3.2.5 Students' attitudes towards group members' assistance

Figure 5.30 presents the questionnaire results on the attitudes of students towards group members' assistance. Student responses generated mean scores ranging from 4.25 to 4.61 on a 5-point Likert scale indicating positive attitudes to very positive attitudes towards group members' assistance.

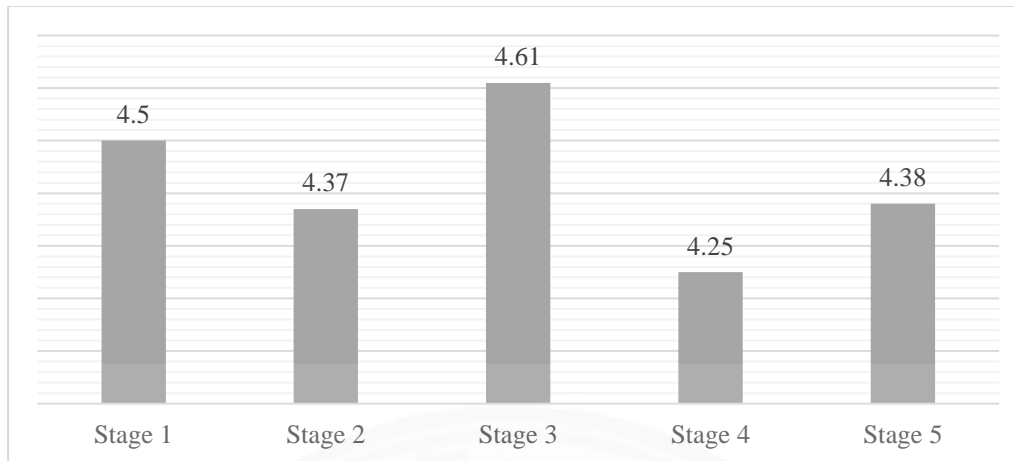


Figure 5.30: Questionnaire results on the attitudes of students towards group members' assistance

According to Figure 5.30. the mean score started at 4.50 in stage 1, fell to 4.37 in stage 2, increased to 4.61 in stage 3, decreased to 4.25 in stage 4 and increased to 4.38 in stage 5.

5.2.3 Students' attitudes towards the teacher's roles in facilitating collaborative learning

The presentation of this section is organized into 5 subsections covering the following topics: (5.2.3.1) students' attitudes towards the teacher's roles in facilitating collaborative learning in general, (5.2.3.2) students' attitudes towards the teacher's roles in creating students' interest and involvement in learning activities, (5.3.2.3) students' attitudes towards the teacher's roles in opening up an opportunity for students to work without interference, (5.3.2.4) students' attitudes towards the teacher's role in providing assistance.

5.2.3.1 Students' attitudes towards the teacher's roles in facilitating collaborative learning in general.

Figure 5.31 presents the questionnaire results on the attitudes of students towards the teacher's roles in facilitating collaborative learning in general. Student responses generated mean scores ranging from 4.51 to 4.75 on a 5-point Likert scale indicating very positive attitudes towards the teacher's roles in facilitating collaborative learning in general.

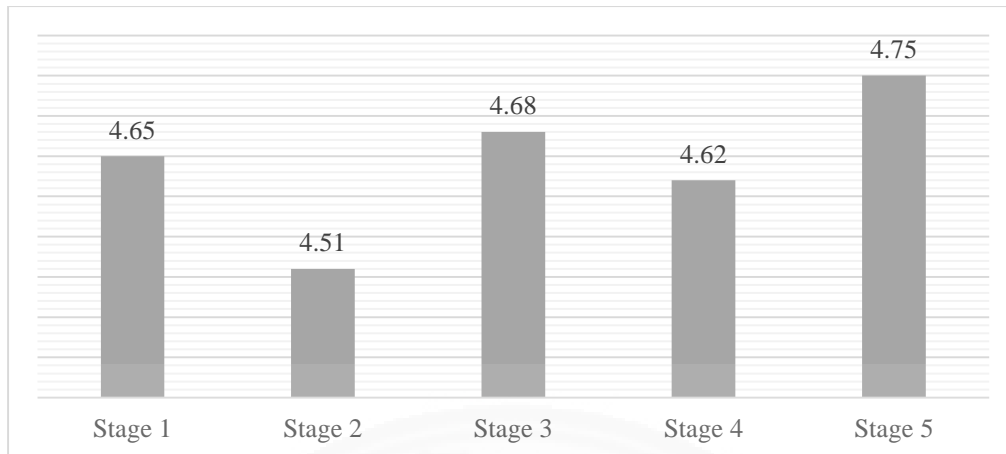


Figure 5.31: Questionnaire results on the attitudes of students towards the teacher's roles in facilitating collaborative learning in general

From figure 5.31, the mean score started at 4.65 in stage 1, fell to 4.51 in stage 2, increased to 4.68 in stage 3, decreased to 4.62 in stage 4 and increased to 4.75 in stage 5.

Data from the interviews revealed that students thought that the teacher assisted them in completing the project and provided assistance whenever they needed. The students also reported that it would be better if the teacher provided them more time for practice and preparations before starting the project in order to help them better understand and utilize the reading material.

5.2.3.1 Students' attitudes towards the teacher's roles in creating students' interest and involvement in learning activities

Figure 5.32 presents the questionnaire results on the attitudes of students towards the teacher's role in creating student interest and involvement in learning activities. Student responses generated mean scores ranging from 4.37 to 4.72 on a 5-point Likert scale indicating positive to very positive attitudes towards the teacher's role in creating student interest and involvement in learning activities.

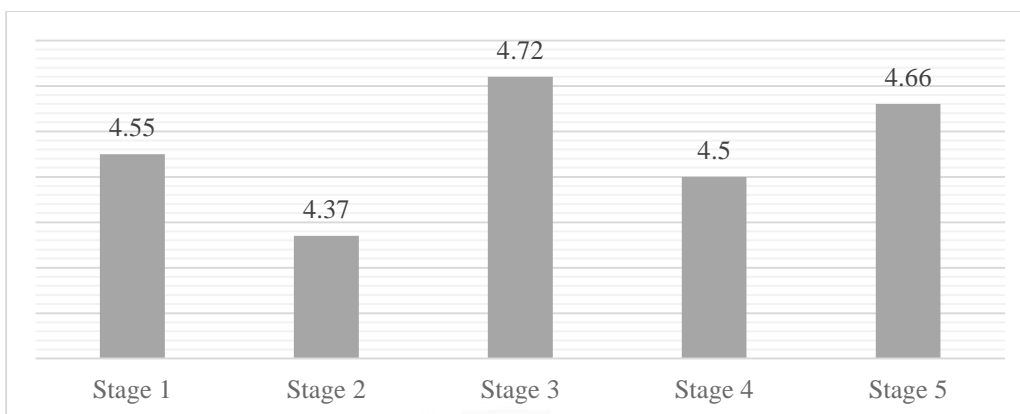


Figure 5.32: Questionnaire results on the attitudes of students towards the teacher's roles in creating students' interest and involvement in learning activities

According to Figure 5.32, the mean score started at 4.55 in stage 1, fell to 4.37 in stage 2, increased to 4.72 in stage 3, decreased to 4.50 in stage 4, and increased to 4.66 in stage 5.

5.2.3.2 Students' attitudes towards the teacher's roles in opening up an opportunity for students to work without interference

Figure 5.33 presents the questionnaire results on the attitudes of students towards the teacher's role in opening up an opportunity for students to work without interference. Student responses generated mean scores ranging from 4.50 to 4.77 on a 5-point Likert scale indicating very positive attitudes towards the teacher's role in opening up an opportunity for students to work without interference.

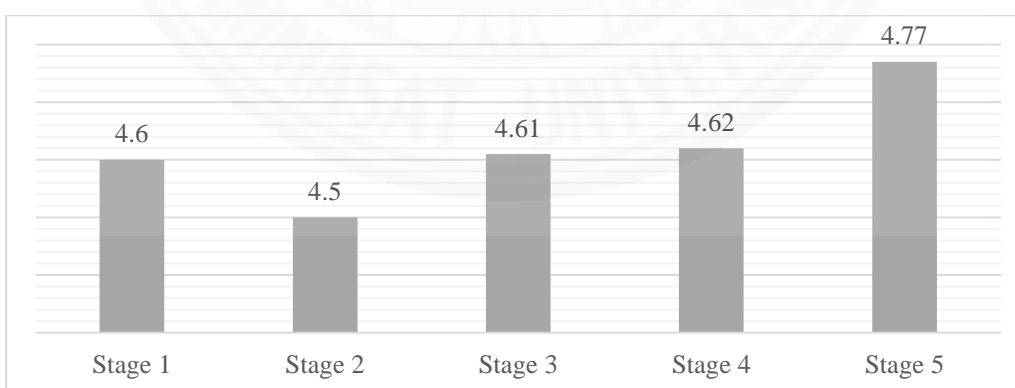


Figure 5.33: Questionnaire results on the attitudes of students towards the teacher's roles in opening up an opportunity for students to work without interference

According to Figure 5.33, the mean score started at 4.60 in stage 1, fell to 4.50 in stage 2, increased steadily from 4.61 in stage 3 to 4.62 in stage 4 and peaked at 4.77 in stage 5.

5.2.3.3 Students' attitudes towards the teacher's roles in providing assistance

Figure 5.34 presents the questionnaire results on the attitudes of students towards the teacher's role in providing assistance. Student responses generated mean scores ranging from 4.68 to 4.85 on a 5-point Likert scale indicating very positive attitudes towards the teacher's role in providing assistance.

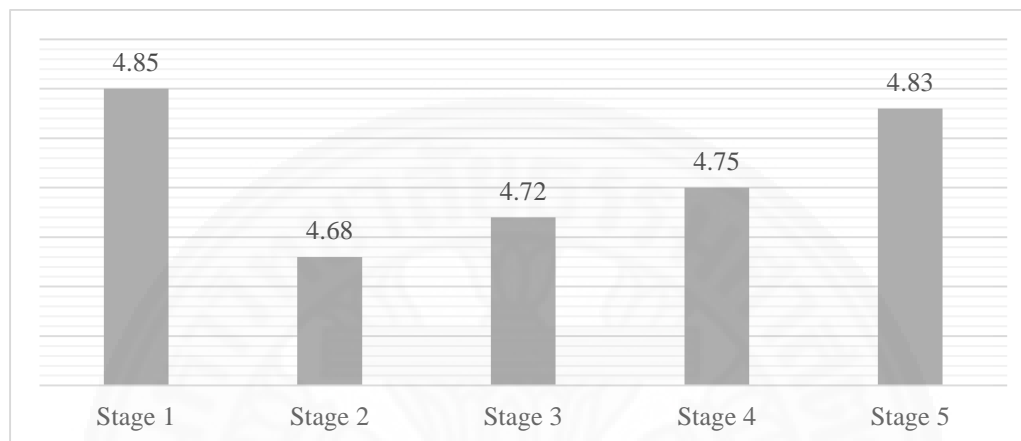


Figure 5.34: Questionnaire results on the attitudes of students towards the teacher's roles in providing assistance

According to Figure 5.34, the mean score started at 4.85 in stage 1, fell to 4.68 in stage 2, increased steadily from 4.72 in stage 3 to 4.75 in stage 4 and peaked at 4.83 in stage 5.

5.2.4 Students' attitudes towards their critical reading skills development through project-based learning

The presentation of this section is organized into 10 subsections covering the following topics: (5.2.4.1) students' attitudes towards their critical reading skills development through project-based learning in general, (5.2.4.2) students' attitudes towards project-based learning in helping identify the author's purpose, (5.2.4.3) students' attitudes towards project-based learning in helping identify the author's tone, (5.2.4.4) students' attitudes towards project-based learning in helping identify the author's point of view, (5.2.4.5) students' attitudes towards project-based learning in helping identify the author's intended audience, (5.2.4.6) students' attitudes towards project-based learning in helping distinguish facts from opinions, (5.2.4.7) students' attitudes towards project-based learning in helping draw inferences and conclusions, (5.2.4.8) students' attitudes towards project-based learning in helping identify the

author's bias, (5.2.4.9) students' attitudes towards project-based learning in helping evaluate the author's argument, and (5.2.4.10) students' attitudes towards project-based learning in helping evaluate the author's evidence

5.2.4.1 Students' attitudes towards their critical reading skills development through project-based learning in general

Figure 5.35 presents the questionnaire results on the attitudes of students towards their critical reading skills development in general. Student responses generated mean scores ranging from 3.90 to 4.24 on a 5-point Likert scale indicating positive attitudes towards critical reading skills development in general.

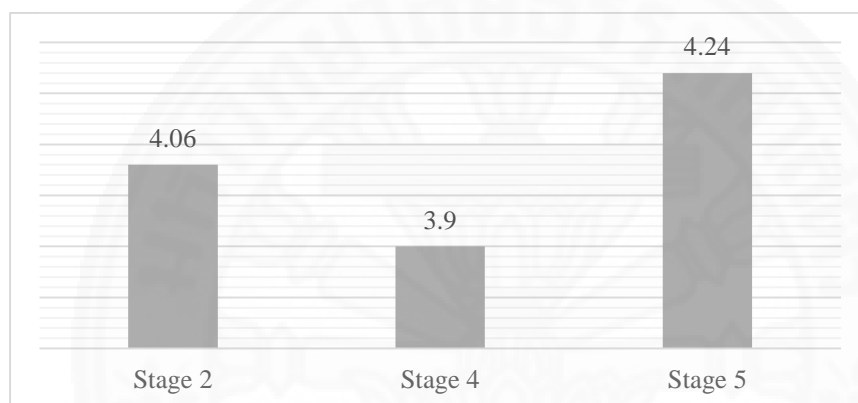


Figure 5.35: Questionnaire results on the attitudes of students towards their critical reading skills development in general

From figure 5.35, the mean score started at 4.06 in stage 2, fell to 3.9 in stage 4 and increased to 4.24 in stage 5.

Data from the interview revealed that compared to their critical reading skill level prior to experiencing the project-based learning approach, the students reported that their critical reading skills had improved. For some set questions, students could answer and give share their reasons and evidence without needing help from fellow members although there were still some set questions where they required peer assistance.

I think I can identify the author's purpose, audience, bias, and points of view but I think it's difficult to distinguish facts and opinions. I am quite confused. (IN14, interview 5, Stage 5, translated).

For me, I think my critical reading skills are better after learning but I think my critical reading skills are not good. I mean my skills are better than in the past.

I think it is important to acquire these skills in life. When I get a job in the future, I think I can use these skill. (IN13, Interview 5, Stage 5, translated)

5.2.4.1 Students' attitudes towards project-based learning in helping identify the author's purpose

Figure 5.36 presents the questionnaire results on the attitudes of students towards project-based learning in helping identify the author's purpose. Student responses generated mean scores ranging from 3.87 to 4.33 on a 5-point Likert scale indicating positive attitudes towards project-based learning in helping identify the author's purpose



Figure 5.36: Questionnaire results on the attitudes of students towards project-based learning in helping identify the author's purpose

According to Figure 5.36, the mean score started at 4.31 in stage 2, fell to 3.87 in stage 4 and increased to 4.33 in stage 5.

5.2.4.2 Students' attitudes towards project-based learning in helping identify the author's tone.

Figure 5.37 presents the questionnaire results on the attitudes of students towards project-based learning helping identify the author's tone. Student responses generated mean scores ranging from 4.00 to 4.16 on a 5-point Likert scale indicating positive attitudes towards project-based learning helping identify the author's tone.

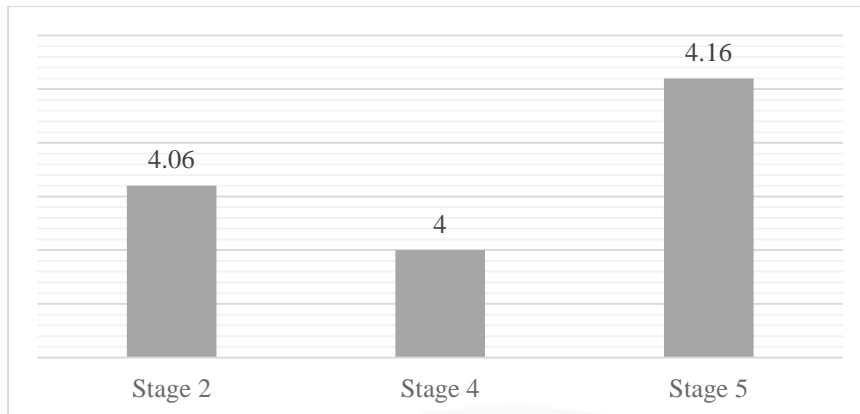


Figure 5.37: Questionnaire results on the attitudes of students towards project-based learning in helping identifying the author's tone

According to Figure 5.37, the mean score started at 4.06 in stage 2, fell to 4.00 in stage 4 and increased to 4.16 in stage 5.

5.2.4.3 Students' attitudes towards project-based learning in helping identify the author's point of view

Figure 5.38 presents the questionnaire results on the attitudes of students towards project-based learning in helping identify the author's point of view. Student responses generated mean scores ranging from 3.93 to 4.22 on a 5-point Likert scale indicating positive attitudes towards project-based learning in helping identify the author's point of view.

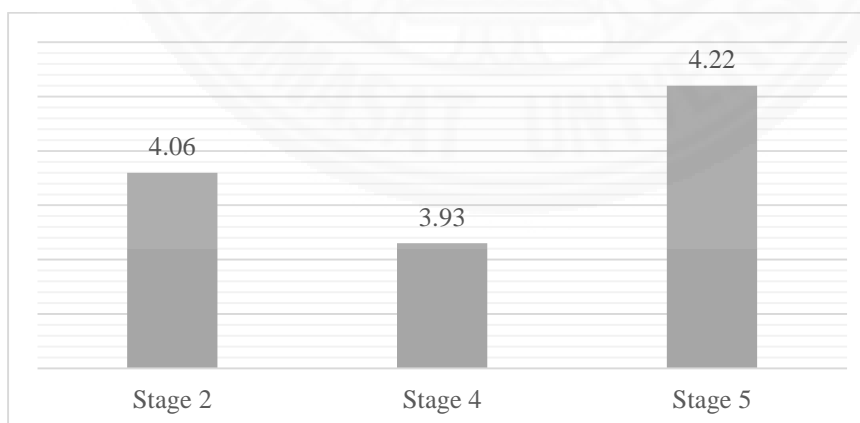


Figure 5.38: Questionnaire results on the attitudes of students towards project-based learning in helping identify the author's point of view

According to Figure 5.38, the mean score started at 4.06 in stage 2, fell to 3.93 in stage 4 and increased to 4.22 in stage 5.

5.2.4.4 Students' attitudes towards project-based learning in helping identify the author's intended audience

Figure 5.39 presents the questionnaire results on the attitudes of students towards project-based learning in helping identify the author's intended audience. Student responses generated mean scores ranging from 3.68 to 4.27 on a 5-point Likert scale indicating positive attitudes towards project-based learning in helping identify the author's intended audience.

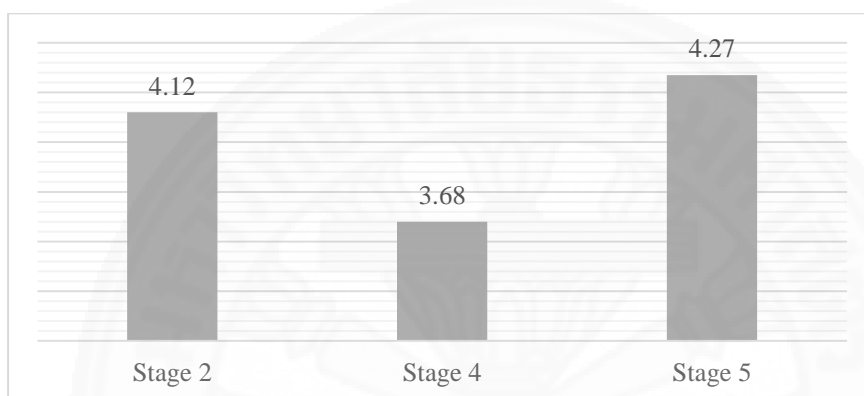


Figure 5.39: Questionnaire results on the attitudes of students towards project-based learning in helping identify the author's intended audience

According to Figure 5.39, the mean score started at 4.12 in stage 2, fell to 3.68 in stage 4 and increased to 4.27 in stage 5.

5.2.4.5 Students' attitudes towards project-based learning in helping distinguish facts from opinions

Figure 5.40 presents the questionnaire results on the attitudes of students towards project-based learning in helping distinguish facts from opinions. Student responses generated mean scores ranging from 3.87 to 4.33 on a 5-point Likert scale indicating positive attitudes towards project-based learning in helping distinguish facts from opinions.

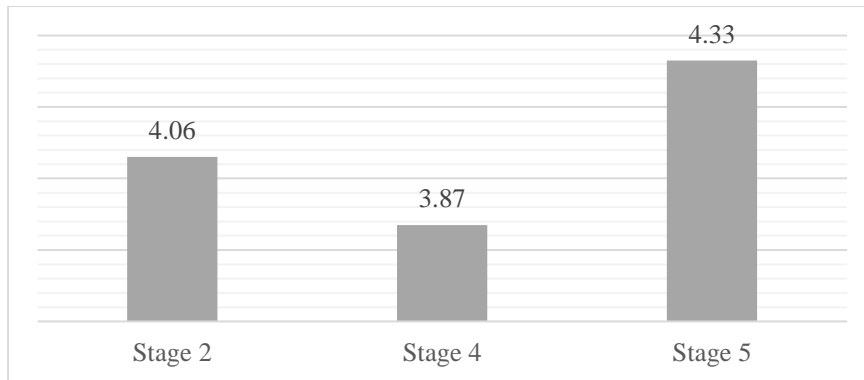


Figure 5.40: Questionnaire results on the attitudes of students towards project-based learning in helping distinguish facts from opinions

According to Figure 5.40, the mean score started at 4.06 in stage 2, fell to 3.87 in stage 4 and increased to 4.33 in stage 5.

5.2.4.6 Students' attitudes towards project-based learning in helping draw inferences and conclusions

Figure 5.41 presents the questionnaire results on the attitudes of students towards project-based learning in helping draw inferences and conclusions. Student responses generated mean scores ranging from 3.75 to 4.33 on a 5-point Likert scale indicating positive attitudes towards project-based learning in helping draw inferences and conclusions

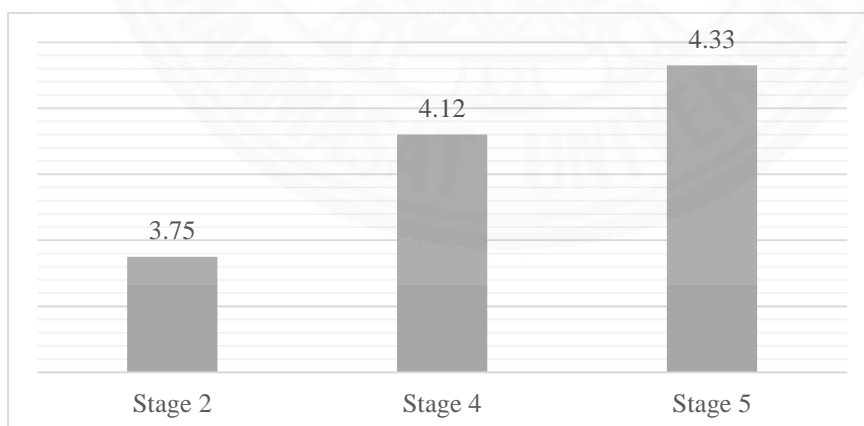


Figure 5.41: Questionnaire results on the attitudes of students towards project-based learning in helping draw inferences and conclusions

According to Figure 5.41, the mean score started at 3.75 in stage 2, increased to 4.12 in stage 4 and increased to 4.33 in stage 5.

5.2.4.7 Students' attitudes towards project-based learning in helping identify the author's bias

Figure 5.42 presents the questionnaire results on the attitudes of students towards project-based learning in helping identify the author's bias. Student responses generated mean scores ranging from 3.81 to 4.22 on a 5-point Likert scale indicating positive attitudes towards project-based learning in helping identify the author's bias.

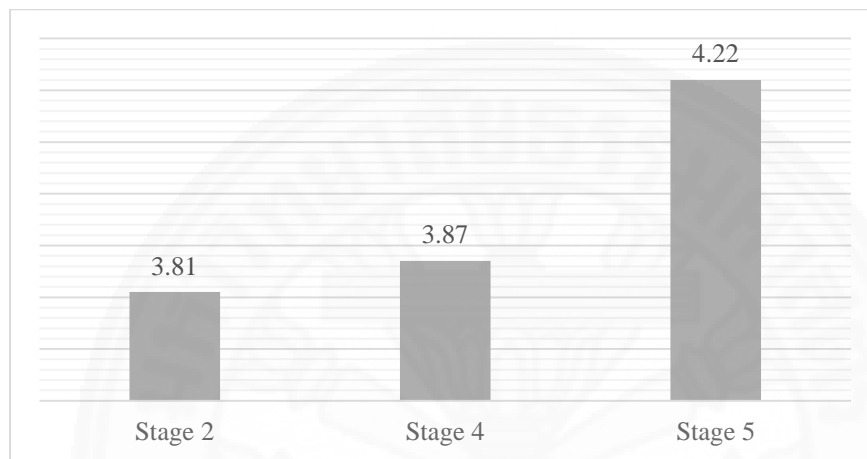


Figure 5.42: Questionnaire results on the attitudes of students towards project-based learning in helping identify the author's bias

According to Figure 5.42, the mean score started at 3.81 in stage 2, increased to 3.87 in stage 4 and increased to 4.22 in stage 5.

5.2.4.8 Students' attitudes towards project-based learning in helping evaluate the author's argument

Figure 5.43 presents the questionnaire results on the attitudes of students towards project-based learning in helping evaluate the author's argument. Student responses generated mean scores ranging from 3.75 to 4.12 on a 5-point Likert scale indicating positive attitudes towards project-based learning in helping evaluate the author's argument.

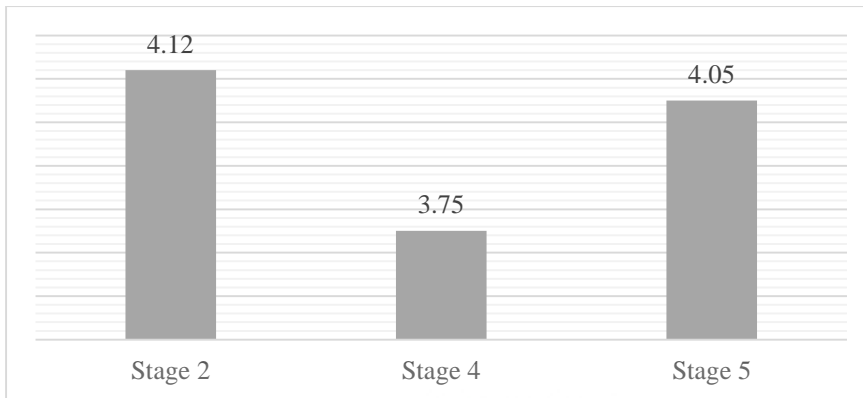


Figure 5.43: Questionnaire results on the attitudes of students towards project-based learning in helping evaluate the author's argument

According to Figure 5.43, the mean score started at 4.12 in stage 2, fell to 3.75 in stage 4 and increasing to 4.05 in stage 5.

5.2.4.9 Students' attitudes towards project-based learning in helping evaluate the author's evidence

Figure 5.44 presents the questionnaire results on the attitudes of students towards project-based learning in helping evaluate the author's evidence. Student responses generated mean scores ranging from 4.00 to 4.25 on a 5-point Likert scale indicating positive attitudes towards project-based learning in helping evaluate the author's evidence.

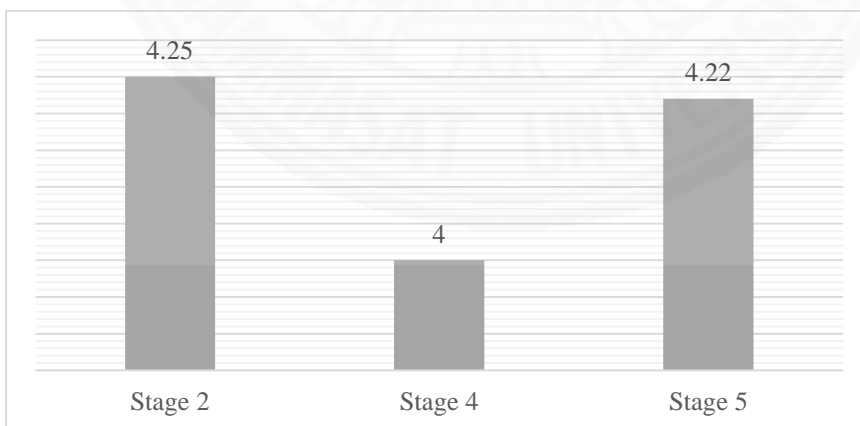


Figure 5.44: Questionnaire results on the attitudes of students towards project-based learning in helping evaluate the author's evidence

According to Figure 5.44, the mean score started at 4.25 in stage 2, fell to 4.00 in stage 4 and increased to 4.22 in stage 5.

The overall attitude of the students towards project-based learning was positive. Students had positive attitudes towards learning activities, collaborative learning behaviors, the teacher's role in facilitating collaborative learning, and critical reading skills development. The students had very positive attitudes toward learning activities in stages 1 and 5 and had positive attitudes toward learning activities in stages 2, 3, and 4. The students had positive attitudes towards the active role of group members in learning and group member participation in group decision-making. The students had positive attitudes to very positive attitudes towards the opportunity for group members to express thought and feelings and group member assistance. The students had positive attitudes towards the interaction among group members. The students had positive to very positive attitudes towards the teacher's role in creating students' interest and involvement in learning activities. The students also had very positive attitudes towards the teacher's role in opening up an opportunity for students to work without interference and the teacher's roles in providing assistance. The students had positive attitudes towards project-based learning in helping identify the author's purpose, tone, point of view, intended audience, facts from opinions, inferences and conclusions, bias, argument, and evidence.

5.3 Research question 3: How do students' end products reflect their critical thinking?

After doing critical reading activities, each group was required to create their end products based on the group-selected text. The end products came from doing the critical reading activities. The groups read their selected texts, found the answers to the questions related to critical reading skills, brainstormed, and proposed ideas related to what they had read in the end products. In the present study, the teacher and the students discussed the types of the end products. For the end product, the students designed and created leaflets containing guidelines related to their reading material. After read the selected text, the students planned the leaflet execution by discussing content, format, and visual design. The students' critical thinking was reflected in all their discussions, planning, idea proposals and the reasons behind their proposed ideas. The results from the leaflet as the end products are presented as follows:

End product of group 1

The text title of group 1 was “Should pregnant girls be allowed to stay in school? (It’s school, not a maternity home)”. The students reported that they agreed with the author that staying at home would be safer and healthier for pregnant girls and their babies. The students expressed the opinion that accommodations could be made to help pregnant girls continue their education without having to physically go to school, however, they noted that the author was focused on arguing against pregnant girls studying at school and did not supply suggestions for alternate means of education. The students thought that the author should have provided some alternatives for pregnant girls. The students created a leaflet with guidelines for people involved in the lives of pregnant girls. The students presented their ideas in 3 topics: preventing teenage pregnancy, providing assistance for pregnant girls, and pregnant girls’ reliance on themselves. The students recommended ways to prevent teenage pregnancy and reported in their presentation that the cause of teen pregnancy lack of attention to contraception. The first few guidelines were therefore related to contraception. Distance or online learning programs were presented as a means for providing assistance to pregnant girls. The students recommended that parents and friends should not allow pregnant girls to abandon their education. The students also recommend self-study for pregnant girls.

End product of group 2

The text title of group 2 was “Should students get paid for good grades?”. The students agreed with the author that students who received good grades should receive rewards. The students proposed several types of rewards for students with good grades. For institutions, the students suggested a discount amount on tuition fees, which would increase for every A grade that students received. Parents would provide rewards based on what they could afford such as increased allowance, tickets to concerts, or educational trips. Teachers could offer incentives for students who received good grades such as less homework or free textbooks. The students also included guidelines for getting good grades.

End product of group 3

The text title for group 3 was “Facebook Is Just a Place for Narcissists and Neurotics to Show Off”. The students agreed with the author that some people used Facebook to show off but they concluded it was their right to do so. The students expressed their opinion that Facebook did not have to be a place to show off but a place to share good information about one’s self or information that could benefit others. They presented some guidelines for Facebook users on how to share their lives and photos in a manner that would inspire and encourage other people rather than show off.

End product of group 4

The text for group 4 was entitled “Employees should be able to work from home more often”. The students made a checklist survey for people to determine whether they liked working at home or not. The students reported that due to differences in lifestyle and interests not all people preferred working at home. The checklist was designed to help people think and understand themselves and their work styles before deciding to work at home or at an office. The students also provided guidelines for working effectively at home.

According to the end product, the group 4 students related what they had read to their real-life situation and provided guidelines related to the reading topics. What the students proposed in the final product revealed that they did not read the texts and did not find the answers related to critical reading skills. The students did propose ideas and complete an end product which demonstrated their ability to utilize critical thinking about the texts. See an example of the end products by the students in Appendix R.

According to the observation results, during the presentations, students were responsive to the ideas proposed by the presenters and were asking questions, sharing ideas, and agreeing or disagreeing with the proposed ideas. Presenters were able to answer the questions and expressed their agreement or disagreement with their classmates’ ideas and suggestions. Both presenters and classmates appeared to be interested and motivated to think and analyze the presentations based on their own reading and background knowledge.

The results of the interviews revealed that the students were content expressing their own thoughts related to the text content in the end products. Students tried to link

the reading to their real-life situations and agreed that sharing ideas with classmates during the presentations made them think about ideas and elements they had overlooked.

The proposed ideas and content in all four groups' final products revealed that the students had not read the text and did not supply answers related to critical reading skills exercises, however, the students were still able to relate the reading with real-life situations and were able to produce guidelines to match their reading topic. This demonstrated that their proposed ideas and final product still managed to utilize critical thinking abilities.



Chapter 6

Discussion

The intent of this chapter is to report the discussion of the study. The presentation is organized into 2 sections covering the following topics: (6.1) discussion related to students' critical reading skills development after learning, (6.2) discussion related to the theoretical foundations for project-based learning.

6.1 Discussion related to students' critical reading skills development after learning through project-based learning

In this study, project-based learning consisted of a series of five stages of doing a project: setting a group, modeling, selecting a reading topic and setting learning objectives, selecting a reading passage and performing critical reading activities, and project presentations and evaluation.

In the first stage, the students were allowed to select their own group members. The member selection was influenced by social and educational factors including the relationship among the students, availability to meet outside class to work on the project, and English proficiency levels. Familiarity with group members made students feel secure and confident to express their views about the texts. Collaboration amongst groups comprised of students with mixed abilities also had a positive impact on learning activities. More competent students took part in assisting less competent students and which improved the students' learning progress. Group size was appropriate for text discussions and every student had the equal opportunity to join in the conversation and were equally acknowledge by fellow members.

In the second stage, the teacher modeled reading strategies and verbalized her thoughts when reading the texts so that the students could use the same strategies when performing critical reading activities. Modeling helped the students know what needed to be done when reading and worksheets allowed them to practice and monitor their performance and skills development. As King (2008) states,

modeling of cognition is a general phenomenon of learning through interaction. Although not usually an intentional activity, modeling of cognitive processes is a very powerful way of learning during interaction. In contrast to behavioral

modeling (observational learning) that occurs when we observe other's actions and then imitate them, cognitive modeling is modeling of various cognitive processes. Unlike actions, cognitive processes are internal to the individual and are only made observable to others through thinking aloud. (p.78)

In the third stage, topic selection by the students depended on their interests, personal background, and member agreement. The learning objectives were based on what the particular reading material and critical reading skills. Familiarity with the reading topic made it possible for students to discuss the text in detail.

In the fourth stage, text difficulty, personal background and interests, and text length were the important considerations text selection. The students recognized the benefits of collaborative learning in critical reading. Through collaborative learning the students learned to use reading strategies to deal with the reading materials, clarify their thoughts, support their views with reason and evidence, criticize ideas from other members, monitor and revise their own understanding, and devise conclusions from the their reading. During joint work with other members, the students helped each other to achieve the targeted goal which made the feel secure in learning. Through journal writing, students were given the opportunity to individually interact with the reading material allowing them to apply what they had learned from teachers and peers to their reading. Being the group owners of a text was the most influential factor in determining response journal answer scores for set questions. Because text owners were required to propose ideas and create and present an end product based on their text they spent more time on their topic and on reading their text and thus obtained perfect or high journal answer scores when the reading was their own. Other influential factors included text difficulty, student interest in the text, and student background knowledge.

In the fifth stage, the end products created by the students were the direct results of reading the texts, finding answers to the questions related to critical reading skills, and relating what was read to determine the content of the end products. The end products were effective at demonstrating what the students had learned from their reading. Student presentations encouraged students to exchange ideas with the presenters which fostered critical thinking in all the students. Students expressed their views based on reasons and evidence and listened to others' views before agreeing or disagreeing them. To equip students with critical reading skills, the teacher had to

allow the students to work with peers who were familiar to them. This made the students more confident to express their views about the texts and helped them feel comfortable completing learning activities together (Rabow et al, 1994; Harmer, 2001; Brookfield & Preskill, 2005). The teacher had to provide opportunities for the students to select their written materials on their own enabling them to relate prior knowledge on their topics to the content of the reading material (Wallace, 1992), to create learning activities that challenged them to think (Jay & Tishman, 1993), to engage students in collaborative learning (Clarke, 1989; Davies, 1995; Nuttal, 1996; Rasool, Banks, & McCarthy, 2002) and to create an atmosphere which encouraged question-making in order to promote critical reading (Collins, 1993).

6.2 Discussions related to the theoretical foundations for project-based learning

6.2.1 Sociocultural theory

Based on the findings presented in Chapter 5, the students used language to communicate about the texts with their teacher and peers. Language was crucial for group discussions, for improving understanding of the reading material and for recording student thoughts and reflections in written journals. As Swain (2000) points out, language serves two main purposes. First, it is used to communicate with others in order for individuals to acquire the target language. Second, it plays a role in shaping individuals' thinking related to the target language, known as private speech. Students in this study used private speech to facilitate their thinking on the reading material. The use of private speech was observed in group discussions where students were attempting to find answers to questions and where students needed to clarify their view for fellow members. Private speech was also used while students were writing journals. The students quizzed themselves on the evidence supporting their answers and wrote down their thoughts in a journal.

In the present study, students engaged with the teacher who introduced them to project-based learning and played an important role in demonstrating reading strategies and how to verbalize thoughts reading content. The teacher was considered as a source of knowledge since she played a key role in introducing new knowledge or skills to individuals and provided assistance in enabling them to master the required knowledge or skills. Supplementary worksheets were created and customized to fit the students' level of difficulty allowing them to practice and become familiar with the reading

strategies. The teacher also provided assistance in other stages of the project to ensure to that students could successfully complete the project.

Students were required to tackle the reading work in groups. Students found that they could understand the text better with the help of fellow group members. This was known as other-regulation, which refers to the process where others provide assistance making it easier for each individual to perform tasks. Students received assistance from their group members in all stages of the project particularly in stage 4. Assistance from fellow members had a favorable impact on the students' critical reading skill development, as stated in Chapter 5.

The results of the present study were related to the sociocultural theory proposed by Vygotsky, which placed great emphasis on the influence of social interaction on individual learning (Eggen & Kauchak, 2004; Henson & Eller, 1999; Holford & Griffin, 2003; Jarvis, 2006; Meece, 2002; Schunk, 2000; Slavin, 2009). By working with others, sharing knowledge and supporting others, individuals could find ways to improve their thinking and learn what is truly important in life. The key concepts in sociocultural theory include mediation, regulation and internalization, zone of proximal development, scaffolding, and private and inner speech. These concepts provide the basis for learning through social interaction and were utilized in present study to develop and improve the students' critical reading skills.

6.2.2 Collaborative learning

In the present study, students formed groups and tackled the reading material and exercises together. Role assignments in discussions were not clearly established by the students. Borich (2007) mentions that role uncertainty would cause student involvement to fade which is a failure for collaborative learning. In the present study, topics related to critical reading were predetermined and discussion objectives were clear, such that role uncertainty was not a problem. Students performed their roles as discussion leaders and members and easily swapped the roles within the groups. Although the roles of the students were not fixed in discussions, the students who were dominant acted as discussion leaders and those who were less dominant acted as discussion members.

Student collaboration in tackling the reading material was observed during the teaching modeling. Although the students were asked to individually practice critical

reading skills through supplementary worksheets, they preferred to do the exercises with their peers. As Roberts(2004) states,

it is interesting to observe therefore that almost all formal learning today, particularly at university level, still take place in an environment in which students are expected to learn individually. Despite this, students often form their own informal study groups to assist their learning. (vi)

Group discussions were conducted during the selecting a reading passage and doing critical reading stage. Students expressed their views on the texts with their peers, listened to the views of others and discussed and agreed conclusions together. Discussions gave students the opportunity to use reasons and evidence to support their ideas. Peer-led discussion was the type of discussion promoted in the present study. Through peer-led discussion, it was found that students were enthusiastic to engage in discussions with fellow members, felt comfortable expressing their opinions, made inquiries about the reading selections, and stimulated each other to think about the reading selections. The students were also given the opportunity to conduct discussion on their own without interruption from the teacher. Students felt good bearing responsibility and authority in discussions and reported that the teacher only provided assistance when they requested. Peer-led discussion gained acceptance in teaching reading (Conley, 1992; Fielding & Pearson, 1994).

There were several issues discovered in the present study. First, students sometimes changed their answers to conform to the majority of group members. Even though the answers of majority members were not supported by reason or evidence the rest of the members readily agreed with question. This behavior demonstrated a lack of development and created an obstacle for improvement of critical reading skills. Browne & Keeley (2010) described the drawback of social interaction on individuals' thinking by referring to Irving Janis who coined the term "groupthink". Janis stated that group members have a negative influence on individual thinking and may persuade individuals to think in the same way. Individuals should therefore be conscious and wary of the ideas proposed by others and should only believe ideas supported by sound reasoning and evidence. Ruggiero (2001) added suggestions on how to achieve individuality in order to avoid too much influence from group members. First, individuals should carefully analyze any received information and not believe it

immediately. Secondly, individuals should be aware of their own responses to the information since their responses may rely on others and not themselves. Thirdly, individuals should consider whether there are other opinions or alternatives that they could apply to the information. Finally, individuals should compare their thoughts against the thoughts of others and examine which thoughts is the most reasonable.

The second issue discovered in the present study arose when one group of students misunderstood the concept of collaborative learning. Each member was responsible for tackling only 2-3 questions from the set of questions related to critical reading skills. The answers were then shared with the group during discussions. This deviated from intent of the current study, which required all group members to initially answer all the questions on their own. It was speculated that the students misunderstood the concept of collaborative learning, however, it was also possible that the group distributed the questions because they were a mixed group with three close friends and two unfamiliar classmates unlike the other groups which consisted of five close friends. Having not worked together before and having little time, opportunity or inclination to meet outside class it was convenient to distribute the questions rather than work together.

In the present study, the students assisted each other in dealing with the texts. Different individual background knowledge and reading skills were used to support joint work and help the students find answers to the set questions. Students discussed the text selection, motivated each other to think about the reading, and tried to find the ways to complete tasks together. Through collaborative learning the students could check their reading comprehension with their peers, find similarities and differences in their interpretations, rethink their conclusions and develop a better understanding overall.

Chapter 7

Conclusions and Recommendations

The intent of this chapter is to report the conclusions and recommendations of the study. The presentation is organized into 4 sections covering the following topics: (6.1) summary of the study, (6.2) recommendations for improving the study, (6.3) recommendations for future research, (6.4) chapter summary

7.1 Summary of the study

The study explored students' critical reading skills development after learning through project-based learning, investigated students' attitudes towards project-based learning, and explored how students' end products reflected their critical thinking. The study was conducted in the bachelor's degree course for second year students at one faculty of a public university in Bangkok, Thailand. The population was second-year students who enrolled in the course during semester 1 of the 2015 academic year. The sampling group consisted of 20 students who were instructed through project-based learning for 14 weeks, one class meeting for 50 minutes a week. The participants were required to go through five stages of doing a project: setting a group, teacher modeling, selecting a reading topic and set learning objectives, selecting a reading passage and do critical reading activities, and project presentation and evaluation. The participants were observed throughout the 14 weeks. The students were required to complete questionnaires at the end of each stage and to write response journals in the stage of selecting a reading passage and doing critical reading activities. Some students were interviewed. The findings of the study are as follows:

7.1.1 The first research question: How do students develop their critical reading skills after learning through project-based learning?

The students learned through five stages of the project that were linked together in order to facilitate the students' critical reading skills. In stage 1, the students formed their groups based on social and educational factors which included the depth of relationships among the students, availability and time to meet outside class to work on the project, and English proficiency levels. All groups consisted of mixed-ability students. This type of group benefited the students in discussing the texts and finding

answers related to critical reading skills together. Less competent students learned how to read texts and how to find answers from more competent students. In stage 2, the teacher modeled strategies for finding answers to the questions related to critical reading skills and the students practiced with reading worksheets. More than fifty percent of the students could answer all questions on the author's purpose, point of view, intended audience, inferences and conclusions, facts from opinions, and bias. Less than half of the students could answer all questions about the author's tone and evaluating the author's argument and evidence. In stage 3, all groups of students were allowed to select their reading topics. These topics were related to the students' interest, personal background, and were agreed by all members. Two groups could set their learning objectives while the other two groups required assistance from the teacher and fellow classmates. In stage 4, students tried to find answers related to critical reading skills by using strategies and discussing with peers. The students used four main reading strategies to help them develop their critical reading skills which included questioning, citing evidence, rereading, and dealing with unknown words. Through peer modeling students were motivated by interactions with and the acknowledgement and recognition of their peers. Students were also encouraged to be open-minded to the views of others. Peer modeling was crucial to the development of the students' critical reading skills. The students tried to use what they learned from the teacher and their group members when reading the texts individually. Having an opportunity to read and find answers individually helped them improve their skills. The students in group 1 could identify the author's purpose, however, they did not show consistent improvement in identifying the author's tone, point of view, intended audience, making inferences and draw conclusions, distinguishing facts and opinions, bias, evidence, and argument. The students in group 2 could identify the author's purpose and bias and showed improvement in identifying the author's tone, point of view, intended audience, and making inferences and draw conclusions. Improvement in distinguishing facts and opinions and evaluating the authors' argument and evidence was inconsistent. The students in group 3 could identify the author's purpose and bias and showed improvement in making inferences and drawing conclusions. Improvement in identifying the author's tone, point of view, intended audience, facts and opinions, bias, arguments and evidence was inconsistent. The students in group 4 could identify the

author's purpose and bias and showed gradual improvement in identifying the author's tone, intended audience, and evaluating the author's argument. Improvement in identifying the author's point of view, making inference and drawing conclusion, fact from opinions, and evidence was inconsistent. In stage 5, all student groups could make a presentation and had created their end products related to what they had read. Being the group owners of a text was the most influential factor in determining response journal answer scores for set questions. Because text owners were required to propose ideas and create and present an end product based on their text they spent more time on their topic and on reading their text and thus obtained perfect or high journal answer scores when the reading was own. Other influential factors included text difficulty, student interest in the text, and student background knowledge.

7.1.2 The second research question: What are the attitudes of students towards project-based learning?

The students' attitudes towards project-based learning were positive. They had positive attitudes towards learning activities, their collaborative learning behaviors, the teacher' roles in facilitating collaborative learning, and their critical reading skills development.

The students also had suggestions, which required consideration. First, the students suggested that the groups be a mixture of friends and unfamiliar classmates, believing it would enable them to take better charge of their work as members who might be unwilling to confront friends who were not completing their work would be less accommodating if there were other affected members who were not close friends. Second, the students reported that it would be better if the teacher introduced one critical reading skill a week. Introducing three skills a week was difficult to follow. Third, the students suggested teachers be required give a more instruction on setting learning objectives. Students described their frustration in setting learning objectives owing to their inexperience in doing so. Fourth, the students reported that they encountered some difficulties in finding the reading material. The students reported difficulty finding the texts that related to the topic which were appropriate for critical reading purposes. Some groups changed their reading topic and the learning objectives to match a text they found interesting. The students suggested that the teacher prepare text options for them to choose from believing that this would make it easier to select a

reading topic and reading passage. The students also noted that some people might not enjoy the challenge of finding their own reading passages, therefore, teachers could gather reading texts of varying difficulty levels and make a list of the texts for the students to select based on their preferences. These reading texts would cover general issues related to student life. If students preferred to find a passage on their own, the teacher would have to recommend further sources of reading material.

7.1.3 The third research question: How do students' end products reflect their critical thinking?

The students proposed ideas related to the texts, but which were not presented within the texts. Group 1 provided guidelines for pregnant girls, schools, parents, and friends. Group 2 provided guidelines for rewarding students who received good grades. Group 3 suggested ways Facebook can be of benefit to oneself and others. Group 4 suggested guidelines for people to find out whether they were suited for working at home. All students were required to read all the text materials, as a result during the presentations, students were active in eliciting responses from the presenters by asking questions, sharing ideas, and agreeing or disagreeing with the proposed ideas based on reasoning and evidence. The presenters were able to answer questions and express their agreement or disagreement with their classmates' ideas. The students found it satisfying to express their thoughts and agreed that sharing ideas with classmates during the presentations made them discover and think over some points they had overlooked. Some students did not pay much attention to the group presentations, as they were too worried preparing for their own presentations. The type of presentation could also explain the lack of attention and interest. Teachers could find other presentation types to capture attention, engage and motivate students to interact with presenters.

7.2 Pedagogical Implications






7.2.1 Teaching model

In order to prepare for implementing project-based learning in critical reading instruction, teachers need to specify learning objectives for students, figure student characteristics, proficiency levels, and student familiarity with project-based learning. Teachers should determine the type of project to be used based on the factors stated above. The type of project will dictate the roles and duties of teachers and students. Teachers should design the project stages and learning activities in each stage with the

aim to improve students' critical reading skills. The teacher would also develop teaching materials appropriate for students to practice critical reading. In this study, project-based learning consisted of five stages, as illustrated in Figure 7.1. These stages included setting groups, teacher modeling, selecting a reading topic and setting learning objectives, selecting a reading passage and do critical reading activities, and project presentation and evaluation.

7.2.2 Teaching materials

To enhance the critical reading skills of university students, reading worksheets are crucial in helping students practice the strategies necessary for reading the texts. Several factors to be considered when creating worksheets are the texts' difficulty level, the content of the text, the length of the text, the students' level of proficiency, and the students' interests and background knowledge. In addition to classroom worksheets, teachers may suggest or create online exercises so the students can spend more time practicing reading strategies outside the classroom. The worksheets should require students to write down both the answers and the evidence or reasons supporting the answers.

	Stage 1 setting groups	Stage 2 teacher modeling	Stage 3 selecting a reading topic and setting learning objectives	Stage 4 Selecting a reading passage and doing critical reading activities	Stage 5 Project presentation and evaluation
The teacher's roles	Introduction to project- based learning 	Introduction to critical reading skills  Model strategies	Introduction to the activities  Provide assistance	Introduction to the activities  Provide assistance and check the answers to the questions related to critical reading skills	Introduction to the activities  Elicit and invite comments on the end products


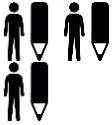








Students' roles	Group formation	Practice with reading worksheets	Select a reading topic	Select a reading passage	Make a presentation about their products
			 Set learning objectives 	 Do critical reading activities Read the text individually  Write journals  Discuss the text with group members  repeatedly go through a series of critical reading activities	 Evaluate their performance 

Table 7.1: Teaching model

7.2.3 The roles of the teacher and students

Project-based learning is student-centered. Students were expected to be active decision-makers and learners and to assume a dominant role in completing the project. The role of the teacher was to open up ample opportunities for students to take control over their own education and to design materials and learning activities aimed at improving students' skills and knowledge and helping them successfully complete the project. Part of the teachers' duties was to not only check the students' answers and provide feedback, but to encourage students to discuss and exchange ideas whenever they disagreed with their teacher's feedback. Teachers did not interfere with the students and only provided support and assistance when necessary or when requested by the students. Teachers would also understand the importance of peer assistance in developing students' critical reading skills thus teachers would have to provide ample opportunity and encourage students to seek assistance from their peers.

7.3 Recommendations for future research

Future research is recommended to investigate online implementation of project-based learning on students' critical reading skills. According to Kim & Kamil (2002), the rise in popularity of computer-assisted learning has increased and a number

of studies have explored the use of computers in different subjects. Most studies have focused on the use of computers in reading instruction, however, there is a need to investigate project-based learning contributions to critical reading. (Kamil & Intrator, 1998; Kamil, Intrator & Kim, 2000). In this study, the students experienced severe time constraints for completing the tasks as they were allotted only one fifty-minute class per week for a duration of 14 weeks. Online project-based learning could address any time constraint problems. Online project-based learning would also enable researchers to design and conduct long-term studies and outcomes for project-based learning and critical reading skills development. Farrall (2012) cites Thomas & Collier who stated that the mastery of English requires time to develop. Critical reading skills also take time to develop. Students would need to be provided with long-term programs rather than short-term programs in order to develop their critical reading skills and improve their performance in L2. Long-term implementation of project-based learning requires more future research.

Future research is recommended to use the pretest and post-test as one of the quantitative data collection instruments to gather more evidence of critical reading skills development from learning through the project-based approach. The first research objective was to explore how students develop their critical reading skills after learning through project-based learning. The concentration was on qualitative data. Therefore, the pretest and post-test were not developed and applied. Future research may use the tests for quantitative data collection.

Future research is recommended to assess results for studies comparing students with characteristics similar to the participants in this study and studies comparing students with different characteristics to the participants in this study. The comparison between the findings of the present study and the findings of future research may contribute to a better understanding of the contribution that project-based learning has on students' critical reading skills development and its limitations.

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Appendix A

An example of lesson plans

LESSON PLANS

WEEK 3

STAGE 2. Teacher modeling

OBJECTIVES To practice critical reading skills

MATERIALS Supplementary reading worksheets

TIME

PROCEDURES

20

1. Tell students that they are going to practice critical reading strategies necessary for doing the project
2. Give each student the supplementary reading
3. Explain about what critical reading is and what critical reading strategies are
4. Model these strategies (1.determining the author's purpose, tone, point of view, and intended audience) by verbalizing thoughts while reading the selections used as examples
5. Elicit the first one of each exercise as an example
6. Ask students to do the exercises on their own or in pairs
7. When they have finished, ask them to compare their answers with their partners and share their reasons for the answers.
8. Bring the class back together and ask students to share their answers and reasons

25

CLOSURE

9. To wrap up, lead a brief discussion of how to use these strategies

5

ASSESSMENTS

1. Observe students' behaviors
2. Check whether students can do the exercises in the supplementary reading

Appendix B

An example of validations form for the lesson plans

VALIDATION FORM FOR THE LESSON PLANS

STEP 1 SETTING A GROUP

An exploration of critical reading skills of Thai undergraduate students through project-based learning

Directions Please indicate how you respond to each of these statements by ticking in the box to indicate what you think and give your comments or suggestions for the lesson plans.

Items	Appropriate (+1)	Not sure (0)	Not Appropriate (-1)
1. The objectives of the lesson plans for step 1 are appropriate.			
2. The instructional procedures in the lesson plans for step 1 are appropriate.			
3. The sequence of activities in the lesson plan for step 1 is appropriate.			
4. The instructional materials used in the lesson plans for step 1 are appropriate.			
5. The lesson plans for step 1 include all essential elements.			
6. The language used in the lesson plans for step 1 is clear.			
Additional comments or suggestions			

Appendix C

Supplementary reading worksheets

SUPPLEMENTARY READING

Part of research instruments for an exploration of critical reading skills of Thai undergraduate students through project-based learning by Sirion Lada



Name _____ ID No. _____

Faculty _____ Major _____

1D DETERMINING THE AUTHOR'S PURPOSE, TONE, POINT OF VIEW, AND INTENDED AUDIENCE

1.1 AN AUTHOR'S PURPOSE

In order for you to identify an author's purpose, it is a good idea to ask yourself why an author has written a passage.

An author's purpose is his or her reason for writing. The purposes of an author can be divided into four main purposes as follows.

Author's purpose	Typical reading material	Vocabulary
To inform	textbooks, newspapers, nonfiction books	straightforward language
To instruct	manuals, diagrams, "How to" passages, steps in a process, instructions for assembly or task, how something works	detailed language explaining a process or how to do or assemble something First, second, next, finally, or numbers
To persuade	persuasive essays, editorials, written debates	ought to, should, must Words that express emotion or point of view, such as adjectives like terrible, wonderful, suspicious, etc.
To entertain	literature, poetry, fiction, magazines	symbolism, figurative language, description, humor

Source: Carter, C. E. (2011). *Mindscapes: Critical reading skills and Strategies*, 2nd ed. Wadsworth: Cengage. P. 175-178

1.2 TONE

In order for you to identify an author's tone, it is a good idea to ask yourself what an author's word choice and writing style convey about his or her attitude toward the topic.

Tone refers to the author's use of words and writing style to convey his or her attitude toward a topic.

1. neutral tone <i>(typically used in textbooks, reference material, sets of directions, instructional manuals, most newspaper and magazine articles, and other factual, objective material that is presented in a straightforward manner)</i>	Dispassionate, Indifferent, Matter-of-fact, Neutral, Objective, Unemotional
2. serious tone <i>(typically used in important formal announcements such as obituaries, for example)</i>	Reserved, Serious, Solemn
3. emotional tone <i>(typically found in personal articles, political writing, and some persuasive writing, such as editorials)</i>	Compassionate, Concerned Defiant, Emotional, Impassioned, Nostalgic, Remorseful, Self-pitying, Sentimental, Urgent
4. hostile, critical, or disapproving tone <i>(typically found in movie and book reviews, editorials, and some magazine articles)</i>	Angry, Critical, Disapproving, Disgusted, Hostile, Indignant, Intolerant, Insulting, Negative, Pessimistic, Threatening
5. humorous, sarcastic, ironic, or satiric tone <i>(can appear in writing of many sorts, including literature and social criticism, and some newspaper and magazine columns and articles)</i>	Amused, Humorous, Lighthearted, Bitter, Contemptuous, Cynical, Disbelieving, Disdainful, Ironic, Irreverent, Malicious, Mocking, Sarcastic, Satirical, Scornful, skeptical

<p>6. supportive tone (found in many types of writing, such as certain textbooks, inspirational writing, some magazine articles, and personal correspondence)</p>	<p>Approving, Conciliatory, Encouraging, Enthusiastic, Hopeful, Optimistic, Positive, Respectful, Sincere, Supportive, Sympathetic, Tolerant</p>
<p>7. some other words that can be used to describe tone</p>	<p>Ambivalent, Apologetic, Arrogant, Authoritative, Cautious, Conciliatory, Evasive, Gloomy, Grim, Humble, hypocritical</p>

Source: Elder, J. 2004. *Exercise your college reading skills: Developing more powerful comprehension*. New York: Mc-Graw Hill. P.212, 216-217.

1.3 POINT OF VIEW

In order for you to identify an author's tone, it is a good idea to ask yourself what the author's position or belief regarding the issue is.

An author's point of view refers to his or her position on an issue or, in other words, the author's opinion or belief regarding an issue.

1.4 AN AUTHOR'S INTENDED AUDIENCE

In order for you to identify an author's tone, it is a good idea to ask yourself Who the author had in mind as reader, whether it was a particular person (who?), a certain group of people(which group?), or the general public.

Intended audience means the people the writer has in mind as the readers. There are three categories of intended audience. First, the intended audience might be a specific person. Second, the intended audience might be a particular group of people. Finally, the intended audience might be the general public.

Source: Elder, J. 2004. *Exercise your college reading skills: Developing more powerful comprehension*. New York: Mc-Graw Hill. P.212-213.

2 MAKING INFERENCES AND DRAW CONCLUSIONS

Making an inference is a thinking process. As you read, you are following the writer's thoughts. You are also alert for ideas that are suggested but not directly stated. Because inference is a logical thought process, there is no simple, step-by-step procedure to follow. Each inference depends on the situation, the facts provided, and the reader's knowledge and experience.

Source: McWhorter, K. T. (2005). Active reading skills. New York: Pearson/Longman.p. 306

3 FACTS AND OPINIONS

Facts

Statements that can be verified. They can be proven true or false. Statements of fact are objective-they contain information but do not tell what the writer thinks or believes about the topic or issue.

Opinion

Statements that express a writer's feelings, attitudes, or beliefs. They are neither true nor false. They are one person's view about a topic or issue.

Source: McWhorter, K. T. (2005). Active reading skills. New York: Pearson/Longman.p.343-344

4 BIAS

When a writer or speaker deliberately presents a one-sided picture of a situation, it is known as bias. Bias, then, refers to an author's partiality, inclination toward a particular viewpoint, or prejudice.

The following list of questions can be used to detect bias:

- Is the author acting as a reporter – presenting facts – or as a salesperson – providing only favorable information?
- Does the author feel strongly about or favor only one side of the issue?
- Does the author seem to be deliberately creating a positive or negative image?
- Does the author seem emotional about the issue?
- Are there other views toward the subject that the writer does not recognize or discuss?

Source: McWhorter, K. T. (2005). Active reading skills. New York: Pearson/Longman. (p.390)

5 EVALUATING ARGUMENTS AND EVIDENCE

Argument	An argument should be logical and should present well-thought-out ideas. It may involve emotion, but a sound argument is never simply a sudden, unplanned release of emotions and feelings. An argument, then, always presents logical reasons and evidence to support a viewpoint.
Parts of an argument	<ul style="list-style-type: none"> • The issue <p>An argument must address an issue—a problem or controversy about which people disagree.</p>
	<ul style="list-style-type: none"> • The claim <p>An argument must take a position on an issue. This position is called a claim.</p>
	<ul style="list-style-type: none"> • Support <p>A writer supports a claim by offering reasons and evidence that the claim should be accepted.</p> <p>A reason is a general statement that back up a claim.</p> <p>However, for any of these reasons to be believable and convincing, they need to be supported with evidence.</p> <p>Evidence consists of facts, personal experience, examples, statistics, and comparisons that demonstrate why the claim is valid. Evidence that is offered in support of a claim must directly relate to that claim. That is, to be relevant, evidence must apply specifically to the issue at hand.</p> <p>There must be a sufficient number of reasons or pieces of evidence to support a claim. The amount and degree of detail of supporting evidence will vary with the issue, its complexity, and its importance.</p>

Source: McWhorter, K. T. (2005). *Active reading skills*. New York: Pearson/Longman. P.417-420

Exercise 1

Determining an author's purpose

Source: <http://www.help4teaching.com>

Direction Read the texts and *answer* the questions

1. Tomatoes were once considered poisonous. Some brave people finally took a bite of a tomato, and they survived. Now, we use tomatoes in our salads and sandwiches. Do you ever use tomato sauce or ketchup? These products are made of tomatoes. If it weren't for these brave individuals, you might not be able to enjoy ketchup with your French fries.

Why has the author written a passage?

a) To inform	b) To instruct
c) To persuade	d) To entertain
2. These are the best shoes in the world! If you wear these shoes you will jump higher, run faster, and score more points in a ballgame than anyone. Get a pair today! They are refreshing! Get your pair of SkyHigh Flyers TODAY!

Why has the author written a passage?

a) To inform	b) To instruct
c) To persuade	d) To entertain
3. Rabbit thought Turtle was slow, so he challenged Turtle to a race. But Rabbit was so confident that he would win the race he decided to take a nap during the race. Turtle knew he could win the race if he just kept on going. Turtle did just that and he WON!

Why has the author written a passage?

a) To inform	b) To instruct
c) To persuade	d) To entertain
4. If you are going on tomorrow's African Safari, you should dress for hot weather. The day will be sunny and warm, perfect for taking photographs. You will be in the sun all day as you view the lions, giraffes, gazelles, hippos, and other animals on the tour. Be sure to wear a hat and sunscreen--animals do not get sunburned, but people do.

Why has the author written a passage?

a) To inform	b) To instruct
c) To persuade	d) To entertain

5. At Easter, many parents want to buy baby bunnies for their children. Baby bunnies are cute, but rabbits are not always good pets. Many rabbits end up at animal shelters because people do not know how to care for them. This year, the Rabbit Rescue Team has an idea. We are asking parents to buy stuffed bunnies for Easter, instead of real rabbits! Please visit your toy store instead of your pet store!
- Why has the author written a passage?
- a) To inform
 - b) To instruct
 - c) To persuade
 - d) To entertain



Exercise 2

Determining an author's tone

Source: www.englishexercises.org

Direction Read the texts and *choose the best answer for each question*

- The Ministry of Transportation is investing a great deal of money in a new campaign about the dangers of using a cell-phone while driving. I doubt it will stop many people from talking on the phone while they drive.
What is an author's tone?

a) optimistic	b) skeptical
c) supportive	d) humorous
- Although not many schools are using laptop computers in schools at the moment, I'm confident that in the future, as the costs go down, we will find that every student has access to one.
What is an author's tone?

a) skeptical	b) optimistic
c) negative	d) neutral
- Airlines have stopped giving peanuts to passengers on flights. This was done to help people who are allergic to peanuts. They can become ill even after breathing air with peanuts. However, some people have complained of being deprived of their previous peanuts and have threatened to sue the airlines.
What do they care if other people become ill?
What is an author's tone?

a) supportive	b) sarcastic
c) humorous	d) neutral
- The woman was a terrible singer. But she was rich, so she made her own albums which she called (incredibly) "the beauty of the human voice!!! It was so bad that people bought them as a joke.
What is an author's tone?

a) pessimistic	b) anxious
c) supportive	d) humorous
- The British football team was punished after there were acts of violence at the game against the Italian team. It isn't fair-the British players were polite and followed the rules. It was all the fault of the Italian players but the judge doesn't see that. He must love Italian players.

What is an author's tone?

- a) biased
- c) supportive

- b) optimistic
- d) humorous



Exercise 3

Determining intended audience

Source: www.wps.ablongman.com

Direction Read the texts and *answer* the questions

1. Single, white female, 25 years of age, in search of a single male, 25–30 years of age, who likes romantic movies, quiet walks on the beach and chili-cheese fries. I love junk food, hate working out, and want to date someone with similar tastes. You be the same.

Who did the author have in mind as reader?

What are clues?

2. FOR SALE: a cozy, two-bedroom, one-bath home on a quiet, tree-lined street in the new Happy Seniors Retirement Estates development. This home is perfect for the retired couple or single who wants an extra room for a visiting grandchild or for sewing and crafts. It has all the modern conveniences and no stairs to climb. This home is pleasant and affordable, even for those on a fixed income.

Who did the author have in mind as reader?

What are the clues?

3. As I prepared to send you my payment, I noticed an error in my monthly statement. You listed a charge against my credit card (account number 1234-5678-9123-4567) in the amount of \$23.56 for a purchase at Wal-Mart twice. I made only one purchase at Wal-Mart for that amount not two. Please correct this error immediately by crediting my account in the amount of \$23.56. Thank you.

Who did the author have in mind as reader?

What are the clues?

-
4. Hey, man, I need to borrow twenty bucks. Okay? I have to buy this stupid book for my music class. It's about lullabies or something. I can't believe a book of lullabies is so expensive. And I can't believe my instructor is making us buy this book. I know. I should've used the twenty bucks I had yesterday to buy the book, but I forgot about it, and, besides, I really wanted that new CD. So, come on, be cool and lend me the money. I'll pay you back on my next payday.

Who did the author have in mind as reader?

What are the clues?

5. My neighborhood, Tranquil Village, is a wonderful place. It is a clean and safe place to raise children. The only thing missing is a neighborhood park. Our children need a place to play that is not only clean and safe but also close to home. Parents are busy people—they work, they take their children to school, and they vote. The parents of Tranquil Village ask you, as their City Council representative, to vote in favor of establishing a park in Tranquil Village.

Who did the author have in mind as reader?

What are the clues?

Exercise 4

Making inferences and drawing conclusions

Source: <http://www.help-teaching.com>

Direction Read the texts and *answer* the questions

1. "I hate the idea of having all those people out there watching me...I just don't like it when I'm around so many people. I wish I just could hide somewhere," whispered Violet.

Violet is a person who

What are the clues?

2. Justin walked towards us, pearly white teeth that glistened in the afternoon sun when he smiled. The closer he got, the better he looked. When he sat down, he had this cologne on that made dizzy and my stomach do a somersault. In a good way, I mean.
How does Maria feel about Justin?

What are the clues?

3. In the 1920s, people diagnosed with disease X were not expected to live beyond 6-12 months. Now many people diagnosed with disease X are able to survive for 5 years and even longer if they receive early treatment.
What can you infer from the above information?

What are the clues?

4. Julio and his father had been looking forward to their fishing trip for weeks. They didn't take much food with them on the trip. When they started fishing they were quickly approached by a forest ranger. He asked Julio's father if he had a fishing license. Julio's father reached into his wallet and suddenly got a terrified look on his face. Julio was disappointed that night as he ate dinner.

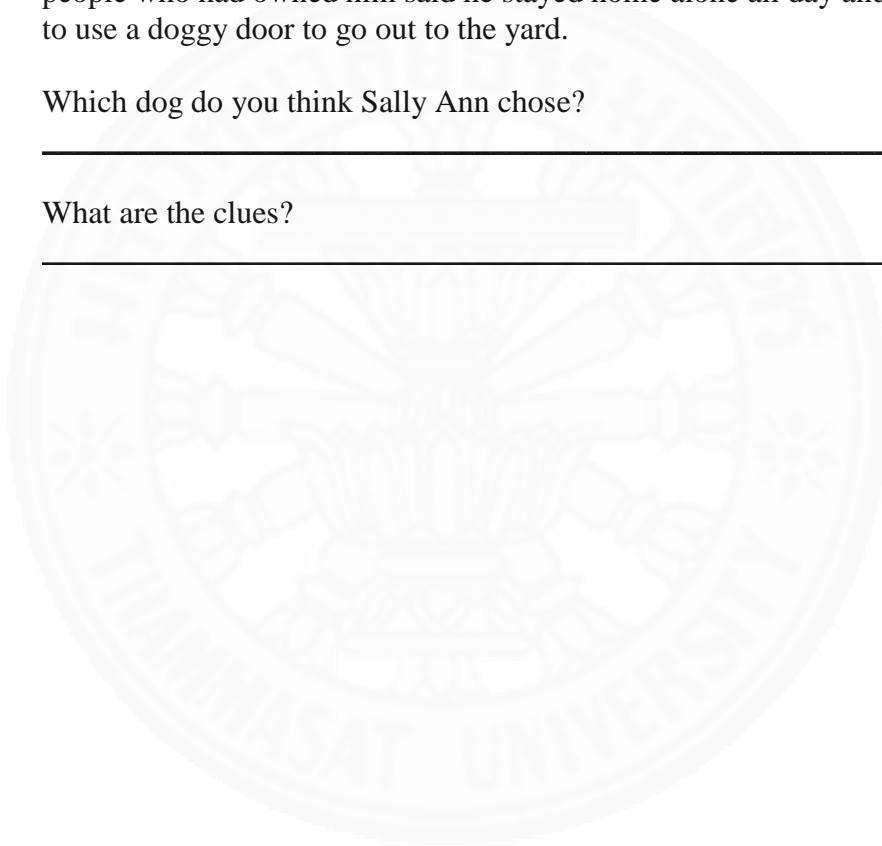
Why did Julio and his father not take much food with them on the trip?

What are the clues?

5. Sally Ann was over 80 years old. She lived in a small house with a very small fenced-in yard. She had just lost her 16-year-old dog and decided to get another dog right away. Sally Ann went to the animal shelter, and after looking at all the dogs, she narrowed her choice down to two. The first was a large, black, one-year-old retriever. He had a lot of energy and was used to running on acres of land. The second dog was a small, three-year-old mix. The people who had owned him said he stayed home alone all day and knew how to use a doggy door to go out to the yard.

Which dog do you think Sally Ann chose?

What are the clues?



Exercise 5

Facts and opinions

Source: www.bbc.co.uk

Direction Read the texts, underline sentences that present facts, double underline the sentences that present opinions, and circle sentences that could be either fact or opinion

1. Review by Anna
Marley: a dog like no other is written by John Grogan. John tells the story of his dog, Marley, and all the things he gets up to. Marley is a troublesome dog that is loved very much. In the book he is always doing funny things, such as drinking out of the bath and running around with the end of the toilet roll in his mouth! The book is funny but also sad I would rate this book 9/10
2. Folk Hibernia
This watchable documentary looked at the Irish folk revival. We heard the best of Irish music from the last 30 years. Sixty years ago this music was almost never heard outside Ireland and it was largely unloved at home. Yet Irish music has given the world a sense of Ireland a sense of itself, as the country has grown to be a Modern European state.
3. Indians “world’s biggest readers”
Indians are the world’s biggest bookworms, reading on average 10.7 hours a week, twice as long as Americans, according to a new survey. The NOP World Culture Score Index surveyed 30,000 people in 30 countries from December 2004 to February 2005. Analysts said self-help and aspirational reading could explain India’s high figures.
4. Leading columnist, Venkateshwar Rao, told Britain’s “Sunday Times” newspaper he could not see Indians flocking into book stores. “Reading books just isn’t a habit with them because they’re not into cultural pursuits. It’s not a part of their make-up. All they want to do is consume.” Mr. Tejpai said: “A good book in India will sell only a few thousand copies; in the UK or US it could sell tens of thousands.
5. The twenty-first century
I think firstly health is better in the 21 century because there are more doctors, nurses, opticians. Secondly, in my opinion, the law and military and police are a good thing about the 21 century because the police are really important to keep the peace. The military defeats the enemy; also the United Nations cannot work without the military.

Exercise 6

Bias

Direction Read the texts and *answer* the questions

1. Reading for pleasure is a waste of time. People who spend hour upon hour reading don't get to live in the real world. They don't really learn anything that is useful about how to deal with everyday people and problems. Plus, teachers always make us read things that are boring.

Source: qacps.schoolwires.net

What is the author's bias?

What are the clues?

2. Eating tomatoes is one of the best things you can do. These beautiful, red fruit not only thrill your taste buds and brighten your plate, they help fight disease. Studies show that people who eat tomatoes and lots of them, lower their risks of cancer because tomatoes contain lycopene, a powerful antioxidant.-Tomato Farmers of America

Source: qacps.schoolwires.net

What is the author's bias?

What are the clues?

3. Our brand of toothpaste contains three different ingredients to clean and protect your teeth. In a recent survey, nine out of ten dentists who reviewed our toothpaste recommended it for their patients. Which would you rather use—the toothpaste recommended by nine professional dentists or the toothpaste recommended by the other guy?

Source: www.district158.org

What is the author's bias?

What are the clues?

4. When I met with Mayor Geovelli, I noticed that he had the appearance of a hobo. He was unshaved and wearing dirty clothes. He spoke to me about his horrible plan to fix our city's roads. Anyone who knows the plan will tell you

that it will bankrupt our city. The plan to fix our roads mostly benefits friends of the Mayor. He plans to pay his buddies in the construction business thousands of dollars over the next two years. I do not want to insult anyone, but the Mayor is of Italian decent, and we all know what reputation they have in this part of the country. Need I remind you of Al Capone and other Italian Mafia members?

Source: www.laurens55.k12.sc.us

What is the author's bias?

What are the clues?

5. Every boy should have a dog. Dogs make great companions. A dog is always there to lick your face when you're feeling down, or to sleep on your feet when you're feeling afraid of the dark. No other pet is as loyal to its owner as a dog. Although a pet can be plenty of work, the rewards you receive from being a dog owner are endless.

Source: <http://www.studyzone.org>

What is the author's bias?

What are the clues?

Exercise 7

Evaluating arguments and evidence

Source: <http://macmillanmh.com>

I think the school's decision to change our dress code to uniforms will hurt students more than help them.

Even though school officials and parents argue that uniforms will help us focus more on our studies, this may not actually be the case. In a survey I did of one hundred students from all three grades, only six thought that wearing a uniform would help them make better grades. On top of that, our school already receives above-average ranking on statewide tests.

In our school, individual accomplishment, not conformity, is encouraged. Both our Spelling Bee champ and our star basketball player were congratulated at a recent school assembly. In addition, part of our school curriculum is celebrating diversity. How can the school encourage us to be individuals and celebrate diversity, on the one hand, but at the same time tell us what to wear every single school day?

Also, the uniforms are just plain uncomfortable and not very practical. The girls, who have to wear skirts, will be unnecessarily cold in winter. The boys, who have to wear ties, will waste time every morning just trying to tie them right!

And, let's face it, uniforms cost a lot of money.

The students of Thomas Jefferson Middle School should be able to have a say in what they wear every day, just like they have for twenty years. Tell your teacher, talk to your parents, write a letter to the principal, and sign a petition. Let us work together to get out of the uniforms and into our own clothes.

Direction Read the texts and *answer* the questions

What is the author's attitudes towards the school's decision to change dress code to uniforms?

Claim 1

Does the author provide reasons and evidence to support this claim?

Claim 2

Does the author provide reasons and evidence to support this claim?

Claim 3

Does the author provide reasons and evidence to support this claim?

Claim 4

Does the author provide reasons and evidence to support this claim?

Exercise 8

Do critical reading

Source: <http://macmillanmh.com>

Cell phone citizens

Our school has banned cell phones. Students must store them in their lockers during the day. We are allowed to use them before and after school hours only. I think this policy is unrealistic and lacks vision. Our school should allow students to use cell phones during the school day in appropriate and responsible ways.

First of all, simply banning phones will not make the problem go away. According to an article in the *Marion Ledger*, about 60 percent of students still use their phones when schools ban or limit cell phone use. That's why it makes sense to teach kids to use cell phones responsibly, not ban them.

Cell phones can help the learning process. Many phones have Internet access. This can be useful if a classroom has limited Internet access and students need to research something quickly. Many phones also have cameras, and students may remember notes on the board or class projects better if they can review a picture of them.

Some people might say that teachers won't be able to regulate how students are using their phones. However, if students understand that using their cell phones in class is a privilege and not a right, they will not take advantage of it.

I do agree that cell phones can be distracting in the classroom if they are used for phone calls or text messages. Ringing or vibrating phones distract the person getting the call and other people as well. Students should turn off phones and store them out of sight during class if they aren't using them for learning. However, students should be allowed to check messages or make calls between classes. There is no difference between holding a face-to-face conversation and a phone conversation in a crowded hallway.

Our principal, Mr. Barnard, has said that he does not want cell phones to become "part of our school culture." But they already are. We are students of a digital age. Let's lift the ban on cell phones in school so we can learn how to become better cell phone citizens.

Direction Read the text and *answer* the questions

1. Why have an author written a passage?

2. What is the author' tone of the whole text?

3. What is the author's attitude towards cell phones?

4. Who did the author have in mind as reader?

5. Underline the facts of the text below

Our school has banned cell phones. Students must store them in their lockers during the day. We are allowed to use them before and after school hours only. I think this policy is unrealistic and lacks vision. Our school should allow students to use cell phones during the school day in appropriate and responsible ways.

First of all, simply banning phones will not make the problem go away. According to an article in the *Marion Ledger*, about 60 percent of students still use their phones when schools ban or limit cell phone use. That's why it makes sense to teach kids to use cell phones responsibly, not ban them.

6. What can you infer from the statement in paragraph 2 "about 60 percent of students still use their phones when schools ban or limit cell phone use"?

7. What can you infer from the statement in paragraph 4 " if students understand that usingtheir cell phones in class is a privilege and not a right, they will not take advantage of it"?

8. What can you infer from the statement in paragraph 5 "There is no difference between holding a face-to-face conversation and a phone conversation in a crowded hallway."?

-
9. What is the author's bias against school cellphone ban?
-
-
10. Is the author biased in favor of or against cellphone in terms of its use for learning? Please explain.
-
-
11. Is the author biased in favor of or against ringing or vibrating phones?
-
-
12. In the first sentence of the second paragraph, the author claims that simply banning cell phone use will not make the problem go away. Do you think reasons and evidence are strong enough? Please explain.
-
-
13. In the first sentence of the third paragraph, the author claims that cell phones can help the learning process. Do you think reasons and evidence are strong enough? Please explain.
-
-
14. In the last sentence of the fourth paragraph, the author claims that if students understand that using their cell phones in class is a privilege and not a right, they will not take advantage of it. Do you think reasons and evidence are strong enough? Please explain.
-
-

Appendix D

An validation form for the supplementary readign worksheets

VALIDATION FORM FOR THE SUPPLEMENTARY READING WORKSHEETS

An exploration of critical reading skills of Thai undergraduate students through project-based learning

Directions Please indicate how you respond to each of these statements by ticking in the box to indicate what you think and give your comments or suggestions for the supplementary reading.

Items	Appropriate (+1)	Not sure (0)	Not Appropriate (-1)
1. The supplementary reading meets the desired objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The topics of the reading selection are appropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The level of difficulty of the supplementary reading is appropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The number of exercise items are appropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The directions of the exercises are clear.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The format of the supplementary reading is appropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional comments or suggestions			

Appendix E
Group record

Page 1

GROUP RECORD

Part of research instrument for an exploration of critical reading skills of Thai undergraduate students through project-based learning by Sirion Lada



แบบบันทึกกลุ่ม

เป็นส่วนหนึ่งของเครื่องมือวิจัยในการศึกษาทักษะการอ่านอย่างมีวิจารณญาณของนักศึกษาไทยในระดับปริญญาตรีผ่านการเรียนรู้โดยใช้โครงงานเป็นฐาน โดยนางสาวศิริอร ละดาคำ

Group name ชื่อกลุ่ม	
Group members สมาชิกกลุ่ม	

STEPS IN DOING A PROJECT

Steps in doing a project	Description
Step 1 Setting a group	In doing a project, you are expected to <ul style="list-style-type: none"> ➤ form your own group of four or five based on self-selection
Step 2 Teacher modeling	<ul style="list-style-type: none"> ➤ learn how to do the project from the teacher and practice critical reading strategies necessary for doing the project
Step 3 Selecting a reading topic and setting learning objectives	<ul style="list-style-type: none"> ➤ select a reading topic that your group holds an interest ➤ set your group learning objectives
Step 4 Selecting a reading passages and doing critical reading	<ul style="list-style-type: none"> ➤ find out only one selection that your group would like to read ➤ deal with the text individually and write a response journal ➤ make a discussion about the selection with group members ➤ write down the summary of the selection in their own words in the critical reading summary ➤ deal with other groups' text individually and write a response journal ➤ make a discussion about the selection with classmates ➤ After finishing reading all groups' text, brainstorm ideas and create your group's product
Step 5 presentation and evaluation	<ul style="list-style-type: none"> ➤ make a presentation ➤ evaluate your performance and your group performance

ขั้นตอนในการทำโครงการงาน

ขั้นตอนในการทำโครงการงาน	คำอธิบาย
ขั้นที่ 1 การจัดตั้งกลุ่ม	<p>ในการทำโครงการงาน นักศึกษาจะต้อง</p> <ul style="list-style-type: none"> ➤ จัดตั้งกลุ่มสี่หรือห้าคนต่อกลุ่มโดยนักศึกษาเป็นผู้เลือกสมาชิกกลุ่มด้วยตนเอง
ขั้นที่ 2 การสาธิตการทำโครงการงานโดยครูผู้สอน	<ul style="list-style-type: none"> ➤ เรียนรู้วิธีการทำโครงการงานจากครูผู้สอนและฝึกกลวิธีการอ่านอย่างวิจารณ์ตามที่เป็นต่อการทำโครงการงาน
ขั้นที่ 3 กำหนดหัวข้อการอ่านและระบุวัตถุประสงค์ในการเรียนรู้	<ul style="list-style-type: none"> ➤ เลือกหัวข้อการอ่านที่กลุ่มของนักศึกษาสงเกตกำหนดวัตถุประสงค์ในการเรียนของกลุ่ม
ขั้นที่ 4 กิจกรรมการเลือกบทความที่ต้องการอ่านและการอ่านอย่างมีวิจารณ์ตาม	<ul style="list-style-type: none"> ➤ หาบทความที่กลุ่มของนักศึกษาต้องการอ่าน ➤ นักศึกษาแต่ละคนอ่านบทความที่กลุ่มเลือกและเขียนแบบบันทึกความคิดเห็นต่อบทความ ➤ ทำการอภิปรายบทความกับสมาชิกกลุ่ม ➤ เขียนบันทึกข้อสรุปลงในแบบสรุปการอ่านอย่างมีวิจารณ์ตาม ➤ อ่านบทความของกลุ่มอื่นและเขียนแบบบันทึกความคิดเห็นต่อบทความ ➤ ทำการอภิปรายบทความร่วมกับเพื่อนร่วมห้อง ➤ หลังจากเสร็จสิ้นการอ่านบทความของทุกกลุ่มแล้ว แต่ละกลุ่มระดมความคิดเห็นเพื่อจัดทำผลงานกลุ่ม
ขั้นที่ 5 การนำเสนอผลงานและการประเมินการผลงาน	<ul style="list-style-type: none"> ➤ นำเสนอผลงาน ➤ ประเมินการทำหน้าที่ของตัวนักศึกษาและของกลุ่มนักศึกษา

MORE ABOUT GROUP MEMBERS AND GROUP WORK

รู้จักสมาชิกกลุ่มและการทำงานกลุ่มให้มากขึ้น

Directions Please write down the name of your group members, their background knowledge and their interests in the box provided.

คำอธิบาย โปรดเขียนชื่อสมาชิกกลุ่ม ความรู้พื้นฐานและความสนใจของสมาชิกกลุ่มลงในช่องว่างที่กำหนดให้

M ember	1 _____	2 _____	3 _____	4 _____	5 _____
B ackground knowledge					
I nterests					

Direction Please write down your answer to each of the following question.
 คำอธิบาย โปรดตอบคำถามดังต่อไปนี้

<p>1. What are anticipated problems of group work? ปัญหาอะไรบ้างที่จะเกิดขึ้นกับการทำงานกลุ่ม</p>
<p>2. What are possible solutions for the problems? วิธีที่ใดบ้างที่จะสามารถแก้ปัญหาที่เกิดขึ้นได้</p>
<p>3. What are the desired behaviors of the group members? พฤติกรรมใดบ้างที่ต้องการให้สมาชิกกลุ่มปฏิบัติ</p>
<p>4. What are the undesired behaviors of the group members? พฤติกรรมใดบ้างที่ไม่ต้องการให้สมาชิกกลุ่มปฏิบัติ</p>

PROJECT CHART

แผนการทำโครงการ

Direction Please write down the reading topic that your group wants to read, the learning objectives that your group would like to accomplish, and the ideas, solutions, or suggestions that your group would like to propose

คำอธิบาย โปรดเขียนหัวข้อการอ่านที่กลุ่มของนักศึกษาต้องการอ่าน วัตถุประสงค์ในการเรียนที่กลุ่มอยากจะทำให้สำเร็จ และความคิด วิธีแก้ปัญหาหรือข้อเสนอแนะที่อยากจะทำนำเสนอ

Reading topic หัวข้อการอ่าน



Learning objectives วัตถุประสงค์ในการเรียน



Ideas, solutions, or suggestions to be proposed

ความคิด วิธีแก้ปัญหาหรือข้อเสนอแนะที่อยากจะทำนำเสนอ

Direction Please write down what your group can learn from doing the project in terms of content, language, and skills

คำอธิบาย โปรดเขียนสิ่งที่กลุ่มของนักศึกษาได้เรียนรู้จากการทำโครงการในแง่ของเนื้อหา ภาษาและทักษะการทำงานกลุ่ม

Content เนื้อหา	Language (Vocabulary and grammatical structure) ภาษา (คำศัพท์และไวยากรณ์)	Group work skills ทักษะการทำงานกลุ่ม

CRITICAL READING SUMMARY

สรุปการอ่านอย่างมีวิจารณญาณ

Direction Please write down your answer to each of the following question based on your reading selection.

คำอธิบาย โปรดตอบคำถามเกี่ยวกับบทความดังต่อไปนี้

1. The author's purpose จุดประสงค์ของผู้เขียน

Evidence/reasons หลักฐาน/เหตุผล

2. The author's tone น้ำเสียงของผู้เขียน

Evidence/reasons หลักฐาน/เหตุผล

3. The author's point of viewทัศนคติของผู้เขียน

Evidence/reasons หลักฐาน/เหตุผล

4. Intended audience กลุ่มผู้อ่านเป้าหมาย
Evidence/reasonsหลักฐาน/เหตุผล
5. facts and opinions ข้อเท็จจริงและความคิดเห็น
Evidence/reasonsหลักฐาน/เหตุผล

6. Making inferences and drawing conclusions ตีความและสรุปความ

Statement ข้อความ	Inference or conclusions made from the statement สิ่งที่ตีความหรือสรุปได้จากข้อความ

Evidence/reasons หลักฐาน/เหตุผล

--

7. The author's bias อคติของผู้เขียน

--

Evidence/reasons หลักฐาน/เหตุผล

--

8. The author's arguments ข้อโต้แย้งของผู้เขียน

Evidence/reasonsหลักฐาน/เหตุผล
8. The author's evidence หลักฐานของผู้เขียน
Evidence/reasonsหลักฐาน/เหตุผล

EVALUATION

แบบประเมิน

Direction Please indicate how your group thinks about each of the following statement by ticking (✓) in the box that reflects your thought

คำอธิบาย โปรดระบุว่ากลุ่มของนักศึกษามีความคิดเห็นอย่างไรเกี่ยวกับข้อความดังต่อไปนี้ โดยการทำเครื่องหมาย

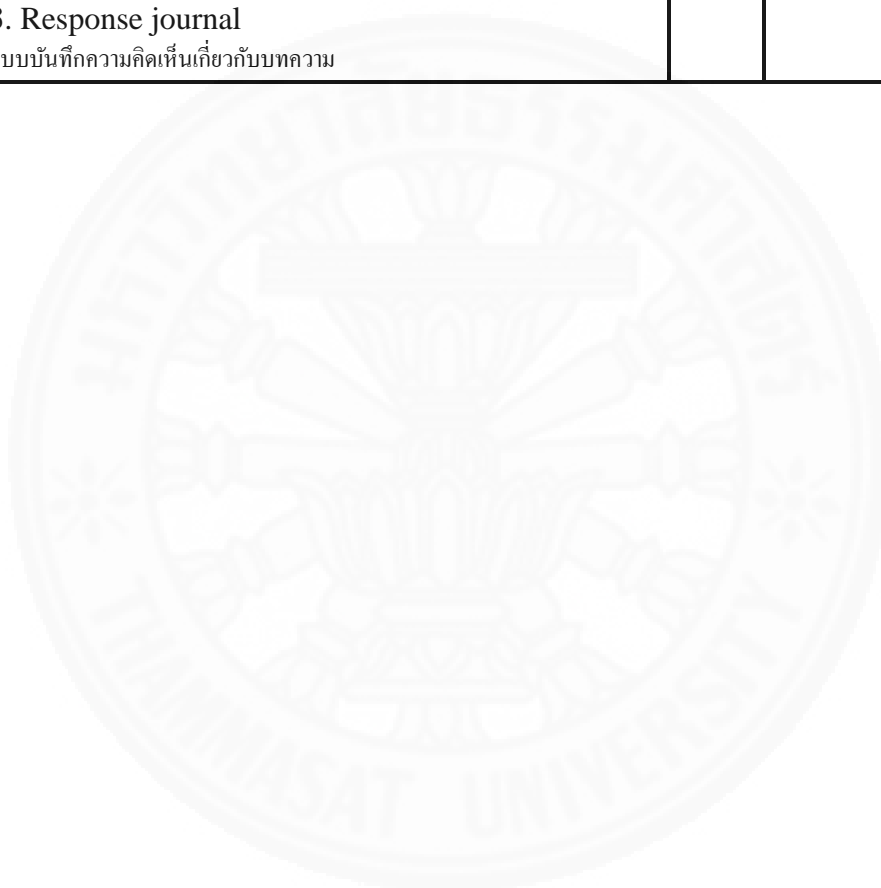
✓ ในช่องที่สะท้อนความคิดของกลุ่มนักศึกษา

Students' collaborative learning behaviors พฤติกรรมการทำงานร่วมกันของนักศึกษา			
Statement	Yes	Sometimes	No
1. We help each other to learn. พวกเราช่วยกันเรียน			
2. We are responsible for the assigned task. พวกเรารับผิดชอบต่อการที่ได้รับมอบหมาย			
3. We work together in order to complete the project. พวกเราทำงานร่วมกันเพื่อทำโครงการให้แล้วเสร็จ			
4. We feel comfortable to express ideas together. พวกเรารู้สึกสบายใจที่ได้แสดงความคิดเห็นร่วมกัน			
5. We work together to solve problems that arise during doing the project. พวกเราช่วยกันแก้ปัญหาที่เกิดขึ้นในระหว่างการทำโครงการ			

Steps in doing the project ขั้นตอนในการทำโครงการ			
	Like	Neutral	Dislike
1. Setting a group การจัดตั้งกลุ่ม			
2. Teacher modeling การสาธิตการทำโครงการโดยครูผู้สอน			
3. Selecting a reading topic and setting learning objectives กำหนดหัวข้อการอ่านและระบุวัตถุประสงค์ในการเรียนรู้			
4. Selecting a reading passages and do critical reading activities กิจกรรมการเลือกบทความที่ต้องการอ่านและการอ่านอย่างมีวิจารณญาณ			

5. Presentation and evaluation การนำเสนอผลงานและการประเมินผลงาน			
--------------------------------------------------------------------	--	--	--

Materials สื่อการสอน			
	Like	Neutral	Dislike
1. Group record แบบบันทึกการทำงานกลุ่ม			
2. Supplementary reading แบบฝึกหัดเสริมทักษะการอ่านอย่างมีวิจารณญาณ			
3. Response journal แบบบันทึกความคิดเห็นเกี่ยวกับบทความ			



Appendix F

An validation form for the group record

VALIDATION FORM FOR THE GROUP RECORD

An exploration of critical reading skills of Thai undergraduate students through project-based learning

Directions Please indicate how you respond to each of these statements by ticking in the box to indicate what you think and give your comments or suggestions for the weekly group record.

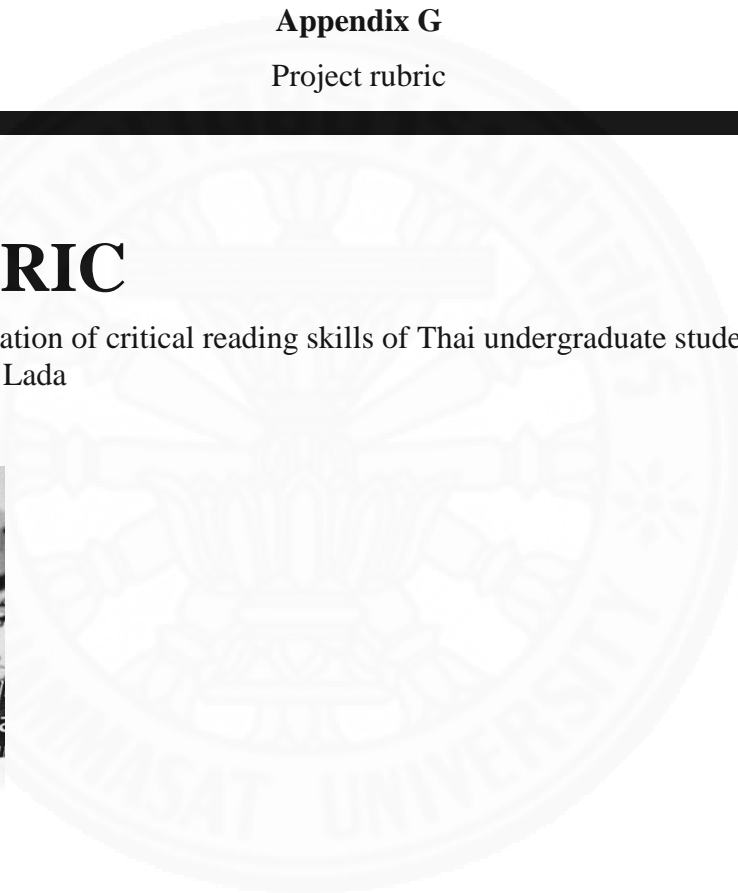
Items	Appropriate (+1)	Not sure (0)	Not Appropriate (-1)
1. The weekly group record meet the research objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The weekly group record can help students in doing a project.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The format of the weekly group record is appropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Language used in the weekly group record is appropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The length of the weekly group record is appropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional comments or suggestions			

Appendix G

Project rubric

PROJECT RUBRIC

Part of research instruments for an exploration of critical reading skills of Thai undergraduate students through project-based learning by Sirion Lada



PROJECT WORK (10%)**1.1 How well the groups get the information from the passages? (critical reading skills)**

Good 2	Fair 1	Poor 0	Point
The group can accurately identify the author's purpose with strong support.	The group can accurately identify the author's purpose but do not well support their response.	The group cannot identify the author's purpose.	—
2	1	0	Point
The group can accurately identify the author's tone with strong support.	The group can accurately identify the author's tone but do not well support their response.	The group cannot identify the author's tone.	—
2	1	0	Point
The group can accurately identify the author's point of view with strong support.	The group can accurately identify the author's point of view but do not well support their response.	The group cannot identify the author's point of view.	—
2	1	0	Point
The group can accurately identify the author's intended audience with strong support.	The group can accurately identify the author's intended audience but do not well support their response.	The group cannot identify the intended audience.	—
2	1	0	Point
The group can accurately make inferences and conclusions with strong support.	The group can accurately make inferences and conclusions but do not well support their response.	The group cannot draw inferences and conclusions	—
2	1	0	Point
The group can accurately distinguish facts from opinions with strong support.	The group can accurately distinguish facts from opinions but do not well support their response.	The group cannot distinguish facts and opinions.	—

2	1	0	Point
The group can accurately identify the author's bias with strong support.	The group can accurately identify the author's bias but do not well support their response.	The group cannot identify the author's bias	—
2	1	0	Point
The group can accurately evaluate the author's arguments with strong support.	The group can accurately evaluate the author's arguments but do not well support their response.	The group cannot evaluate the author's arguments.	—
2	1	0	Point
The group can accurately evaluate the author's evidence with strong support.	The group can accurately evaluate the author's evidence but do not well support their response.	The group cannot evaluate the author's evidence.	—

1.2 How well do the groups react to the passages and propose their ideas, suggestions, or solutions based on what is read?				
4	3	2	1	Point
The groups pinpoint the issues that they agree or disagree on the passages and strongly support their perspectives.	The groups pinpoint the issues that they agree or disagree on the passages but do not well support their perspectives.	The groups pinpoint the issues that they agree or disagree on the passages but do not support their perspectives.	The groups cannot pinpoint the issues that they agree or disagree on the passages	_____
4	3	2	1	Point
Ideas, suggestions, or solutions are well related to the passages and supported by reasons or/and evidence in the passages.	Ideas, suggestions, or solutions are related to the passages but not well supported by reasons or/and evidence in the passages.	Ideas, suggestions, or solutions are related to the passages but not supported by reasons or/and evidence in the passages.	Ideas, suggestions, or solutions proposed are not related to the passages.	_____

1.3 How well do the groups collaborate together?				
Category	Positive Interdependence			
4	3	2	1	Point
All members help others to understand what is learned.	Most of them help others to understand what is learned.	Some members help others to understand what is learned.	All members never help others to understand what is learned.	_____
4	3	2	1	Point
All members communicate with each other directly and consistently.	Most of them always communicate with each other.	Some members sometimes communicate with each other.	All members do not communicate with each other.	_____
4	3	2	1	Point
All members maintain a good relationship with each other.	Most of them maintain a good relationship with each other	Some members try to maintain a relationship with each other.	All members do not maintain their relationship	_____
Category	Individual accountability			
4	3	2	1	Point
Individual students actively participate in their group's activities.	Individual students participate in their group's activities.	Individual students rarely participate in their group's activities.	Individual students do not participate in their group's activities.	_____
4	3	2	1	Point

Individual students are responsible for their work well.	Individual students are responsible for their work.	Individual students rarely do their work.	Individual students let other members do the work	—
4	3	2	1	Point
Individual students consistently stay on task.	Individual students stay on task.	Individual students rarely stay on task. ivlearnin20%	Individual students do not stay on task.	—

PRESENTATION (10%)				
How well do the groups make a presentation? 10%				
Category	Organization 4%			
Excellent 4	Good 3	Fair 2	Poor 1	Point
Information is presented in a logical sequence.	Most of information is presented in a logical sequence.	Some information is presented in a logical sequence.	Information is not presented in a logical sequence.	—
Category	Engaging audience 3%			
3	2	1	0	Point
The presenters sustain the listeners' interest throughout the presentation.	The presenters are able to sustain the listeners' interest but not throughout the presentation	The presenters hardly ever sustain the listeners' interest.	The presenters cannot sustain the listeners' interest.	—
Category	Language and fluency 3%			
3	2	1	0	Point
The presenters speak fluently and speak at an understandable way. They can use a wide variety of expressions, language structures and vocabulary correctly and appropriately.	The presenters speak quite fluently, but sometimes get struck. Most of what they speak can be understood. They can generally use a wide variety of expressions, language structures and vocabulary with few minor mistakes.	The presenters are able to make a presentation. Some of what they speak can be understood. They can use a limited set of expressions, language structures and vocabulary with few minor mistakes.	The presenters read the notes all the time. What they speak cannot be understood. Their use of language expressions, vocabulary and grammatical structures is limited and frequently not accurate.	—

Appendix H

An validation form for the project rubric

VALIDATION FORM FOR THE PROJECT RUBRIC

An exploration of critical reading skills of Thai undergraduate students through project-based learning

Directions Please indicate how you respond to each of these statements by ticking in the box to indicate what you think and give your comments or suggestions for the rubric for the project.

Items	Appropriate (+1)	Not sure (0)	Not Appropriate (-1)
1. The rubric for the project is practical.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The rubric for the project is appropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The description of each criterion is easy to understand.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The rubric covers all relevant criteria.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional comments or suggestions			

Appendix I
Observation form

OBSERVATION FORM

Part of research instruments for an exploration of critical reading skills of Thai undergraduate students through project-based learning by Sirion Lada



The observation form is used for the purpose of observing students' learning behaviors in the classroom. There are two components. First is physical setting. Second is activities and interaction, consisting two main topics to be observed: collaborative learning and critical reading strategies. The lists of behaviors under the mentioned topics are provided and the frequency of behaviors will be rated. Critical comments need to be written in the box provided.

COMPONENT 1: PHYSICAL SETTING

Direction Please write down the information about the observations in the boxes provided

Prior to the lesson

seating arrangement

facilities

Others

During the lesson

Interruption/distracting noise

Others

COMPONENTS 2 ACTIVITIES AND INTERACTION

Directions Please check the behaviors you have observed by ticking the boxes on the observation form – Y if the students display the behaviors; N if the students do not display the behaviors; and U if you is unsure whether or not the students display the behaviors and write down the interaction that you can observe and the comments in the box provided.

Collaborative learning	Behavior observed	Y	N	U	Interaction (teacher-student interaction, student-student interaction, nonverbal communication)	Comments
	1. Students help each other to learn.					
	2. Students encourage all group members to share their ideas.					
	3. Students express their thoughts with their group.					
	4. Students listen to their group member while speaking.					
	5. Students discuss ideas proposed by their group members.					

Critical reading	Behavior observed	Y	N	U	Interaction (teacher-student interaction, student-student interaction, nonverbal communication)	Comments
Identify the author's purpose						
6. Students express ideas about the author's purpose.						
7. Students explain their reasons or/and present evidence from the text to support their ideas.						
8. Students discuss with their friends to identify the author's purpose						
Identify the author's tone						
9. Students express ideas about the author's tone.						
10. Students explain their reasons or/and present evidence from the text to support their ideas.						
11. Students discuss with their friends to identify the author's tone						
Identify the author's point of view						
12. Students express ideas about the author's point of view.						
13. Students explain their reasons or/and present evidence from the text to support their ideas.						
14. Students discuss with their friends to identify the author's point of view.						

Critical reading	Behavior observed	Y	N	U	Interaction (teacher-student interaction, student-student interaction, nonverbal communication)	Comments
Identify the intended audience						
15. Students express ideas about the intended audience.						
16. Students explain their reasons or/and present evidence from the text to support their ideas.						
17. Students discuss with their friends to identify the intended audience.						
Distinguishing facts from opinions						
18. Students express ideas about facts.						
19. Students explain their reasons or/and present evidence from the text to support their ideas.						
20. Students express ideas about opinions.						
21. Students explain their reasons or/and present evidence from the text to support their ideas.						
22. Students discuss with their friends to distinguish facts from opinions.						

Critical reading	Behavior observed	Y	N	U	Interaction (teacher-student interaction, student-student interaction, nonverbal communication)	Comments
Determine the author's bias						
23. Students express ideas about the author's bias.						
24. Students explain their reasons or/and present evidence from the text to support their ideas.						
25. Students discuss with their friends to determine the author's bias.						
Make inferences and draw conclusions						
26. Students express ideas about inferences and conclusions						
27. Students explain their reasons or/and present evidence from the text to support their ideas.						
28. Students discuss with their friends to draw inferences and conclusions.						
Evaluating argument						
29. Students express ideas about an author's argument.						
30. Students explain their reasons or/and present evidence from the text to support their ideas.						
31. Students discuss with their friends to evaluate argument.						

Critical reading	Behavior observed	Y	N	U	Interaction (teacher-student interaction, student-student interaction, nonverbal communication)	Comments
Evaluating the author's evidence						
32. Students express ideas about the author's evidence.						
33. Students explain their reasons or/and present evidence from the text to support their ideas.						
34. Students discuss with their friends to evaluate the author's evidence.						

Note

Appendix J

An validation form for the project rubric

VALIDATION FORM FOR THE OBSERVATION FORM

An exploration of critical reading skills of Thai undergraduate students through project-based learning

Directions Please indicate how you respond to each of these statements by ticking in the box to indicate what you think and give your comments or suggestions for the observation form.

Items	Appropriate (+1)	Not sure (0)	Not Appropriate (-1)
1. The observation form is practical in answering the research question.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The format of the observation checklist is appropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The observation form covers all behaviors that should be observed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The statements in English are appropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional comments or suggestions			

Appendix K

An example of interview guides

INTERVIEW GUIDE

An exploration of critical reading skills of Thai undergraduate students through project-based learning (Step 2 Modeling)

Description

The interview guide is part of a study of an exploration of critical reading skills of Thai undergraduate students through project-based learning conducted by Miss Siri-on Lada, a PhD student of English Language Studies, Faculty of Liberal Arts, Thammasat University.

It is designed to elicit the participants' perception of their critical reading skills development and their opinions towards project-based learning (Step 2 Teacher modeling) consisting of 15 questions. The results from the interview will be used for research purposes only. In order to ensure the confidentiality of the interviewee's responses, the researcher will use an English letter instead of the name of the interview. The number will also be used in reporting the findings and discussion sections.

Before the interview

The researcher will inform the participants about the objectives of an interview, the confidentiality, the use of the information from the interview, the duration of interview and recording technique and give the consent form to the participants.

Item	Questions
1	Can you tell me about teacher modeling? นักศึกษาช่วยอธิบายวิธีการบริหารจัดการทำโครงการโดยครูผู้สอนว่าเป็นอย่างไร
2	Do the teacher model critical reading strategies clearly? Please explain อาจารย์ผู้สอนสาธิตกลวิธีการอ่านอย่างมีวิจารณ์ญาณได้ชัดเจนหรือไม่ โปรดอธิบาย
3	Do the teacher demonstrate the steps in doing a project clearly? Please explain อาจารย์ผู้สอนสาธิตขั้นตอนการทำโครงการได้ชัดเจนหรือไม่ โปรดอธิบาย
4	What are the problems about teacher modeling? นักศึกษาประสบปัญหาอะไรบ้างในการบริหารจัดการทำโครงการโดยครูผู้สอน
5	How do you solve the problems about teacher modeling? นักศึกษามีวิธีแก้ปัญหาที่เกิดขึ้นในการบริหารจัดการทำโครงการโดยครูผู้สอนอย่างไร
6	Do you think teacher modeling helps you identify the author's purpose? Please explain นักศึกษาคิดว่าการบริหารจัดการทำโครงการโดยครูผู้สอนช่วยให้นักศึกษาระบุจุดประสงค์ของผู้เขียนได้หรือไม่ โปรดอธิบาย

- 7 Do you think teacher modeling helps you identify the author's tone? Please explain
 นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาสามารถระบุน้ำเสียงของผู้เขียนได้หรือไม่ โปรดอธิบาย
- 8 Do you think teacher modeling helps you identify the author's point of view? Please explain
 นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาระบุทัศนคติของผู้เขียนได้หรือไม่ โปรดอธิบาย
- 9 Do you think teacher modeling helps you identify the intended audience? Please explain
 นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาระบุกลุ่มผู้อ่านเป้าหมายได้หรือไม่ โปรดอธิบาย
- 10 Do you think teacher modeling helps you distinguish facts from opinions? Please explain
 นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาแยกข้อเท็จจริงออกจากความคิดเห็นได้หรือไม่ โปรดอธิบาย
- 11 Do you think teacher modeling helps you draw inferences and conclusions? Please explain
 นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาตีความจากเรื่องที่อ่าน และสรุปความจากเรื่องที่อ่านได้หรือไม่ โปรดอธิบาย
- 12 Do you think teacher modeling helps you identify the author's bias? Please explain
 นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาระบุอคติของผู้เขียนได้หรือไม่ โปรดอธิบาย
- 13 Do you think teacher modeling helps you evaluate argument? Please explain
 นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาช่วยให้นักศึกษาประเมินข้อโต้แย้งที่ผู้เขียนใช้ในงานเขียนได้หรือไม่ โปรดอธิบาย
- 14 Do You think teacher modeling helps you evaluate evidence? Please explain
 นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาประเมินหลักฐานที่ผู้เขียนในสนับสนุนงานเขียนได้หรือไม่ โปรดอธิบาย
- 15 What would you like to suggest in order to improve the teaching and learning in the step of teacher modeling?
 นักศึกษาอยากจะทำอะไรที่จะช่วยปรับปรุงการเรียนการสอนในขั้นการสาธิตการทำโครงงานโดยครูผู้สอน

Appendix L

An validation form for the interview guides

VALIDATION FORM FOR THE INTERVIEW GUIDE

An exploration of critical reading skills of Thai undergraduate students through project-based learning

Directions

Please indicate how you respond to each of these statements by ticking in the box to indicate what you think and give your comments or suggestions for the interview guide.

Items	Appropriate (+1)	Not sure (0)	Not Appropriate (-1)
1. The questions in the interview guide meets the research objectives.			
2. The questions in English and Thai are clear and easy to understand.			
3. The interview guide does not contain leading questions or biased questions			
4. The interview guide does not contain double barreled questions.			
5. The sequences of questions are easy to follow			

Additional comments or suggestions

Appendix M
Student response journal

RESPONSE JOURNAL

แบบบันทึกความคิดเห็นเกี่ยวกับบทความ

Part of research instruments for an exploration of critical reading skills of Thai undergraduate students through project-based learning by Sirion Lada

เป็นส่วนหนึ่งของเครื่องมือวิจัยในการศึกษาทักษะการอ่านอย่างมีวิจารณญาณของนักศึกษาไทยในระดับปริญญาตรีผ่านการเรียนรู้

โดยใช้โครงการเป็นฐาน

โดยนางสาวศิริอร สะดาคำ



Name/ชื่อ _____ Student ID Number/รหัสนักศึกษา _____

Class/กลุ่มเรียน _____ Group's name/ชื่อกลุ่ม _____

RESPONSE JOURNAL DESCRIPTION

The researcher hopes that this response journal will

- ❖ help you deal with the reading selection in depth through the provided questions
- ❖ be your guideline in discussing with your group members about the selection
- ❖ provide you an opportunity to review what you can learn from discussions in terms of language, skills, and content
- ❖ provide you an opportunity to assess your performance, your group performance, and your critical reading skills

This response journal requires you to write down your understanding, opinions, and feeling about the reading selection. It consists of 3 main sections.

Section 1 before discussion

This section requires you to deal with the reading selection individually and write down your understanding, opinions, and feeling about the reading selection supported with reasons.

Section 2 after discussion

This section requires you to revise your understanding of the selection after discussion with others. It also encourages you to review what you have learned after reading the selection and discussion in terms of language, skills, and content.

Section 3 self-assessment

This section requires you to evaluate your performance, your group performance, and your critical reading skills.

คำอธิบายเกี่ยวกับแบบบันทึกความคิดเห็นเกี่ยวกับบทความ

ผู้วิจัยสร้างแบบบันทึกความคิดเห็นเกี่ยวกับบทความนี้ขึ้น โดยหวังว่าแบบบันทึกนี้จะ

- ❖ ช่วยให้นักศึกษาอ่านบทความได้ลึกซึ้งซึ่งผ่านการตอบคำถามในแบบบันทึก
- ❖ เป็นแนวทางในการช่วยให้นักศึกษาอภิปรายบทความร่วมกับเพื่อนได้
- ❖ เปิดโอกาสให้นักศึกษาได้ทบทวนสิ่งที่นักศึกษาได้เรียนรู้จากการอภิปรายในแง่ของภาษา ทักษะและเนื้อหาที่ได้จากการอ่านบทความและการอภิปรายร่วมกับผู้อื่น
- ❖ เปิดโอกาสให้นักศึกษาได้ประเมินการทำหน้าที่ของตนเอง ประเมินการทำหน้าที่ของกลุ่มตนเองและประเมินทักษะการอ่านอย่างมีวิจารณญาณของนักศึกษา

แบบบันทึกความคิดเห็นเกี่ยวกับบทความนี้ต้องการให้นักศึกษาเขียนความเข้าใจ ความคิดเห็น ความรู้สึกของนักศึกษาต่อบทความ แบบบันทึกนี้ประกอบไปด้วย 3 ส่วนสำคัญ

ส่วนที่ 1 ก่อนการอภิปราย

ในส่วนนี้ นักศึกษาจะต้องทำการอ่านบทความและเขียนความเข้าใจ ความคิดเห็น ความรู้สึกของนักศึกษาต่อบทความ พร้อมทั้งอธิบายเหตุผลสนับสนุน

ส่วนที่ 2 หลังการอภิปราย

ในส่วนนี้ นักศึกษาจะทบทวนความเข้าใจของนักศึกษาต่อบทความหลังจากได้ทำการอภิปรายบทความร่วมกับเพื่อน รวมทั้งทบทวนเกี่ยวกับสิ่งที่นักศึกษาได้เรียนรู้หลังจากการอ่านบทความและการอภิปรายในแง่ของภาษา ทักษะและเนื้อหาที่ได้จากการอ่านบทความและการอภิปรายร่วมกับผู้อื่น

ส่วนที่ 3 ประเมินตนเอง

ในส่วนนี้ นักศึกษาจะทำการประเมินการทำหน้าที่ของตนเอง ประเมินการทำหน้าที่ของกลุ่มตนเองและประเมินทักษะการอ่านอย่างมีวิจารณญาณของนักศึกษา

TEACHER RUBRIC FOR THE RESPONSE JOURNAL

Good (2)	Fair (1)	Poor (0)	Score
Students can identify an author's purpose with strong support.	Students can identify an author's purpose but do not well support their response.	Students cannot identify an author's purpose	___
Students can identify an author's tone with strong support.	Students can identify an author's tone but do not well support their response.	Students cannot identify an author's tone	___
Students can identify the author's point of view with strong support.	Students can identify the author's point of view but do not well support their response.	Students cannot identify an author's point of view	___
Students can identify an intended audience with strong support.	Students can identify an intended audience but do not well support their response.	Students cannot identify an intended audience.	___
Students can distinguish facts and opinions with strong support.	Students can distinguish facts and opinions but do not well support their responses.	Students cannot distinguish facts and opinions.	___
Students can draw inferences and conclusions with strong support.	Students can draw inferences and conclusions but do not well support their responses.	Students cannot draw inferences and conclusions	___
Students can identify the author's bias with strong support.	Students can identify the author's bias but do not well support their responses.	Students cannot identify the author's bias	___
Students can evaluate arguments with strong support.	Students can evaluate arguments but do not well support their responses.	Students cannot evaluate arguments.	___
Students can evaluate evidence with strong support.	Students can evaluate evidence but do not well support their responses.	Students cannot evaluate evidence.	___
Total			

นักศึกษาสามารถประเมิน หลักฐานที่ผู้เขียนในสนับสนุน งานเขียนได้โดยมีเหตุผล มาสนับสนุนคำตอบได้เป็นอย่างดี	นักศึกษาสามารถประเมินหลักฐาน ที่ผู้เขียนในสนับสนุนงานเขียนได้ แต่ไม่สามารถหาเหตุผล มาสนับสนุนคำตอบได้ดีเท่าที่ควร	นักศึกษาไม่สามารถประเมิน หลักฐานที่ผู้เขียนใน สนับสนุนงานเขียนได้	—
		คะแนนรวม	



RESPONSE JOURNAL

แบบบันทึกความคิดเห็นเกี่ยวกับบทความ

Directions Please write down your responses

คำอธิบาย โปรดตอบคำถาม

Section I before discussion

ส่วนที่ 1 ก่อนการอภิปราย

Week/สัปดาห์ที่	
Reading title/ชื่อบทความ	
1. What is the reading selection about? บทความที่อ่านเกี่ยวกับอะไร	

2. How do you feel about the reading selection?

นักศึกษา รู้สึกอย่างไรกับบทความ

3. Do you agree or disagree with the passage? Please explain.

นักศึกษา เห็นด้วยหรือไม่เห็นด้วยกับบทความนี้ โปรดอธิบาย

Section II after discussion

ส่วนที่ 2 หลังการอภิปราย

4. What have you learned after discussion?

นักศึกษาได้เรียนรู้อะไรบ้างหลังจากจบการอภิปราย

❖ In terms of language ในแง่ของภาษา

❖ In terms of skills ในแง่ของทักษะ

❖ In terms of contents ในแง่ของเนื้อหา

Section III self-assessment

ส่วนที่ 3 ประเมินตนเอง

<p>5. If there are five scores to give for your performance this week, how much you should get. Please mark X the number provided and write down the reason why you deserve it.</p> <p>ถ้ามีคะแนนทั้งหมด 5 คะแนนให้สำหรับการทำหน้าที่ของตัวนักศึกษาในสัปดาห์นี้ นักศึกษาคิดว่านักศึกษาคควรจะได้คะแนนเท่าไร โปรดทำเครื่องหมาย X ที่หมายเลขคะแนนที่นักศึกษาคิดว่าสมควรได้รับและเขียนอธิบายเหตุผลประกอบ</p>		
Scores คะแนน	Description คำอธิบาย	Reasons เหตุผล
5	<p>Your performance is excellent. You work well with others to complete the project and are fully responsible for your work and meet all responsibilities. Your contribution makes your group meet learning objectives.</p> <p>นักศึกษากำหนดหน้าที่ได้เยี่ยม นักศึกษาทำงานร่วมกับผู้อื่นได้เป็นอย่างดีเพื่อทำโครงการให้แล้วเสร็จและรับผิดชอบต่อน้ำที่ของตนเองอย่างเต็มที่และครบถ้วน การทำหน้าที่ของนักศึกษาทำให้กลุ่มบรรลุจุดประสงค์ในการเรียน</p>	
4	<p>Your performance is good. You work with others to complete the project. You are responsible for your work and meet all responsibilities.</p> <p>นักศึกษากำหนดหน้าที่ได้เป็นอย่างดี นักศึกษาทำงานร่วมกับผู้อื่นเพื่อทำโครงการให้แล้วเสร็จและรับผิดชอบต่อน้ำที่ของตนเองได้ครบถ้วน</p>	
3	<p>Your performance is ok. You work with others to complete the project but do not work as hard as others. You are responsible for your work but do not meet all responsibilities.</p> <p>นักศึกษากำหนดหน้าที่ได้พอใช้ นักศึกษาทำงานร่วมกับผู้อื่นเพื่อทำโครงการให้แล้วเสร็จแต่ไม่ได้ทำงานหนักเท่ากับผู้อื่น นักศึกษารับผิดชอบต่อน้ำที่ของตนเองแต่ไม่ครบถ้วนตามที่ได้รับมอบหมาย</p>	
2	<p>Your performance is poor. You hardly ever work with others to complete the project. You are hardly ever responsible for your work.</p> <p>นักศึกษากำหนดหน้าที่ได้ไม่ดี นักศึกษาแทบจะไม่ทำงานร่วมกับผู้อื่นเพื่อทำโครงการให้แล้วเสร็จ และนักศึกษาก็แทบจะไม่รับผิดชอบต่อน้ำที่ของตนเอง</p>	
1	<p>Your performance is terrible. You do not work with others to complete the project. You are not responsible for your work.</p> <p>นักศึกษากำหนดหน้าที่ได้ไม่ดีอย่างมาก นักศึกษาก็ไม่ทำงานร่วมกับผู้อื่นเพื่อทำโครงการให้แล้วเสร็จ และนักศึกษาก็ไม่รับผิดชอบต่อน้ำที่ของตนเอง</p>	

6. If there are five scores to give for your group performance this week, how much your group should get. Please mark X the number provided and write down the reason why you deserve it.

ถ้ามีคะแนน 5 คะแนนให้สำหรับการทำหน้าที่ของกลุ่มนักศึกษาในสัปดาห์นี้ นักศึกษาคิดว่ากลุ่มของนักศึกษาคงจะได้คะแนนเท่าไร โปรดทำเครื่องหมาย X ที่หมายเลขคะแนนที่นักศึกษาคิดว่ากลุ่มสมควรได้รับและเขียนอธิบายเหตุผลประกอบ

Scores คะแนน	Description คำอธิบาย	Reasons เหตุผล
5	Your group performance is excellent. Your group work well together towards learning objectives and can meet the objectives as expected. กลุ่มของนักศึกษาทำหน้าที่ได้ดีเยี่ยม กลุ่มของนักศึกษาทำงานร่วมกันเพื่อบรรลุวัตถุประสงค์ในการเรียนและสามารถบรรลุวัตถุประสงค์ตามที่กลุ่มคาดหวัง	
4	Your group performance is good. Your group work together towards learning objectives and can meet the objectives. กลุ่มของนักศึกษาทำหน้าที่เป็นอย่างดี กลุ่มของนักศึกษาทำงานร่วมกันเพื่อบรรลุวัตถุประสงค์ในการเรียนและสามารถบรรลุวัตถุประสงค์	
3	Your group performance is ok. Your group work together towards learning objectives but cannot meet all objectives. กลุ่มของนักศึกษาทำหน้าที่ได้พอใช้ กลุ่มของนักศึกษาทำงานร่วมกันเพื่อบรรลุวัตถุประสงค์ในการเรียนแต่ไม่สามารถบรรลุวัตถุประสงค์ได้ครบทุกข้อ	
2	Your group performance is poor. Your group work together towards learning objectives but do not meet any objectives. กลุ่มของนักศึกษาทำหน้าที่ได้ไม่ดี กลุ่มของนักศึกษาทำงานร่วมกันเพื่อบรรลุวัตถุประสงค์ในการเรียนแต่ไม่สามารถบรรลุวัตถุประสงค์ได้เลย	
1	Your group performance is terrible. Your group do not work together towards learning objectives. กลุ่มของนักศึกษาทำหน้าที่ได้ไม่ดีย่างมาก กลุ่มของนักศึกษาไม่ทำงานร่วมกันเพื่อบรรลุวัตถุประสงค์ในการเรียน	

7. If there are five scores to give for your critical reading skills this week, how much you should get. Please mark the number provided and write down the reason why you deserve it.

ถ้ามีคะแนน 5 คะแนนให้สำหรับทักษะการอ่านอย่างมีวิจารณญาณของนักศึกษาในสัปดาห์นี้ นักศึกษาคิดว่านักศึกษาคงจะได้คะแนนเท่าไร โปรดทำเครื่องหมาย X ที่หมายเลขคะแนนที่นักศึกษาคิดว่าสมควรได้รับและเขียนอธิบายเหตุผลประกอบ

Scores คะแนน	Description คำอธิบาย	Reasons เหตุผล
5	Your critical reading skills are excellent.	

	<p>You can use critical reading skills to deal with the passages and get the correct responses with strong support.</p> <p>ทักษะการอ่านอย่างมีวิจารณญาณของนักศึกษาดีเยี่ยม นักศึกษาสามารถใช้ทักษะการอ่านอย่างมีวิจารณญาณในการอ่านบทความและสามารถหาคำตอบได้อย่างถูกต้อง โดยมีเหตุผลมาสนับสนุนคำตอบได้เป็นอย่างดี</p>	
4	<p>Your critical reading skills are good.</p> <p>You can use critical reading skills to deal with the passages and get the correct responses but not well support your responses.</p> <p>ทักษะการอ่านอย่างมีวิจารณญาณของนักศึกษาดี นักศึกษาสามารถใช้ทักษะการอ่านอย่างมีวิจารณญาณในการอ่านบทความและสามารถหาคำตอบได้อย่างถูกต้อง แต่ไม่สามารถหาเหตุผลมาสนับสนุนคำตอบได้ดีเท่าที่ควร</p>	
3	<p>Your critical reading skills are ok.</p> <p>You can use critical reading skills to deal with the passages with the help from others and get the correct responses.</p> <p>ทักษะการอ่านอย่างมีวิจารณญาณของนักศึกษาพอใช้ นักศึกษาสามารถใช้ทักษะการอ่านอย่างมีวิจารณญาณในการอ่านบทความเมื่อได้รับความช่วยเหลือจากผู้อื่น และสามารถหาคำตอบอย่างถูกต้อง</p>	
2	<p>Your critical reading skills are poor.</p> <p>You can use certain critical reading skills with the help of others and get some correct responses.</p> <p>ทักษะการอ่านอย่างมีวิจารณญาณของนักศึกษาไม่ดี นักศึกษาสามารถใช้ทักษะการอ่านอย่างมีวิจารณญาณได้เพียงบางอย่างเมื่อได้รับความช่วยเหลือจากผู้อื่นและสามารถหาคำตอบบางข้อได้อย่างถูกต้อง</p>	
1	<p>Your critical reading skills are terrible.</p> <p>You cannot use critical reading skills although you are helped by others.</p> <p>ทักษะการอ่านอย่างมีวิจารณญาณของนักศึกษาไม่ใช่มาก นักศึกษาไม่สามารถใช้ทักษะการอ่านอย่างมีวิจารณญาณได้แม้จะได้รับความช่วยเหลือโดยผู้อื่น</p>	

Appendix N

An validation form for the response journal

VALIDATION FORM FOR THE RESPONSE JOURNAL

An exploration of critical reading skills of Thai undergraduate students through project-based learning

Directions

Please indicate how you respond to each of these statements by ticking in the box to indicate what you think and give your comments or suggestions for the response journal.

Items	Appropriate (+1)	Not sure (0)	Not Appropriate (-1)
1. The response journal meets the research objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Language used in the response journal are clear and easy to understand.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The sequences of questions and statements are appropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The format of the response journal is appropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The length of the response journal is appropriate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional comments or suggestions			

Appendix O
Sample of questionnaires

QUESTIONNAIRE ABOUT PROJECT-BASED LEARNING

An exploration of critical reading skills of Thai undergraduate students through project-based learning(Step 2 Modeling)

Rationale

This questionnaire is part of a study of an exploration of critical reading skills of Thai undergraduate students through project-based learning conducted by Miss Siri-on Lada, a PhD student of English Language Studies, Faculty of Liberal Arts, Thammasat University. It is designed to explore the attitudes of students towards project-based learning (Step 2 Teacher modeling) and the results from the questionnaire will be used for research purposes only. In order to ensure the confidentiality of your responses, please do not write your name on the questionnaire.

Details

The questionnaire consists of two main sections: demographic background section consisting of 4 factual statements and project-based learning (Step 2 Teacher modeling) consisting of 22 attitude statements.

It will take you 20 minutes to complete the questions. If you have problems in completing the questionnaire, please feel free to ask. Your cooperation is greatly appreciated.

Section I Demographic background

Directions Please write down the answer in the box provided and if you change your answer, please make sure that you erase your previous answer completely.

1. Age

2. Sex

3. Years of English learning experience

Section II Project-based learning (Step 2 Modeling)

Directions Please indicate how much you agree or disagree with each of the following statements by ticking the appropriate degree. Tick only one degree per statement and if you change your answer, please make sure that you erase your previous answer completely.

Teacher modeling						
Item	Statement	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly disagree 1
1	You are satisfied with teacher modeling. นักศึกษาผู้ศึกษาพอใจต่อการสาธิตวิธีการทำโครงการ โดยครูผู้สอน					
2	You think teacher modeling is necessary. นักศึกษาคิดว่าการสาธิตวิธีการทำโครงการ โดยครูผู้สอนเป็นสิ่งจำเป็น					
3	You think that teacher modeling can help you follow the steps of doing the project. นักศึกษาคิดว่าการสาธิตวิธีการทำโครงการ โดยครูผู้สอนช่วยให้นักศึกษาสามารถปฏิบัติตามได้					
4	You feel confident to do the project after teacher modeling. นักศึกษาเกิดความมั่นใจที่จะทำโครงการ หลังจากการสาธิตวิธีการทำโครงการ โดยครูผู้สอน					
5	You get necessary information about doing the project from teacher modeling นักศึกษาได้รับทราบข้อมูลที่จำเป็นต่อการทำโครงการจากการสาธิตวิธีการทำโครงการ โดยครูผู้สอน					

Students' collaborative learning behaviors						
Item	Statement	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly disagree 1
6	All group members actively engage in learning activities. สมาชิกกลุ่มทุกคนมีความกระตือรือร้นในการทำกิจกรรมการเรียน					
7	All group members are involved in making group decisions. สมาชิกกลุ่มทุกคนมีส่วนร่วมในการตัดสินใจในกลุ่ม					
8	All group members freely express thoughts and feelings. สมาชิกกลุ่มทุกคนแสดงความคิดเห็นและความรู้สึกได้อย่างอิสระ					
9	All group members interact well with each other. สมาชิกกลุ่มทุกคนมีปฏิสัมพันธ์อันดีต่อกัน					
10	All group members provide assistance when other members have difficulties in doing the activities. สมาชิกกลุ่มทุกคนให้ความช่วยเหลือแก่สมาชิกกลุ่มเมื่อประสบปัญหาในการทำกิจกรรม					
Teacher's roles in facilitating collaborative learning						
11	The teacher creates student interest and involvement in learning activities. ครูผู้สอนทำให้นักศึกษาเกิดความสนใจและเข้าร่วมในกิจกรรมการเรียน					
12	The teacher opens up an opportunity to work in groups without teacher' interference. ครูผู้สอนเปิดโอกาสให้นักศึกษาทำงานเป็นกลุ่ม โดยไม่มีการแทรกแซงจากครูผู้สอน					
13	The teacher provides assistance when necessary. ครูผู้สอนให้ความช่วยเหลือนักศึกษาเมื่อนักศึกษาต้องการ					
Critical readingskills						

Item	Statement	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly disagree 1
14	You think teacher modeling helps you identify the author's purpose. นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาสามารถระบุจุดประสงค์ของผู้เขียนได้					
15	You think teacher modeling helps you identify the author's tone. นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาสามารถระบุน้ำเสียงของผู้เขียนได้					
16	You think teacher modeling helps you identify the author's point of view. นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาระบุทัศนคติของผู้เขียนได้					
17	You think teacher modeling helps you identify an intended audience. นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาระบุกลุ่มผู้อ่านเป้าหมายได้					
18	You think teacher modeling helps you distinguish facts from opinions. นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาแยกข้อเท็จจริงออกจากความคิดเห็นได้					
19	You think teacher modeling helps you draw inferences and conclusions. นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาตีความจากเรื่องที่อ่านและสามารถสรุปความจากเรื่องที่อ่านได้					
20	You think teacher modeling helps you identify the author's bias.					

	นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาระบอบคิของผู้เขียนได้					
21	You think teacher modeling helps you evaluate argument. นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาประเมินข้อโต้แย้งที่ผู้เขียนใช้ในงานเขียนได้					
22	You think teacher modeling helps you evaluate evidence. นักศึกษาคิดว่าการสาธิตการทำโครงงานโดยครูผู้สอนช่วยให้นักศึกษาประเมินหลักฐานที่ผู้เขียนในสนับสนุนงานเขียนได้					

Appendix P

An validation form for the questionnaires

VALIDATION FORM FOR THE QUESTIONNAIRE

An exploration of critical reading skills of Thai undergraduate students through project-based learning

Directions

Please indicate how you respond to each of these statements by ticking in the box to indicate what you think and give your comments or suggestions for the questionnaire

Items	Appropriate (+1)	Not sure (0)	Not Appropriate (-1)
1. The questionnaire meets the research objectives.			
2. The statements in English and Thai are clear and easy to understand.			
3. The questionnaire does not contain leading statements or biased statements.			
4. The questionnaire does not contain double barreled statements.			
5. The sequences of questions are easy to follow.			
6. The layout of questionnaire is easy to read.			
7. The response format is appropriate.			
8. The length of the questionnaire is appropriate.			

Additional comments or suggestions

Appendix Q

Texts selected by the students

Group 1 Should pregnant girls be allowed to stay in school? (It's school, not a maternity home) By: Doreen Umutesi
<p>The debate on whether pregnant teenagers should stay in school raises a lot of issues. But the common English adage 'a rotten apple spoils the barrel' is a good start in this case. A pregnant teenager should stay home until she gives birth so that her presence won't be an encouragement to her peers to also indulge in premarital sex just because they won't be sent away should it happen to them.</p> <p>If schools do not have policies on pregnant teenagers in school then that's a bad move. It's an indication that girls having sex at an early age is fine. And this is where we cannot afford to 'spare the rod'.</p> <p>The only way teenage pregnancy can be controlled is by being tough on these kids and emphasizing the dangers associated with sex at a tender age. If there are any schools that let pregnant girls continue with their classes like it is not a big deal, they should brace themselves for the many more that will surely follow.</p> <p>The argument that it's her right to education and therefore, she should continue with school till she's ready to give birth is lame. At the end of it, she will miss school either way because she will have to take some time off after birth.</p> <p>Pregnant girls should stay home and go back to school after giving birth because other than the bad message her presence would send should she walk around with her bulging tummy, she will not handle the glares and scrutiny from other kids.</p> <p>She should stay away from school because she will not be able to deal with the stress that comes with discrimination from students, teachers and other parents that come to pick up or drop their children at school.</p> <p>Its one thing to be the talk of the town or village, and it's another to be a live example in biology during sexual reproduction class.</p> <p>With the common cases of high blood pressure caused by pregnancy, it's a risk if she continues with school. Her growing belly will be the centre of attention at school and this is bound to affect her performance and she might eventually drop out on her own. Teenage pregnancies are far riskier than pregnancies in older women because they are way too young.</p> <p>According to online experts, teenage pregnancies pose more risks like going into labour early. In most cases she is likely to go in labour 37 weeks earlier. What will a teacher do if she goes into labour during class?</p> <p>Therefore, to save the girl the trouble, its better she stays home and returns to school after she has given birth.</p> <p>Source: http://www.newtimes.co</p>

Group 2
Should Students Get Paid For Good Grades?
By Mariah F., Bronx, NY

The author's comments:

The reason I wrote this piece is to persuade not only you but other people to put their opinion in about should students get paid for good grades. My opinion I feel they should. What about yours?

Getting money to buy that new pair of sneakers you want if you do well on that test. Do you think students should get paid for good grades? In my opinion there are three reasons I think students should get paid for good grades. One of them is more focus on school. Second reason is they love money so they'll do what they have to, to get the money they want. Third, reason they'll have better behavior.

Students will focus more on school if they know they're getting paid for doing their work, homework etc. I know if I were getting paid for doing well in school I would try my hardest on everything to get money of my own that I earned from school. Focus is a big thing in school, if you don't focus on your work paying attention you won't know what to do if you don't focus to get that good grade you want.

Kids of all ages love money they reason they do is because they'll want to have their own instead of always asking their parents. Because they have money of their own to spend and their parents can't tell them anything about how they spend their money. When I have my own money I say my mom can't tell me anything because it's my money not hers I could do whatever I want with my money , that I earned . Every kid will love to money of their own.

Do you have students in your school who misbehave? But love to get things from their parents? Should those kids get paid? What should they do? Work harder in school and behave so they can get new things.

I think that kids would behave better if they know money was involved in school and they were getting paid for good grades. In My opinion I mean money is very popular some people can't live without it , kids LOVE money so that they can get what they want .

Students should get paid for good grades.

Source: <http://www.teenink.com>

Group 3

Facebook Is Just a Place for Narcissists and Neurotics to Show Off

Dainius Runkevicius
Professional Human Being

Everyone hates people who tend to seek attention and show off over-actively. However, I don't understand why it's well-tolerated on the Internet and why most of the people don't realize that social networks, especially Facebook, have become just a place to create a fake self-image, please the ego and desperately seek attention.

What was the initial purpose of Facebook? As I know, it was just to improve the communication between schoolmates. However, after 10 years we have something a "little bit" more than just a tool to communicate with your colleagues in a school or college. And I don't see the purpose of today's Facebook from the mentally-healthy person's point of view anymore. This is why.

People use Facebook to show off, not to share their life with you

Just think about the last 10-15 status updates of your Facebook friends. The majority of them are over-edited photos from fabulous vacations, expensive purchases, brags about insignificant personal achievements, such as hitting the 5-miles milestone on the Endomondo sports tracker or just an attention-seeking selfie with a banal quote that has nothing to do with that "duck face" expression.

And do you think these status updates are about sharing their life with you? So, let me ask you a question. How many times you saw these people sharing the really embarrassing moments or setbacks of their lives on Facebook? I mean, sincerely, without any intentions to get attention. The answer explains everything.

Facebook activity is closely related to narcissism and neuroticism

Recent research shows a link between your activity on Facebook and the degree to which you are a socially-disruptive person. Most of them reveal that the heaviest Facebook users are either neurotics or narcissists.

Researchers at Western Illinois University found that people who score highly on the Narcissistic Personality Inventory questionnaire had more friends on Facebook and updated their status updates more regularly comparing to the ones who scored fewer. In addition to that, Eliot Panek, a psychologist at University of Michigan, describes Facebook and other social networks as a medium for narcissists to "construct and maintain a carefully considered self-image."

However, narcissists aren't the only heavy users of Facebook. Neurotic folks are pretty active as well. Researchers revealed that neurotics tend to upload more photos per album than anyone else. Azar Eftekhari, a Ph.D. student at the University of Wolverhampton, explains neurotics' heavy activity on Facebook as a compensation for their offline deficiencies.

"As socially anxious individuals, they see Facebook [as] a safe place for self-expression and to compensate for their offline deficiencies," Eftekhari explained in the interview with Live Science.

Facebook harms people's perception of reality

During the Facebook IPO, Mark Zuckerberg wrote an open letter describing Facebook's purpose, value and social mission. In this letter, Mark stated, "People sharing more — even if just with their close friends or families — creates a more open culture and leads to a better understanding of the lives and perspectives of others." And I completely disagree with this particular statement.

There are tons of studies that reveal the dark sides of this, as Mark Zuckerberg describes, "open culture." Due to the fact that people tend to use Facebook as a self-expression tool, they usually embellish the truth and hide the unpleasant or embarrassing aspects of their lives. As a result, we see only the bright side of others' lives. This really harms people's perception of reality and, sooner or later, it can lead to the jealousy and the feelings of inadequacy or resentment.

Of course, I'm not talking about everyone. Some people use Facebook for really useful purposes such as initiating discussions on various relevant topics, sharing insights or just

networking. However, for the majority Facebook is just a place to show off. So maybe we should leave those narcissist and neurotic folks alone there that they could finally choke from each other's desire to seek attention.
Source: <http://www.huffingtonpost.com>



Group 4

Employees Should Be Able to Work From Home More Often

The Internet has forever changed the lives of human beings globally. Not only has it connected people all over the planet with each other and changed communication, but it also affected the usual way and regime of work, as well as created new forms of employment, such as freelancing. Although the Internet allows employees to efficiently work outside of the office, many companies still prohibit such a practice. Allowing employees to work from home should be practiced on a wider basis due to a number of significant reasons.

To allow employees to work from home means to balance the eternal “work-family” scales. According to a Penn State study, being able to work outside of the office (at home, mostly) helps to avoid typical conflict situations which arise when a person cannot spend enough time with their family. Besides, working from home relieves an employee of the daily stress connected to the necessity to get to their office regardless of health conditions, weather, family circumstances, and so on (Salary.com).

According to the Work Without Walls survey, among the benefits connected to working from home are the following: a less stressful environment (38%), a quieter atmosphere (43%), an elimination of a long commute (44%), less distractions (44%), increased productivity (45%), saving money on gas (55%), and a great work/home balance (60%). At the same time, according to the survey, the lack of control and the inability to see results of work in practice may negatively affect productivity of those employees who work from home (Forbes).

Working from home generally improves employees’ satisfaction with their lives and workplace; reduces attrition and the number of unscheduled absences due to poor health conditions and other reasons; increases productivity due to fewer distracting factors, more comfortable working conditions; saves employer’s (and employee’s) money and minimizes chances of workplace discrimination; provides employees with opportunities for under-employment, and so on (Globalworkplaceanalytics.com).

The Internet allows millions of employees, whose duties do not require them to be present in the office, to work from home. Although many employers do not seem to be enthusiastic about letting their employees work from home, this practice is in many ways beneficial for both the hirer and the worker. In particular, working from home allows employees to successfully maintain a work-family balance; an increased level of productivity, decreased stress, less discrimination, economy, and opportunities for freelancing and under-employment are among the most frequently named benefits of working from home. Therefore, employers should consider enabling this practice more often.

Source: <https://academichelp.net>

Appendix R

An example of students' end products





No one wants to be pregnant if they are not ready but if this happens, don't leave them alone.

Believe me. I will not be pregnant.

Contraception is important. You can have a boyfriend and you can have sex but you need to know how to prevent you from pregnancy. If your boyfriend wants to have sex without any contraception, just say "no".

Help me! I'm pregnant.

Schools should help pregnant girls. Schools may offer online courses and take-home assignments for them so that they can go on studying.

Schools may allow pregnant girls to study at school if their health is good and their bellie are not big so that they will not feel sad and are separated from their friends.

Parents should give them morale support and be with them so that they can go on their lives.

Friends can help pregnant girls review lessons, listen to them, cheer them up, and be their good friends. Don't hate them.

Help yourself.

If you cannot go to school, you can read books at home and learn things on the Internet. You may find it very useful for you. Do not stop learning. Believe us.

BIOGRAPHY

Name	Sirion Lada
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