



Using Group Reading Strategy to Promote Critical Thinking in Thai EFL University  
Learners

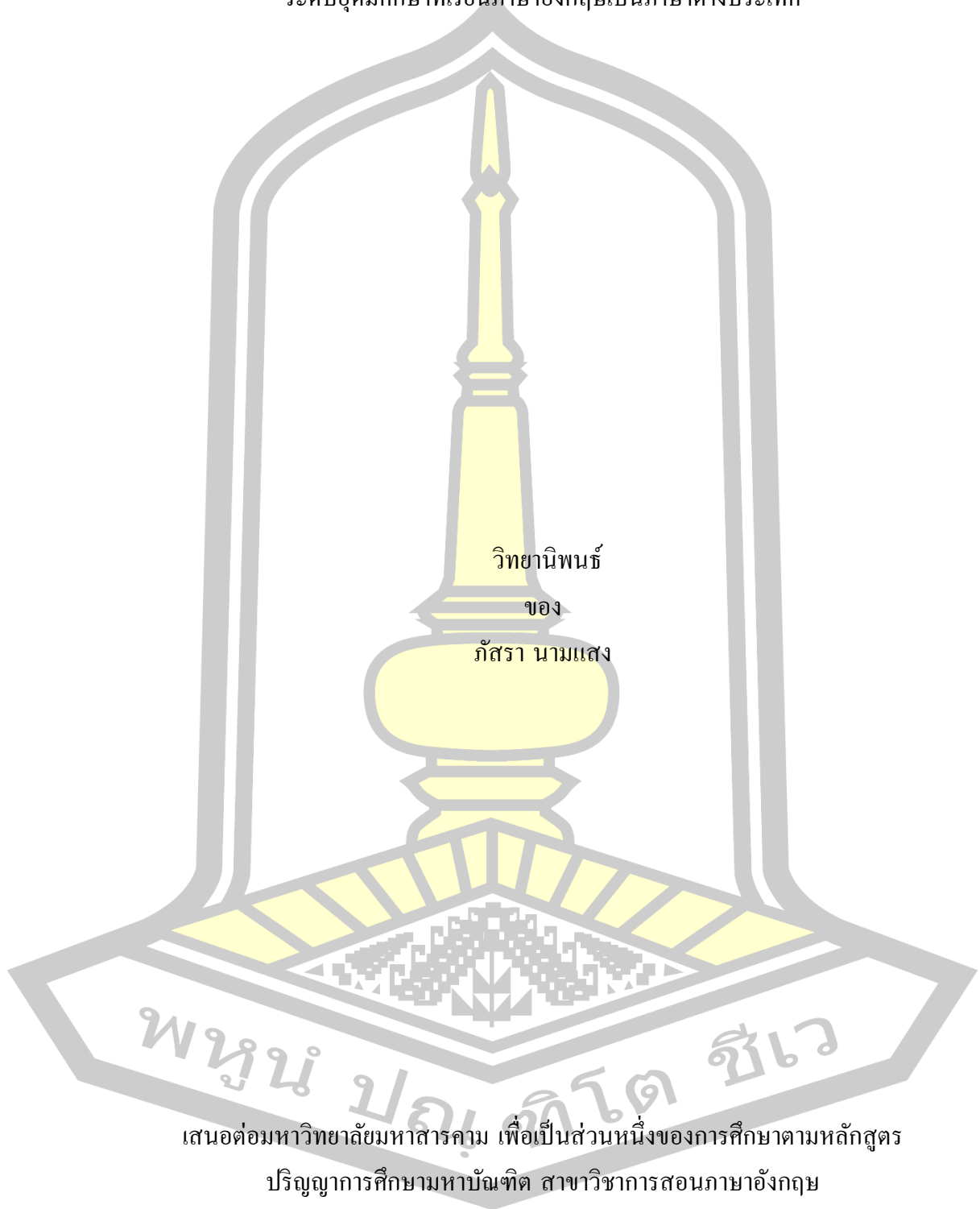
Pasara Namsaeng

A Thesis Submitted in Partial Fulfillment of Requirements for  
degree of Master of Education in English Language Teaching

April 2020

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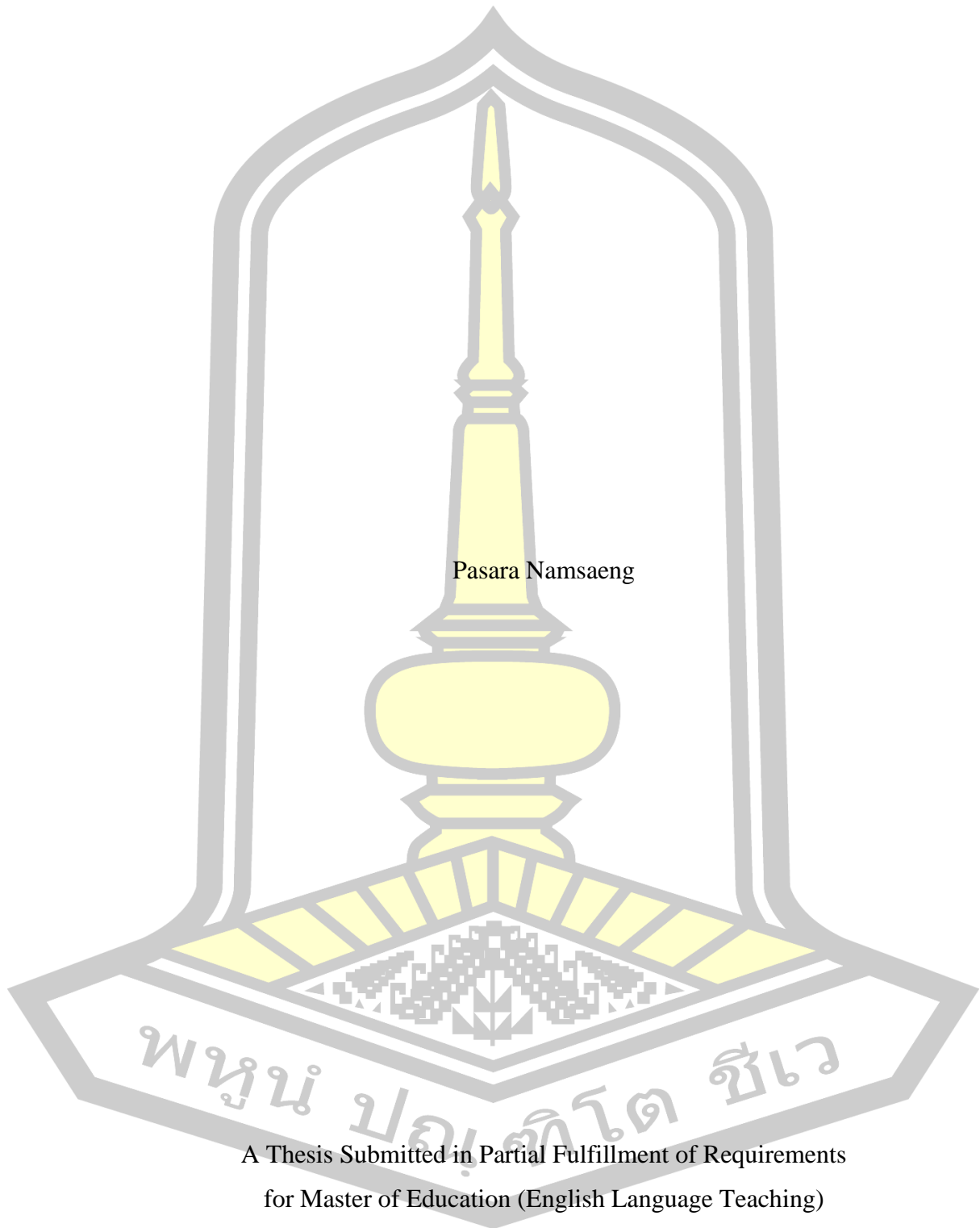


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Learners



Pasara Namsaeng

A Thesis Submitted in Partial Fulfillment of Requirements  
for Master of Education (English Language Teaching)

April 2020

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พหุบัณฑิต ชีวะ

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### ABSTRACT

Group Reading Strategy (GRS), a collaborative reading activity, offers individual contributions to a shared goal in an active learning approach. This mixed-methods research examined the influence of group reading strategy of Thai EFL university learners on critical thinking and explored learners' perceptions of the GRS process on critical thinking skills. The Critical Thinking Self-Assessment Questionnaire, the logbook, and semi-structured interviews were used to collect data. The analysis of quantitative findings revealed that, overall, GRS fostered critical thinking skills in Thai EFL university participants. The results also showed that some intrinsic characteristics of critical thinking skills were cultivated before others. Indeed, the current study indicated the increased development of critical thinking skills through the GRS learning process.

The qualitative findings evinced constructive opinions of the GRS approach to facilitate active learning environments. Specifically, Thai EFL university participants viewed GRS as peer-assisted learning, collaborative learning approach, which could, in turn, lessen adverse learning factors. However, some factors, including culture, time-allocation for the GRS process, and types of assessment, also influenced the learning process of GRS activities. Overall, GRS could have an impact on Thai EFL university participants' critical thinking skills, at least to some extent. Indeed, longitudinal studies are still a need for future investigations.

Keyword : Group Reading Strategy, Critical Thinking, collaborative learning, active learning, Thai EFL university learners

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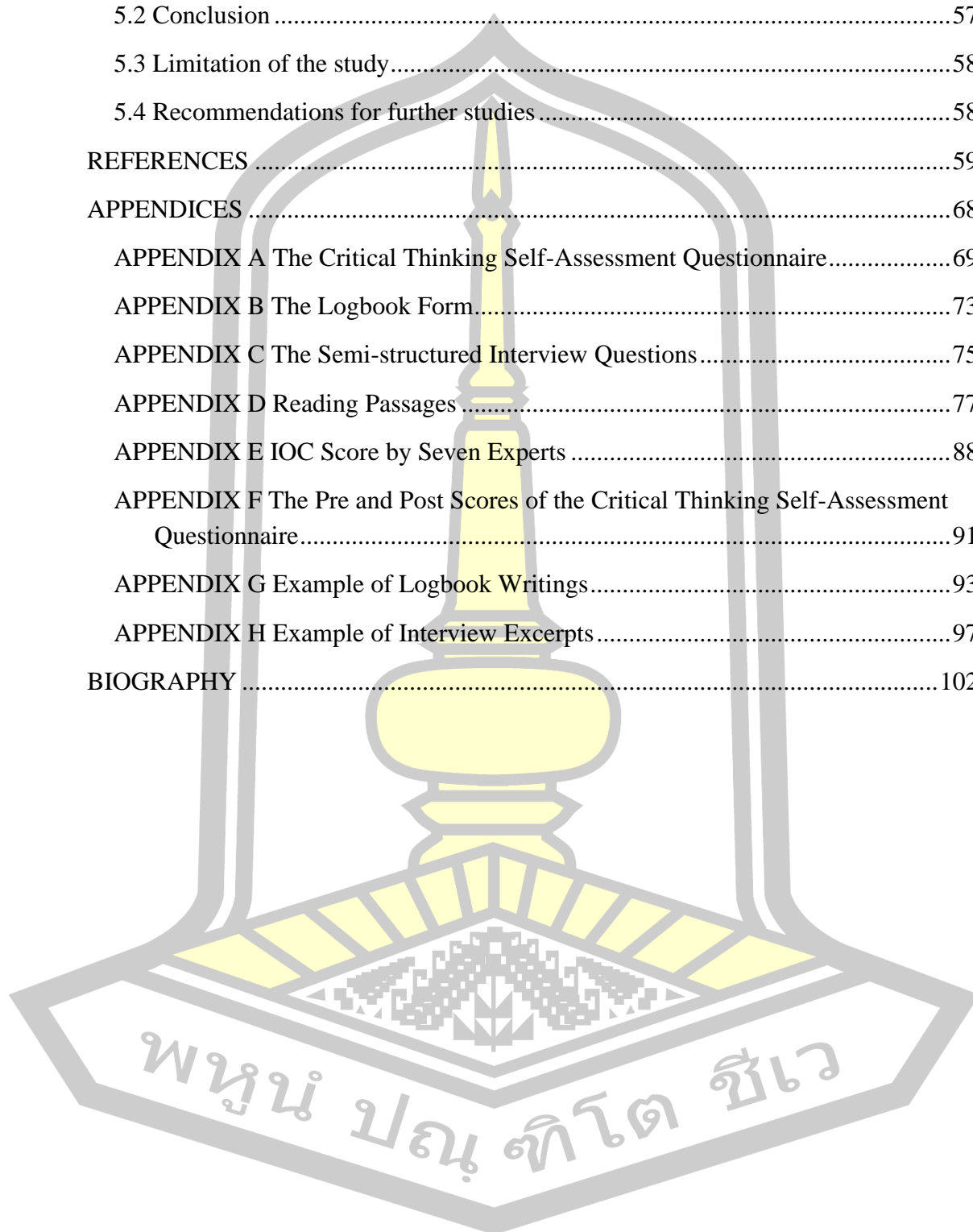
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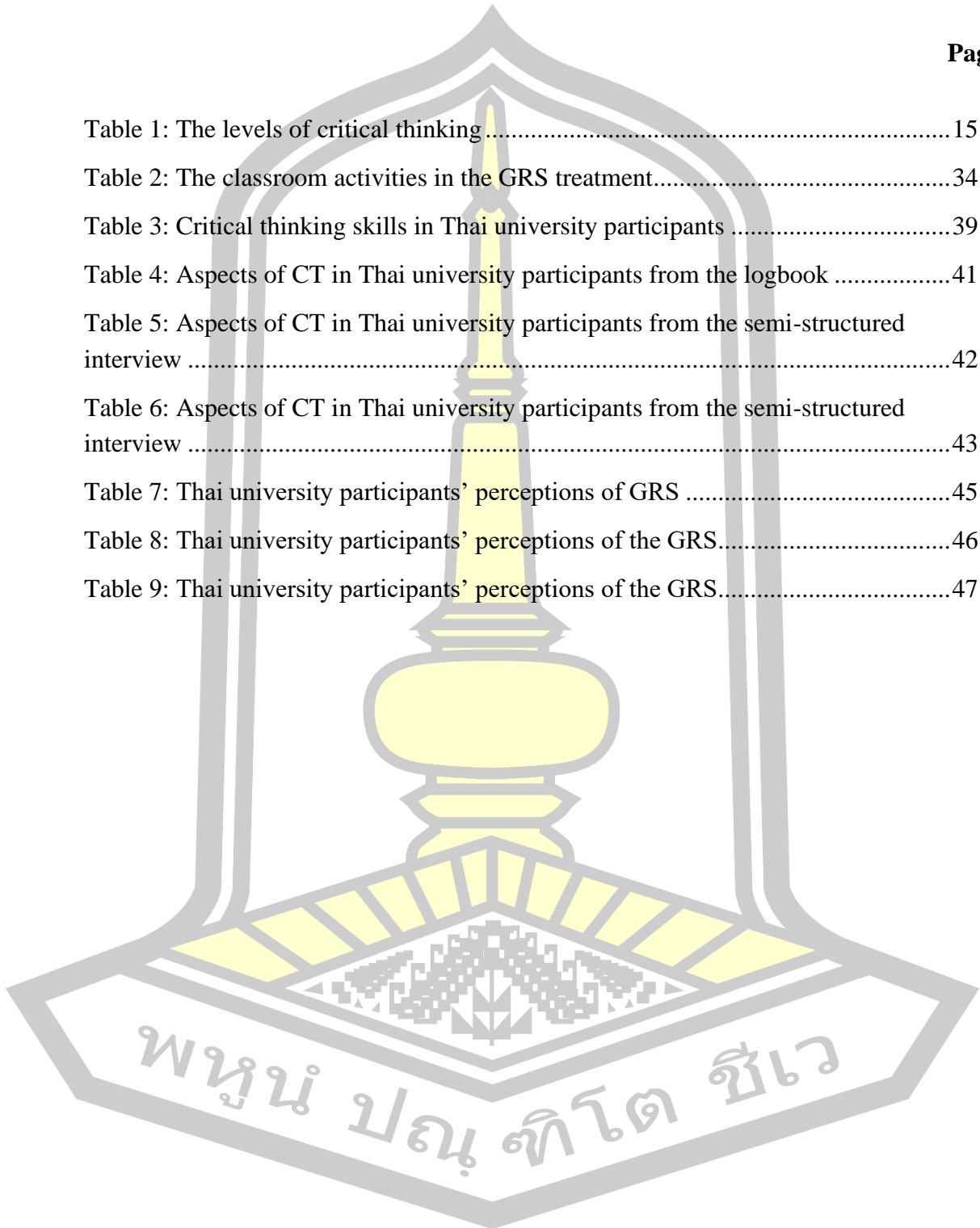


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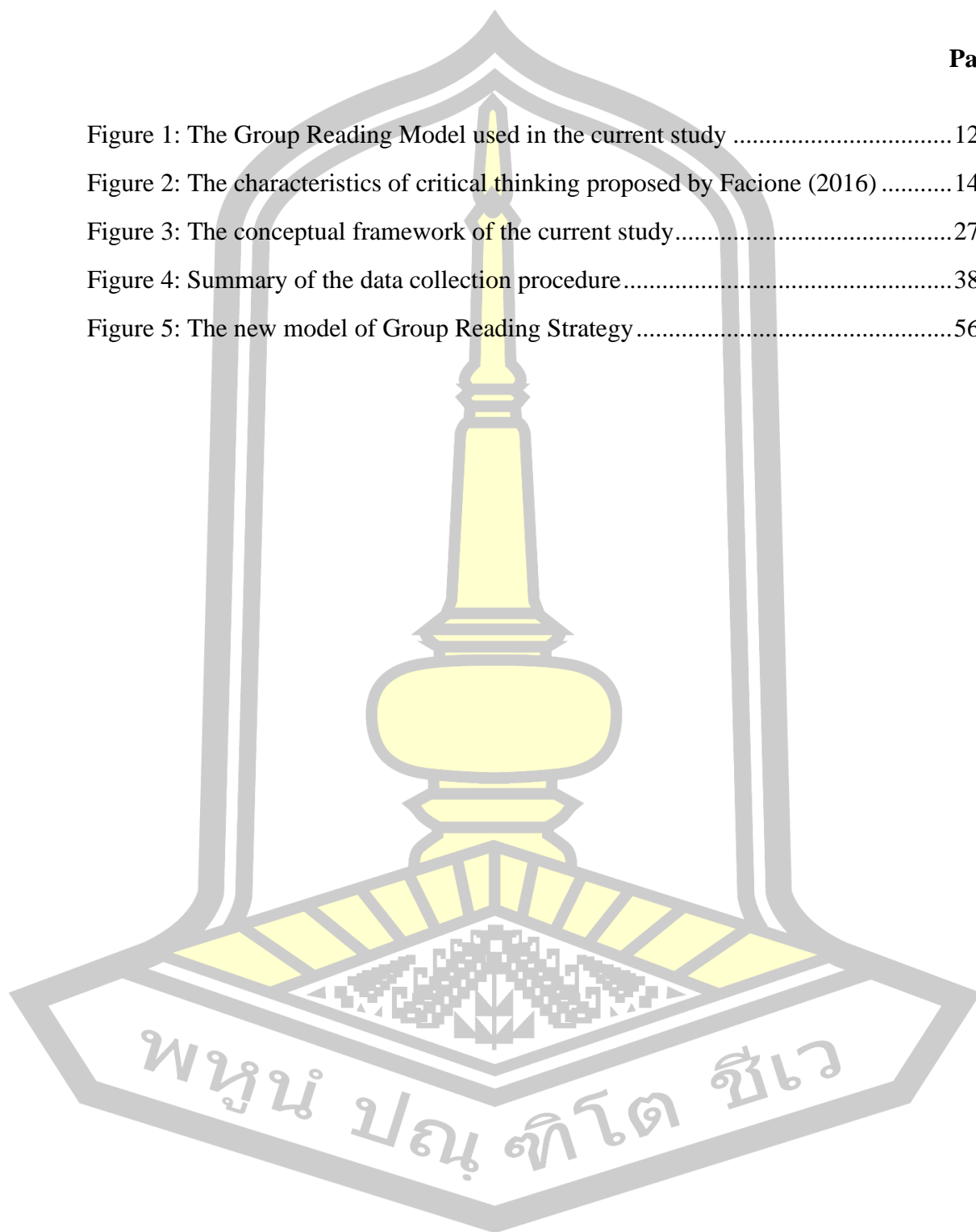
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# CHAPTER I

## INTRODUCTION

This chapter provides the background, purpose and scope of research, significance of the study, and definitions of terms.

### 1.1 Background

Critical thinking is a fundamental skill required by many employers in the 21<sup>st</sup> century (Changwong, Sukkamart, & Sisan, 2018). In this era of big data, with an abundance of information found online and offline, it is becoming more and more essential that we can evaluate and select the most reliable information critically. Indeed, critical thinking skills should be developed in the four basic skills (reading, listening, speaking, and writing). Of the four basic skills, reading seems to be the most important skill for English as a Foreign Language (EFL) learners to access real language use for their personal, occupational, and professional goals (Anderson & Cheng, 2004). Therefore, the current study will focus on facilitating the EFL learner's ability to apply critical thinking to reading.

Critical thinking is the ability to judge something purposefully and logically (Walker, 2003). The characteristics of critical thinkers include the ability to interpret, analyze, evaluate, draw an inference, explain, and exhibit self-control (Facione, 2016). Critical thinking can be classified into different levels, including remembering, understanding, applying, analyzing, evaluating, and creating (Krathwohl, 2002). Remembering is the easiest level while creating is considered the hardest level (Wilson, 2016). Facilitating and scaffolding critical thinking can be nurtured through explicit teaching, life experiences, questioning, discussion, debate, and group reading strategies (Walker, 2003).

Reading is defined as a process of decoding, understanding, and deriving the message from a written text (Cline & King, 2006). While reading, there is an ongoing interaction between readers and texts (Tyson, 2014), which stimulates the readers to think spontaneously. There are three levels of reading comprehension: literal, inferential, and critical (Khusniyah & Lustyantje, 2017). Individual readers may not be able to reach the level of critical comprehension, which will result in an inability to

obtain a full understanding of the text. However, reading collaboratively as a group allows the readers to discuss with their friends, collate their ideas, clarify complex issues, scaffold one another, and, ultimately, have a better comprehension of the text.

Group reading strategy (GRS) is defined as a multicomponent reading strategy used among group members while reading (Vaughn et al., 2011). The GRS provides group members with an opportunity to discuss, brainstorm, and crosscheck a text, thereby scaffolding the learners' critical thinking skills. To illustrate, the GRS comprises six different roles, which include leaders, summarizers, visualizers, questioners, and connectors. Specifically, each of the GRS roles is responsible for its own task and contributes to group reading. As such, learners' critical thinking skills can be fostered through collaborative and interactive discussions. The GRS supports the psychological activities that foster learners' synergy through opinions, ideas, and views towards the information in the reading text (Karimi & Veisi, 2016). More importantly, research on GRSs indicates that group reading helps promote learners' critical thinking skills (e.g., Ay, Karakaya, & Yilmaz, 2015; Karimi & Veisi, 2016; Winarso & Dewi, 2017). In this vein, the GRS can enhance deeper insights into reading materials, therefore, increasing learners' ability to think beyond the text.

Critical thinking can be cultivated through the use of GRS in EFL classrooms. In China, critical thinking skills were improved in students after using three teaching strategies: group discussion, concept mapping, and analytical questioning (Wang & Seepho, 2017). Other studies in different contexts, including in the US, Iran, China, Taiwan, and Turkey, showed that students' critical thinking significantly increased after being trained in group reading strategies (Hove, 2011; Boardman et al., 2016; Chen & Chen, 2015; Bedir, 2013; Wang & Seepho, 2017). In addition, more than 40 European countries have emphasized the benefits of GRS in facilitating students' critical thinking, and CT is regarded as one of the criteria of the Common European Framework of Reference for Languages (CEFR) (Silalahi, 2017; Council of Europe, n.d.).

In Thai EFL contexts, relatively little is known about the effect of GRS in facilitating Thai students' critical thinking skills. One study compared the effect of the traditional teaching method and the reciprocal teaching method and found that students' reading

comprehension in the reciprocal teaching group was better than their traditionally taught peers (Yoosabai, 2008). The findings also showed that the reciprocal teaching method improved students' metacognitive awareness. A recent study showed that high school learners developed their critical thinking after being trained in a new learning management method called the "PUCSC" model (Changwong et al., 2018). Similarly, research on second language reading in Thai university contexts indicated that reading strategies based on a collaborative learning approach in an English class improved students' confidence and reading comprehension rather than their critical thinking skills (Suwantharithip, 2015). Their findings also showed that explicit reading instruction enhanced informational text comprehension and reading engagement. However, comparatively little is known about students' critical thinking through the use of collaborative reading or GRS. As such, there is still a need for additional investigations into the roles of GRS in facilitating critical thinking in Thai university students.

This current study aims to examine the effects of the GRS on critical thinking in a Thai university setting. It also aims to explore Thai EFL university learners' perceptions of GRS training. The findings of the current study will shed light on the role of the GRSs in critical thinking and will provide conceptual frameworks to guide future studies.

### **1.2 Purpose of the research**

The purpose of the study is to examine the influence of the GRS on the critical thinking skills of Thai EFL university learners. The current study also aims to explore learners' perceptions of the GRS and its relevance to critical thinking. In response to the research objectives, two research questions have been formulated:

1. Does the group reading strategy facilitate Thai EFL university learners' critical thinking?
2. What are Thai EFL university learners' perceptions of group reading strategies?

### **1.3 Scope of the research**

The current study focused on using the group reading strategy to develop critical thinking in a Thai EFL context. The participants were 61 English major undergraduate learners. The learning natures, characteristics, and language competencies of the participants were similar. The group reading strategy training lasted for six weeks, with a two-hour training session per week. Questionnaires were given before and after the training (treatment). During the treatment, the learners were required to complete a logbook once a fortnight. There were six reading passages and one preparatory reading passage which are a proper level for undergraduate learners. After the treatment, ten learners were interviewed individually.

### **1.4 Significance of the study**

The current study will provide insight into the reading strategies used in tertiary education in Thailand for both the learners and teachers. Learners will be exposed to the group reading strategy and will be able to apply this strategy to every reading situation. This is likely to increase their English language competence. Teachers will be able to develop and apply the group reading strategy training into their settings by redesigning the roles to be best fit their students.

### **1.5 Definitions of terms**

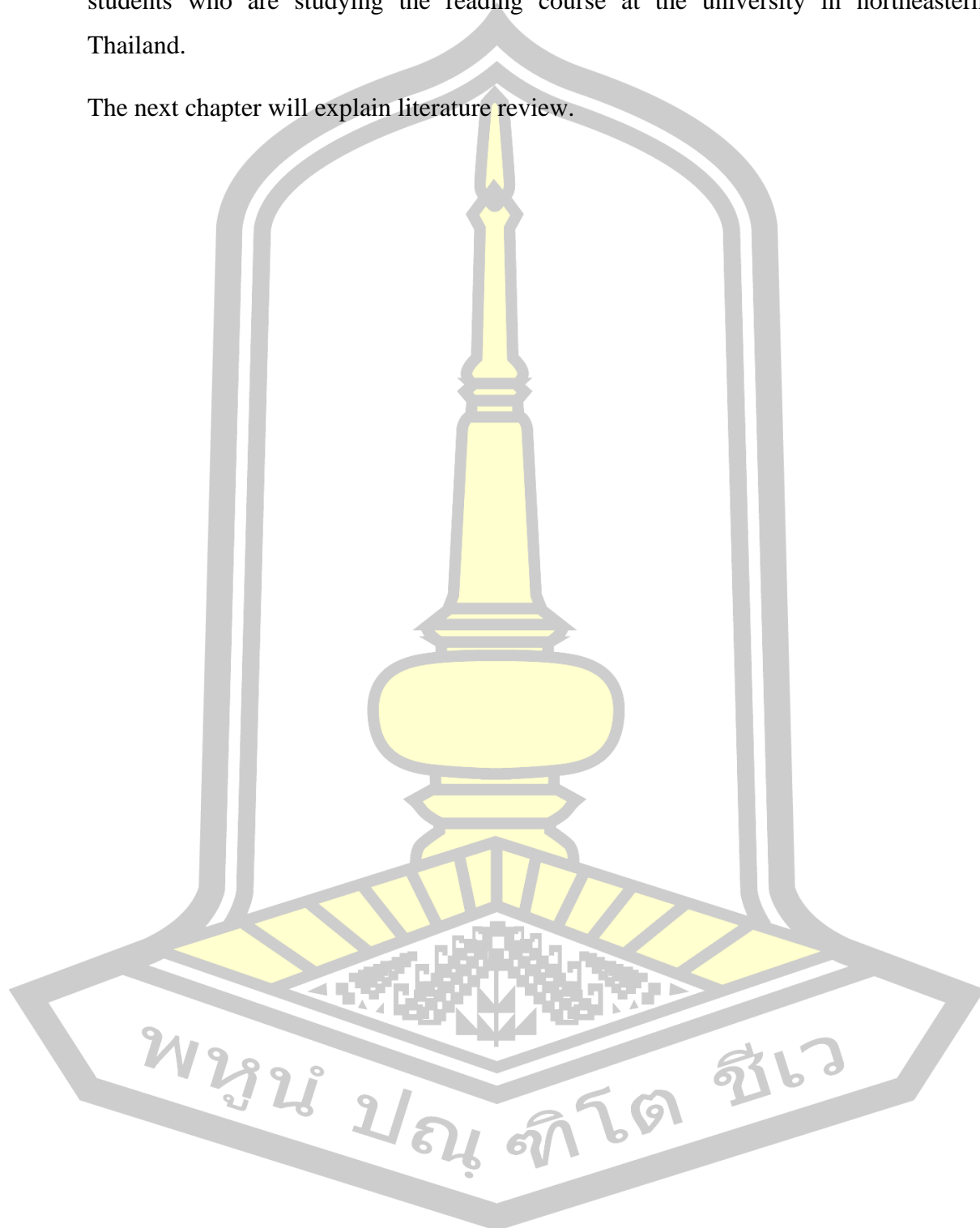
1.5.1 Reading Comprehension refers to the ability to understand the message from the reading materials. To read comprehensively, the reader must draw the meaning from the reading materials. There are three levels of reading comprehension: literal comprehension, inferential comprehension, and critical comprehension (Khusniyah & Lustyantje, 2017).

1.5.2 Critical Thinking is the ability to judge something purposefully and logically (Walker, 2003). Critical thinking is the basis of the highest level of reading comprehension, critical comprehension.

1.5.3 Group Reading Strategy refers to a reading strategy that allows learners to collaboratively read within a group. The learners can use multi-component reading strategies (Vaughn et al., 2011) first to read the text individually and can then interact with their group members to construct a mutual understanding.

1.5.4 Thai EFL university Learners refer to the second and third-year English major students who are studying the reading course at the university in northeastern Thailand.

The next chapter will explain literature review.





## **CHAPTER II**

### **LITERATURE REVIEW**

This chapter provides a review of literature related to the group reading strategy to promote critical thinking in Thai EFL university learners. Specifically, this chapter contains four main areas, including reading, group reading strategy (GRS), critical thinking (CT), and the use of GRS in promoting CT.

#### **2.1 Reading construct**

##### **2.1.1 Definitions of reading and comprehension levels**

Readings can be defined in different ways. Cline & King (2006) summed up three definitions of reading. Firstly, it is the process of decoding and comprehending the text. Secondly, the process of decoding the text and understanding the reader's purposes. Finally, it is the ability to get the message from the written text. It can be either audio, text, or braille. Ulmer, Timothy, Bercaw, Gilbert, Holleman, and Hunting (2002) suggested that reading is not only the recalling and the decoding of the word recognition and phonic but also the interaction of the reading and the text dynamically. Similarly, one of nine definitions proposed by Tyson (2014) that reading is the interaction and involvement of reader, text, and activities. However, some researchers defined them as a model such as the top-down model, the bottom-up model, or the interactive model. The bottom-up model focused on the smallest levels of reading, such as words composing a sentence, where the students can construct the meaning gradually, sentence by sentence. In the top-down model, the emphasis is on the reading passage and the student's background knowledge. The interactive model pays attention to the metacognitive and cognitive reading strategy awareness, which involves higher-order thinking skills through the planning, monitoring clarifying, and evaluating. The cognitive strategies allow the students to perform the task, and the metacognitive strategies allow students to understand how the task can be performed (Ahmadi, Ismail & Abdullah, 2013). Therefore, the current study will conceptualize "reading" as an interactive process of communication between texts and readers.

Regarding comprehension, the researcher classified reading comprehension into different levels. For example, Hand in Hand Education (2019) defined reading

comprehension into five levels; lexical comprehension, literal comprehension, interpretive comprehension, applied comprehension, and affective comprehension. Similarly, Kent State University (n.d.) outlined the three levels of comprehension guide for active reading, which is literal, interpretive, and applied levels. Roundy (n.d.) also proposed three levels of reading comprehension, including literal meaning, inferential meaning, and evaluative meaning. Khusniyah & Lustyantje (2017) proposed three levels of reading comprehension, which consist of literal, inferential, and critical comprehension. To assess the levels of comprehension, Hawker Brownlow Education (2010) suggested two formats. While the multiple-choice format is most often used, a short response format is likely to reveal the students' thinking process. There are two components of assessing levels of comprehension. Multiple-choice is a simple measurement tool, whereas a short response involves elaborated comprehension assessment into three levels of cognition, which are self-system, metacognitive system, and cognitive system. Self-system refers to the motivation of the reader, while metacognitive system activates the reading strategy. The cognitive system is the effectiveness of the process in order to achieve the reading comprehension. At the hardest levels proposed by several researchers, there are some common area leading to critical thinking.

### **2.1.2 Readability**

Text readability can cause difficulty for the individual learners, so to bring about some techniques can facilitate learners to read easier. Individual learners must face many components for reading comprehension, including lexical and grammatical knowledge, linguistics, culture, and social context. The integration of these factors can also promote reading comprehension (Rosado & Caro, 2018; Gürses & Bouvet, 2016). The current study reviews the factors influencing reading comprehension in four aspects: linguistic, reading context, reading strategy, and reading instruction. First, in regards to the linguistic aspect, Lee (n.d.) suggested six essential skills for reading comprehension, especially for kids, namely decoding, fluency, vocabulary, sentence construction and cohesion, reasoning and background knowledge, and working memory and attention. Decoding is the connection of the sound to the letters or phonological awareness. Fluency is considered an advanced step of decoding.

Vocabulary is a vital skill for reading comprehension. As an initial step, parents can help students to improve their vocabulary by reading aloud and clarifying the meaning when necessary. Sentence construction and cohesion is linkage of the overall text. The learners will be able to understand the sentence structure as well as the coherence that connects the ideas together, which facilitates reading comprehension in general. Reasoning and background knowledge are also important because prior knowledge can help the learners better understand the context. Finally, working memory helps the learner to processes the knowledge and attention can be increased by using reading materials that motivate and encourage the learners to read more. The main components of the reading context are readers, texts, techniques, and internal processes. The interchange takes place between the senders and the receivers of the message in order to build mutual understanding. Reading strategies provide critical support for reading comprehension Begeny et al. (2010). Begeny and colleagues (2010) compared two reading fluency programs: The Helping Early Literacy with Practice Strategies (HELPS) Program and the Great Leaps K-2 Reading Program. The results indicated that the students in the HELPS program had a greater reading score with many crosschecks from different reading measuring types. This provides evidence that reading strategies can play an important role in reading comprehension levels after several revisions. As such, reading that allows learners to read and crosscheck multiple times is to collaboratively read in a group.

Research showed that reading could be nurtured through reading instruction. There are ten elements of effective reading comprehension instruction (Duke, Pearson, Strachan, & Billman, 2011). The first element is to train the learners to be disciplined and knowledgeable. The second component is to allow the learners to get exposed to the reading as much as possible. Third, learners must be motivated while reading. Fourth, reading strategy instruction must be provided. The text structure and organization must also be instructed, and learners must be allowed to discuss with their classmates. Next, word and language must mutually be built. In addition, reading and writing skills must be integrated. Practitioners must do any observation and assessment from time to time. Finally, the instruction should be novel in order to get the learner's attention in the reading comprehension class. Thus, reading can be instructed through a group reading in the classroom.

## 2.2 Group reading strategy

Group reading can interchangeably be used as Collaborative Strategic Reading (CSR), Reciprocal Reading, and Group Reading Strategy. For example, Zagoto (2016) described Collaborative Strategic Reading (CSR) as a strategy for reading comprehension where practitioners teach various reading strategies before allowing the student to do activities in a group. Reciprocal Reading has been defined as interactive reading, whereby the students have to activate their prior knowledge while reading the text (Ahmadi & Gilakjani, 2012). Another study argued that collaborative strategic reading and reciprocal teaching are related by defining the collaborative strategic reading as “ a peer-mediated reading comprehension instruction model informed by the methods in reciprocal teaching” (Cavendish & Hodnett, 2017). The current study defines Group Reading Strategy (GRS) as one of the reading strategies that allow learners to read collaboratively within a group. The learners can use multi-component reading strategies (Vaughn et al., 2011) and mutually construct an understanding among the group members interactively.

In 2001, “*Guided Reading*” was published, and this book explained the initial stage of group reading instruction. Guided reading refers to a teaching method that supports a small group of students. The texts used for guided reading must be easy and support the student’s problem-solving skills. There are seven procedures for guided reading. First, the teachers join a small group of students who have similar linguistic needs. Second, the teachers introduce the text to the students and support them to solve the problems found while reading. Third, the students read the whole text by themselves. Next, the students find new words and search for their meanings. Fifth, the teachers confirm the meaning of the word and encourage the students’ problem-solving. Then, the teachers and students discuss the meaning of the reading text. Finally, the teacher returns to a specific point in order to explain which reading strategy can be used (Fountas, Pinnell, & Verrier, 2001). Some essential components must be considered when implementing group reading, such as practitioners, students, teaching implications, and instructional materials. Hall and Barnes (2017) proposed three types of inference instruction concepts for reading instruction. First, predictive inference is the learner’s ability to predict the context while reading. Second, the text-connecting inference is the ability to connect the text based on anaphoric, lexical, and inferential

aspects. Finally, the non-productive knowledge-based inference is the ability to go beyond the text itself.

Armbruster (2010) also proposed that reading instruction must focus on reading strategy instruction because novice readers will create their strategies while reading. Seven strategies should be taught and used. First, readers must be able to monitor themselves. Second, the reader must engage in metacognition, which is the ability to paraphrase the reading into the reader's own words. Metacognition can occur before, during, and after the reading. Third, the reader must perform semantic organization, such as mind mappings, to help better conceptualize the reading comprehension. The readers should also be able to answer both yes/no and open-ended questions on the text. This will ensure that readers think cognitively. The readers must also generate their questions related to the main ideas. Besides, readers must be able to reorganize the plot to help analyze the event and retell the story. The final strategy is summarization. This helps the readers to identify the main ideas by giving explicit explanations and encouraging the students to work together and share main ideas with their group. The seven strategies can be combined or partly used to best-suit the learner's differences and settings.

There are several reading strategies use in a group reading. Since GRS allows the learners to brainstorm and crosscheck the information for better understanding, good readers must be able to deploy a variety of reading strategies to identify the meaning from the passage. Several strategies can be used when reading in a group, and each group member can use one or strategies at a time. The Ontario Ministry of Education (2005) proposed several reading strategies that can be used in a group reading. The reading strategies are grouped into three stages. The first stage is preparing to read. Six reading strategies can be used in this stage, which includes previewing the text, analyzing the features of the text, finding the organization of the pattern used in the text, anticipating the guide of the text, identifying the signal words, and extending vocabulary. Questions can be asked in this preparation phase. The second stage of reading is engaging in the reading. In this phase, the readers can still ask questions, try to understand the text, make the inferences, visualize, make connections, think, and take notes. Six strategies can be used to engage in reading, including using the context

to find the meaning, reading between the lines or inferencing, searching for the most, and the least important ideas of the information, sorting the ideas through the concept mapping, visualizing, and making short notes. The last stage of reading is reacting to the reading. In this final phase, learners must be able to identify and understand the main ideas as well as think about the text, which will eventually promote critical thinking. Three reading strategies can be used in this final phase, which is responding to the text (Graffiti), drawing conclusions (I read/I think/ therefore), and making judgments. These reading strategies can be applied to different types of texts, such as informational texts, graphical text, literary text, and instructions.

Similarly, Zagoto (2016) proposed four strategies to be used in group reading: preview, click and clunk, get the gist, and wrap up. First, the reader must preview the text and then determine if they understand or not. Next, the reader must identify the important parts of the reading materials before summarizing the ideas of the text. These group reading strategies can promote better comprehension. Another study assigned four different roles underlying four reading strategies (predicting, questioning, clarifying, and summarizing) on students' reading comprehension. The experimental research study indicated five roles to the students, which include a leader, a predictor, a questioner, a clarifier, and a summarizer. The results showed that the five roles promoted student participation in the reading group, and the students applied the strategies with less support from the teacher (Komariah, Ramadhona, & Silviyanti, 2015; Ahmadi & Gilakjani (2012). Based on this previous research, this current study is based on six reading strategies, including visualizing, connecting, questioning, determining, inferring, synthesizing, and uses six roles, including leader, summarizer, visualizer, questioner, clarifier, and connector (Lynch, 2018).

พหุ ประถมศึกษา

The current study used reading strategies proposed by Lynch (2018). He suggested six strategies. These strategies include creating a visual, making a connection, questioning, determining importance (indicating the main ideas), inferring, synthesizing, and noticing the author's craft (critical thinking skill). The strategies are linked to six roles in the group: leader, summarizer, visualizer, questioner, clarifier, and connector.

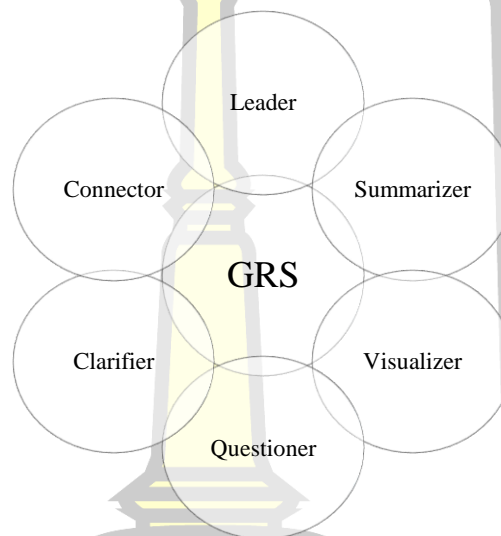


Figure 1: The Group Reading Model used in the current study

In the leader's role, the student will be the timekeeper for the group as well as present or share the discussed ideas to the whole class. The summarizer's role is to outline the main ideas of the reading, which can be done paragraph by paragraph or for the whole passage depending on the participant's preferences and timeframe. The visualizers should draw a picture or create a mind-map for the reading passage. The questioners will ask questions related to the passages, meaning that they need to see and identify unclear points in the passage. The clarifiers should answer these questions. Finally, the connectors will relate the reading passages to the world, to the country, to their own setting, and to themselves. The group members can assist each other in their roles. For example, the participant who takes a summarizer's role can help clarifiers by answering the questions, but make sure that the role takers are prioritized to perform their roles before asking help from the other group member. The GRS roles in promoting critical thinking will be further explained in section 2.4.

## 2.3 Critical thinking

### 2.3.1 Definitions and characteristics of critical thinking

Many authors have attempted to define critical thinking (CT). In the literature, four primary definitions have been proposed. First, CT has been defined as the thinking process whereby an individual person deploys criteria and standards into their thought. Second, CT is defined as a combination of the skills and attitudes to solve problems, which can be perceived as the ability of an individual person. CT is also considered as the ability to skepticize and reflect when engaging in an activity. Finally, CT has been described as the ability to judge something with purpose and self-regulation (Walker, 2003). Taken together, a critical thinker is defined as “a good thinker, clear, logical, thoughtful, attentive to the facts, open to alternatives” (Facione, 2016). Similarly, Petress (2004) defined critical thinking in a psychological context as an examination of assumptions, evidence evaluation, and conclusions by focusing on the capability to solve the problem or figure something out. The current study uses Walker's (2003) definition of critical thinking as the ability to judge something purposefully and logically.

Critical thinking skills consist of sub-skills, including interpretation, analysis, evaluation, inference, explanation, and self-regulation (Facione, 2016). Critical thinking must, therefore, be defined in a positive sense as a form of thoughtful judgment. Indeed, a critical thinker will usually possess several other characteristics, including systematic, inquisitive, judicious, truth-seeking, analytical, open-minded, and confident in reasoning. Figure 2 illustrated the characteristics of critical thinking proposed by Facione (2016).

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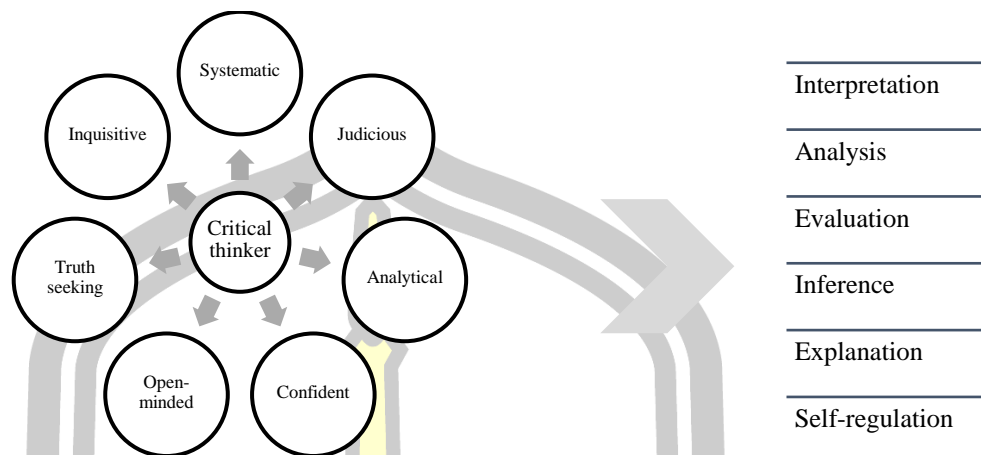


Figure 2: The characteristics of critical thinking proposed by Facione (2016)

The characteristics of critical thinking have been divided into different levels. Bloom et al. (1956) proposed six levels of critical thinking, which are knowledge, comprehension, application, analysis, synthesis, and evaluation. Each of these levels may be composed of sub-levels. For instance, there are three levels of knowledge: knowledge of specifics, knowledge of ways and means of dealing with specifics, and knowledge of universals and abstractions in a field. The level of comprehension consists of translation, interpretation, and extrapolation. The application includes only a single level related to how to use the knowledge in the real-life setting. The analysis level includes analysis of elements, analysis of the relationship, and analysis of organizational principles. The synthesis level includes the production of a unique communication, production of a plan or a proposal, and derivation of a set of abstract relations. Finally, evaluation consists of two sub-levels, which are evaluated in terms of internal evidence and judgment in terms of external criteria, the hardest level. To achieve the hardest level, the novice critical thinker must master the prerequisite levels.

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Table 1: The levels of critical thinking

Original Bloom's taxonomy (1956)	Revised Bloom's taxonomy proposed by Anderson & Krathwohl (2001)
<b>1. Knowledge</b> - Specifics - Ways and means of dealing with specifics - Universals and abstractions in a field	<b>Easiest</b> >>> <b>1. Remembering</b>
<b>2. Comprehension</b> - Translation - Interpretation - Extrapolation	>>> <b>2. Understanding</b>
<b>3. Application</b>	>>> <b>3. Applying</b>
<b>4. Analysis</b> - Analysis of elements - Analysis of relationship - Analysis of organizational principles	>>> <b>4. Analyzing</b>
<b>5. Synthesis</b> - Production of a unique communication - Production of a plan or a proposal - Derivation of a set of abstract relations	>>> <b>5. Evaluating</b>
<b>6. Evaluation</b> - Internal evidence - External Criteria	>>> <b>6. Creating</b> <b>Hardest</b>

Recently, Wilson (2016) updated these levels by comparing the original Bloom's taxonomy (1956) and the revised Bloom's taxonomy proposed by Anderson & Krathwohl (2001) level by level. "Knowledge" was redefined as the "remembering" level, and "comprehension" was changed to the "understanding" level. "Application" was modified to "applying," but the analysis was kept as the "analyzing" level. "Synthesis" was changed to "evaluating" and this level was redefined and a new level "creating" was defined. Also, the knowledge level was broadened to include metacognitive knowledge, in addition to factual, conceptual, and procedural knowledge. Metacognition is to think and thinking and, thus, should be included as one of the salient characteristics of critical thinking (Wilson, 2016).

### 2.3.2 The scaffolding of critical thinking

Several factors influence critical thinking. Mahapoonyanont (2012) identified three main factors: education, student factors, and personal factors. Education factors include teaching methodology, educational materials, and atmosphere. Student factors

include learning outcome, reading ability, learning motivation and intention, attitude towards learning, and emotional intelligence. Finally, personal factors consist of personal status, attitude, and child-rearing. Overall, the teaching method (education), reading ability (student), and child-rearing (personal) are the strongest influences on critical thinking skills. Several physical factors can affect critical thinking skills, including age, real-life experiences, gender, academic achievement, level of education, and manners. Generally, older people have more life experience, higher academic achievement, a higher level of education, and good manners are likely to have higher critical thinking skills (Mortellaro, 2015).

In regards to teaching, Slameto (2017) found that teachers can scaffold the student's critical thinking through instructional development (for example, implementing creative activities), but student-related factors also play an essential role, for example, learning motivation, readiness, and prior knowledge. Walker (2003) suggested three methods to facilitate critical thinking in the classroom. First, questioning tactics can promote critical thinking by helping students to evaluate, synthesize, and think beyond the reading. Higher-level thinking questions should be promoted. For example, students are asked to explain, compare, and clarify one or two issues. Discussion and debates can also promote critical thinking. This includes fostering tension, observation, and expression of the opinion. Tension drives the students to think critically and provide evidence to support their argument or dispute the arguments of their classmates. Observation allows the student to write down their arguments before discussing with their friends. Importantly, tangible content should be used for the discussion, as students will feel close to the content and be able to engage in the debate. The last method to promote critical thinking is written assignment. Written assignments can promote the student's critical thinking in several ways. For instance, students must explain a situation in detail, rather than simply answering "yes or no" to a question. In addition, students may be asked to write about something that relates to their real-life, especially their personal reactions or feelings.

To conclude, the factors influencing critical thinking are teaching method, educational materials, and atmosphere, learning outcome, reading ability, learning motivation and intention, the attitude towards learning, emotional intelligence, personal status,

attitude, child-rearing, age, real-life experiences, gender, academic achievement, the level of education, manners, instructional materials, learning motivation, readiness, and prior knowledge. Moreover, using teaching techniques that include questioning, discussion and debates, and written assignments can also help promote critical thinking in the novice critical thinker.

### **2.3.3 The assessment of critical thinking**

The assessment of critical thinking skills allows the practitioner to diagnose their students in order to design appropriate teaching materials. Critical thinking can be roughly separated into elementary, pre-intermediate, intermediate, post-intermediate, and advanced levels of critical thinking. Indah and Kusuma (2016) used a rubric to assess the level of critical thinking skills in Indonesian undergraduate students. They based this assessment on a written assignment and evaluated five elements of critical thinking assessment: argument, content, evidence, organization, and conclusion. Their findings showed that the average critical thinking skill of undergraduate students in Indonesia is at the pre-intermediate level. This type of critical thinking assessment can be seen as an in-house assessment designed by practitioners.

Assessment of critical thinking can also be standardized. The Halpern Critical Thinking Assessment (HCTA) was initially proposed by Halpern in the U.S.A and was then expanded into different countries, such as Belgium, Ireland, Spain, and China. Importantly, each country needs to ensure that 1) the HCTA is reliable and valid in their context, 2) that the test conforms to the student's academic level, and 3) that appropriate methods are used (Franco, Costa, & da Silva Almeida, 2018). Importantly, it should also be noted that when these tests are translated into other languages, the reliability, validity, feasibility, and attractiveness of the translated tests should be evaluated (e.g., Verburch, François, Elen, & Janssen, 2013). The Halpern Critical Thinking Assessment (HCTA) is considered a reliable tool, and its quality as a critical thinking measurement has been widely verified. Several studies have used the HCTA to measure critical thinking in academic achievement as well as critical thinking in real-world outcomes (Butler, 2012). Other tests also exist, including the Cornell Critical Thinking Test (CCTT), California Critical Thinking Dispositions Inventory (CCTDI), California Thinking Skills Test (CCTST), Critical Thinking

Assessment Battery (CTAB), ETS Tasks in Critical Thinking, and the Watson-Glaser Critical Thinking Appraisal (WGCTA). However, some of these tests have been shown to be unreliable or biased.

The current study used formative, summative, and dynamic assessment procedures to measure the participants' critical thinking skills (Phakiti, 2018). The formative assessment occurred during the intervention in the form of logbooks, which reflects the student's learning process through feedback every fortnight. The summative assessment took place after the intervention using a critical thinking self-assessment questionnaire. This questionnaire included 22 items from the assessment of the high school students' critical thinking skills proposed by (Sarigoz, 2012). Finally, dynamic assessment occurred during the intervention via group reading strategy training, where the teacher can initially provide reading strategy instructions and, then, gradually remove any assistance. As a result, students become autonomous and can apply the strategies themselves, leading to higher-order thinking skills application.

#### **2.4 The use of GRS in promoting CT**

GRS can be used to promote CT due to the distribution of reading strategies which are embedded in the roles of GRS. To illustrate, CT through GRS can be found in L1 context, EFL context, and Thai EFL context.

##### **2.4.1 Roles of GRS in promoting CT**

GRS allows the students to collaboratively work together as a team, exchange their thoughts and experiences, add up each other's ideas, fill up the missing pieces of information leading to deep comprehension of the text and promoting critical thinking. Moreover, the role is taken in GRS also supports critical thinking skills in the following details.

Leadership is perceived to be very important and added to the educational system intending to promote the student's critical thinking skills (Jenkins & Andenoro, 2016; Jenkins & Cutchens, 2011). Several research studies have argued that leadership can promote critical thinking. Leadership can be expressed through behaviors, skills, and attitudes. Cohen (2002) suggested that there are two essential qualifications of a leader, which are task-oriented behaviors and relationship-oriented behaviors. Task-oriented behaviors include the ability to solve a problem, make a decision, make a

plan, coordinate, and provide what is necessary in order to achieve the purpose. While performing the task-oriented behaviors, the leaders continue to monitor and measure the situation to ensure that the group is heading towards the goal. Relationship-oriented behaviors include being trustworthy, friendly, considerate, appreciative, and understanding other people. Apart from task-oriented and relationship-oriented behaviors, self-leadership can also help promote critical thinking Ay et al. (2015). Self-leadership involves behavior-focused strategies, natural reward strategies, and developing constructive thinking patterns. Developing constructive thinking patterns is an interesting aspect since it deals with the thought patterns that will be expressed towards the behavioral patterns. The leader needs to determine the goal, self-talk, and assess their own ideas leading to be self-regulated.

To be a summarizer, the students must be able to interpret and explain by summarizing the important information to be concise and easy to present to others. Choy and Lee (2012) studied the effects of teaching paraphrasing skills to students in an ESL context and found that the students need to be equipped with critical thinking skills in order to produce a good summary. This suggests that the more the students practice their summary writing, the more they increase their critical thinking skills. Similarly, Shokrpour, Sadeghi, and Seddigh (2013) investigated the effect of summary writing as a critical reading strategy on reading comprehension of Iranian EFL learners. This study was done under the concept of critical reading or critical comprehension, which is the highest level of reading comprehension. To be able to write a summary, the students were nurtured to show their own perspective, to accept multiple interpretations, and to discuss with their classmates. Frey et al. (2003) suggested the five criteria to assess a written summary: length, accuracy, paraphrasing, focus, conventions. The length of the summary should be as short as possible but still cover the necessary points. The accuracy of the summary should be verified with or without the appropriate citations. The students must be able to paraphrase the reading passages as well as correctly use the synonym words. The focus of the summary should be placed on the main ideas and supportive details. Finally, the standard writing conventions (punctuation, grammar, and spelling errors) should be respected. It is clear that critical thinking and summary writing share similar criteria. Thus, the summarizer's role can promote critical thinking.

The visualizer's role in the group reading helps the participants to perceive and use their imagination to draw a picture while reading takes place. Winarso and Dewi (2017) studied the visualizer and verbalizer cognitive style in geometrical problem-solving in Indonesia. They found that the visualizer and verbalizer cognitive style helped junior high school students to solve the problem better. In another recent study, Permatasari (2018) studied the reading level between the two groups of learners, verbalizer, and visualizer, and found that both types of learners have developed their reading comprehension because they prefer learning through the pictures rather than learning through text. Cognitive style is the fixed learning behaviors and characteristics of the learner. Some may learn better through images, diagrams, or mind mappings. The current research study proposes the role of visualizer with an aim to help learners identify their preferred style. Ryan (2015) offered more support for the visualizer's role in critical thinking. He suggested that the teachers must include the use of visualization in teaching because it helps the students to deal with large amounts of data, to develop their critical thinking skills, and to gain a deeper understanding. Moreover, it helps students in their use of graphical techniques for their own presentations in classroom assignments and future presentations outside of the school. Visualization in presentations helps audiences to see the clear picture, patterns, trends, and supports decision making leading to systematic thinking.

Questioning and clarifying have been considered an epistemic process of critical thinking (Ikuenobe, 2001). Questioners are typically inquisitive so that the questions are formulated according to their minds. In corresponding to the questions, clarifiers are likely to have truth-seeking skills. According to Socrates, questioning was perceived to be rude because the responder often takes offense (Ikuenobe, 2001). Then he suggested that teachers should ask questions that promote an epistemic attitude so that the student can have a purpose for reading and be encouraged to think critically. Not only does questioning help promote critical thinking, but critical thinking also brings about vital questions. Duron (2006) studied the critical thinking framework for any discipline and found that passive thinker tends to answer yes or no towards any question. To be an active thinker, the question should not be yes or no; instead, the questions must allow both the questioners and responders to think clearly

using the relevant information, be open-minded, to abstract the idea, as well as convey the intention effectively. Cultural factors, institutional factors, and language proficiency can create issues for students in the East Asian context. DeWaelche (2015) suggested that the teachers should create a good atmosphere by not being too strict on the traditional learning style so that the students will be comfortable to ask the question, make a decision, and share ideas in the classroom. Lennon (2017) also suggested that the teacher must scaffold the students' critical thinking by leading a discussion in the classroom. Questioning in the classroom discussion is the initial step to a higher level of thinking, and it is the pathway for the students to move into the engagement of critical thinking.

In this aspect, people make connections in everyday life without even considering it (Forawi, 2012). Connectors require inferencing skills to link the information together. It is, therefore, not surprising that the connecting skill is one of the reading strategies used in group reading. The connector's role is to relate the reading to the world, the country, the current setting, and the situation or even their personal life. Puga and Easthope (2017) defined creative thinking as a mechanism to promote "new ideas and fresh connections," and creative thinking is one of the six skills of critical thinking. Connecting skills can be fostered via an inquiry-based learning approach. Duran and Dökme (2016) suggested that the student can create new concepts by connecting the prior knowledge with the new information found in the reading. Connecting skills are least likely to be used under constructed inquiry and more likely to be used in guided inquiry. That is, connecting skills will be used the most when it is in the free inquiry since it does not limit the connecting framework of the students.

To perform six roles of GRS helps promote critical thinking because the skills found in GRS, such as self-regulation, interpretation, and explanation, inquisitive, truth-seeking, inference, and systems, are the characteristics fostering critical thinking proposed by Facione (2016). Moreover, the other skills, such as analysis, evaluation, judicious, confident, and open-minded, are also covered in GRS.

#### **2.4.2 CT through GRS in L1 context**

In the US, Hove (2011) studied the development of critical thinking skills in the high school English classroom. The critical thinking strategy instruction was used, and



critical thinking strategies were taught explicitly. The instructional activity was used for only the experimental group in the small group discussion. The control group used traditional teaching without small group discussions. The students in the experimental group were scaffolded to think about the concept, compared to previous knowledge, consider the alternatives, and synthesize the information. When doing the instructional activities in the group, Hove used an inferencing critical thinking technique (“Text says/ I think/ So I guess”). He also used a “think aloud” model for the students before allowing them to complete the task by themselves. Technology-supported material or SmartBoard was also used in the small group discussion to draw the salient passages so that the students understand more about the plot and theme as well as to grab the attention of all students in the class. The result found that the students who received the treatment could apply their critical thinking better than the non-experimental group, as illustrated by the assessment scores after the instruction. Similarly, Boardman et al. (2016) studied the efficacy of collaborative strategic reading in middle school (ages 9-14) science and social studies classes. The study included 19 teachers and 1074 students and used the Collaborative Strategic Reading (CSR) method. During the CSR session, three strategies were used: preview, click and clunk, and warp-up. The findings revealed that the teacher-rated work was higher quality when students were taught with CSR, and students provided more positive feedback when taught with this method. Overall, CSR improved student reading comprehension, especially for the complicated reading passages and information.

#### **2.4.3 CT through GRS in EFL context**

In Iran, Vaseghi & Barjesteh (2012) separated 240 participants into high and low English language proficiency levels and allocated these participants to the control and treatment groups. The critical thinking skills were instructed during the reading class. After the treatment, it was found that the level of language proficiency did not correlate with critical thinking skills. More importantly, the result also strongly highlighted that critical thinking skills have a positive effect on the learner’s reading comprehension. Another two studies investigated the impact of teaching critical thinking skills on reading comprehension in Iranian EFL learners. The treatment was given to the experimental group by using debate as a classroom activity. The result showed that post-test scores of the experimental group were significantly different

from the pre-test for reading comprehension tests; however, there were no significant differences between pre-test and post-test for a critical thinking test. Even if this result suggests that teaching critical thinking will not help the EFL learners to develop their critical thinking levels, critical thinking can improve their language learning in general (Fahim & Sa'eepour, 2011; Karimi & Veisi, 2016).

In China, Wang & Seepho (2017) studied the use of group discussion, concept mapping, and analytical questioning in Chinese EFL learners. The findings showed that group discussion allowed the students to share their ideas with group members and to see the advantages and disadvantages of their ideas and the ideas of others. Concept mapping also helped the students to organize an idea, especially to clarify the complex issues. Finally, analytical questioning helped the students to think independently. Therefore, these strategies all facilitated critical thinking among the group of students.

In Taiwan, there is also a significant effort to develop critical thinking skills in college students. Tung & Chang (2009) used “reading comprehension pop quizzes, learning log, group presentation, guided in-class discussion with Socratic questioning skills, and individual essay report writing” to promote critical thinking. The California Critical Thinking Skills Test and self-assessment were used for pre-test and post-test. The results indicated that literature reading helped improve critical thinking, and the guided in-class discussion was perceived as an effective reading strategy for developing critical thinking.

In Turkey, Bedir (2013) studied reading and critical thinking skills in ELT classes of Turkish students. His focus was on critical reading activities, which is considered as the highest level of reading comprehension. Students were encouraged to use their imagination, make a decision, and engage in higher-order thinking, which should lead them to be critical and creative. The result illustrated that critical reading activities showed some critical thinking dispositions, including “truth-seeking, open-mindedness, systematicity, inquisitiveness, self-confidence, and maturity.”

Zoghi, Mustapha, and Maasum (2010) studied collaborative strategic reading with university EFL learners in Iran. They used the modified collaborative strategies reading, which includes three stages of presentation, practice, and production. At the

stage of the presentation, the teacher introduced reading strategies and discourse markers and activated the student's background knowledge. Then, the teacher used think-aloud techniques for modeling in front of the classroom. At the stage of practice, the students were assigned to a five-member group. The five group members were assigned as a leader, monitor, fix-up pro, encourager, and reader. Then, each group member had to summarize the main idea as well as generate questions, paragraph by paragraph. For the final production stage, the teacher asked the students to interview each other, retell the reading passage to each other, and perform a debate about the pros and cons of the reading passage. The pretest and posttest were employed before and after the six-week intervention. This study used the comprehension test covering five sub-skills (literal comprehension, reorganization of ideas, inferential comprehension, evaluation, and appreciation). Thus, it can be clearly seen that the five sub-skills found in the tests are related to critical thinking skills.

To conclude, there is abundant evidence (from many countries) that the reading strategies used in group reading can promote critical thinking in both secondary and tertiary education. It is widely accepted that critical thinking and reading comprehension skills are closely related. Indeed, critical thinking and reading comprehension are both included in the Common European Framework of Reference for Languages (CEFR), a language proficiency standard that is accepted by the Council of Europe (CoE) Member States (Silalahi, 2017; Council of Europe, n.d.).

#### **2.4.4 CT through GRS in Thai EFL context**

Group reading and critical thinking studies have been conducted in many countries across the world, including the United States, Iran, China, Taiwan, and Turkey. However, research studies about group reading and critical thinking in Thailand are still rare and inadequate. Thai learners lack reading strategies resulting in inadequate reading comprehension (Akkakoson & Setobol, 2009). Plus, Thai students' critical thinking skills are low. In 2018, the Analytical and Critical Reading Test was conducted in over six thousand students in 12 private universities in Thailand. It was found that the average score was ~six (out of 15), which is considered to be a low level of critical thinking skills (Ploysangwal, 2018). As such, we must urgently

promote critical thinking skills in these students, and this could be achieved via group reading.

The following studies review the current group reading and critical thinking situation in Thailand. The development of critical thinking skills in Thai high school students was recently studied (Changwong et al., 2018). It was found that critical thinking ability has a positive correlation with academic achievement. In addition, a model for teaching critical thinking was proposed, the PUCSC model. In this model, “P” stands for the preparation of learning management, “U” is understanding and practice, “C” is for cooperative solutions, “S” stands for sharing new knowledge, and “C” is for the creation of new knowledge. It is believed that this PUCSC model can help promote critical thinking; however, it is not clear whether a greater benefit could be achieved by using this model in small groups. The effects of reciprocal teaching on English reading comprehension have also been studied in Thai high school students (Yoosabai, 2008). Students in the reciprocal reading condition were given four parts of a reading passage were given to the students, followed by a metacognitive strategy questionnaire (MRSQ) and in-depth interview. The MRSQ consisted of ten metacognitive strategies: predicting, activating background, verifying prediction, self-management, setting goals, taking notes, making an inference, selective attention, summering, and self-evaluation. The results indicated that the reciprocal reading approach produced positive results in all ten strategies. However, in this study, the only comprehension was measured, not critical thinking abilities. Thus, the effect of this approach on critical thinking skills, particularly the role of the influencer, remains to be determined.

Kasemsap and Lee (2015) studied the application of reading strategies to their reading of English texts in a Thai vocational college. Using surveys, think-aloud strategies, and semi-structured interviews, the authors revealed that the use of reading strategies was similar in both high and low English proficiency students; however, the high English proficiency group used more reading strategies than the low English proficiency group. Interestingly, the skilled and unskilled readers did not perceive the reading strategies equally. Cognitive and metacognitive strategies were also reviewed. The cognitive strategies included comprehension, memory, and retrieval strategies,

and the metacognitive strategies included planning, monitoring, and evaluating. The concrete reading strategies in this is not adequate and sufficient to promote critical thinking.

The benefits of explicit reading instruction on text comprehension have also been investigated in Thai EFL tertiary students using the Concept Oriented Reading Instruction (Vongkrachang, 2015). Cognitive and metacognitive strategies were also used, including goal setting, monitoring, evaluation, sensing others' feelings, collaboration, and exchanging explanations. Six different types of questions were used in the instruction. These questions required literal comprehension (i.e., recall the facts stated in the reading passage), reinterpretation, inference, evaluation (i.e., the students must make a judgment about a particular scene in the reading passage), personal response or, finally, guessing the author's intention about the ideas and the organization of the passage. A reading test, reading engagement index, and reading engagement checklist was used to assess comprehension before and after the reading instruction. The findings indicated that the six reading strategies increased the students' reading engagement index as well as the reading engagement checklist; however, the social interaction among the students was low. The effect of such reading instruction on critical thinking remains to be assessed.

Suwantharathip (2015) implemented reading strategies based on the collaborative learning approach in an English class in a Thai tertiary context. A multiple-choice test, cognitive and metacognitive strategy survey and open-ended questionnaires were used to measure performance. The result indicated that, following collaborative learning, the students were more confident and less stressed in the reading class and, consequently, the students' reading comprehension scores were improved. It should be noted that it is not clear what reading strategies were used in this study, and the study did not assess the students' critical thinking skills.

The studies of GRS in promoting CT were conducted over the globe. The findings indicated that students significantly increased their critical thinking after trained group reading strategies. However, group reading and critical thinking in Thailand EFL settings are underexplored. Indeed, previous research has focused solely either on reading comprehension or critical thinking, but the two concepts have not been

studied together. The current study will, therefore, examine the use of the group reading strategy to promote critical thinking for teaching and learning in a Thai university.

### 2.5 The summary of the current study

Reading is an interactive communication among texts, readers, and interactive activities. With several levels of comprehension, the hardest level of comprehension is the linkage to critical thinking. Many reading strategies and reading methodologies are implementation in teaching instruction in order to promote critical thinking. One of the effective reading instructions is a group reading strategy the students can collaboratively read together. Because each role of GRS helps promote CT, the learners who are trained, those roles will eventually be promoted their critical thinking. GRS based on Lynch (2018) will be used to promote CT in the current study, which consists of six roles. Firstly, the role of a leader helps generate self-regulation skills. Secondly, the role of summarizer helps foster interpretation and explanation skills. Thirdly, the role of visualizer helps in seeing things systematically. Fourthly, the role of the questioner supports *inquisitive* skills. While the role of clarifier strengthens truth-seeking skills. Lastly, the role of the connector emphasizes referencing skills by connecting relevant information. Thus, GRS is a focus of this current study, which its conceptual framework is demonstrated in figure 3.

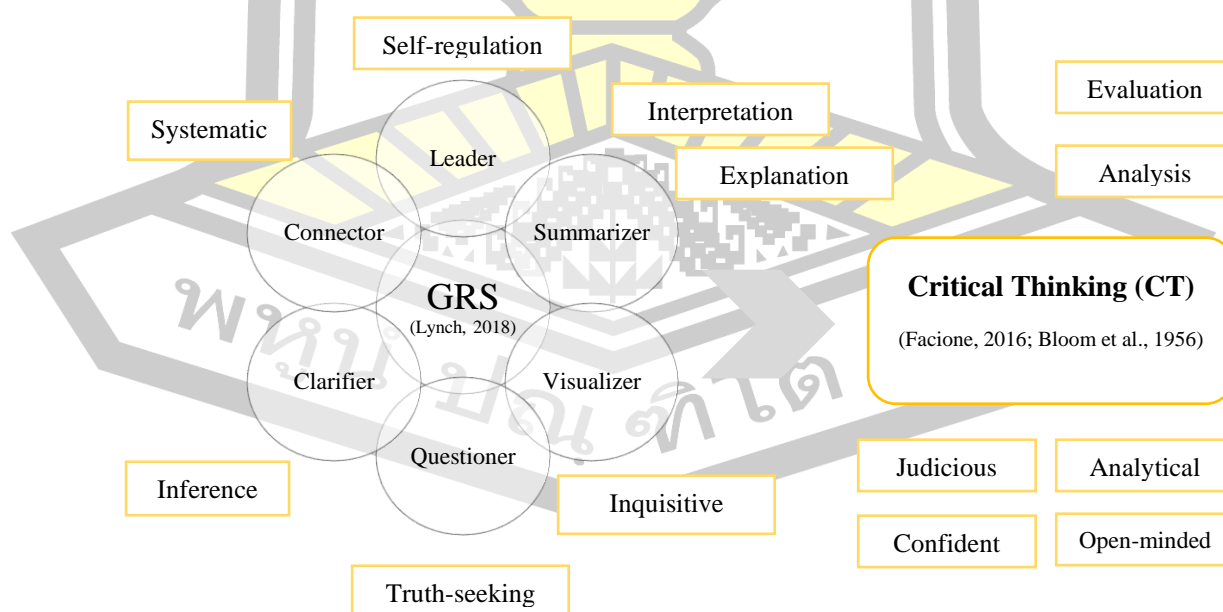
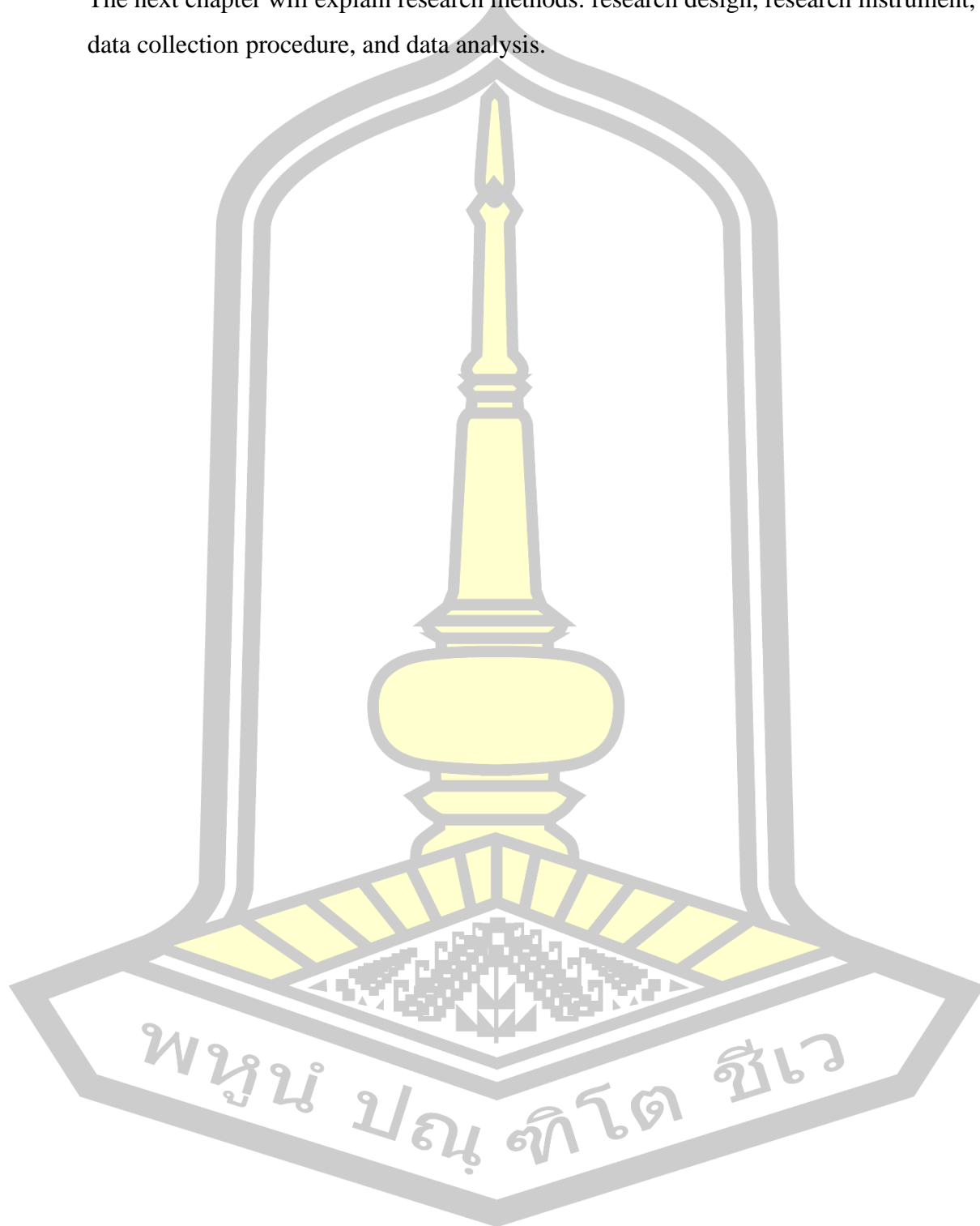


Figure 3: The conceptual framework of the current study

The next chapter will explain research methods: research design, research instrument, data collection procedure, and data analysis.



## CHAPTER III

### RESEARCH METHODS

This chapter outlines the research methodology, including the research design, participants and setting, research instruments, data collection procedure, and data analysis.

#### **3.1 Research Design**

This study used a single-group pretest-posttest design. Specifically, a quasi-experimental research design was used to test the effect of the group reading strategy (the treatment) on critical thinking skills (White & Sabarwal, 2014). For the quantitative data collection, the participants were administered the critical thinking self-assessment questionnaire before and after the treatment. The qualitative data was collected during and after the treatment. The participants were required to reflect on their perceptions about the group reading strategy through logbook writing every fortnight and the semi-structured interview after the treatment.

#### **3.2 Participants and setting**

The participants were 61 English major students from one Thai university aged between 18-22 years old enrolling in the compulsory English reading course, English for Academic Reading. As a researcher, it is the only way to get access to the learners in an actual undergraduate class. There were forty females, eighteen males, and three other genders. As English majors, all participants were familiar with English language teaching and learning. The convenience sampling technique was used due to the number of participants. The participants were considered a homogenous group as their learning natures, characteristics, and language competencies were similar to one another. The reading instruction in the classroom was encouraged by the teacher. The participants were familiar with an individual reading and the grammar-translation method. Textbooks were the primary teaching material used for reading instruction and evaluation. In addition to in-class reading texts, participants were also given an extensive reading book to read outside the class. The extensive reading was also evaluated and graded to ensure that students completed the reading outside of the classroom. During reading instruction in the classroom, the students were asked to follow the teacher's reading, interpret the meaning from the text, and to answer the



teacher's questions. The participants had not previously received any instructions about group reading or critical thinking strategies.

### **3.3 Research instruments**

This study used a mixed-methods research design. Quantitative data was collected from a questionnaire measuring critical thinking skills, and the qualitative data was collected from the logbook and the semi-structured interview describing the participants' critical thinking development as well as their perceptions regarding the group reading strategy. The reading text consisted of six passages adapted from "More Reading Power 3," published in 2012, British Council (n.d.)'s website, and Exam English (n.d.)'s website.

#### **3.3.1 Questionnaire**

The Critical Thinking Self-Assessment Questionnaire was used for quantitative data collection. This questionnaire was initially developed by Sarigoz (2012) to measure students' critical thinking skills; however, Sarigoz's version of the questionnaire was not consistent with the purpose of this study. Hence, a modified Critical Thinking Self-Assessment Questionnaire was generated for this specific study. The items of the questionnaire were based on two frameworks, Facione (2016) and Bloom et al. (1956). The questionnaire was verified by seven experts and then translated into Thai. A group of Thai university students were then given the questionnaire to determine whether these students could understand the questionnaire and use it correctly. The questionnaire also allowed students to avoid direct face-to-face questions to ensure that students felt comfortable and were able to think about their responses. The questionnaire was considered to be a summative assessment (Phakiti, 2018).

The participants were required to complete the questionnaire before and after the treatment and were given sufficient time to complete the questionnaire. The questionnaire consists of two parts: general information and critical thinking self-assessment. The general information includes gender, faculty, Grade Point Average (GPA), and the number of hours studying English per week. The Critical Thinking Self-Assessment Questionnaire was used to collect information about the participant's ability to judge without prejudice, to analyze the reading sources, to hypothesize, and to evaluate the matter logically. It consisted of 35 items and required that the

participants rate their level of critical thinking before and after the treatment. The Likert rating score was used with the following five categories:

5	Very high
4	High
3	Medium
2	Low
1	Very low

### 3.3.2 Logbook

The logbook was used to measure the participants' perceptions towards the six roles of the group reading strategy (GRS): leader, summarizer, clarifier, visualizer, questioner, and connector. The logbook was written both in Thai and English because the learners' L2 proficiency was limited. The logbook was both a formative and a dynamic assessment (Phakiti, 2018). The formative assessment measured perceptions of the GRS during the intervention, and the dynamic assessment measured perceptions of the GRS during the intervention via the active involvement of the teacher or the group members. This type of ongoing assessment allowed the participants to easily reflect on their perceptions. By contrast, if participants were asked to share their perceptions only after the six weeks of treatment, they may not be able to recall or remember what they have done in the GRS or how they felt during the GRS treatment.

The treatment covered six weeks, and the participants were required to write in the logbook once per fortnight (i.e., three entries in total). The participants were required to complete the logbook as follows:

1. The title of the passage
2. The assigned role(s)
3. Explain what they gained from GRS
4. Explain how GRS helped develop their critical thinking skills
5. Explain how the assigned roles contribute to and support group reading.
6. Other comments or suggestions

### 3.3.3 Semi-structured interview

The semi-structured interview was aligned with the critical thinking self-assessment questionnaire and logbook. Ten participants were randomly selected to be interviewed

after the GRS treatment. Each interview session lasted about 20 mins and was recorded. The scope of the interview included the participant's reflections on critical thinking and the group reading strategy. The semi-structured interview was used to assess the overall understanding and perception of the participants after GRS and to triangulate the data collected through the questionnaire and logbook. During the interview, the participants could express their ideas and feelings, which can lead to new insights that were not revealed in the questionnaire or logbook sessions.

### **3.4 Data collection procedure**

#### **3.4.1 Research Instrument Validity**

The validity of all three research instruments was verified using the Index of Item-Objective Congruence (IOC) was used. Seven experts evaluated the questionnaire, logbook, and the questions of the semi-structured interview. All experts had at least ten years of experience working in English Language teaching in the university. Six experts had obtained the academic title of Assistant Professor, and five experts obtained a Ph.D. in the English language. The score range of IOC is from -1 to +1: -1 Incongruent, 0 Questionable, +1 Congruent.

The IOC average score for the questionnaire was 0.71, which is considered valid. Four items scored under 0.5 and were therefore revised according to the experts' suggestions. The logbook and interview questions scored 0.93 and 0.86, respectively. None of the items in the logbook or interview questions scored under 0.5, indicating that all items were valid.

#### **3.4.2 Reading materials selection**

Six reading passages were selected for the GRS according to three main criteria. First, the passages needed to be appropriate for the level of English proficiency of the undergraduate students. The reading passages were at the B2 level, which is a level that is accepted for employment and higher education around the world in the USA, Australia, Germany, and the Netherlands (University of Cambridge., n.d.). As such, the B2 level is likely to be the correct level for university learners, especially English major students. Second, the reading passages must contain current information and foster readers in the 21<sup>st</sup> century to critically solve new problems arising from the modern world (Hafni, 2017). Reading passages that were relevant to the world's

current issues were therefore selected. Finally, the readers' preferences and interests must be taken into consideration. The readers' preferences and interest in the reading passages promote involvement in group reading because the students can relate the reading materials to their personal experiences.

The passages were selected from the most popular reading lessons from the British Council (n.d.)'s website and Exam English (n.d.)'s website. All selected passages met the aforementioned criteria. Of the six reading passages, two passages were selected from the book entitled, "More Reading Power 3" (Jeffries & Mikulecky, 2012), three reading passages were selected from the upper intermediate B2 on the British Council's website, and the final passage was selected from B2 reading tests on the Exam English (n.d.)'s website. The reading passages were:

Passage 1: An Oceanful of Plastic

Passage 2: Food for the 21st Century: Insects

Passage 3: Work-life balance

Passage 4: Study problems – help is here

Passage 5: Are celebrities bad for you?

Passage 6: Job adverts

The reading passages were piloted and were simplified or complexified according to the experts' suggestions and the range program in order to assure the student's readability.

### **3.4.3 The Critical Thinking Self-Assessment Questionnaire before the GRS treatment**

The participants were required to complete the critical thinking self-assessment questionnaire before the GRS treatment. The GRS was presented to the students with a few trials until they fully understood the strategy.

### **3.4.4 The Group Reading Strategy Treatment**

The participants were required to perform the GRS for six weeks and to reflect on their perceptions about the GRS through logbook writing every fortnight. The GRS treatment lasted 1.5 hours per class. Each class involved six steps, including introduction, preparation for GRS, GRS, preparation for group sharing, group sharing,

and wrap-up. The classroom activities and the duration of each step are shown in Table 2.

Table 2: The classroom activities in the GRS treatment

Time	Steps	Classroom Activities
10 mins.	Introduction	<ul style="list-style-type: none"> <li>- Complete the Critical Thinking Self-Assessment Questionnaire (for the first class only)</li> <li>- Introduce GRS</li> <li>- Train the participants on the six reading strategies (six roles)</li> <li>- Model and assign the roles</li> </ul>
10 mins	Preparation for GRS	<ul style="list-style-type: none"> <li>- Present the reading passage</li> <li>- Vocabulary instruction</li> </ul>
30 mins	GRS	<ul style="list-style-type: none"> <li>- Read the passage paragraph by paragraph together within the group (1<sup>st</sup> time)</li> <li>- Make sure all group members understand the reading passages by scaffolding each other.</li> </ul>
10 mins	Preparation for group sharing	<ul style="list-style-type: none"> <li>- All members prepare for group sharing.               <ol style="list-style-type: none"> <li>1. The <b>leader</b> does the timekeeping, makes sure everyone speaks, and prepares for the sharing session.</li> <li>2. The <b>summarizer</b> outlines the reading passage and identifies its main idea.</li> <li>3. The <b>visualizer</b> draws pictures or diagrams to represent the plot of the reading passage.</li> <li>4. The <b>questioner</b> lists questions to ask the group and must avoid using yes/no questions.</li> <li>5. The <b>clarifier</b> carefully reads the passage and clarifies some complex points that might be questioned by the questioner.</li> <li>6. The <b>connector</b> relates the reading passage to other ideas.</li> </ol> </li> </ul>
20 mins.	Group sharing	<ul style="list-style-type: none"> <li>- Share with the group members               <ol style="list-style-type: none"> <li>1. The <b>leader</b> keeps the time and ensures that everyone speaks.</li> <li>2. The <b>summarizer</b> summarizes the reading passage to the group members.</li> <li>3. The <b>visualizer</b> shows their drawings (picture or diagram) and explains the meaning of their work.</li> <li>4. The <b>questioner</b> presents what is unclear in the reading passage and poses questions. The questions should not require only a yes or no response but should necessitate a longer explanation.</li> <li>5. The <b>clarifier</b> tries to answer the questions asked by the questioner.</li> <li>6. The <b>connector</b> explains how the reading passages relate to other things.</li> </ol> </li> <li>- Everyone is allowed to help each other during the GRS session.</li> </ul>
10 mins.	Wrap-up	<ul style="list-style-type: none"> <li>- Wrap-up</li> <li>- Assign the logbook writing at the end of the 1<sup>st</sup>, 3<sup>rd</sup>, and 5<sup>th</sup> weeks and participants will submit it the following week.</li> <li>- Complete the Critical Thinking Self-Assessment Questionnaire (for the final class only)</li> </ul>
90 mins		

For the steps of individual and group sharing, the participants were allowed to use any language with which they felt comfortable. This ensured that participants could express their understanding and critical thinking processes to promote the best comprehension among the class.

#### *Week 1*

The participants were given the Critical Thinking Self-Assessment Questionnaire (Sarigoz, 2012). Then, the GRS was introduced to the whole class again. The participants were then assigned into groups, which consisted of 6 group members each. The six roles (leader, summarizer, clarifier, visualizer, questioner, and connector) were assigned to each group member. Each role took on the following responsibilities:

1. Leader : Arrange the time allocated for each group member  
: Make sure all group members cover what they have to do  
: Share what they have had done in the GRS
2. Summarizer: Write the summary of the reading passage  
: Share the summary in the individual sharing session
3. Visualizer : Draw a picture or mind-map  
: Share the drawing in the individual sharing session
4. Questioner : Ask questions in the individual sharing session
5. Clarifier : Answer the questions in the individual sharing session
6. Connector : Relate the readings to the world, their own country, own settings and their personal experiences in the individual sharing session

The group reading strategy began with the passage entitled, “An Oceanful of Plastic.” At the end of the group reading session, the participants were required to complete the logbook.

#### *Week 2*

The participants remained in the same group, but new roles as assigned. For example, the participant who was assigned the role of leader for the first week took another role for the second week. Then, the group reading strategy began using the passage entitled, “Food for the 21<sup>st</sup> Century: Insects”.

#### *Week 3*

Participants were assigned another role within their group. For example, the participant who was assigned the role of leader for the first week, and the role of summarizer for the second week would be assigned the role of clarifier for the third week. The group reading strategy then began using the passage entitled “Work-life balance.” At the end of the group reading session, the participants were required to write in their logbook.

#### *Week 4*

Participants were assigned another role within their group. For example, the participant who was assigned the role of leader for the first week, the role of summarizer for the second week, and the role of clarifier for the third week, would be assigned the role of visualizer for the fourth week. Then, the group reading strategy began using the passage entitled, “Study problems – help is here.”

#### *Week 5*

Participants were assigned another role within their group. For example, the participant who was assigned as the role of leader for the first week, the role of summarizer for the second week, the role of clarifier for the third week, the role of visualizer for the fourth week, would be assigned the role of the questioner for the fifth week. The group reading strategy was then conducted using the passage entitled, “Are celebrities bad for you? ”. At the end of the group reading session, the participants were required to write in their logbook.

#### *Week 6*

Participants were assigned their final roles within their group. For example, a participant who was assigned the role of leader for the first week, the role of summarizer for the second week, the role of clarifier for the third week, the role of visualizer for the fourth week, the role of the questioner for the fifth week, would be assigned the role of connector for the sixth week. The group reading strategy then began using the passage entitled “Job Adverts.” At the end of the group reading session, the participants were required to complete the Critical Thinking Self-Assessment Questionnaire (Sarigoz, 2012).

### **3.4.5. The Critical Thinking Self-Assessment Questionnaire after the GRS treatment**

The participants were required to complete the critical thinking self-assessment questionnaire again after the GRS treatment.

### **3.4.6 Semi-structured interview**

Ten participants, who were randomly selected as representatives, were given the semi-structured interview, which was recorded and lasted approximately 20 mins. The voice recording was then transcribed for coding.

## **3.5 Data analysis**

### **3.5.1 The Critical Thinking Self-Assessment Questionnaire**

The data from the Critical Thinking Self-Assessment Questionnaire before and after the treatment were analyzed. The general information collected in the questionnaire included gender, faculty, and the number of hours studying English per week. Gender is expressed as a percentage. The average number of English studying hours per week was also calculated. The data from student's critical thinking self-assessment on the five-point Likert rating scale was calculated as a percentage, mean, and standard deviation (S.D.). The Statistical Package for the Social Sciences (SPSS) was used to analyze the data.

### **3.5.2 Logbook**

The data from the logbook during the treatments were analyzed by content analysis. Intercoder reliability was used to avoid bias coding (Campbell, Quincy, Osseman, & Pedersen, 2013). Then the advisor acted an intercoder to verify the data. The data from the logbook focused on the learner's actual critical thinking skills as well as the learner's perceptions. The themes of skills were aligned with the seven characteristics of the critical thinking self-assessment questionnaire, and the themes of perceptions were based on the qualitative data. The pseudonym was employed to conceal the participants' identity.

### **3.5.3 Semi-structured interview**

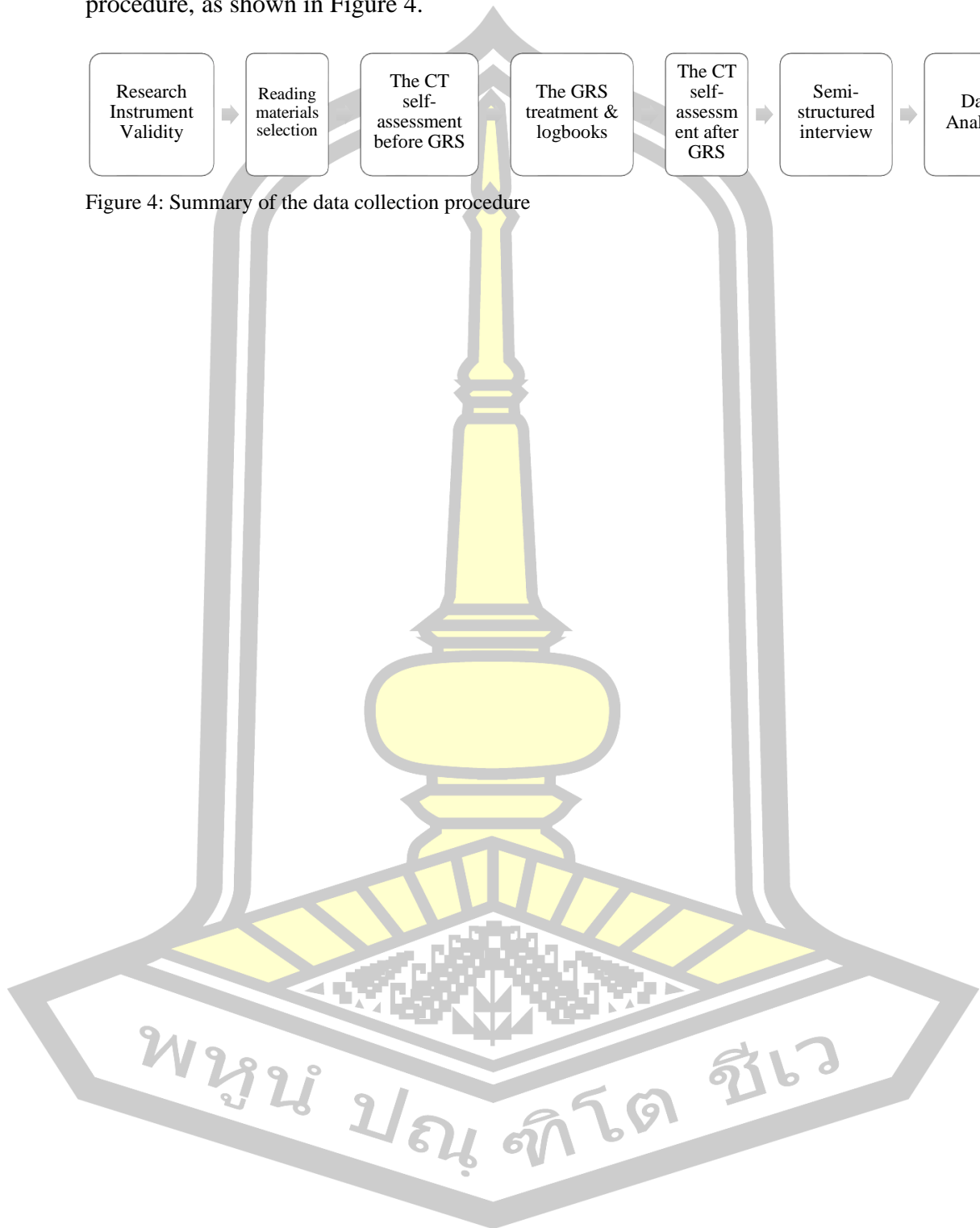
A content analysis was used for the data from the semi-structured interview. The advisor also acted an intercoder to verify the data. The themes were similar to the logbook. However, other questions and topics could arise during the interview.



An outline of the methodology for the current study, including the data collection procedure, as shown in Figure 4.



Figure 4: Summary of the data collection procedure



## CHAPTER IV

### RESULTS

This chapter reports the results of the study and how the results address the two research questions: 1) Does group reading strategy facilitate Thai EFL university learners' critical thinking?, and 2) What are Thai EFL university learners' perceptions of group reading strategies?

#### 4.1 Thai EFL university learners' critical thinking skills

The quantitative result as well as qualitative result show Thai EFL university learners' critical thinking skills.

##### 4.1.1 Quantitative data

In response to Research Question 1, Does group reading strategy facilitate Thai EFL university learners' critical thinking?, the quantitative data obtained from the questionnaires were analyzed using SPSS software. The pre- and - post Critical Thinking Self-Assessment Questionnaire items were analyzed and interpreted using SPPSS software. The results from the pre-and post-treatment questionnaires were also compared to determine whether the GRS intervention affected critical thinking skills in Thai university participants. Table 3 illustrates overall CT skills in Thai university participants.

Table 3: Critical thinking skills in Thai university participants

CT aspects	Pre-CT self-assessment		Post-CT self-assessment		S.D.	Difference (%)	t-value	p-value
	Score	%	Score	%				
Confident	3.50	70	3.72	75	0.72	5	3.214	$p < .032$
Systematic	3.40	68	3.62	72.4	0.77	4.4	7.701	$p < .002$
Truth-seeking	3.73	74.6	3.92	78.4	0.74	3.8	5.033	$p < .007$
Analytical	3.64	72.8	3.77	75.4	0.90	2.6	1.689	$p < .167$
Inquisitive	3.88	77.6	4.00	80	0.88	2.4	2.146	$p < .098$
Judicious	3.82	76.4	3.90	78	0.76	1.6	1.430	$p < .226$
Open-minded	4.00	80	4.02	80.4	0.77	0.4	0.341	$p < .750$
<b>Overall</b>	<b>3.71</b>	<b>74.2</b>	<b>3.85</b>	<b>77</b>	<b>0.79</b>	<b>2.8</b>	<b>2.839</b>	<b>0.004</b>

The findings from the questionnaire show that Thai university participants had an intermediate to high levels of critical thinking skills. More specifically, the current results showed that overall critical thinking skills were increased by 2.8%. The three most highly developed aspects were *confident*, *systematic*, and *truth-seeking* sub-skills, which increased by 5%, 4.4%, and 3.8%, respectively. These aspects of CT also showed a significant improvement between pre-and-post- questionnaire scores. Although there was also an increase in *analytical* (2.6%), *inquisitive* (2.4%), *judicious* (1.6%), and *open-minded* (0.4%), the statistical analysis revealed no significant differences between pre-and-post questionnaire scores. However, the current findings showed that Thai university participants' overall CT skills were significantly fostered. These findings suggest that the GRS may have an impact on Thai university participants' CT skills.

#### **4.1.2 Qualitative data**

The qualitative data from the logbook writing and semi-structured interviews were transcribed and coded into themes and aspects of CT skills. Before data analysis, the content was inter-coded and was sent back to participants for confirmation of the information provided. The logbook and semi-structured interview data were coded and checked through several readings to develop theoretical themes and aspects, thereby validating the themes and increasing the reliability of the current findings.

#### **Results of the logbook writing**

Qualitative results obtained from the logbook were analyzed and coded into six aspects of CT skills, including *systematic*, *judicious*, *analytical*, *confident*, *open-minded*, and *inquisitive*. Table 4 illustrates six aspects of CT skills in Thai university participants.

Table 4: Aspects of CT in Thai university participants from the logbook

Aspects of CT	Logbook writings (Writers)
<b>Systematic</b>	<ul style="list-style-type: none"> <li>GRS helps me develop my CT a bit at a time by <i>looking through the structure</i> of the story, for example, title, introduction, main idea, cause and effect, and conclusion. (Ann)</li> <li>GRS makes me think <i>systematically</i>. (Pete)</li> <li>GRS helps me think <i>systematically</i> and helps me arrange the priority of the tasks during which GRS takes place. (Manee)</li> <li>When reading, it makes me <i>comply with content into different categories</i>. (Ja)</li> <li>I can arrange the time for each person so that <i>group reading is manageable</i>. (Tick)</li> </ul>
<b>Judicious</b>	<ul style="list-style-type: none"> <li>Not only reading, I think GRS encourages me to practice my communication skills by <i>choosing the right words and appropriate sentences to talk with other group members</i>. (Vivy)</li> <li>GRS makes me <i>judicious</i> by carefully selecting the reasons to back up my argument. It makes me able to 1) work as a team, 2) be responsible, 3) analyze other people's opinions and ideas, and 4) contradict others based on the reason. (Kai)</li> <li>I look at other viewpoints, <i>re-read</i> the passage, and <i>think about it again and again</i>. (Miew)</li> <li><i>I think deeper in all aspects</i>, such as components, effects, reasons, changing, etc. (Gig)</li> </ul>
<b>Analytical</b>	<ul style="list-style-type: none"> <li>I received various ideas from the group member and can <i>analyze</i> them based on different points of view. (Wirun)</li> <li>To discuss with friends, it helps <i>improve my interpretation skill</i> as well as my speaking skills. (Mix)</li> <li>When asking and answering the question, I have to <i>analyze</i> more and relate to other relevant information. (Lilly)</li> <li>I can analyze the passages in different ways in which new concepts eventually occur. (Pawee)</li> <li>While reading together, we see the cause-effect relationship and <i>analyze</i> it slowly in order to ensure everyone's understanding. (Hong)</li> <li>As a clarifier, I have to <i>analyze</i> the graph more than one time to prepare my answer, and I had to think beyond the unexpected questions. (Yok)</li> <li>Typically, I will scan and skim the information from the text roughly. However, GRS makes me pay more attention to the details so that I could be able to <i>analyze</i> and explain to other group members. (Yooyee)</li> </ul>
<b>Confident</b>	<ul style="list-style-type: none"> <li>It makes me <i>confident</i> to share my ideas and ask the questions systematically. (Susi)</li> <li>It helps me think out of the old mindset and makes me <i>dare to speak with others</i>. (View)</li> </ul>
<b>Open-minded</b>	<ul style="list-style-type: none"> <li>I got new perspectives from other roles. Sometimes, you need <i>new perspectives to make you enlighten</i>. (Udom)</li> <li>It opens up <i>ideas that I have never thought of</i>, and it helps me think of a better solution. (May)</li> <li>New ideas and various opinions made me <i>understand the diversity of people</i> better. (Aiw)</li> <li>I learned that people have different ideas that <i>widen our visions</i>. When listening to the other members' sharing, I can <i>accept other people's opinions</i>. Some ideas are already perfect; some ideas need fulfilment. We can add more details for some ideas leading to efficient group work. (New)</li> <li>I think that everyone's words and ideas are <i>equally important</i>. (Am)</li> <li>I got more information from friends, which I think <i>their interpretation and conclusion is better than mine</i>. (Na)</li> <li>It makes me <i>listen to people more</i>. (Pla)</li> </ul>
<b>Inquisitive</b>	<ul style="list-style-type: none"> <li><i>While questioning, we need to think more</i> and share more ideas that help develop critical thinking. (Meaw)</li> <li>GRS makes me <i>curious</i> and would like to ask the questions. (Aor)</li> </ul>

Table 4 illustrates the logbook writings produced by Thai university participants. These transcripts reflected the influences of GRS in Thai university participants' CT skills, which included *systematic*, *judicious*, *analytical*, *confident*, *open-minded*, and *inquisitive*. The current findings of the logbook also indicated that Thai university participants had a variety of insights toward the GRS.

### Results of the semi-structured interview

The qualitative data obtained from the semi-structured interview were analyzed and coded into six aspects of CT, including *systematic*, *judicious*, *analytical*, *confident*, *open-minded*, and *inquisitive*. The interview was conducted in Thai, the content was transcribed and translated into English. By using the mother tongue, it helps to wave language burdens and to maximize the responses. The content analysis was conducted using intercoder reliability. Tables 5 and 6 show Thai university participants' CT aspects obtained from the semi-structured interview.

Table 5: Aspects of CT in Thai university participants from the semi-structured interview

Aspects of CT	Interview Excerpts (Interviewees)
<b>Systematic</b>	<ul style="list-style-type: none"> <li>• It makes me learn how to <i>allocate and share the duties</i> equally within the group. (Mil)</li> <li>• I like to be a visualizer because I can <i>systematically collect information from friends by using mind mapping</i>. (Prea)</li> <li>• I know how to <i>assign work in the group equally</i>. (Nuni)</li> <li>• We were <i>systematically</i> responsible for our role. (Pae)</li> <li>• I like the way GRS helped us to read <i>step-by-step</i>, which was very helpful in prioritizing tasks. (Achi)</li> <li>• I think <i>step-by-step</i> more than before, and I can <i>manage</i> my ideas better. (May)</li> <li>• I think the limited timeframe made me think <i>systematically</i> because the time-spending should be worth it. (Irin)</li> </ul>
<b>Analytical</b>	<ul style="list-style-type: none"> <li>• GRS helped me <i>analyze</i> the information and compare it with my friends. (Mil)</li> <li>• When receiving many ideas from the group, we have more meaningful information to <i>analyze and synthesize</i>. (Prea)</li> <li>• I think GRS made me deeply <i>think in details</i> in order to discuss with group members. (Nuni)</li> <li>• GRS helps me <i>find the connection</i> between the content from the reading passage and the thing in daily life. (Palmy)</li> <li>• We <i>analyzed</i> the information while performing our role. (Pae)</li> <li>• GRS made me be <i>more analytical</i> because I did not believe the information immediately. (Achi)</li> <li>• Initially, GRS forced me to ask a question in the group, which I had to <i>think about the gap or the specific ideas</i> that seems unclear to me. (Waew)</li> <li>• I <i>think more than before</i>, especially how to convey the message to other group members. (May)</li> <li>• I <i>think more than before</i>. (Noey)</li> <li>• I think my critical thinking is increased because I think <i>of a cause-effect relationship</i> more than before. (Irin)</li> </ul>
<b>Confident</b>	<ul style="list-style-type: none"> <li>• I think I am <i>more confident</i> in speaking in the group particularly speaking in my mother tongue. (Prea)</li> <li>• When adding a reading alone session before GRS, it makes me even more effective because I agree that everyone can be both clarifier and questioner. To do this, some friends who have ideas will be <i>confident</i> to talk it out. (Nuni)</li> <li>• I was very <i>confident</i> when doing what I am good at. (Waew)</li> <li>• I think I support <i>friends' confidence</i> by asking constructive questions. (May)</li> <li>• I gained <i>more confidence</i> in showing my idea. (Noey)</li> <li>• I was not an outstanding person, but GRS urged me <i>to speak more</i>. (Irin)</li> </ul>

Table 6: Aspects of CT in Thai university participants from the semi-structured interview

Aspects of CT	Interview Excerpts (Interviewees)
<b>Judicious</b>	<ul style="list-style-type: none"> <li>• I would <i>not make an immediate decision</i> on specific issues unless I feel I have the complete information. (Mil)</li> <li>• I think that when reading with friends, the group can <i>cover all aspects</i>. (Palmy)</li> <li>• We made a mistake about the step of GRS, so we need to <i>be more deliberate about GRS procedures</i>. (Pae)</li> <li>• I think I am more <i>judicious</i> than before; for example, I will read through the passage as preparation for GRS. (May)</li> <li>• I do <i>not believe things immediately</i>, but I need to analyze it more than before. It is more than summarizing the text. (Irin)</li> </ul>
<b>Open-minded</b>	<ul style="list-style-type: none"> <li>• I think my CT increased from GRS because it makes me <i>be neutral</i> about the issues and be <i>more open to other ideas</i> from friends. Also, it makes me think deeply. (Mil)</li> <li>• During GRS, <i>it is okay if the group members understand differently</i> because it is about their interpretation. (Prea)</li> <li>• I <i>listened to and accepted the group member's</i> ideas more than before. (Nuni)</li> <li>• My group summarized the information based on <i>the newly formed idea collected from all group members</i>. (Palmy)</li> <li>• When searching for the story to connect with the reading passage, <i>we open for a wider perspective</i>. (Pae)</li> <li>• I summarized not only the content of the reading passage but my <i>friends' opinions because it was worth to share</i>. (Achi)</li> <li>• <i>The same thing can be seen differently</i> depending on how information was presented and interpreted. (Noey)</li> </ul>
<b>Inquisitive</b>	<ul style="list-style-type: none"> <li>• When receiving information, I felt <i>curious</i> to know more, and I decided to ask questions. (Prea)</li> <li>• I think that <i>everyone was inquisitive</i> about the reading passage; however, the only questioner can ask. Thus, I think the role of the <i>questioner</i> can be anyone. (Nuni)</li> <li>• Initially, we felt of being forced to ask the question initially. Later on, we automatically questioned because we <i>want to know more</i>. (Pae)</li> <li>• GRS made me see everything interesting, and I <i>want to learn more</i>. (May)</li> </ul>

The qualitative results obtained from the semi-structured interview highlighted the roles of GRS in promoting critical thinking ability in Thai university participants. More precisely, Thai university participants indicated that GRS helped facilitating their thinking skills. That is, group reading boosted confidence in, and understanding of reading materials; thereby, promoting thinking more sensibly and analytically. These findings also showed that Thai university participants could manage their thinking more effectively and welcomed different thoughts and ideas. Overall, the

results of the current study suggest the benefits of GRS in promoting critical thinking through reading activities.

#### **4.2. Thai EFL university learners' perceptions of GRS**

The second purpose of the study was to explore participants' perceptions of the group reading strategy for developing critical thinking skills. The logbook entries and the ten transcriptions of the semi-structured interview were collected from the participants during and after GRS, respectively. The content was transcribed and then translated into English and verified by an expert and a native speaker. GRS was defined as collaborative learning, and the learners can mutually construct an understanding as an active learning. The logbook and semi-structured interview data were coded and checked through several readings to develop theoretical themes and aspects, thereby validating the themes and increasing the reliability of the current findings.

##### **Results of the logbook writing**

Qualitative results obtained from the logbook were analyzed and coded into two themes: collaborative learning and active learning based on the underlying concepts of GRS. Table 7 shows some excerpts of Thai university participants' perceptions of the GRS.

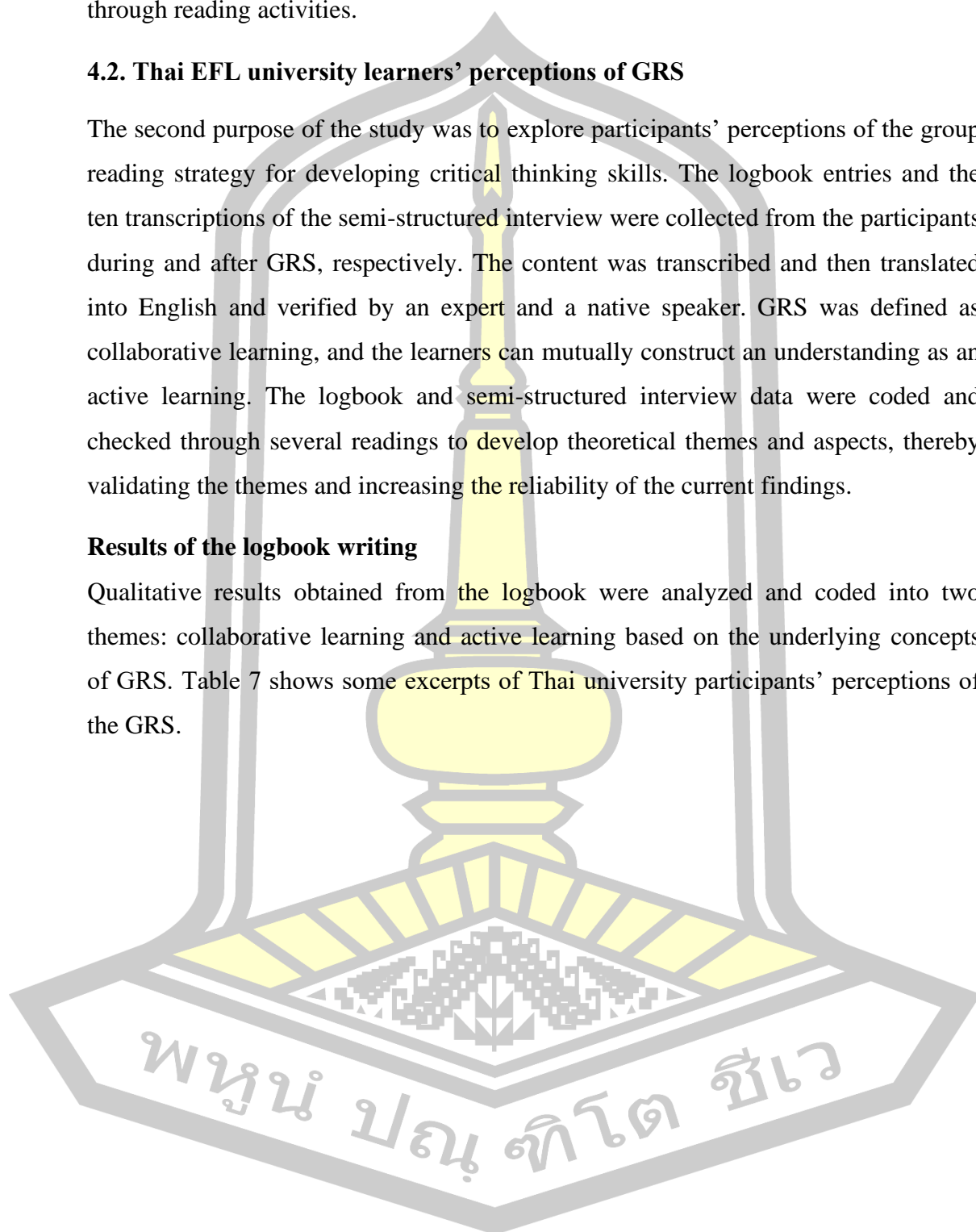


Table 7: Thai university participants' perceptions of GRS

Participants' perceptions	Logbook writings (Writers)
<b>Collaborative learning</b>	<ul style="list-style-type: none"> <li>• I know how to work with other people, and I <i>gained more understanding from my friend's explanation</i>, especially in the part that I did not fully understand. (Fang)</li> <li>• It makes me learn to <i>allocate and share the duties equally within the group</i>. (Ernst)</li> <li>• We can <i>help each other</i> to clarify the information and find the meaning of words. (New)</li> <li>• The group can examine the main idea of the text <i>together</i> and conveys it in a simple form. (Chat)</li> <li>• <i>Asking friends the questions help me</i> understand the reading passage better. (Bibi)</li> <li>• <i>My group members helped me</i> conclude the reading passage. (Ai)</li> <li>• <i>We supported one another's ideas</i>, helped to analyze difficult parts, and provided new insights for one another. (Kao)</li> <li>• I <i>exchange information with friends</i> after reading, which helped me understand clearer. (Lufy)</li> <li>• The <i>group members shared experiences</i>, and I think the process of GRS is good. (Song)</li> <li>• We understand more from <i>friends' sharings</i>. (Hai)</li> </ul>
<b>Active learning</b>	<ul style="list-style-type: none"> <li>• I am more creative and <i>active</i>. It is challenging to make it best with a limited timeframe. We need to help one another to survive. (Prang)</li> <li>• The way we talk after reading helps us to <i>use the brain to synthesize the information</i>. It makes me <i>take my responsibility</i> and concerned about what I was reading. (Nidnoy)</li> <li>• A number of skills occurred <i>at the same time</i> during GRS, such as communication skills, socialization skills, friendship, speaking skills, and brainstorming skills. (Wut)</li> <li>• The new issues of the reading passage make it more <i>interesting</i>. (Bil)</li> <li>• I <i>read faster</i> through the passage, searched for the keyword, and explained to my group members. (Ai)</li> <li>• I think asking the question makes my group members <i>actively participated</i> in GRS as they need to look for the answer. (Kao)</li> <li>• I <i>actively contributed</i> a lot during GRS such as reading, questioning, and answering (Sao)</li> <li>• I can <i>maximize my fast reading skills</i>. (Aew)</li> <li>• It made me <i>not lazy to read</i>. (Susi)</li> <li>• GRS makes all group members <i>actively shared</i> their ideas. (Hai)</li> </ul>

The results of the current study showed that Thai university participants viewed GRS in different ways. First, results indicated that GRS encouraged group members to work collaboratively. This result showed that participants could exchange their perspectives with other members, and they could learn from others. These findings indicated that GRS supported collaborative learning environments.

The current findings also showed that GRS engaged Thai university participants to read dynamically and effectively. That is, GRS encouraged participants to ask



questions and seek responses to such interrogations. Indeed, GRS highlighted active learning environments and provided support to student-centered contexts.

### Results of the semi-structured interview

Before the analysis, the qualitative data obtained from the semi-structured interview were coded into two themes: collaborative learning and active learning, based on the underlying concepts of GRS. The content was transcribed and translated into English, which was checked by two experts, both an Thai English teacher and a native speaker of English. As such, the reliability was confirmed, and the content was validated. The findings of the current study were shown in Table 8.

Table 8: Thai university participants' perceptions of the GRS

Participants' perceptions	Interview Excerpts (Interviewees)
Collaborative Learning	<ul style="list-style-type: none"> <li>• I have a concept about group reading before. It is slightly different from my thought. I like to be the leader because I think it feels like me. I try to initiate the ideas and wait for my <i>friend's supportive ideas</i>. I think it covers all points of ideas. (Mil)</li> <li>• GRS makes me knowledgeable, gains more understanding of the passage. We can <i>synthesize the data more than before, especially when knowing more from friends</i>. (Prea)</li> <li>• It makes me learn <i>how to manage and share the duties equally within the group</i>. I also learn how to ask specific questions from general information. (Nuni)</li> <li>• GRS make me be with friends and <i>understand the content from friends</i> before being able to perform my role. (Palmy)</li> <li>• In the beginning, it is very confused because GRS was a new concept for me. After a few times, I was familiar with it. I like <i>the way the group members sharing ideas because it senses of fulfilling</i>. (Pae)</li> <li>• I used to have experiences about reading in the group; however, the difference was that there had not any particular roles. To do GRS, I like the way <i>we helped one another to analyze the content. Sometimes, we did understand, but having ideas from friends made it even more explicit</i>. (Achi)</li> <li>• I had never experienced GRS before. I like to be the summarizer the most. <i>GRS is good when friends help to share ideas</i>. (Waew)</li> <li>• I used to think that GRS may not work in the beginning. When I understand it truly, I found that it helps me a lot <i>because when exchanging knowledge with friends, it opened my perspective from friends' experiences</i>. (May)</li> <li>• I had never known anything about GRS at all. Once I get to know it, it is perfect because my friends shared something that is far from my perspective. In the beginning, I was struggling. Later, it is better because I understand the step more. GRS is excellent because I can tell their thought, and <i>my friends can exchange experiences and ideas</i>. It is like a peer-teaching. (Noey)</li> <li>• I never know GRS before. The traditional way is to read with friends and discussion without employing any roles. <i>It is good because I spend less time reading, and we have more time analyzing and discussing</i>. I like the way <i>people have the sharing of their ideas</i>. When coming together, it created something new. (Irin)</li> </ul>

Thai university participants have perceived GRS as a collaborative learning method. To illustrate, GRS comprises different roles, each of which provokes other participants' thoughts and interpretations. The results also showed that GRS allowed participants to apply reading content, take ownership of their learning, and collaborate. Indeed, the results suggest that through collaboration and inquiry, participants can cultivate problem-solving, critical thinking skills, learning engagement, and intrinsic motivation. To conclude, Thai university participants had a constructive perception of GRS on their critical thinking.

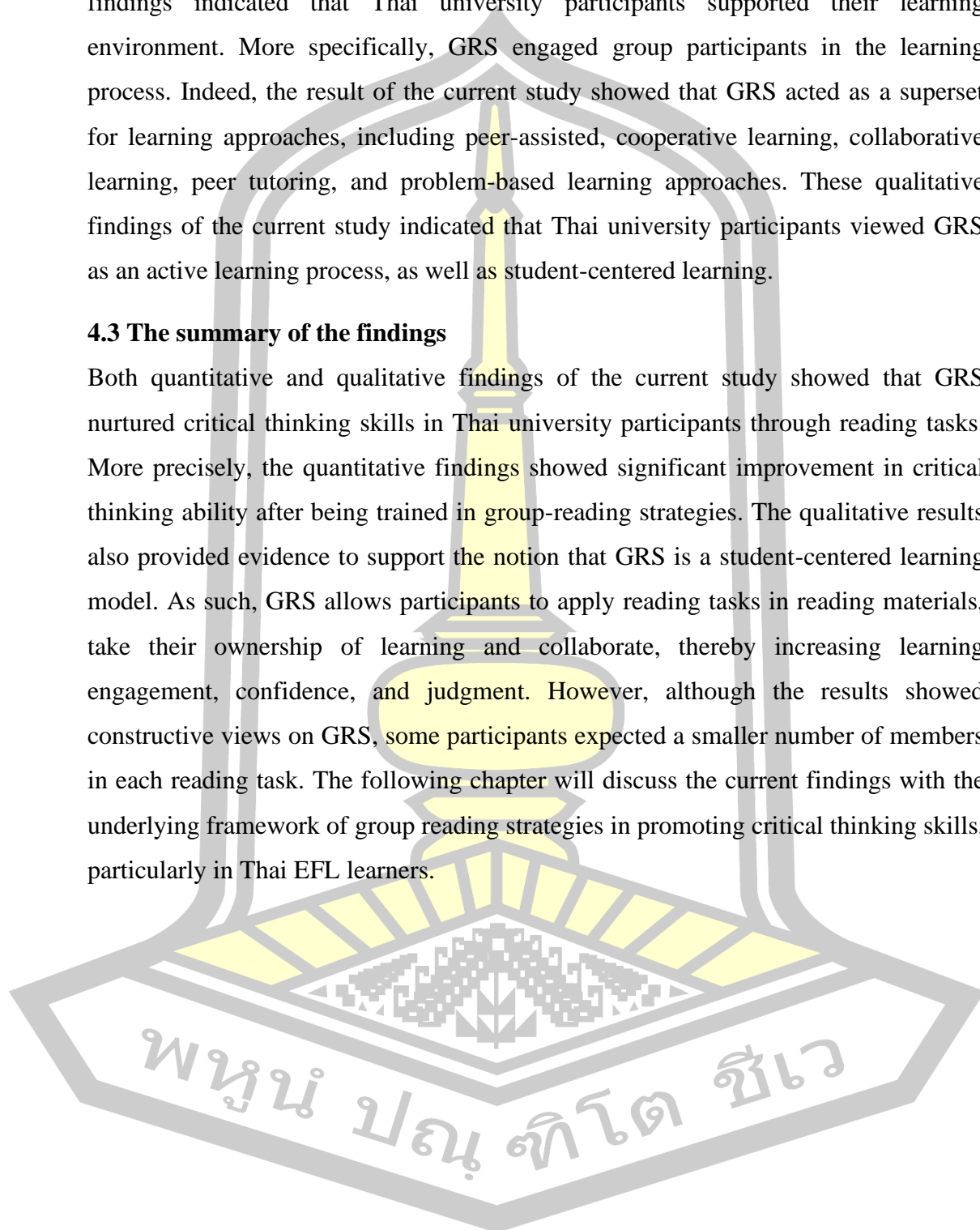
Table 9: Thai university participants' perceptions of the GRS

Participants' perceptions	Interview Excerpts (Interviewees)
Active Learning	<ul style="list-style-type: none"> <li>• The summarized information from friends was clear enough; however, the questioner needed to ask a question. <i>It urges us to think of out of the passage to be able to ask the question and make the GRS procedure flow smoothly.</i> (Mil)</li> <li>• I think the passage was quite difficult for me, and <i>I was struggling trying to get the meaning of the passage actively.</i> (Prea)</li> <li>• I learn how to convey the message and make other group members understand. <i>I think in detail in order to be able to discuss it with friends.</i> (Nuni)</li> <li>• Though we were informed about rotating the role, we still fought with one another <i>to take the favourite role as we can do it best.</i> (Palmy)</li> <li>• It is much better than I read alone, in any case. I like the role of connector the most because I felt impressed by it. I like the way that group consisting of six people because of <i>several ideas and issues arising from the discussion.</i> (Pae)</li> <li>• Before we read the passage, we do not have to question what was written. However, GRS provided <i>more opportunities to ask questions</i> out of the content. Personally like the role of connector because it opens a new world for me. (Achi)</li> <li>• While timing, I had to <i>attentively pay attention to all group members</i> in order to get the message. (Waew)</li> <li>• I <i>enjoyed working in a group</i> because each of us can support one another. I think GRS is good, and <i>I felt so proud</i> of myself being able to connect the passage with other things. (May)</li> <li>• I just watched YouTube videos about plastic, and the following day I was assigned to about plastic in the ocean. <i>I felt so connected</i> with the passage. (Noey)</li> <li>• My group was very <i>active</i> because we can finish everything before the allocated time. The given time was about 15 mins, but we can finish it within 10 mins. (Irin)</li> </ul>

Table 9 shows the Thai university participants' perceptions of GRS. The overall findings indicated that Thai university participants supported their learning environment. More specifically, GRS engaged group participants in the learning process. Indeed, the result of the current study showed that GRS acted as a superset for learning approaches, including peer-assisted, cooperative learning, collaborative learning, peer tutoring, and problem-based learning approaches. These qualitative findings of the current study indicated that Thai university participants viewed GRS as an active learning process, as well as student-centered learning.

#### **4.3 The summary of the findings**

Both quantitative and qualitative findings of the current study showed that GRS nurtured critical thinking skills in Thai university participants through reading tasks. More precisely, the quantitative findings showed significant improvement in critical thinking ability after being trained in group-reading strategies. The qualitative results also provided evidence to support the notion that GRS is a student-centered learning model. As such, GRS allows participants to apply reading tasks in reading materials, take their ownership of learning and collaborate, thereby increasing learning engagement, confidence, and judgment. However, although the results showed constructive views on GRS, some participants expected a smaller number of members in each reading task. The following chapter will discuss the current findings with the underlying framework of group reading strategies in promoting critical thinking skills, particularly in Thai EFL learners.



## CHAPTER V

### DISCUSSION AND CONCLUSION

This chapter discusses the results of the current study to the underlying framework of GRS. It also offers a conclusion and limitation of the study. The chapter will end with recommendations essential for further studies.

#### 5.1 Discussion

##### 5.1.1 Influence of GRS in Thai EFL university learners' critical thinking

The current study showed that the Thai university participants' CT skills increased after being trained GRS. Both quantitative and qualitative analysis of the current study reveals that GRS enhances Thai university participants' critical thinking. More precisely, GRS facilitates Thai university participants developing some aspects of critical thinking more effectively than others. To illustrate, three critical thinking skills, e.g., *confident*, *systematic*, and *truth-seeking* characteristics, increased significantly. These results can be accounted for by the intrinsic features of GRS. First, GRS is an active learning approach that engages learners to read collaboratively. Precisely, participants work in groups towards the attainment of superordinate goals; labor is divided between group members, such that each individual takes responsibility for a different role or sub-goal; and individual contributions are pooled into a composite product to reach the shared goal.

The critical thinking skills in Thai university participants increased because of the intrinsic mechanisms of the GRS process, including preparation, reading engagement, and reaction. The first phase of the GRS technique requires the participants to read alone as a preparatory phase, which learners had an opportunity to preview the structure of the reading text, identify the signal word, and understand the undeveloped idea of the reading passage. The preparatory phase may help the participants to read systematically. Indeed, the preparatory phase has required the participants to prepare for their roles. For example, the role of the connector must seek the relevant information to link with the reading passages in order to share with other group members. While seeking for the ideas connecting to the passage, participants were

cultivating their *inquisitive* skills. Participants also need to crosscheck the information, which generates *analytical* skills.

Next, the participants are required to perform GRS by taking their role or responsibility, questioning and clarifying, and concluding all information. As a task-based learning approach, participants require to solve the problem in which their problem-solving skills are refined. As a small group of participants and their nature of GRS, an individual actively distributes ideas, experiences, and perspectives into the group. Participants dynamically work in a team and collaborate in order to complete the tasks. Hence, peer-mediated learning helps participants to interactively brainstorm the ideas among the group members, in which the participants need to cover all relevant issues intentionally. During the discussion, participants may or may not agree with the ideas of other group members. By contrast, they may accept other ideas, which help to construct the *open-minded* skill. When receiving new ideas, participants need to verify the information, in which participants cultivate their *truth-seeking* and *judicious* skills. As such, the process of GRS enhances participants' critical thinking skills.

GRS could facilitate participants in developing critical thinking skills because of the peer-assisted learning techniques in strategic reading activities. Peer-assisted learning is cooperative learning in which participants work in small groups to accomplish shared goals. Participants with high language proficiency will work together with those with low language proficiency in solving reading tasks, therefore maximizing their own and each other's learning. Furthermore, individuals in group reading activities help increase strategic reading performance, reading comprehension, and fluency. Moreover, strategies included within this group reading activities cumulatively evaluate texts read, sequence information, summarize reading paragraphs or passages, detect main ideas, and predict and check outcomes. These activities thus underpin critical thinking skills in group reading members. The current findings support the previous claim of the impact of group reading strategies on promoting learners' critical thinking skills (Hove, 2011; Boardman et al., 2016; Vaseghi & Barjesteh, 2012; Wang & Seepho, 2017; Tung & Chang, 2009; Bedir, 2013).

Critical thinking skills could be cultivated through the GRS method because of the learning process. Indeed, GRS emphasizes participant activities and participant engagement in the learning process, which promotes active learning. Specifically, this instructional method includes many activities or tasks, such as collaborative reading, brainstorming, concept mapping, simulation, peer tutoring, and problem-based solving. As such, these activities of GRS require participants to use critical thinking skills, such as analysis, synthesis, and evaluation. This finding is in line with the previous research that GRS methods require learners to use higher-order thinking skills (Phakiti & Plonsky, 2018).

The growing confidence may also be a result of the GRS reaction. GRS emphasizes group interactions, which consist of group reading, discussion, interpretation, and judgment among group members. Therefore, during GRS, participants react with the passage, which can be positively or negatively. However, they would be able to back up their reaction or argument for reasons. This helps improve participants' confidence in their reasoning abilities. For example, the role of a leader had to allocate time for the other group member and made sure all members talked. During the GRS, after gathering the information, the leader needs to analytically summarize facts from the passage, as well as opinions from other notions within group members before presenting for the whole class. Such activities and reactions could also foster participants' critical thinking skills, i.e., *systematic*, *analytical*, *truth-seeking*, and *confident*, which are reciprocally constructed through group reading activities or tasks. This finding is consistent with previous studies (Zoghi, Mustapha, and Maasum, 2010; Changwong *et al.*, 2018; Yoosabai, 2008; Kasemsap and Lee, 2015; Vongkrachang, 2015)

Another explanation for the increased confidence may be due to active learning that acts as a superset for both peer-assisted learning and problem-based learning approaches. Accordingly, GRS helps participants develop flexible knowledge, effective problem-solving skills, collaboration skills, and intrinsic motivation, thereby increasing confidence in individuals. This result provides evidence to support previous studies that learners appeared to become hassle-free and more comfortable

working in teams (The Nation, 2016; Somdee & Suppasetsee, 2007; Singhanuwananon, 2016; Thovuttikul, Ohmoto, & Nishida, 2019).

Apart from the quantitative scrutiny, the analysis of the qualitative findings also provided support to the literature that GRS could foster Thai university participants' critical thinking. Regarding confidence, individual contributions are pooled into a composite product to ensure the accomplishment of the group. Indeed, each participant actively engages in group tasks. The following excerpts can evidence this claim:

“It makes me confident to share my ideas and ask the questions systematically.” (Susi)

“It helps me think out of the old mindset and makes me dare to speak with others.”

(View)

The qualitative analysis also revealed that GRS encouraged Thai university participants' critical thinking in terms of *systematic* and *truth-seeking* skills. This may be because GRS helps participants develop an understanding of reading materials and problem-solving skills through collaborations. Indeed, GRS helps individuals to take ownership of their learning, collaborate, and apply subject content in contexts. Through GRS, participants foster knowledge, metacognitive skills, learning engagement, and intrinsic motivation. This learning process cultivate learners' higher-order thinking. More specifically, GRS helps the participants to analyze a large number of ideas, to pay attention to the information detail, to interpret, and to re-tell information to another group member. The following excerpts of the logbook can support these findings:

“GRS helps me think systematically and helps me arrange the priority of the tasks during which GRS takes place.” (Manee)

“I can arrange the time for each person so that group reading is manageable.” (Tick)

“I received various ideas from the group member and can analyze them based on different points of view. To discuss with friends, it helps improve my interpretation skill as well as my speaking skills.” (Wirun)

“GRS makes me pay more attention to the details so that I could be able to analyze and explain to other group members.” (Yooyee)

The analysis of the semi-structured interviews also provided evidence to support that GRS enhanced critical thinking skills in Thai university participants:

“I like the way GRS helped us to read step-by-step, which was very helpful to prioritize tasks.” (A6)

“I can manage my ideas better, and I think the limited timeframe made me think systematically because the time-spending should be worth it.” (A8)

Likewise, the content analysis provided evidence to support that GRS fostered the participants to think more analytically, i.e., think deeply, find connections of the information and ideas, and critically think of the effect of the cause. This claim can be evidenced by the logbook writings as follows:

“I think GRS made me deeply think in details in order to discuss with group members.” (A3)

“GRS helps me find the connection between the content from the reading passage and the thing in daily life.” (A4)

“I think my critical thinking improved because I think of cause-effect relationships more than before.” (A10)

However, although GRS helped promote Thai university participants’ critical thinking skills, the statistical analysis revealed no significant increase in some characteristics of critical thinking skills, i.e., *open-minded*, *inquisitive*, *judicious*, and *analytical*. This phenomenon can be accounted for by the restrictions of the current study *per se*. That is, the length of the experiment was unexpectedly limited. Indeed, the experiment lasted six weeks instead of 12 weeks, as planned. Such a limited time did not allow participants to have exposure to GRS techniques.

To conclude, GRS could help promote critical thinking skills in Thai university participants, although some aspects of critical thinking were not statistically significant. More precisely, quantitative analysis revealed that GRS could enhance critical thinking skills, especially for *confident*, *systematic*, and *truth-seeking* characteristics of higher-order thinking skills. However, although the raw scores of the questionnaires showed an increase in Thai university participants’ critical thinking



skills, i.e., *analytical, inquisitive, judicious, and open-minded*, statistical significance did not exist.

### 5.1.2 Thai EFL university learners' perceptions of GRS toward CT

In response to research question 2, the analysis of the current findings showed that the participants showed numerous views of GRS in promoting critical thinking skills in Thai university participants. First, GRS reduces stress, anxiety, and depression, in which these factors are viewed as negative effects for learning (American College Health Association, 2016). GRS helps waive these negative factors and maximize learning outcomes. Within the comfort zone, the participants' potentials and challenges, problem-solving skills, and learning engagement eased group members. In short, collaborative learning helped lessen adverse learning factors and foster the interaction among the group members causing an ability to express ideas without anxiety. The qualitative result also showed that the learners perceived GRS as collaborative learning that they gained more comprehension while working in a group, and perceived that GRS was a good process in supporting one another's ideas, as evidenced in the logbook writing. Take this excerpt as an example:

I know how to work with other people, and I gained more understanding from my friend's explanation, especially in the part that I did not fully understand. The group members shared experiences, and I think the process of GRS is good. (Fang)

GRS also supports the learning environment and motivation. The previous studies showed that a learning environment and learning motivations are salient components for successful learning. While the teaching process and context can create a high impact on active learning (Nugroho, A., Rizal Akbar Zamzami, M., Ukhrowiyah, 2020; Auster & Wylie, 2006). The learning environment made the participants active and was in an appropriate learning atmosphere, which positively promotes critical thinking skills and disposition (Cheng & Wan, 2017).

Thai university participants also perceived GRS as an active learning approach. This notion is perhaps because the participants need to acquire information and knowledge from their peers instead of the teachers. While working in a group, many ideas were arising from different perspectives leading the ability to acquire new knowledge and ideas actively. As such, group members have become active, actively share and

contribute their ideas into a group, and be not lazy to read, as evidenced in the qualitative result as follows:

GRS makes all group members actively shared their ideas, I actively contributed a lot during GRS such as reading, questioning, and answering, and it made me not lazy to read. (Prang)

Moreover, cultural influence may also play an essential role in participants' perceptions. The previous study found that Thai people are likely to be collectivism in which they identified other people as in-group and out-group (Thovuttikul, Ohmoto, & Nishida, 2019). Thus, whenever they feel alone or individuated, they tend to keep quiet, leading to skepticism. On the opposite, Thai people feel more relaxed and enjoyed when it is in a group because they think it is a social activity. Since GRS allowed the participants to share ideas in groups collaboratively, they can have a group discussion in various aspects. Hence, when receiving supports from other group members, participants developed their confidence in contributions. The qualitative result evidenced this claim:

It makes me confident to share my ideas and ask the questions systematically. (Susi)

Time-allocation in each step of GRS may influence participants' perceptions. As mentioned in Chapter 3, each role shared within a limited time. The previous study showed that efficient participants seemed to be more efficient in time management while learning (B. S. Bloom, 1974). With the limited timeframe, GRS encouraged participants to spend time effectively by prioritizing the importance of the assigned task. When everything went step-by-step with the set timeframe, GRS would be more *systematic*. Thus, participants perceived themselves to be more *systematic*, as evidenced by the qualitative result:

GRS helps me think systematically and helps me arrange the priority of the tasks. (Manee)

Moreover, the types of assessment of GRS may also influence the participants' perceptions. During GRS, participants required to write the logbook. The logbook is the formative assessment helping participants to review and monitor their critical thinking skills and perceptions. By reviewing the reading passages and strategies, it

made them more *judicious* (Grosas, Raju, Schuett, Chuck, & Millar, 2016). This excerpt can evidence such claim:

GRS makes me judicious by carefully selecting the reasons to back up my argument.  
(Kai)

However, the current findings indicated that a smaller number of group members would be more effective. Reducing group members may offer a larger space for individual responsibility. Therefore, individual learners contribute to the shared goal. Such a concept leads to a revision of the previous model of GRS, resulting in the relationship shown in Figure 5.

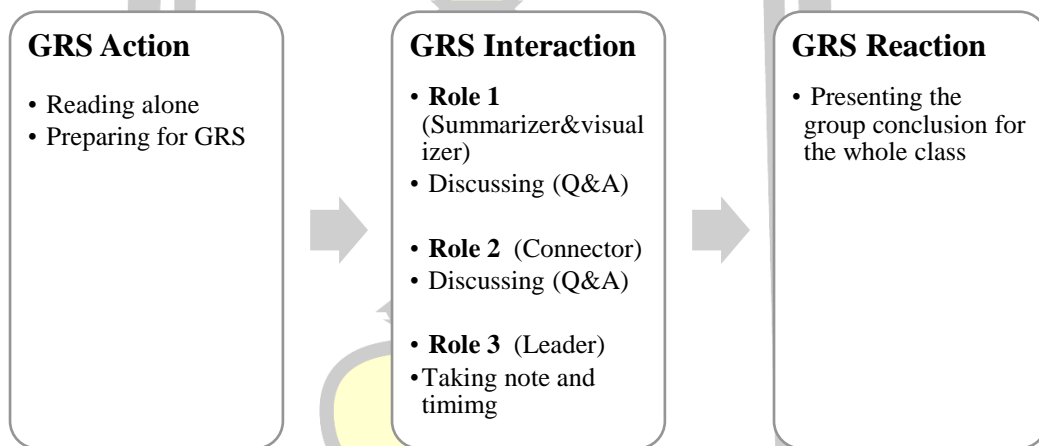


Figure 5: The new model of Group Reading Strategy

Figure 5 illustrates the new model of GRS. The three phases comprise GRS action, GRS interaction, and GRS reaction. There are only three group members in order to make GRS controllable and manageable, but six reading strategies still exist. GRS action is the preparatory stage that the learners are required to read individually, as well as prepare for their role. For example, after finishing reading alone, the role of the connector is required to search for the linkage between the reading passage with relevant information. Next, GRS interaction is the stage in which each role requires individual contributions to a shared goal. Then all group members collaboratively help to question and clarify the issues accordingly. The leader requires to allocate time for all roles, as well as taking notes. Finally, the last stage is the GRS reaction. The leader of each role requires to present the conclusion of the group for the whole

class. Note that the time allocating for each phase depends on the level of the learner's reading proficiency and the length of the reading passage.

To conclude, Thai university participants perceived GRS as collaborative learning and active learning. Collaborative learning helps reduce the participants' stress, anxiety, and depression during GRS, which helps maximize their learning outcomes. Then critical thinking was fostered during the interaction among group members. Also, the positive learning environment, as well as learning motivation, make the participants actively acquire innovative ideas causing critical thinking skills. Moreover, the influence of culture, time-allocated of each step, and type of assessment can also influence participants' perceptions.

## 5.2 Conclusion

The current study examined the influence of group reading strategy of Thai EFL university learners on critical thinking and explored learners' perceptions of the group reading strategy on critical thinking. The quantitative findings indicated that GRS could enhance Thai university's overall critical thinking, especially for *confident*, *systematic*, and *truth-seeking* characteristics. Indeed, some characteristics of critical thinking skills are cultivated before others dependent upon the contexts. Overall, the intrinsic mechanisms of the GRS process, which include peer-assisted learning and collaborative learning approaches, could influence Thai university participants' critical thinking.

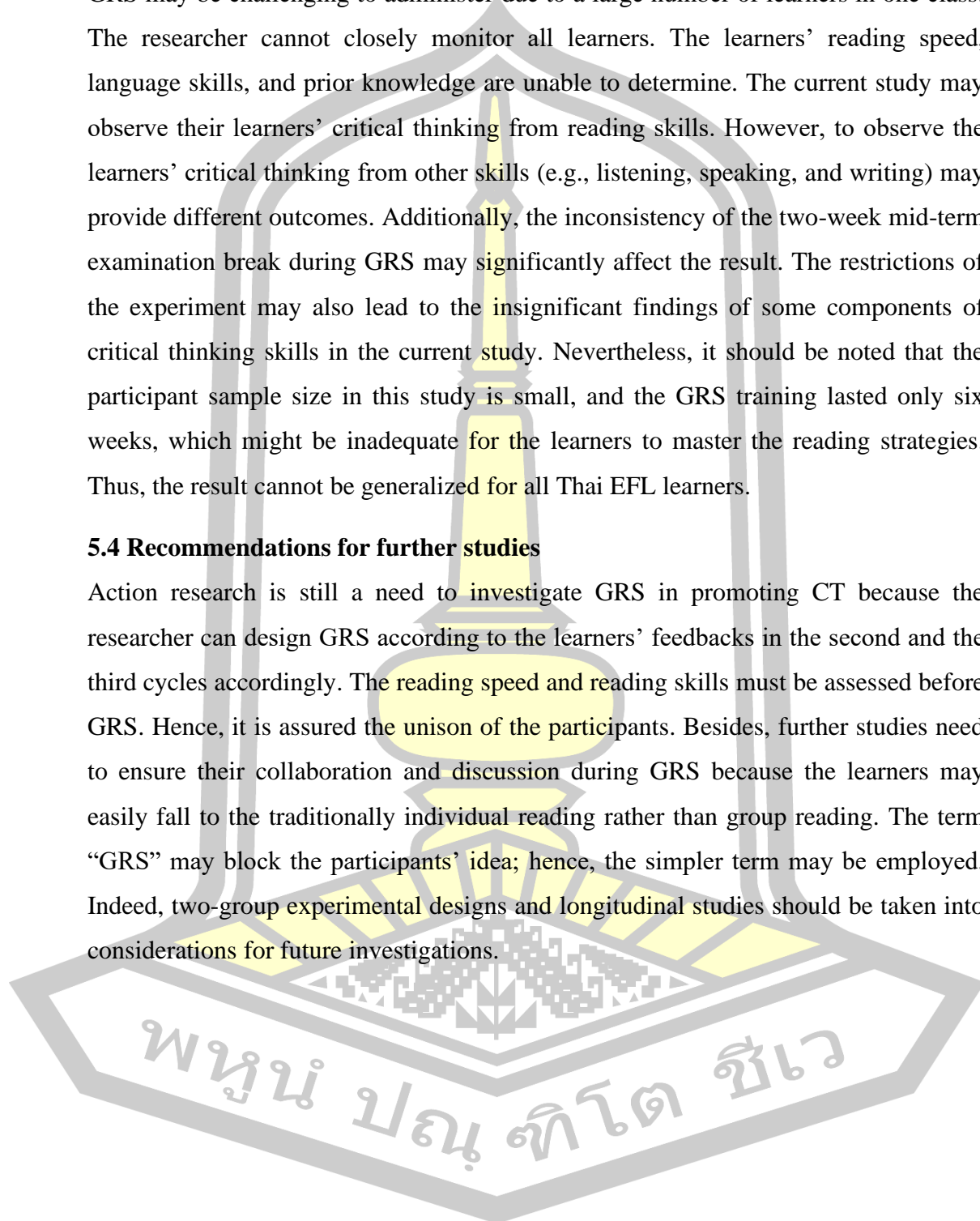
The qualitative analysis also emphasized the constructive outcome of the GRS method in Thai university participants' critical thinking skills. More precisely, the content analysis revealed that Thai university participants perceived GRS as a peer-assisted learning, collaborative learning approach, which can decrease adverse learning factors, therefore nurturing learning outcomes and constructing critical thinking skills. The learning environment and motivation can also influence participants' critical thinking skills. Additional influences can be observed through culture, time-allocated for the GRS process, and types of assessment. To conclude, GRS helps enhance critical thinking skills and develop an active learning approach for Thai EFL university learners.

### **5.3 Limitation of the study**

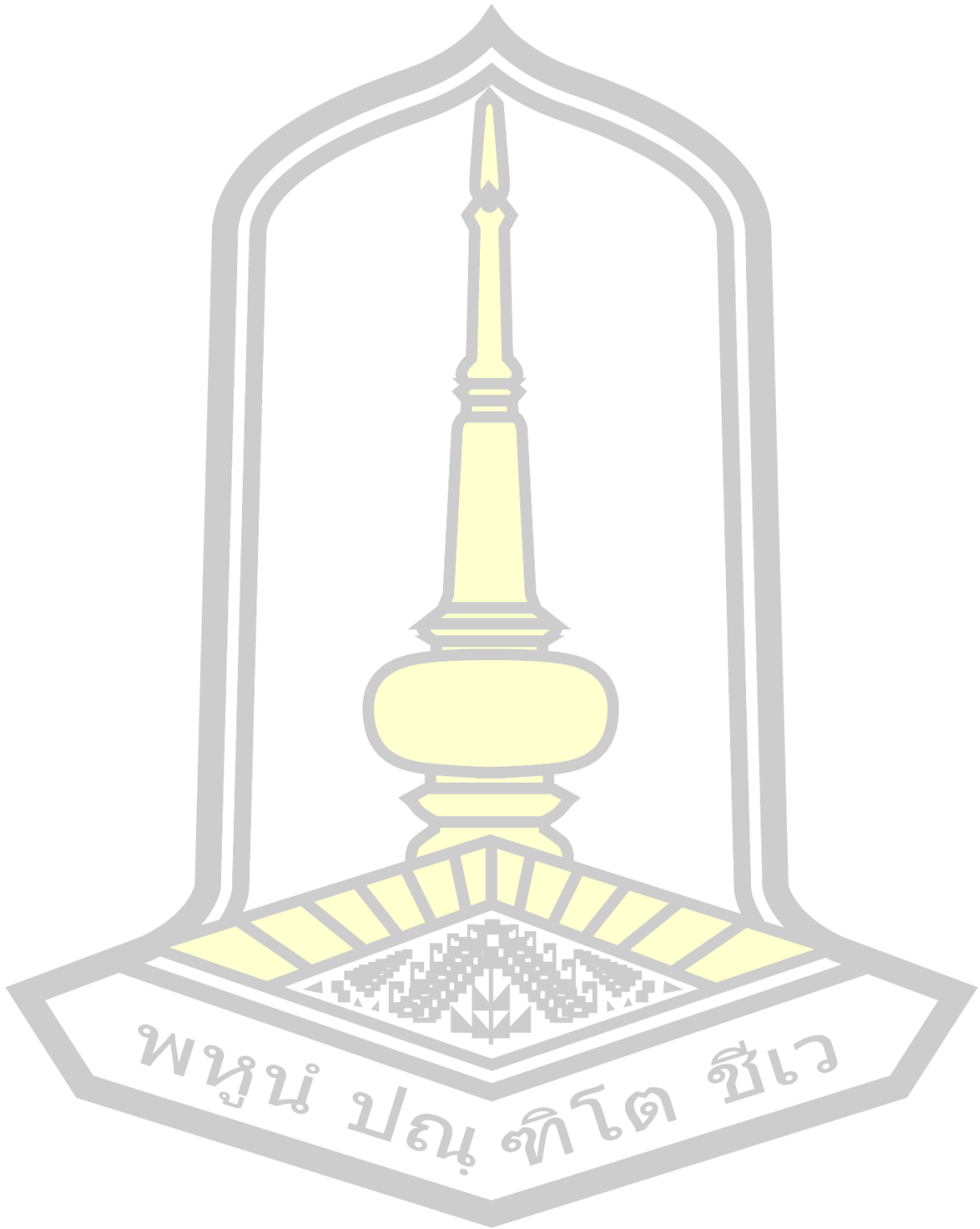
GRS may be challenging to administer due to a large number of learners in one class. The researcher cannot closely monitor all learners. The learners' reading speed, language skills, and prior knowledge are unable to determine. The current study may observe their learners' critical thinking from reading skills. However, to observe the learners' critical thinking from other skills (e.g., listening, speaking, and writing) may provide different outcomes. Additionally, the inconsistency of the two-week mid-term examination break during GRS may significantly affect the result. The restrictions of the experiment may also lead to the insignificant findings of some components of critical thinking skills in the current study. Nevertheless, it should be noted that the participant sample size in this study is small, and the GRS training lasted only six weeks, which might be inadequate for the learners to master the reading strategies. Thus, the result cannot be generalized for all Thai EFL learners.

### **5.4 Recommendations for further studies**

Action research is still a need to investigate GRS in promoting CT because the researcher can design GRS according to the learners' feedbacks in the second and the third cycles accordingly. The reading speed and reading skills must be assessed before GRS. Hence, it is assured the unison of the participants. Besides, further studies need to ensure their collaboration and discussion during GRS because the learners may easily fall to the traditionally individual reading rather than group reading. The term "GRS" may block the participants' idea; hence, the simpler term may be employed. Indeed, two-group experimental designs and longitudinal studies should be taken into considerations for future investigations.



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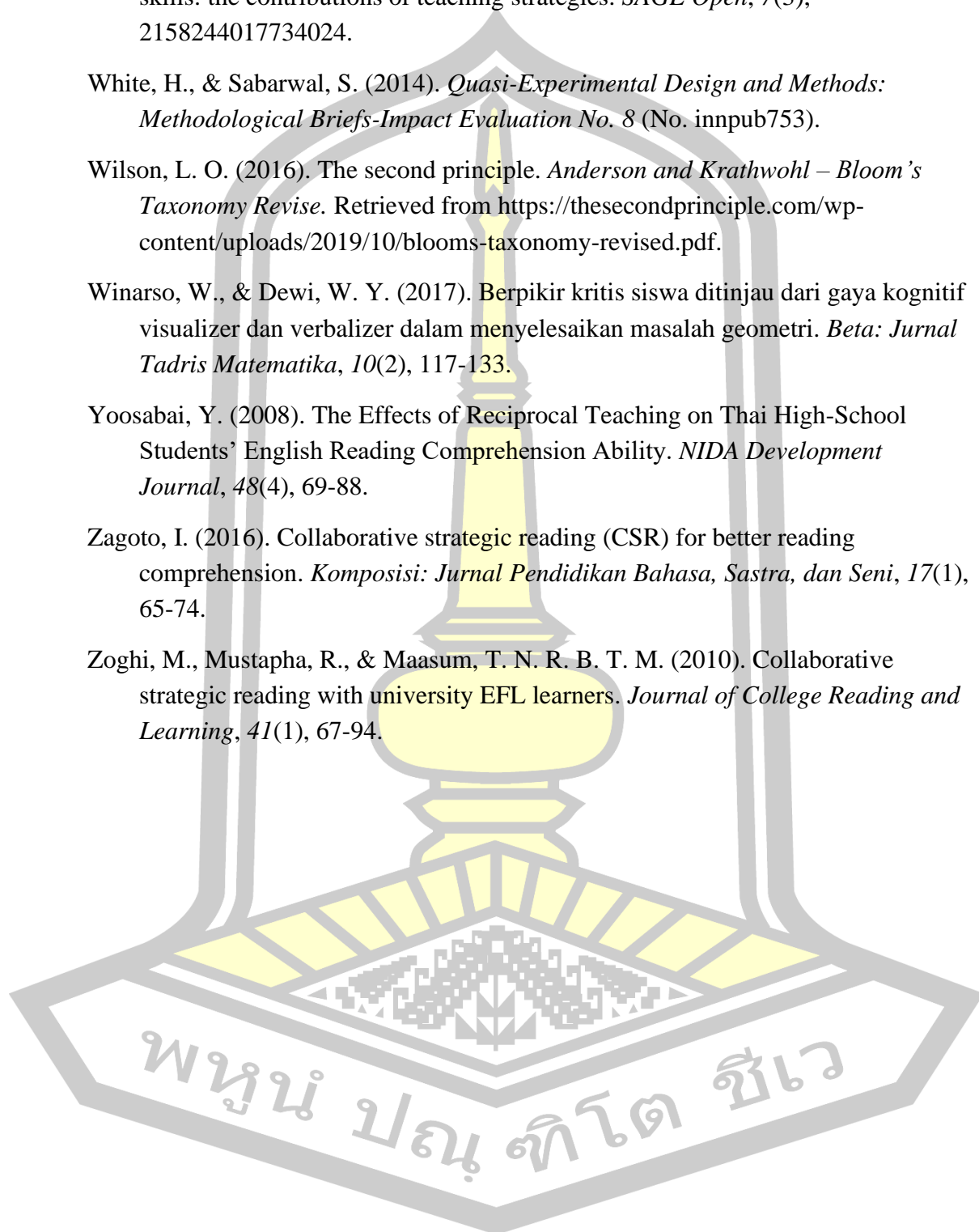
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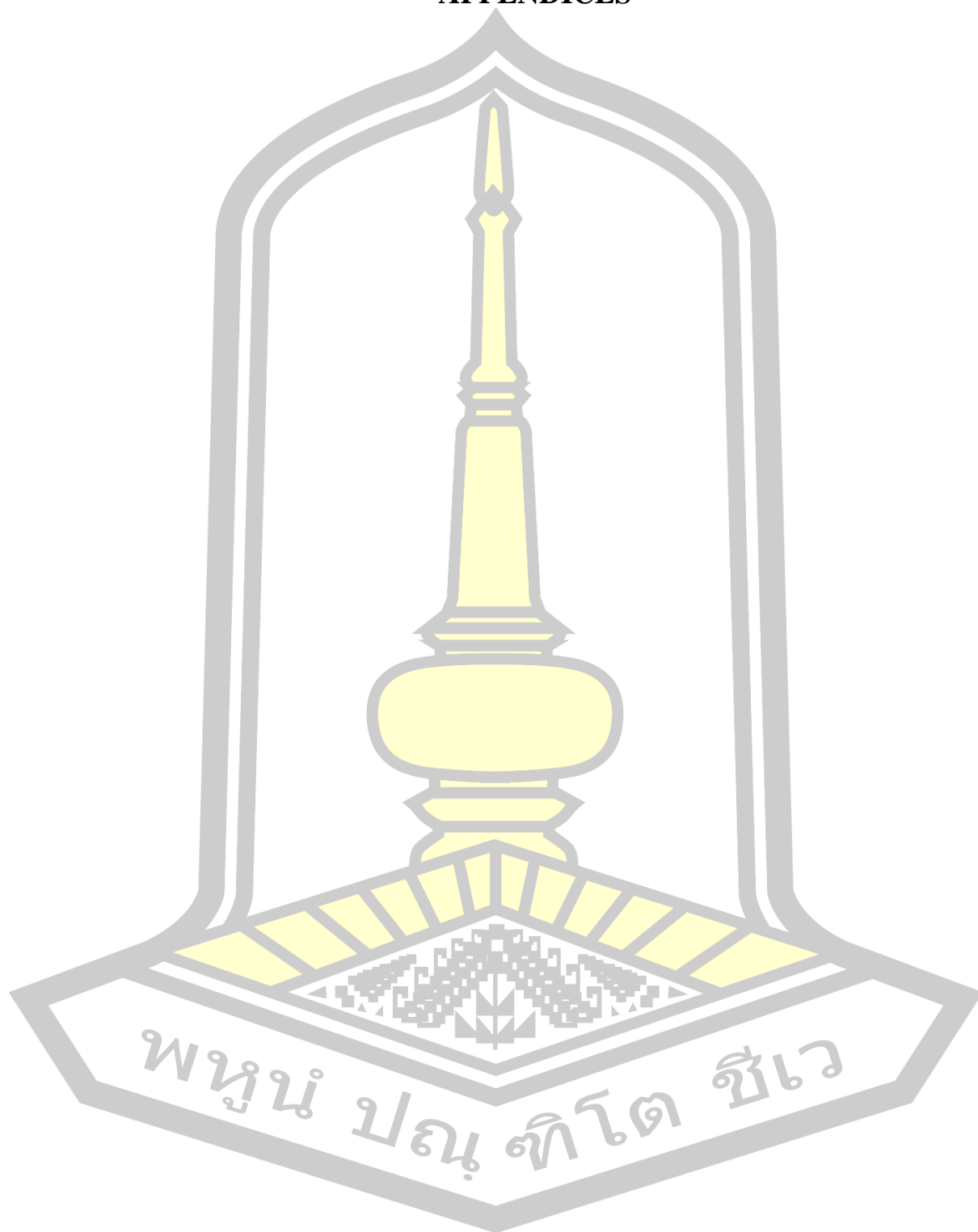
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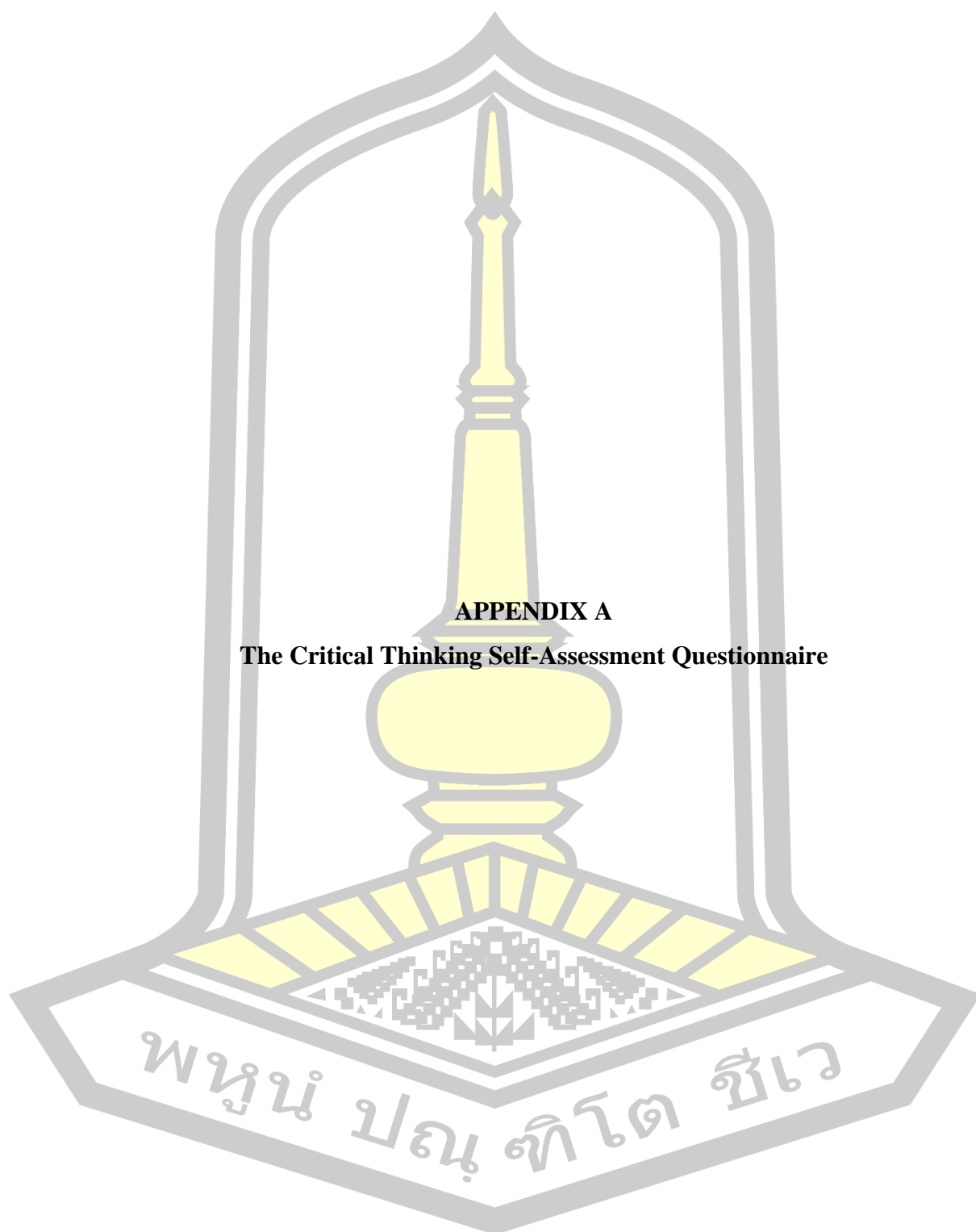
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**APPENDICES**





**APPENDIX A**

**The Critical Thinking Self-Assessment Questionnaire**



## The Critical Thinking Self-Assessment Questionnaire

This questionnaire is designed to gather participants' information about critical thinking that is used for the research entitled, "Using Group Reading Strategy to Promote Critical Thinking in Thai EFL university Learners. Your personal information will be strictly confidential, and will not be communicated to any person outside the research team. The data will be stored in electronic files for later analysis and will be destroyed after two years.

- I consent to disclose my information only for the purposes of research
- I do not consent to disclose my personal data

**Part 1. General Information:** Please write down your general information.

- 1.1 Gender  Male  Female  Others
- 1.2 Faculty  HUSO  Others, \_\_\_\_\_
- 1.3 Major \_\_\_\_\_
- 1.4 GPA \_\_\_\_\_
- 1.5. How many hours do you study English per week? \_\_\_\_\_ hours/ week

**Part 2. Critical Thinking Self-Assessment:** There are 35 items within this critical thinking self-assessment. Please rate each of the items by ticking (✓) the number from 1 to 5 that best represents yourself the most.

- 1 means strongly disagree
- 2 means disagree
- 3 means undecided
- 4 means agree
- 5 means strongly agree

Item	Critical thinking skills	1	2	3	4	5
<b>Systematic</b>						
1	I think I am well-organized.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	I think I am good at planning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	I think I am good at time-management.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	When receiving a lot of information, I like to classify them into categories.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	I think I prefer to do something step by step.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Judicious</b>						
6	I like to pay attention to details.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	Before sharing some information with others, I like to cross-check it first.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	I like to bring about the pros and cons before judging something.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	I think I try to understand things fully before sharing the information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	I think I am careful when thinking, speaking, and taking action.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Analytical</b>						
11	I think I know if the information received is first-hand or second hand by using my knowledge and experience.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	I think I am good at linking new information with my prior knowledge.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	I think I am good at identifying the cause-effect relationship of issues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	I think I am good at summarizing and interpreting the received information into my own words.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	I think I am an analytical person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Confident</b>						
16	I think I am confident with my reasoning abilities, even if people do not agree with me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17	I think I am somewhat shy about asking questions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	(Revised) If understand the reading text wrongly, I can learn from it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	(Revised) I am not afraid of showing my opinion about the reading text.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	I like to express my thoughts and feelings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<b>Open-minded</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
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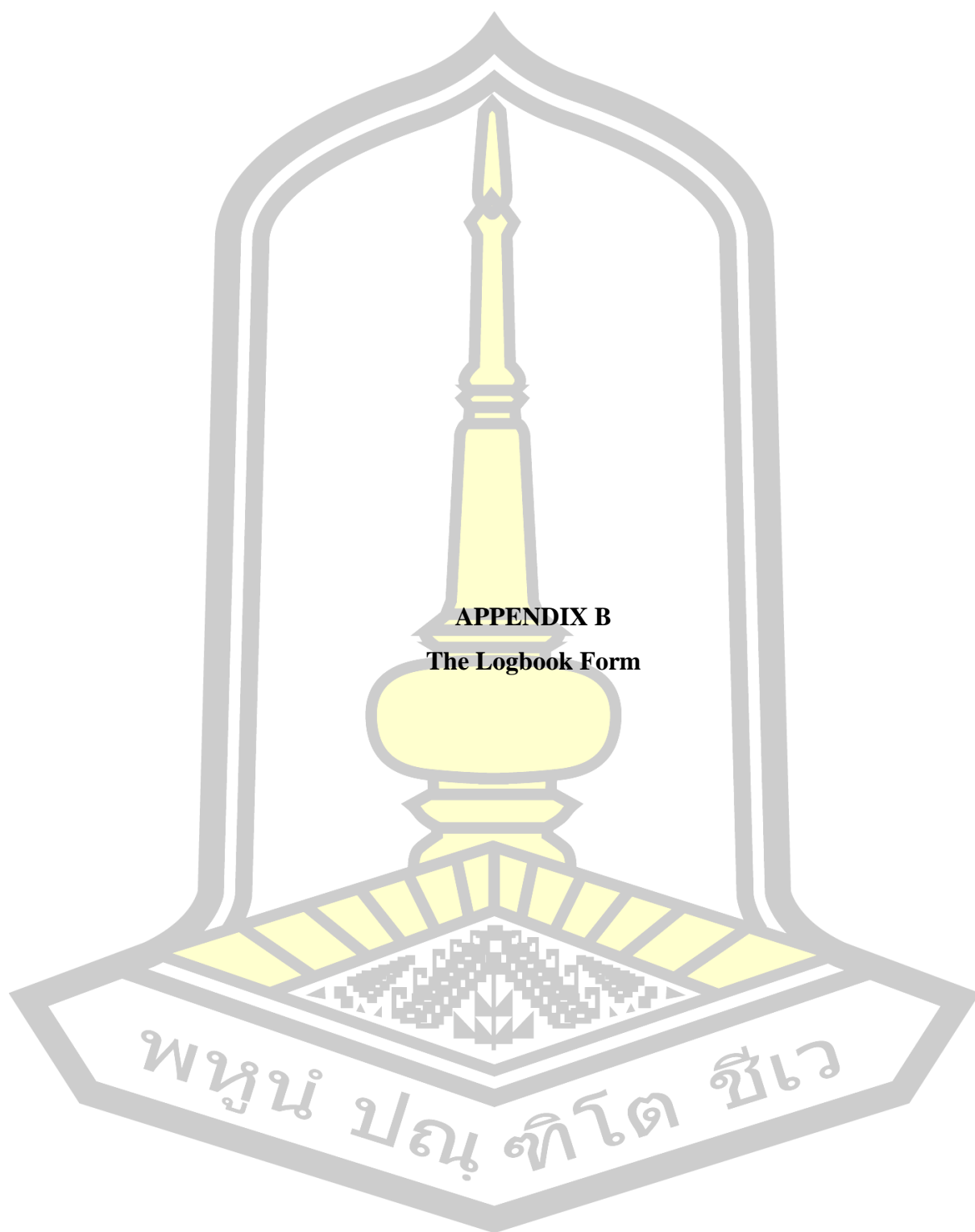
21	I think I accept other people's opinions and learn from them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22	I think it is all right when people do not agree with me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23	(Revised) I think it is not necessary to compare myself with other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24	I think I have no ego.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25	I think I am tolerant.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<b>Truth-seeking</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
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26	I like to seek for the truth after receiving some information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27	I do not believe in some information unless I have evidence.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28	I think I am observant.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29	(Revised) I always have clear evidences to back up my reason.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30	I like to search for information through various sources.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<b>Inquisitive</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
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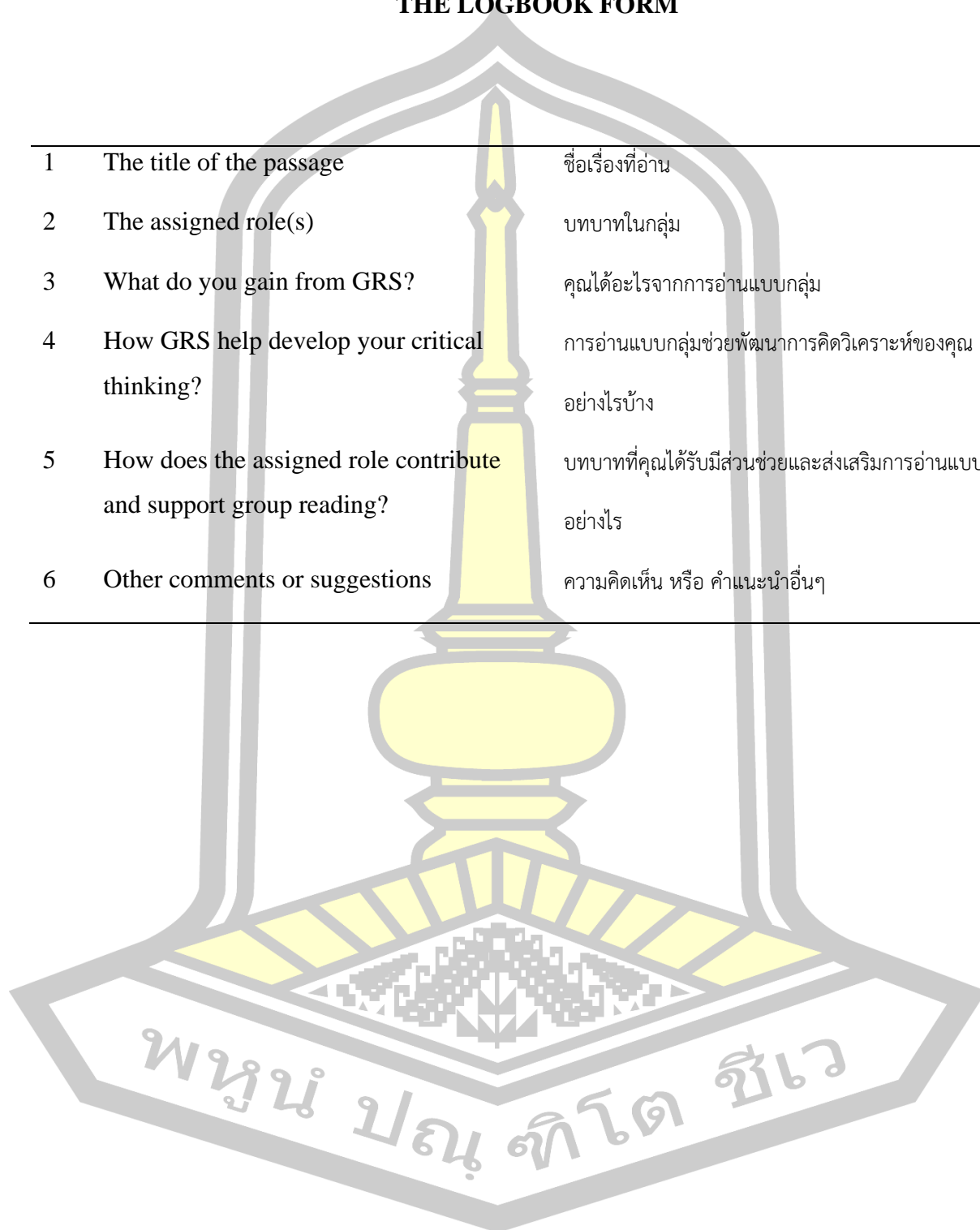
31	When receiving some information, I am curious to know more.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32	When receiving some information, I like to ask for clarification.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33	I think I like to learn new things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34	I want to understand information clearly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35	I think it is my nature to be inquisitive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

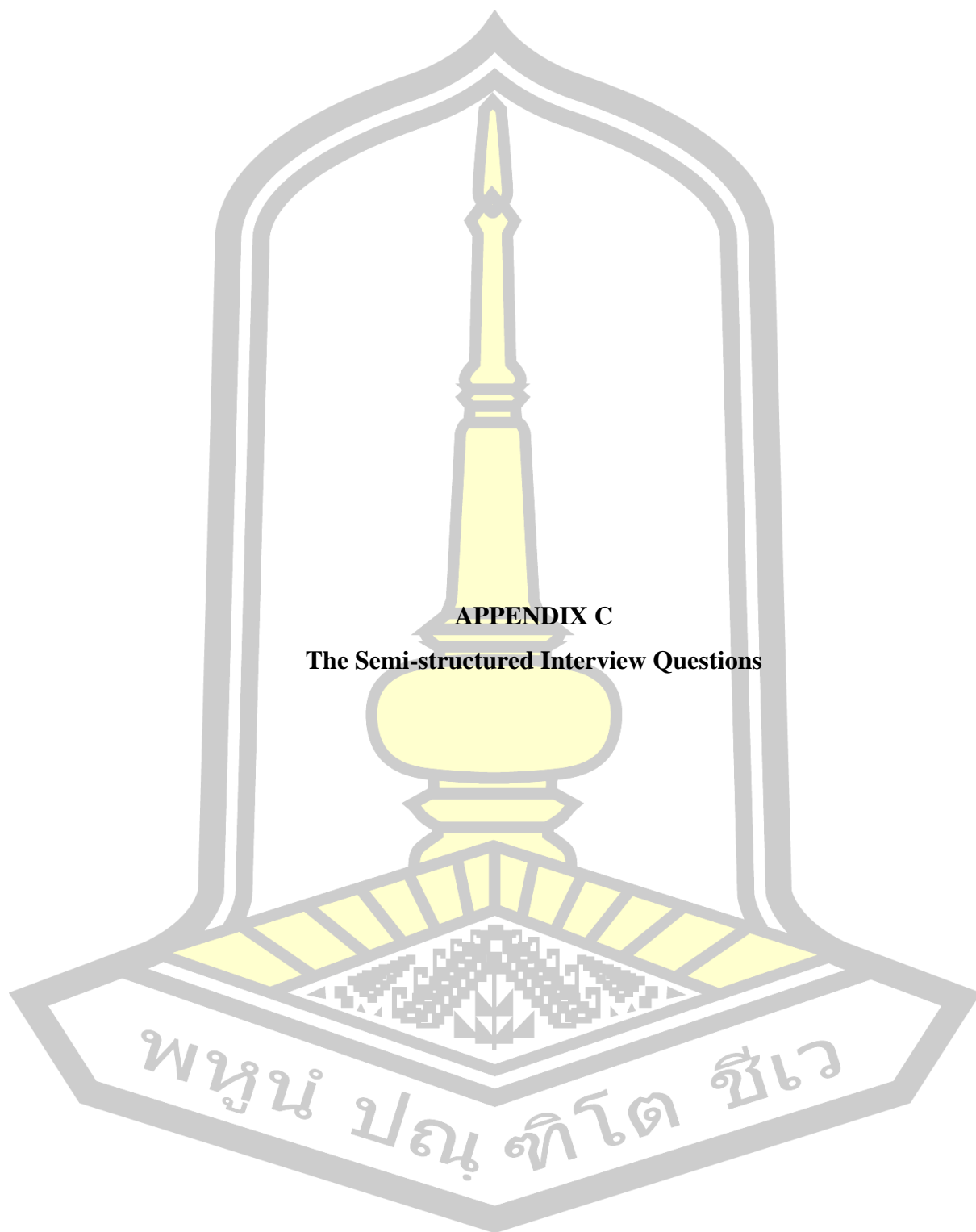


**APPENDIX B**  
**The Logbook Form**

### THE LOGBOOK FORM

1	The title of the passage	ชื่อเรื่องที่อ่าน
2	The assigned role(s)	บทบาทในกลุ่ม
3	What do you gain from GRS?	คุณได้อะไรจากการอ่านแบบกลุ่ม
4	How GRS help develop your critical thinking?	การอ่านแบบกลุ่มช่วยพัฒนาการคิดวิเคราะห์ของคุณ อย่างไรบ้าง
5	How does the assigned role contribute and support group reading?	บทบาทที่คุณได้รับมีส่วนช่วยและส่งเสริมการอ่านแบบกลุ่ม อย่างไร
6	Other comments or suggestions	ความคิดเห็น หรือ คำแนะนำอื่นๆ



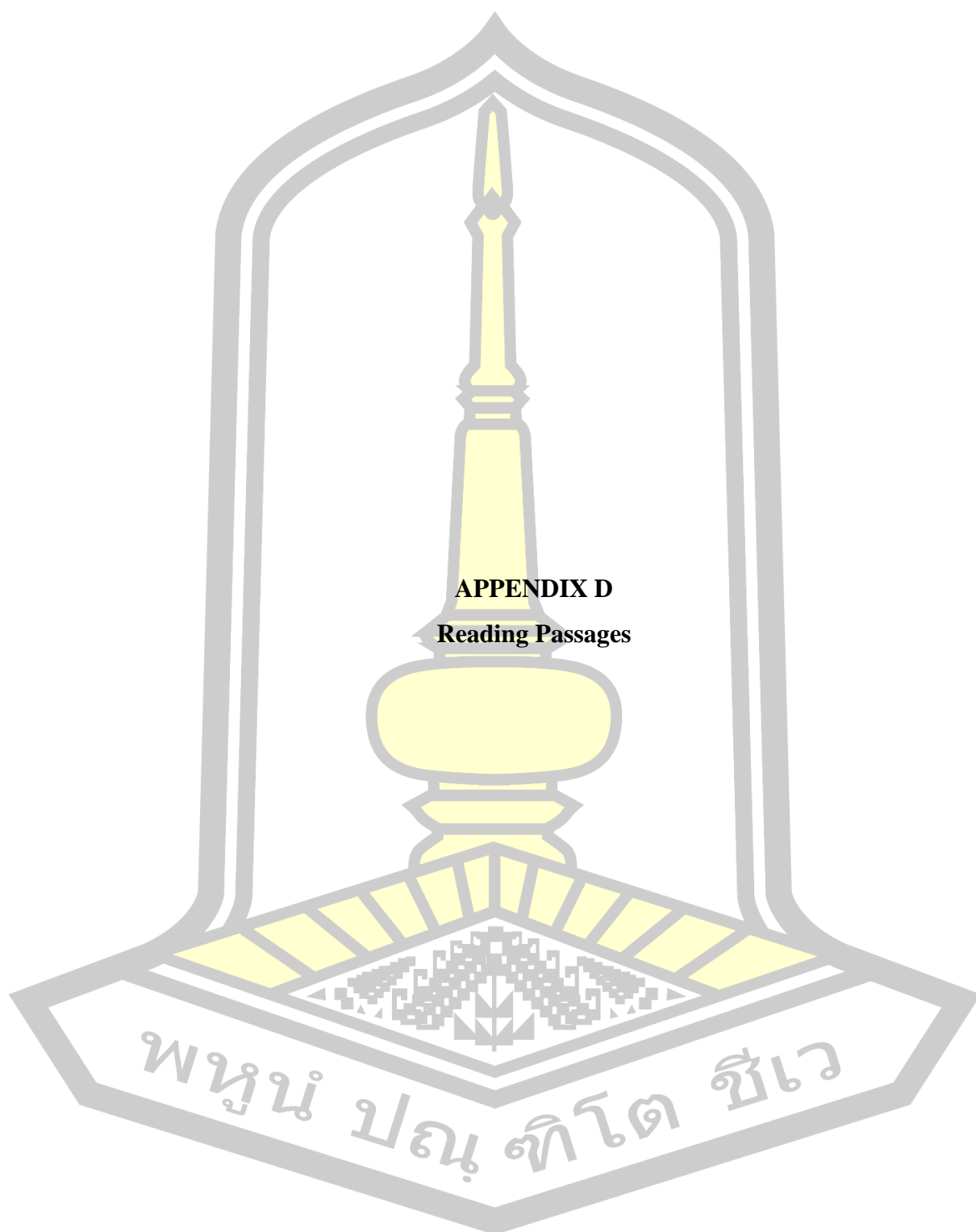


**APPENDIX C**  
**The Semi-structured Interview Questions**

## SEMI-STRUCTURED INTERVIEW QUESTIONS

- |  |  |
|--|--|
| 1. Please briefly introduce yourself                                   | บอกประวัติส่วนตัวของคุณสั้นๆ   |
| 2. Please briefly explain what have you done about GRS                 | จงบอกสิ่งที่คุณทำในกิจกรรมการอ่านแบบกลุ่ม  |
| 3. Please explain what do you like about GRS                           | จงบอกสิ่งที่ชอบในการอ่านแบบกลุ่ม   |
| 4. Please explain what do you dislike about GRS                        | จงบอกสิ่งที่ไม่ชอบในการอ่านแบบกลุ่ม  |
| 5. How do you think GRS help you to think more than the reading text?  | คุณคิดว่าการอ่านแบบกลุ่มทำให้คุณคิดมากกว่าสิ่งที่ปรากฏในเนื้อหาอย่างไร                   |
| 6. How do you think GRS promote your critical thinking?                | คุณคิดว่าการอ่านแบบกลุ่มทำให้คุณมีทักษะการคิดวิเคราะห์เพิ่มขึ้นอย่างไร                   |
| 7. When using GRS, what are the problems found? How do you solve them? | ในระหว่างกิจกรรมการอ่านแบบกลุ่ม คุณพบปัญหาอะไรบ้าง และคุณมีวิธีการแก้ไขปัญหานั้นๆอย่างไร |
| 8. How will you use GRS in other settings or circumstances?            | คุณจะนำเอากลยุทธ์การอ่านแบบกลุ่มไปใช้ในการอ่านในบริบทอื่นๆได้อย่างไร                     |
| 9. Do you have any suggestion to make GRS to be more effective?        | คุณคิดว่าจะต้องทำอะไรเพื่อให้กลยุทธ์การอ่านแบบกลุ่มมีประสิทธิภาพยิ่งขึ้น                 |
| 10. Any suggestions?   | คุณมีข้อเสนอแนะเพิ่มเติมหรือไม่ อย่างไร  |


  
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### Preparatory Passage: Are zoos a good thing?

Zoos are hugely popular attractions for adults and children alike. But are they actually a good thing?

Critics of zoos would argue that animals often suffer physically and mentally by being enclosed. Even the best artificial environments can't come close to matching the space, diversity, and freedom that animals have in their natural habitats. This deprivation causes many zoo animals to become stressed or mentally ill. Capturing animals in the wild also causes much suffering by splitting up families. Some zoos make animals behave unnaturally: for example, marine parks often force dolphins and whales to perform tricks. These mammals may die decades earlier than their wild relatives, and some even try to commit suicide.

On the other hand, by bringing people and animals together, zoos have the potential to educate the public about conservation issues and inspire people to protect animals and their habitats. Some zoos provide a safe environment for animals which have been mistreated in circuses, or pets which have been abandoned. Zoos also carry out important research into subjects like animal behaviour and how to treat illnesses.

One of the most important modern functions of zoos is supporting international breeding programmes, particularly for endangered species. In the wild, some of the rarest species have difficulty in finding mates and breeding, and they might also be threatened by poachers, loss of their habitat and predators. A good zoo will enable these species to live and breed in a secure environment. In addition, as numbers of some wild species drop, there is an increased danger of populations becoming too genetically similar. Breeding programmes provide a safeguard: zoo-bred animals can be released into the wild to increase genetic diversity.

However, opponents of zoos say that the vast majority of captive breeding programmes do not release animals back into the wild. Surplus animals are sold not only to other zoos but also to circuses or hunting ranches in the US or South Africa, where some people are willing to pay a lot of money for the chance to kill an animal in a fenced enclosure. Often, these animals are familiar with humans and have very little chance of escaping.

So, are zoos good for animals or not? Perhaps it all depends on how well individual zoos are managed, and the benefits of zoos can surely outweigh their harmful effects. However, it is understandable that many people believe imprisoning animals for any reason is simply wrong.

(Adopted from <https://learnenglishteens.britishcouncil.org/skills/reading/upper-intermediate-b2-reading/are-zoos-good-thing>)

### Passage 1: An Oceanful of Plastic

When he planned his trip, David de Rothschild knew there was a lot of plastic in the ocean. That was the whole point of the trip. He had studied the problem and wanted to bring attention to it. So he built a boat from 12,500 plastic bottles, named it the *Plastiki*, and sailed it across the Pacific Ocean.

Even though he was prepared, de Rothschild was shocked by what he saw. The route of *Plastiki* took it through the “eastern garbage patch.” This is a collection of floating garbage that covers an area of about 550,000 square miles—more than twice size of Texas. Until 12 years ago, it was unknown to scientists it is mostly invisible—millions of very small pieces of plastic floating just underwater, a kind of plastic soup.

According to scientists, the **garbage patch** may contain 100 million tons of plastic. It has been carried to this area by **ocean currents** and winds from all over the Pacific. Scientists used to think that plastic bags or bottles broke up into small pieces only after many years on cold water. However, studies have shown that it happens much more quickly. In about a year, plastic bottles, bags, or other plastic objects are broke down into many small pieces which may remain in the water for a hundred years.

Furthermore, when plastic breaks up, chemicals are released into the water, and these too remain for a long time. Researchers in Japan have studied water from world’s oceans and found that it contains chemicals from plastic. Two of these chemicals, polystyrene and bisphenol A, have also been found in fish. It is not known yet what effect they may have on the fish or on other kinds of marine animals, but they are known to be harmful to human health.

The large pieces of plastic that have not yet broken down are also a problem. Scientists who study marine life say that marine animals often mistake larger pieces of plastic for food. The consequences can be deadly. According to the United Nations Environmental Program, plastic causes the death of more than a million seabirds a year, as well as over 100,000 dolphins and whales, and thousands of sea turtles.

On his trip across the Pacific, de Rothschild was also shocked by the lack of marine life. He compared his experience with that of Thor Heyerdahl who sailed across in 1947. Heyerdahl saw all kinds of fish, dolphins, whales, and seabirds every day. There were so many **flying fish**, for example, that he sometimes had to throw them off the boat. De Rothschild, on the other hand, saw very few fish and other marine animals. This confirms what scientists are now saying—that 80percent of the fish in the world’s oceans have disappeared. Plastics is not only cause of this disappearance, but it is one of them.

To reduce the amount of plastic that ends up in the ocean, we need to reduce the amount we use. Plastic grocery bags are the worst source of pollution mainly because there are so many. In 2005, about five trillion bags were produced worldwide. A number of cities and countries have taxed or banned them (make them illegal), including Dhaka, Mumbai, and San Francisco; and South Africa, Australia, Ireland, Greece, Italy, and China.

In places where measures have been taken, people are using many few bags. In Ireland, for example, bag use dropped by 90 percent after the tax. In China, where people were using three million bags daily before the new laws, bag use was reduced by about 70 percent.

(Adopted from Jeffries, L., & Mikulecky, B. S. (2012). *More reading power 3*. Pearson/Longman, 27)

## Passage 2: Food for the 21st Century: Insects

Insects for dinner? This idea may not appeal to everyone, but insects are the regular part of the diet in many areas of the world. New scientists working for the Food and Agriculture Organization (FAO) of the United Nations are studying insects as a food source. Insect farming is already common in some countries, such as Thailand, and the scientists hope to expand it.

The reason is simple: million people around the world get just enough food to survive, usually rice or corn. However, they do not get enough nutrients (things your body needs), such as protein, vitamins, and minerals. Insects are very good source of these nutrients. They contain as much protein as meat or fish. They also contain large amounts of vitamins, and minerals, especially calcium (necessary for your bones).

Before focusing on insects, the FAO experts considered other food sources that might be developed. One was fish. In developing countries, fish used to be an important food source for families living near rivers, lakes, and oceans. But these days, fisherman with small boats are catching less and less fish. In fact, wild fish are disappearing from the water around the world because of pollution and overfishing by huge factory ships. In developing countries there are now many fish farms. In fact, this farmed fish is taking the place of wild fish in the supermarkets of the developed countries. But people in developing countries do not benefit from the fish farms. The fish is too expensive, and the fish farms are highly polluting.

Meat was another food source considered by the scientists. In recent years, demands for meat has increased dramatically, and so has production. However, in developing countries, meat is too expensive for most of the population. Moreover, most farmers in developing countries are too poor to buy the land or animal to produce meat, so they cannot benefit from the increased demand. Instead, meat production is mostly in the hands of big landowners and international food businesses.

Another problem with the meat production is environmental. Animals such as cows, sheep, and pigs produce ammonia (a chemical) which pollutes rivers, lakes, and groundwater. These animals also produce large amounts of global-warming gases from human activities comes from farm animals.

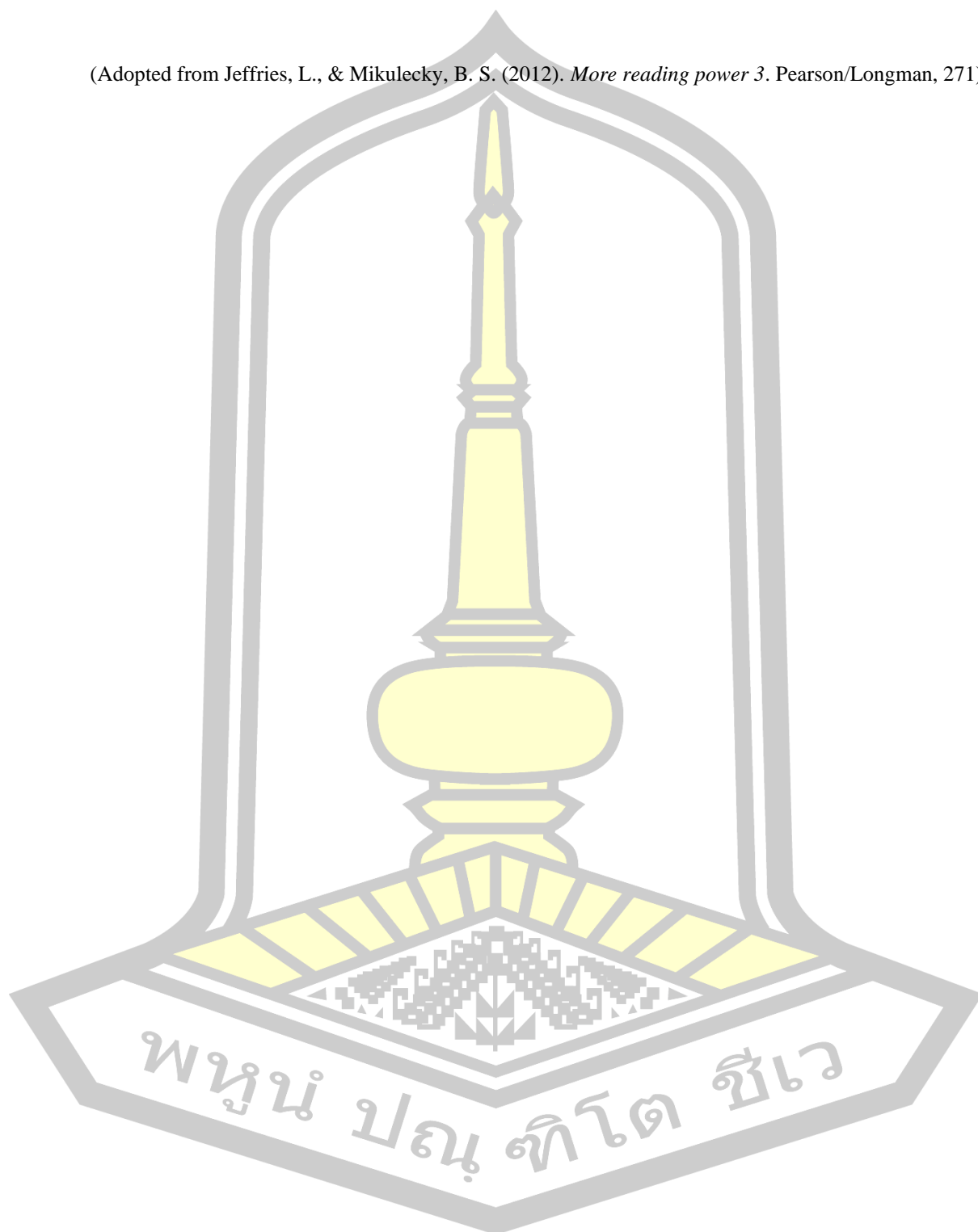
Furthermore, to increase the production of meat, farmers need more land. To get more land in developing countries, such as Brazil, farmers have. Cut down forests. Large areas of the Amazon forest, for example, have been cut down for this reason. But forests are important for the planet in many ways, especially because they help reduce global-warming gasses.

Compared with farming for meat, insect farming has many disadvantages. First of all, it is easier for farmers to get started, since they do not need much land or equipment. Insect farming is also much less harmful to the environment. Unlike warm-blooded animals, insects do not produce ammonia and they only produce small amount of global-warming gasses. Since insect farming does not require much land, farmer also would not need to cut down trees in forests.

The FAO scientists say that their knowledge about insects for farming is still very limited. They are working with the Thai farmers to develop farming methods that can be taught to farmers in other countries. The scientists are also working with people who traditionally eat forest insects to learn more about those insects. Finally, they are studying the

methods used by people who raise insects for other purposes, such as bees for honey or silk worms for silk.

(Adopted from Jeffries, L., & Mikulecky, B. S. (2012). *More reading power 3*. Pearson/Longman, 271)



### Passage 3: Work–life balance

Read what four people have to say about their working hours

#### 1. Ronan

“I work in a fairly traditional office environment doing a typical nine-to-five job. I like my job, but it's annoying that my commute to work takes an hour and a half each way and most of my work could really be done online from home. But my boss doesn't seem to trust that we will get any work done if left to our own devices, and everyone in the company has to clock in and out every day. It's frustrating that they feel the need to monitor what we do so closely instead of judging us based on our task performance, like most companies do these days”.

#### 2. Jo

“I used to do a typical five-day week, but after I came out of my maternity leave, I decided that I wanted to spend more time with my children before they start school. After negotiating with my boss, we decided to cut my working week down to a three-day work week. This of course meant a significant cut in my pay too, as I'm paid on a pro-rata basis. I've since noticed, though, that my workload hasn't decreased in the slightest! I'm now doing five days' worth of work in three days, but getting paid much less for it! I find myself having to take work home just so that I can meet the deadlines. It's wearing me out trying to juggle work with looking after my children and my family, but I don't dare to bring this up with my boss because I think he feels as if he's made a huge concession letting me come in only three days a week.”

#### 3. Marcus

“I work for a global IT company, but because their headquarters is in the States, I do all my work online from home. That means that I don't waste time commuting or making idle chit-chat with colleagues. I work on a project basis, and this flexibility is very valuable to me because it means that I can easily take some time off when my children need me to go to their school performances or if I need to schedule an appointment with the dentist. The downside is that without clear office hours, I tend to work well into the evening, sometimes skipping dinner to finish a task. It can also get quite lonely working on my own, and I sometimes miss sharing ideas with colleagues.”

#### 4. Lily

“I'm a freelancer and work for myself. This is great because I am in control of what I do and how I spend my time. At first, I was working from home, but I found it really hard to concentrate. There were just too many distractions around: housework that needed doing, another cup of tea, my family members wanting my attention for various things. So I started to go to a nearby café to work, but the Wi-Fi connection wasn't ideal and I found myself drinking too much coffee. In the end, I decided to rent a desk in a co-working space with five other freelancers like myself. I liked getting dressed to go to work in the morning and being able to focus in an office environment. The other freelancers do similar kinds of web-based work to me and so it's nice to have workmates to bounce ideas off as well.”

(Adopted from <https://learnenglish.britishcouncil.org/skills/reading/upper-intermediate-b2/work-life-balance>)

#### Passage 4: Study problems – help is here

Ask E-tutor

Hi! I'm E-tutor, or Emma. I'm here to help with any study-related problems, whether big or small.

**Meg**

**What should I say to my sister?**

Hi, E-tutor. Unfortunately, I share a bedroom and a desk with my elder sister. She continually distracts me because she's noisy and disorganised. I think she's disrespectful. I've got exams in a fortnight and I desperately need to revise. I can't concentrate when she's studying too and the desk is always overflowing with stuff so I can't find anything. If I try to have a dialogue with my sister, she gets annoyed. Can you help?

**E-tutor**

**Re: What should I say to my sister?**

Hi, Meg. That's a common complaint between siblings. Why don't you discuss a rota system so that you use the desk at different times? Or maybe you could study at the local library, cultural centre or community centre a few days a week. Make sure you've got storage space for everything on your desk: folders and containers for your paper and stationery. If everything has its own place, it will be easier to keep orderly. It might even be enjoyable to do this together. If it's easier to write instead of talking face to face, try messaging her and explain how awful you feel.

**Rudy**

**Against the clock**

My problem is time – or lack of it! Next month I've got 12 exams in three weeks. How can I possibly study for all of them? It's complicated. I think it's impossible.

**E-tutor**

**Re: Against the clock**

Hi, Rudy. It isn't impossible but you DO have to get started NOW. Make a study plan and highlight periods of study time for each subject. Make a detailed plan for this week and then do the same for the weeks ahead. It's better to study for an hour or so a day than just once a week, all day. Your brain needs time to process information.

**Hayley**

**Disaster**

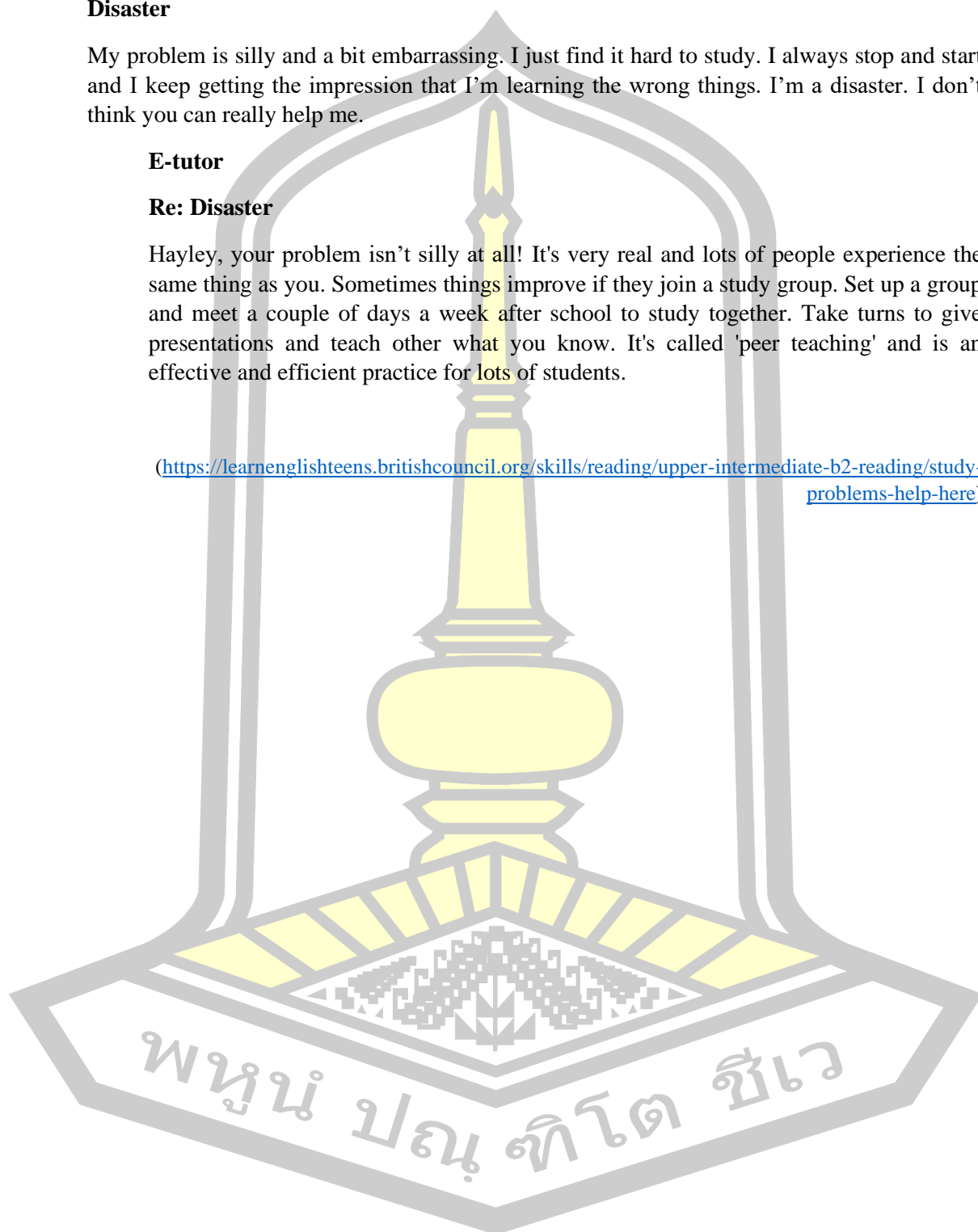
My problem is silly and a bit embarrassing. I just find it hard to study. I always stop and start and I keep getting the impression that I'm learning the wrong things. I'm a disaster. I don't think you can really help me.

**E-tutor**

**Re: Disaster**

Hayley, your problem isn't silly at all! It's very real and lots of people experience the same thing as you. Sometimes things improve if they join a study group. Set up a group and meet a couple of days a week after school to study together. Take turns to give presentations and teach other what you know. It's called 'peer teaching' and is an effective and efficient practice for lots of students.

<https://learnenglishteens.britishcouncil.org/skills/reading/upper-intermediate-b2-reading/study-problems-help-here>



### Passage 5: Are celebrities bad for you?

Celebrities are everywhere nowadays: on TV, in magazines, online. Is this preoccupation with famous people harmless fun or is it bad for us? How many people are truly obsessed with modern media idols? And on the other side of the coin, can fame be harmful to the celebrities?

Studies suggest that the vast majority of teenagers do not really worship celebrities. Researchers have identified three kinds of fans. About 15% of young people have an 'entertainment-social' interest. They love chatting about their favourite celebrities with friends and this does not appear to do any harm.

Another 5% feel that they have an 'intense-personal' relationship with a celebrity. Sometimes they see them as their soulmate and find that they are often thinking about them, even when they don't want to. These people are more at risk from depression and anxiety. If girls in this group idolise a female star with a body they consider to be perfect, they are more likely to be unhappy with their own bodies.

That leaves 2% of young people with a 'borderline-pathological' interest. They might say, for example, they would spend several thousand pounds on a paper plate the celebrity had used, or that they would do something illegal if the celebrity asked them to. These people are in most danger of being seriously disturbed.

What about the celebrities themselves? A study in the USA tried to measure narcissism or extreme self-centredness, when feelings of worthlessness and invisibility are compensated for by turning into the opposite: excessive showing off. Researchers looked at 200 celebrities, 200 young adults with Masters in Business Administration (a group known for being narcissistic) and a nationally representative sample using the same questionnaire. As was expected, the celebrities were significantly more narcissistic than the MBAs and both groups were a lot more narcissistic than the general population.

Four kinds of celebrity were included in the sample. The most narcissistic were the ones who had become famous through reality TV shows – they scored highest on vanity and willingness to exploit other people. Next came comedians, who scored highest on exhibitionism and feelings of superiority. Then came actors, and the least narcissistic were musicians. One interesting result was that there was no connection between narcissism and the length of time the celebrity had been famous. This means that becoming famous probably did not make the celebrities narcissistic – they already were beforehand.

So, what can we learn from this? People who are very successful or famous tend to be narcissists and are liable to be ruthless, self-seeking workaholics. As we can see from celebrity magazines, they are also often desperate and lonely. They make disastrous role models.

(Adopted from <https://learnenglishteens.britishcouncil.org/skills/reading/upper-intermediate-b2-reading/are-celebrities-bad-you>)



## Passage 6: Job adverts

### IT Recruitment Officer

We are looking for recent graduates who would like to work with some of the most important companies in the digital industry. This post is based in Dubai. Once you have received training on our computer system, you will be responsible for:

- liaising with recruiters to create job descriptions
- advertising jobs
- sourcing possible candidates
- updating the database

We are looking for someone with passion, drive and commitment. Recruitment Resourcers must be able to work under pressure and be self-motivated and people-focused. These qualities will help you progress within the company. Recruitment Resourcers who are willing to learn can train to become Account Managers and Account Directors.

- Competitive basic salary plus commission

### Logistics Associate

Our company is looking for someone to work in the sales and customer service department to ensure that customers have a professional service from the moment they place an order until they receive their shipment. The job is for 27 hours per week. Hours are negotiable. Opportunities for overtime are likely.

Your responsibilities will include:

- placing and processing orders
- keeping accurate records
- processing returns and refunds

The successful candidate will:

- be educated to degree level
- be able to work efficiently and to deadlines in a high pressured environment
- have good IT skills

Candidates should have experience in business logistics, purchasing and supply management or operations management.

### Insurance Telesales

Do you have previous sales experience? Are you available from January 6th until the end of March?

We are currently looking for someone to deal with insurance renewals sales. The role will involve calling existing customers and asking them if they intend to renew their policy, and if necessary, discuss how we can keep them as a customer. The role is a 3-month fixed term

contract. The hours of work will be 8:45am until 5pm Monday to Friday. We are looking for a hard worker who is computer literate and has a good telephone manner.

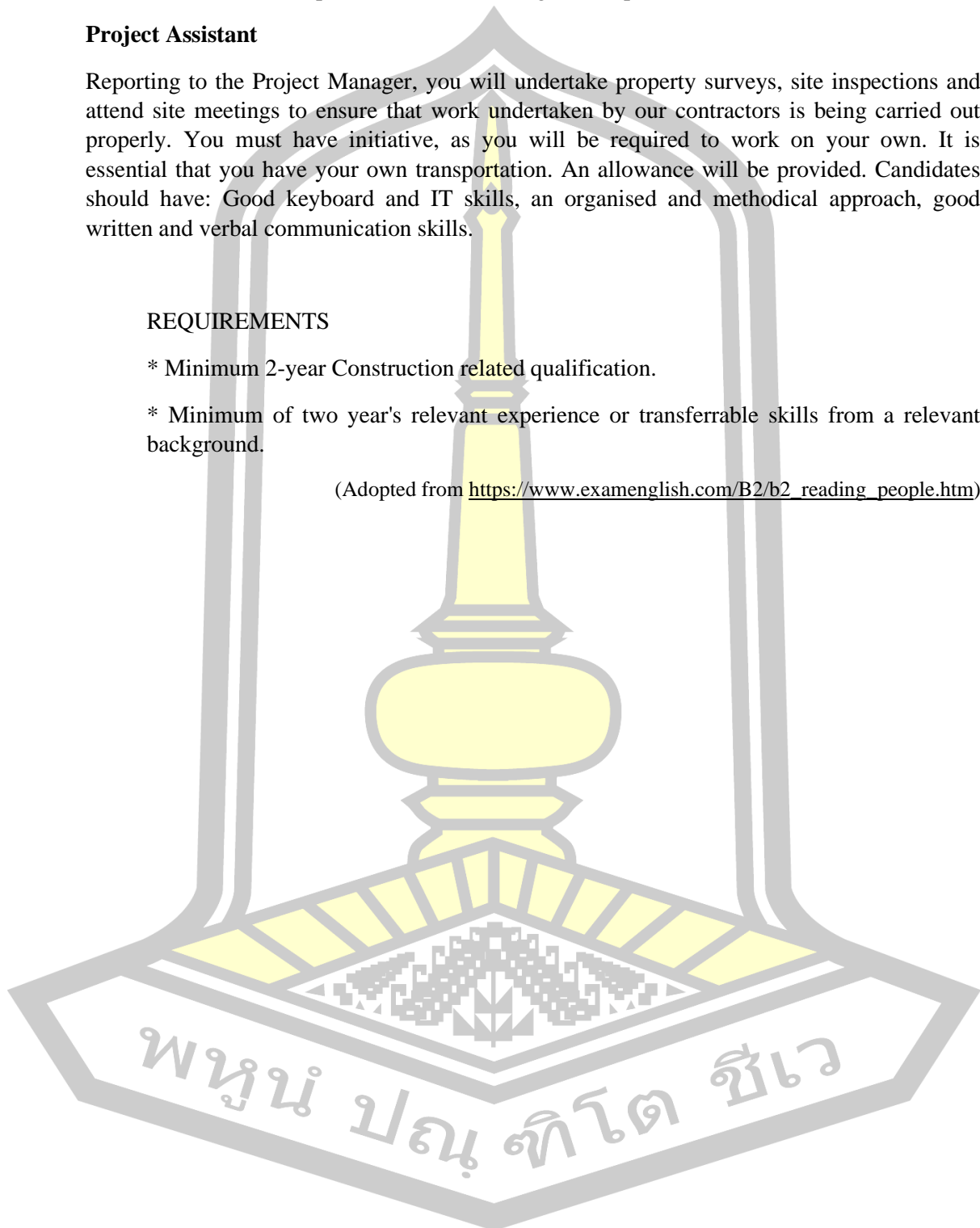
### **Project Assistant**

Reporting to the Project Manager, you will undertake property surveys, site inspections and attend site meetings to ensure that work undertaken by our contractors is being carried out properly. You must have initiative, as you will be required to work on your own. It is essential that you have your own transportation. An allowance will be provided. Candidates should have: Good keyboard and IT skills, an organised and methodical approach, good written and verbal communication skills.

### **REQUIREMENTS**

- \* Minimum 2-year Construction related qualification.
- \* Minimum of two year's relevant experience or transferrable skills from a relevant background.

(Adopted from [https://www.examenglish.com/B2/b2\\_reading\\_people.htm](https://www.examenglish.com/B2/b2_reading_people.htm))





**APPENDIX E**  
**IOC Score by Seven Experts**

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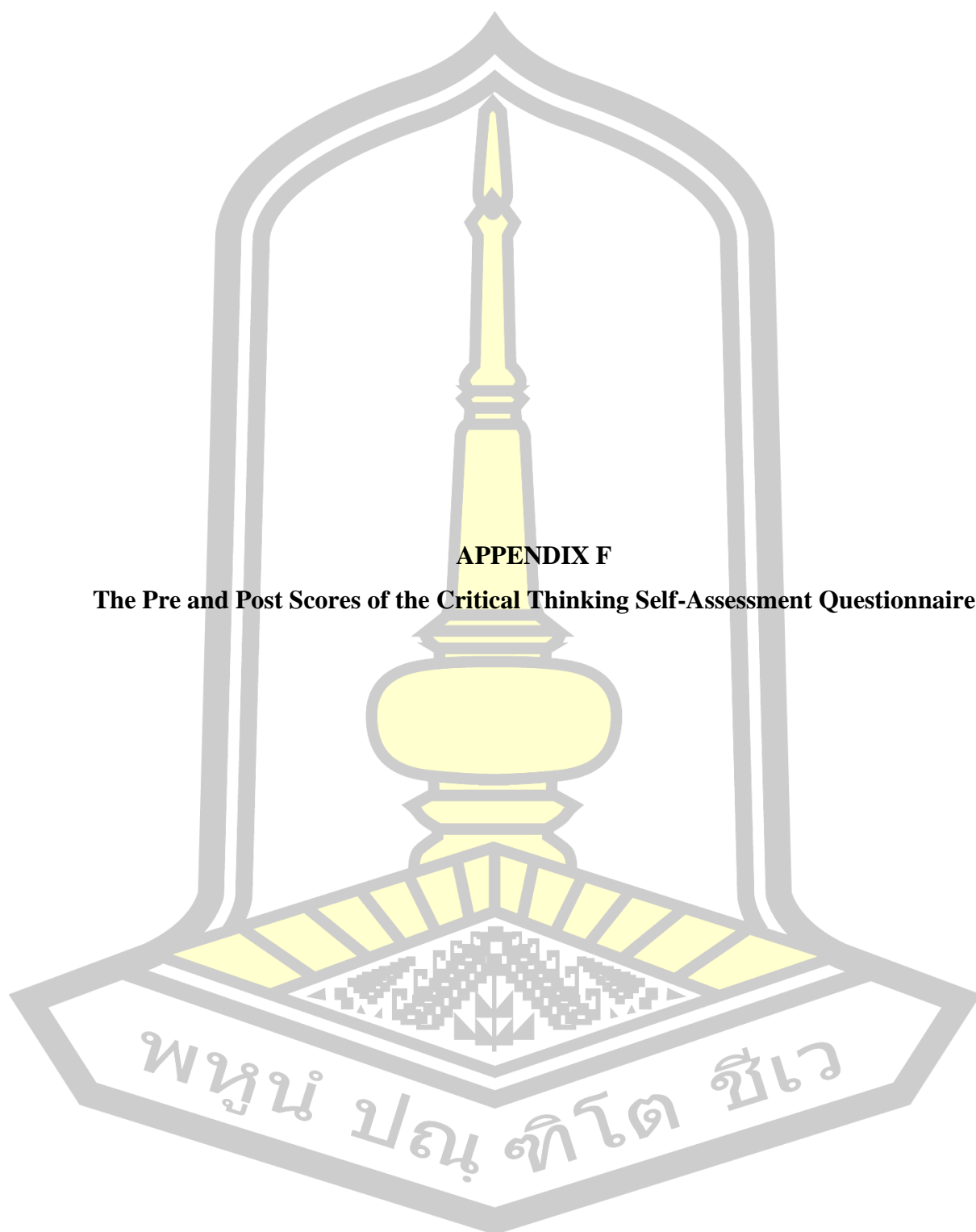
## IOC Score by seven experts

Critical Thinking Self-Assessment Questionnaire									
No	IOC Score by Seven Experts							IOC SCORE	RESULT
	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	Expert 7		
1	0	1	0	1	1	1	1	0.71	Valid
2	0	1	0	1	1	1	1		Valid
3	1	1	0	1	1	0	1		Valid
4	0	1	0	1	1	1	1		Valid
5	0	1	0	1	1	1	1		Valid
6	1	1	0	1	0	1	1	0.77	Valid
7	1	1	-1	1	1	1	1		Valid
8	1	1	1	1	1	1	1		Valid
9	1	1	0	1	1	1	1		Valid
10	1	1	-1	1	1	0	1		Valid
11	1	1	1	1	1	1	1	0.91	Valid
12	1	1	0	1	1	1	1		Valid
13	1	1	1	1	1	1	1		Valid
14	1	1	1	1	1	1	1		Valid
15	1	1	-1	1	1	1	1		Valid
16	1	1	-1	1	1	1	1	0.54	Valid
17	1	1	-1	1	0	1	1		Valid
18	1	1	-1	0	0	0	0		Revised
19	1	1	-1	1	0	1	0		Revised
20	1	1	0	1	1	1	1		Valid
21	1	1	-1	1	1	1	1	0.57	Valid
22	0	1	-1	1	1	1	1		Valid
23	1	1	-1	0	1	1	-1		Revised
24	1	1	-1	1	0	1	1		Valid
25	1	1	-1	1	1	1	1		Valid
26	0	1	-1	1	1	1	1	0.63	Valid
27	1	1	-1	1	1	1	1		Valid
28	1	1	0	1	1	0	0		Valid
29	1	1	-1	0	1	1	-1		Revised
30	1	1	1	1	1	1	1		Valid
31	1	1	0	1	1	1	1	0.83	Valid
32	1	1	0	1	1	1	1		Valid
33	1	1	0	1	1	1	1		Valid
34	1	1	0	1	1	1	0		Valid
35	1	1	0	1	1	1	1		Valid
	<b>0.83</b>	<b>1.00</b>	<b>-0.29</b>	<b>0.91</b>	<b>0.86</b>	<b>0.89</b>	<b>0.77</b>	<b>0.71</b>	<b>Valid</b>

Logbook									
No	IOC Score by Seven Experts							IOC SCORE	RESULT
	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	Expert 7		
1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	Valid
2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	Valid
3	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.86	Valid
4	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	Valid
5	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.86	Valid
6	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.86	Valid
	<b>1.00</b>	<b>1.00</b>	<b>0.67</b>	<b>1.00</b>	<b>0.83</b>	<b>1.00</b>	<b>1.00</b>	<b>0.93</b>	

Questions for Interview									
No	IOC Score by Seven Experts							IOC SCORE	RESULT
	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	Expert 7		
1	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.57	Valid
2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	Valid
3	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	Valid
4	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	Valid
5	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.86	Valid
6	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.86	Valid
7	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.86	Valid
8	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.86	Valid
9	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.86	Valid
10	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.71	Valid
	<b>0.90</b>	<b>1.00</b>	<b>0.50</b>	<b>1.00</b>	<b>0.80</b>	<b>0.90</b>	<b>0.90</b>	<b>0.86</b>	



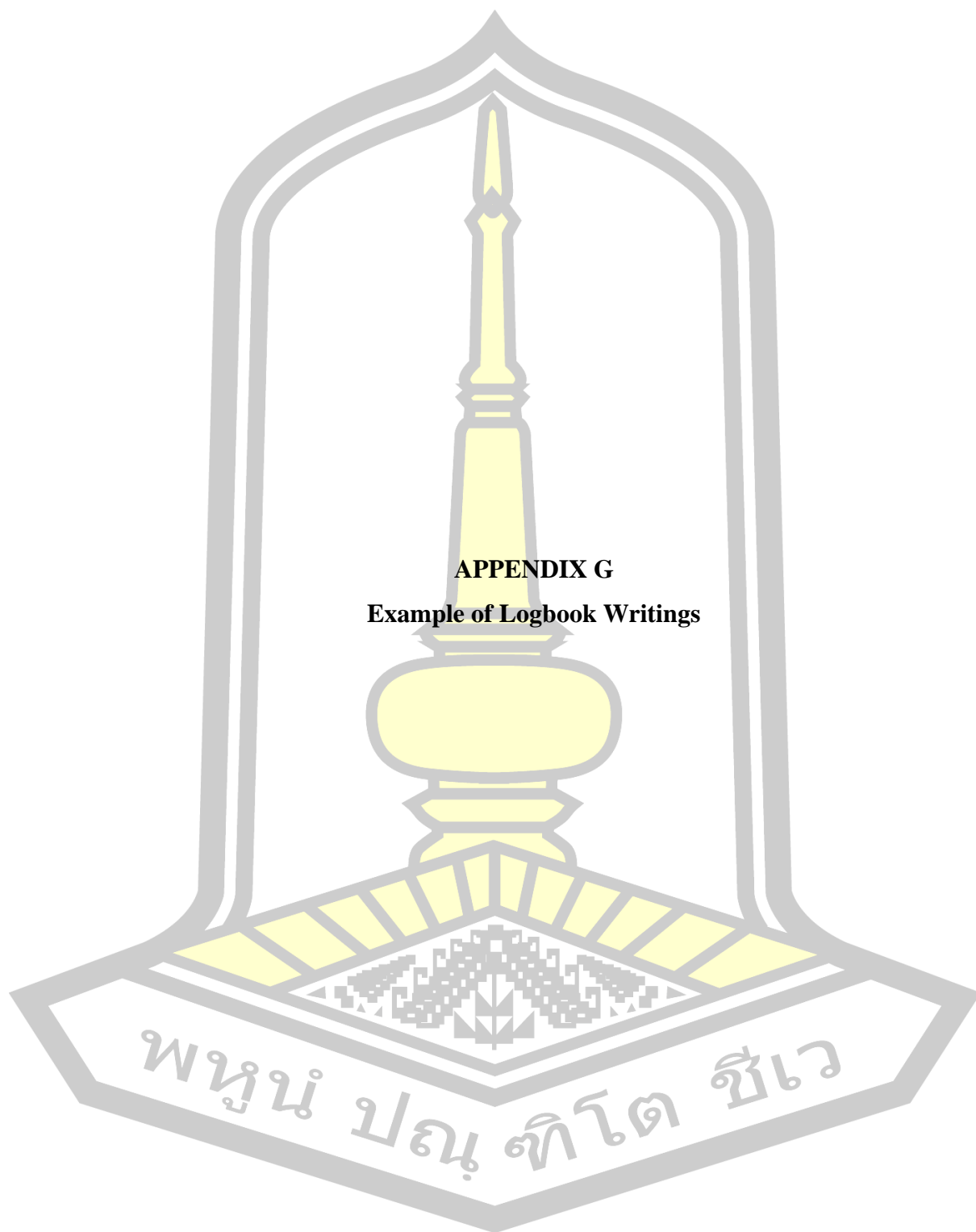


**APPENDIX F**

**The Pre and Post Scores of the Critical Thinking Self-Assessment Questionnaire**

**The Pre and Post Scores of the Critical Thinking Self-Assessment Questionnaire**

Item	Critical thinking skills	Pre-Score	Sum Pre-Score	Post-Score	Sum Post-Score
1	Systematic	3.30	3.40	3.43	3.62
2		3.34		3.63	
3		3.23		3.43	
4		3.46		3.68	
5		3.66		3.94	
6	Judicious	3.64	3.82	3.88	3.90
7		3.98		3.94	
8		4.10		4.03	
9		3.84		3.98	
10		3.52		3.68	
11	Analytical	3.70	3.64	3.82	3.77
12		3.80		3.71	
13		3.80		3.85	
14		3.61		3.80	
15		3.30		3.66	
16	Confident	3.39	3.50	3.74	3.72
17		3.26		3.23	
18		3.87		4.08	
19		3.31		3.68	
20		3.64		3.89	
21	Open-minded	4.48	4.00	4.34	4.02
22		4.16		4.14	
23		3.80		3.83	
24		3.18		3.49	
25		4.36		4.31	
26	Truth-seeking	3.85	3.73	4.03	3.92
27		3.93		4.08	
28		3.49		3.82	
29		3.62		3.75	
30		3.77		3.91	
31	Inquisitive	3.77	3.80	3.85	4.00
32		3.70		3.89	
33		4.05		3.98	
34		4.10		4.25	
35		3.77		4.05	
<b>Total Scores</b>			<b>3.71</b>		<b>3.85</b>



**APPENDIX G**  
**Example of Logbook Writings**



### Example of Logbook Writings

#### Logbook 1

- It makes me think step by step by looking through the structure of the story, for example, title, introduction, main idea
- GRS helps me think systematically and helps me arrange the priority of the tasks during GRS takes place
- It makes me think systematically
- It helps me criticize the passage deeply with careful supportive reasons
- Using GRS can gain us new knowledge from exchanging ideas with friends; we may not have the same idea in the same topic because we are from different experience and different back group knowledge. Besides, if there is some misinformation, we may help one another find out what will be possible
- I look at other viewpoints, re-read the passage, and think about it again and again
- I received various ideas from the group member and am able to analyze them based on different points of views
- GRS really helps my critical thinking skill because I have to think about what my friends saying so that I could relate issues and knowledge together
- Some questions can make you think wisely, and many ideas can mix together to create something new
- As a connector, I think it is necessary to keep myself updated to the world's issue, its consequences, and sometimes what causes the problem
- I think deeper in all aspects such as components, effects, reasons, changing, etc.
- While reading together, we see the cause-effect relationship and analyze it slowly in order to ensure everyone's understanding
- By helping each other, I see a bigger picture and get more idea to synthesize my thought
- As a clarifier, I have to analyze the graph more than one time to prepare my answer and I had to think beyond for the unexpected questions
- I think beyond the passages such as the solution and the causes of the problem
- While brainstorming after reading, we gathered ideas, synthesize the information, and understand it clearly
- I learned more about reading techniques, which I can adapt in further occasion
- It makes me confident to share my ideas and ask the questions systematically

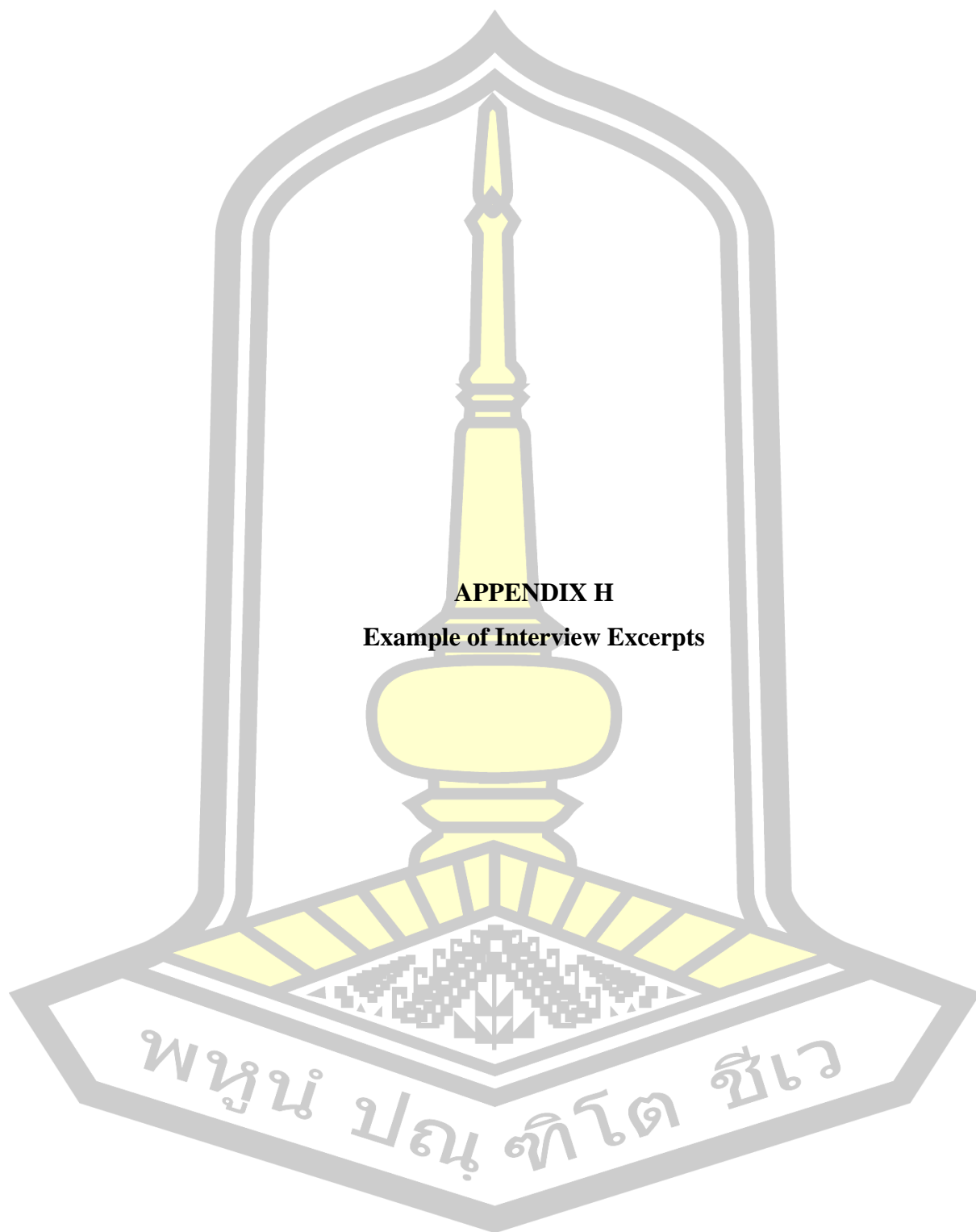
## Logbook 2

- It helps me think out of the old mindset, and made me dare to speak with others
- We learn how to cooperate and analyze everyone's opinion to give the best answer as possible
- I received various ideas from the group member and am able to analyze them based on different points of views," said Student 45, logbook
- New ideas and various opinions made me understand the diversity of people better
- Even talking and discussing the same topic, we have different ideas about it
- I have gained more viewpoints than reading alone because my friends think differently and also give good opinions to support their views
- I gained a lot of information from different ideas. Some ideas are very interesting which I have never thought before. It helped me feel more confident while discussing because I can say whatever I want as long as it is related to the topic. More importantly, there will be always group members listening to what I am saying
- I think that everyone's words and ideas are equally important
- While questioning, we need to think more and share more ideas which help develop critical thinking
- GRS makes me curious and would like to ask the questions
- It makes me read systematically, I received a lot of ideas from connector and visualizer
- Not only reading, I think GRS encourages me to practice my communication skills by choosing the right words and appropriate sentences to talk with other group members
- I learned to be careful while reading, and I think when creating a mind-mapping it is easier for understanding
- GRS makes me judicious by carefully selecting the reasons to back up my argument. It makes me able to 1) work as a team, 2) be responsible, 3) analyze other's people opinions and ideas, and 4) contradict others based on the reason
- My reading skill is gradually improved, especially summarizing skills and idea concentration
- It helps me analyze the information step by step as we as cover all necessary points
- I can analyze the passages in different ways which new concepts eventually occur
- I analyze more, question more, and make a good conclusion
- I learned how to listen to friend's opinion and try to compare it with my thoughts. Sometimes, I realizes that I should consider

both good and bad sides

- Normally, I will scan and skim the information from the text roughly. However, GRS makes me pay more attention into the details so that I could be able to analyze and explain to other group members
  - I got new perspectives from other roles. Sometimes, you need new perspective to make you enlighten
  - I got more information from friends, which I think their interpretation and conclusion is better than mine
  - I learned that people have different ideas which widen our visions. When listening to the other member's sharing, I can accept other people's opinions. Some ideas are already perfect; some ideas need fulfillments. We can add more details for some ideas leading to the efficient group work
  - It opens up ideas that I have never thought of and it helps me think of a better solution
- Logbook 3
- When reading, it makes me comply the content into different categories
  - I systematically think and look for the possible info to support my thought. As a connector, I compare the text to any available reference outside the passage
  - I can arrange the time for each person so that the group reading is manageable
  - It makes me think systematically," said Student 16, logbook
  - I got a lot of skills such as reading and analyzing skills
  - To discuss with friends, it helps improve my interpretation skill as well as my speaking skills
  - It helps me being able to analyze the content and conclude it in the form of picture and diagram. Also, when communicating to each other, reading is more proficiently
  - When asking and answering the question, I have to analyze more and relate to other relevant information
  - I got to see what people think about the topic rather than from only my perspective
  - It makes me listen to people more

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**APPENDIX H**  
**Example of Interview Excerpts**

### Example of Interview Excerpts

Interviewee 1

- It makes me learn how to allocate and share the duties equally within the group.
- I would not make an immediate decision on specific issues unless I feel I have the complete information.
- GRS helped me analyze the information and compare it with my friends.
- I think my CT increased from GRS because it makes me be neutral about the issues and be more open to other ideas from friends. Also, it makes me think deeply.
- I have a concept about group reading before. It is slightly different from my thought. I like to be the leader because I think it feels like me. I try to initiate the ideas and wait for my friend's supportive ideas. I think it covers all points of ideas.
- The summarized information from friends was clear enough; however, the questioner needed to ask a question. It urges us to think of out of the passage to be able to ask the question and make the GRS procedure flow smoothly.

Interviewee 2

- I like to be a visualizer because I can systematically collect information from friends by using mind mapping.
- When receiving many ideas from the group, we have more meaningful information to analyze and synthesize.
- I think I am more confident in speaking in the group particularly speaking in my mother tongue.
- During GRS, it is okay if the group members understand differently because it is about their interpretation.
- When receiving information, I felt curious to know more, and I decided to ask questions.
- GRS makes me knowledgeable, gains more understanding of the passage. We can synthesize the data more than before, especially when knowing more from friends.

Interviewee 3

- I think the passage was quite difficult for me, and I was struggling trying to get the meaning of the passage actively.
- I know how to assign work in the group equally.
- I think GRS made me deeply think in details in order to discuss with group members.
- When adding a reading alone session before GRS, it makes me even more effective because I agree that everyone can be both clarifier and questioner. To do this, some friends who have ideas will be confident to talk it out.
- I listened to and accepted the group member's ideas more than

before.

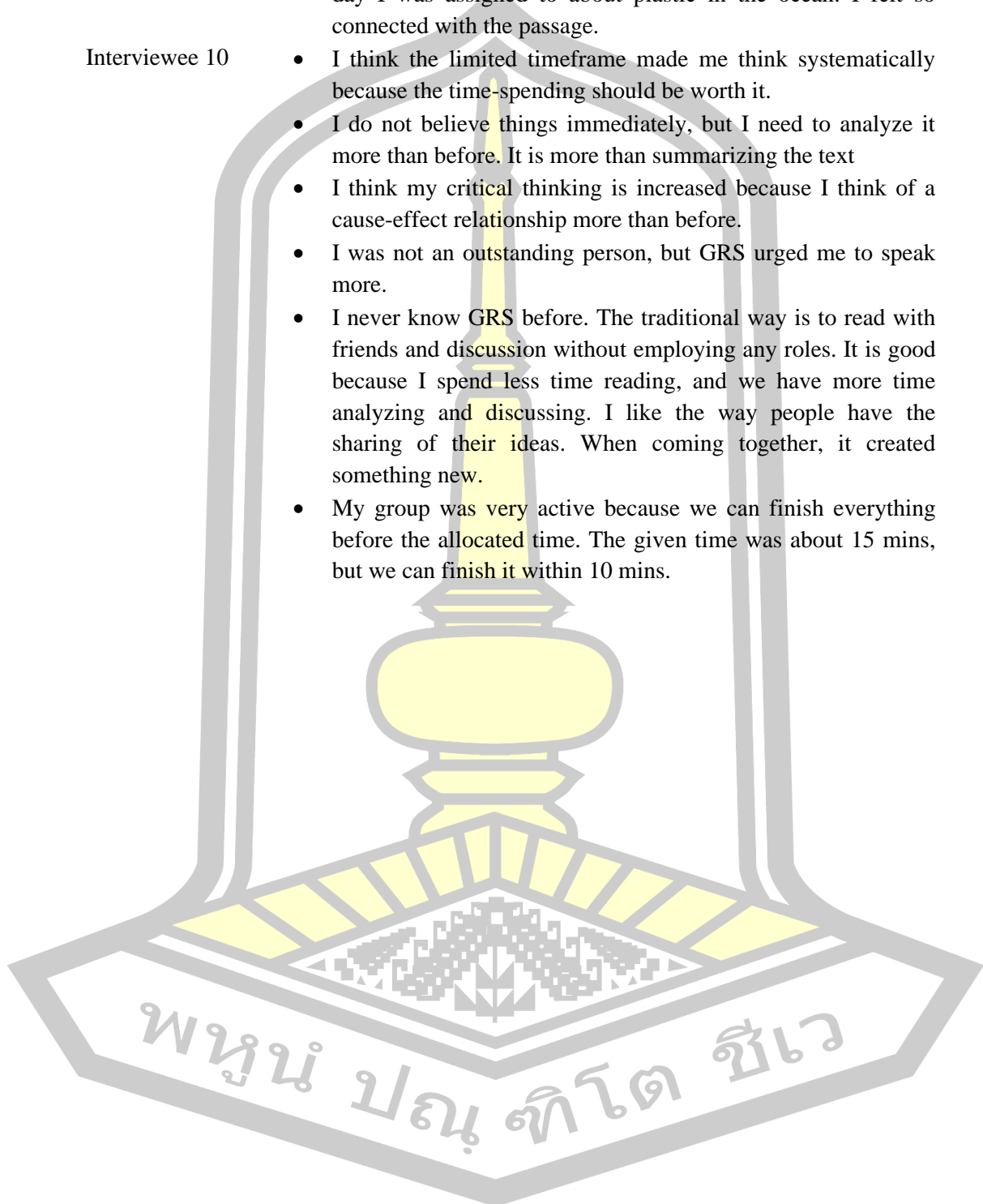
- I think that everyone was inquisitive about the reading passage; however, the only questioner can ask. Thus, I think the role of the questioner can be anyone.
  - It makes me learn how to manage and share the duties equally within the group. I also learn how to ask specific questions from general information.
  - I learn how to convey the message and make other group members understand. I think in detail in order to be able to discuss it with friends.
- Interviewee 4
- I think that when reading with friends, the group can cover all aspects.
  - GRS helps me find the connection between the content from the reading passage and the thing in daily life.
  - My group summarized the information based on the newly formed idea collected from all group members.
  - GRS make me be with friends and understand the content from friends before being able to perform my role.
  - Though we were informed about rotating the role, we still fought with one another to take the favourite role as we can do it best.
- Interviewee 5
- We were systematically responsible for our role.
  - We made a mistake about the step of GRS, so we need to be more deliberate about GRS procedures.
  - We analyzed the information while performing our role.
  - When searching for the story to connect with the reading passage, we open for a wider perspective.
  - Initially, we felt of being forced to ask the question initially. Later on, we automatically questioned because we want to know more.
  - In the beginning, it is very confused because GRS was a new concept for me. After a few times, I was familiar with it. I like the way the group members sharing ideas because it senses of fulfilling.
  - It is much better than I read alone, in any case. I like the role of connector the most because I felt impressed by it. I like the way that group consisting of six people because of several ideas and issues arising from the discussion.
- Interviewee 6
- I like the way GRS helped us to read step-by-step, which was very helpful in prioritizing tasks.
  - GRS made me be more analytical because I did not believe the information immediately.
  - I summarized not only the content of the reading passage but my friends' opinions because it was worth to share.

- I used to have experiences about reading in the group; however, the difference was that there had not any particular roles. To do GRS, I like the way we helped one another to analyze the content. Sometimes, we did understand, but having ideas from friends made it even more explicit.
  - Before we read the passage, we do not have to question what was written. However, GRS provided more opportunities to ask questions out of the content. Personally like the role of connector because it opens a new world for me.
- Interviewee 7
- Initially, GRS forced me to ask a question in the group, which I had to think about the gap or the specific ideas that seems unclear to me.
  - I was very confident when doing what I am good at.
  - I had never experienced GRS before. I like to be the summarizer the most. GRS is good when friends help to share ideas.
  - While timing, I had to attentively pay attention to all group members in order to get the message.
- Interviewee 8
- I think step-by-step more than before, and I can manage my ideas better.
  - I think I am more judicious than before; for example, I will read through the passage as preparation for GRS.
  - I think more than before, especially how to convey the message to other group members.
  - I think I support friends' confidence by asking constructive questions.
  - GRS made me see everything interesting, and I want to learn more.
  - I used to think that GRS may not work in the beginning. When I understand it truly, I found that it helps me a lot because when exchanging knowledge with friends, it opened my perspective from friends' experiences
  - I enjoyed working in a group because each of us can support one another. I think GRS is good, and I felt so proud of myself being able to connect the passage with other things.
- Interviewee 9
- I think more than before.
  - I gained more confidence in showing my idea.
  - The same thing can be seen differently depending on how information was presented and interpreted.
  - I had never known anything about GRS at all. Once I get to know it, it is perfect because my friends shared something that is far from my perspective. In the beginning, I was struggling. Later, it is better because I understand the step more. GRS is excellent because I can tell their thought, and my friends can

Interviewee 10

exchange experiences and ideas. It is like a peer-teaching.

- I just watched YouTube videos about plastic, and the following day I was assigned to about plastic in the ocean. I felt so connected with the passage.
- I think the limited timeframe made me think systematically because the time-spending should be worth it.
- I do not believe things immediately, but I need to analyze it more than before. It is more than summarizing the text
- I think my critical thinking is increased because I think of a cause-effect relationship more than before.
- I was not an outstanding person, but GRS urged me to speak more.
- I never know GRS before. The traditional way is to read with friends and discussion without employing any roles. It is good because I spend less time reading, and we have more time analyzing and discussing. I like the way people have the sharing of their ideas. When coming together, it created something new.
- My group was very active because we can finish everything before the allocated time. The given time was about 15 mins, but we can finish it within 10 mins.





## BIOGRAPHY

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