

## A Think-Aloud Study: L2 Reading Strategies Used by Higher and Lower Proficiency Thai EFL Readers

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### ABSTRACT

*This study aims to explore the complex phenomenon hidden in Thai EFL students' minds and to detect the different strategies used by two groups of readers with different levels of L2 reading proficiency whilst reading four English reading texts through think-aloud activities. Eight undergraduate students (two groups of four high scorers and four low scorers) were selected from thirty-six students to participate in think-aloud activities and retrospective interview programmes. Verbal reports from the think-aloud and retrospective interviews were transcribed and content-analysed. The analysis of the frequencies of strategies used found similar uses of strategies among both groups of different L2 reading proficiency. Despite the similar uses of strategies among both groups, the qualitative analysis revealed a more efficient use of higher-order level strategies reported by the group of highly proficient readers. Further, the qualitative analysis opportunistically allowed a closer look at the reading strategies used for two text types: narrative and expository.*

*Keywords: Reading strategies; Thai EFL students, think-aloud protocols; reading text types; L2 reading proficiency*

### INTRODUCTION

L2 reading comprehension has been a critically challenged skill in the area of language learning, where L2 learners, teachers, and researchers have had difficulties dealing with it for decades. L2 reading is complex in its nature because it involves dynamic interactions of different levels of comprehension processes (Song et al., 2020; Lau, 2006). Readers employ different levels of comprehension strategies to resolve their reading issues at multiple levels within the reading processes, (Song et al., 2020). Cognitive reading strategies, which involve bottom-up strategies or a language-based approach (scanning and using context clues), top-down strategies or a knowledge-based approach (skimming and activating schemata), help readers to construct meanings from a text. Metacognitive strategies which involve monitoring comprehension and evaluating strategy use are applied when readers monitor and appraise reading processes. Furthermore, readers may use social/affective strategies to discuss with their peers or teachers for better understanding or test-taking strategies when they sit an exam (Phakiti, 2003; Akkakoson, 2013). These strategies are mainly categorised into two main levels: 'Lower-order comprehension Strategies' (e.g., word identification, syntactic features) and 'Higher-order comprehension Strategies' (e.g., monitoring reading processes) (Song et al., 2020).

Quantitative research examining the relationship between reading strategies and reading proficiency in EFL contexts consistently found that proficient readers tended to use comprehension strategies more frequently and in a more varied way than less-proficient readers (Phakiti, 2003; Akkakoson, 2013; Wang, 2016; Fathi & Afzali, 2020). For example, Akkakoson (2013) conducted an experimental study to investigate the relationship between strategic reading instruction, the

process of learning second language-based reading strategies and English reading achievement for Thai university students of science and technology. The results showed that the highly proficient readers in the experimental cohort outperformed the control cohort in the postcourse standardised English test and were able to use second language-based reading strategies more effectively than their less-proficient peers.

Qualitative studies using think-aloud protocols and metacognitive interviews to explore EFL readers' strategy use further found that highly proficient readers were strategically engaged in reading activities and were able to use high-level order strategies more than low proficient readers. Lau (2006) examined readers' strategy use among eight grade 7 Chinese students in Hong Kong and found that good readers used more strategies and had better ability and knowledge of strategy use than did poor readers. In Wang's (2016) study, ten EFL Taiwanese high school freshmen with an intermediate level of English language proficiency were grouped into pairs to carry out the think-aloud reading tasks. The skilled pairs were able to use strategies more effectively and strategically to comprehend the text, such as forming well-integrated ideas from different sentences within the text, while less skilled pairs inefficiently applied strategies to integrate textual content for coherent meaning.

Other research employed the use of the think-aloud technique to explore different text types (narrative and expository) and uses of reading strategies. Ghavamnia et al. (2013) investigated the differences in the types and frequencies of strategy uses by four proficient and four less-proficient Iranian undergraduates majoring in TEFL. When reading expository texts, the proficient readers were likely to focus on a meaning-making process rather than a word-level decoding process. Alkhaleefah (2017) examined the reading strategies used and reading problems faced by four Saudi EFL students, two good and two poor readers. The good readers showed that they were more aware of their understanding about text content and problems unlike the poor readers. Reading narrative texts was more challenging than expository texts because the narrative texts contained some unique characteristics and writing features (e.g. narrative description, cultural contexts, etc.) which were not easily identified when compared to the expository texts. Further, Yayli (2010) found that proficient readers were more active in their use of cognitive reading strategies than less proficient readers for both narrative and expository text types. Hence, uses of reading strategies are seen to be interactively related to different types of reading texts.

Currently, in most EFL reading programmes in Thailand, a traditional teaching style where translation is mainly practiced is typically evident (Akkakoson, 2013). This teaching style is widely practiced from primary schools to universities and seems to influence students' inclinations to deal with their reading assignments using a bottom-up approach. Students tend to rely on decoding the meaning of every single word and details of the texts. Thus, they are likely to passively take in what is presented in the text and are not accustomed to thinking about how to interact with or question the text (Sitthitikul, 2011). Based on a review of relevant research and my own experiences over six years as a reading instructor of a compulsory English reading course for Thai EFL undergraduate students, most low achiever readers seem to be focused on decoding word-level meaning, so they are unsuccessful in constructing the main-idea of the text (Lau, 2006; Tsai et al., 2010; Wang, 2016).

In order to explore the uses of L2 reading strategies by proficient and less proficient readers, and to understand the factors contributing to their reading comprehension, a conceptual framework for this study was developed based on previous research by Akkakoson (2013), Wang (2016), and Lau (2006) to guide the inquiry methods and interpretations. Table 1 indicates the conceptual framework of the study developed, based on their research. Strategies included in the

framework were classified based on their features and previous studies. They were grouped into four main categories: cognitive (bottom-up), cognitive (top-down), metacognitive, and social.

TABLE 1. A conceptual framework of the study

Conceptual framework of this present study	Akkakoson (2013)	Wang (2016)	Lau (2006)
i. Cognitive: Bottom-up (language-based reading strategies)			
1. Resourcing	/		
2. Using contextual clues to interpret for word meanings	/	/	
3. Translating	/	/	
4. Using knowledge of grammar	/		
5. Re-reading	/	/	
6. Taking notes	/	/	
ii. Cognitive: Top-down (knowledge-based strategies)			
7. Overviewing			/
8. Visualising	/		/
9. Activating prior knowledge		/	/
10. Skipping unknown words	/	/	/
11. Determining the most important ideas	/		/
12. Looking for key words	/	/	/
13. Recognising text structure	/	/	/
14. Paraphrasing	/	/	/
15. Summarising	/	/	/
16. Making inferences		/	/
iii. Metacognitive			
17. Goal setting	/		/
18. Comprehension monitoring	/		
19. Self-evaluating			/
20. Strategy monitoring (Think-aloud)	/		
21. Acknowledging a lack of linguistic resources		/	/
iv. Social			
22. Discussing with others	/	/	

Using the above conceptual framework, this study aimed to explore the differences between the strategies used when performing English (L2) reading activities for both higher proficiency and lower proficiency readers in a Thai university context. The “think-aloud” method was employed to allow for a verbalisation of the thinking process and behaviors that occurred during the reading activity (Block, 1986), as a teaching technique and a research tool. While performing the think-aloud tasks, the students engaged with the text and verbalised what came into their minds. The students were trained by the researcher regarding the uses of strategies before starting the actual reading tasks, so that they were aware of the strategies used (Lin & Yu, 2015). This study aimed to seek answers for the following research questions:

1. What were the types and frequency of reading strategies used by the participants in both higher proficient and lower proficient reader groups?
2. To what extent were there differences in the strategies used by the participants in both higher proficient and lower proficient reader groups?

#### PARTICIPANTS

This study was conducted with a class of thirty-six undergraduate English major students in their second year enrolled in a compulsory reading comprehension course, offered by a government

university in Bangkok, Thailand. This course was instructed by myself, the researcher. The students were invited to take part in the study, although only eight of them would be selected in the follow-up interview programme based on their midterm scores, which reflected their reading proficiency level. All thirty-six students' midterm scores were arranged from the highest to the lowest. Four in the highest range and four in the lowest range were selected to participate in the think-aloud activities and retrospective interview programme. Pseudonyms were created to maintain the confidentiality of the data provided by the participants. Table 1 shows the pseudonyms and ranges of reading proficiency of the participants.

TABLE 2. Pseudonyms and ranges of reading proficiency of the participants

Number	Pseudonym	Low-High Scorer
1	Tong	Low range scorer
2	Lula	Low range scorer
3	Stang	Low range scorer
4	Khao	Low range scorer
5	Nut	High range scorer
6	Fern	High range scorer
7	Cat	High range scorer
8	Joy	High range scorer

#### DATA COLLECTION

At approximately ten weeks into the course schedule of 16 weeks, students were expected to be familiar with the basic skills of identifying the main idea of a text and recognising the dominant patterns of organisation which would help them see how minor details support the main idea. They also learned how to construct notes, outline, paraphrase, and summarise reading texts, as well as to practice giving reasons for inferences made from different reading practices. In addition, the researcher explained to the students the nature of the research project and the guidelines for performing think-aloud activities.

In the orientation session, the researcher explicitly explained the project background, the instruction for the think-aloud activity protocol, the listed reading strategies, and a video recording of a five-minute demonstration of a think-aloud reading practice. This tailor-made video-recording, used as a pre-task modelling, aimed to avoid a cold start effect when the students independently began their own think-aloud activities, but was not intended to influence them (Charters, 2003). All students in the class were assigned to complete the four reading tasks using the think-aloud worksheet and record their voices using their own mobile phone device for about 40 minutes during class time over four weeks. They were allowed to sit anywhere within the campus building and do the tasks alone and independently in order to avoid any influence from others (Nunan, 1992). All students were informed that their think-aloud reports would be audio recorded for transcription, and that all collected data would be kept confidential and used only for research purposes.

After completing each task, the students were required to write a summary of each reading passage and respond to the think-aloud prompted questions by reflecting on their thoughts and evaluations of the activities. Also, they needed to perform a group discussion about what they found from each task for a better understanding about the task. Only the eight students who were selected to participate in the study were invited to participate in a follow-up retrospective interview each week after the participants had finished their think-aloud activities. The follow-up interview was arranged within 3 to 4 days after the think-aloud activities each week.

## INSTRUMENTS

The instruments designed for this study included an orientation package for think-aloud activities, a think-aloud activity worksheet, reading tasks and retrospective interview questions. They were self-designed by the researchers using the theoretical framework.

### ORIENTATION PACKAGE FOR THINK-ALLOUD PROTOCOL

Students were prepared for completing the think-aloud protocol in a training session run by the researcher. The training package included the guidelines for the training session which comprised the background of the study, the think-aloud technique and reading strategies with descriptions and examples.

### THINK-ALLOUD PROTOCOL WORKSHEET

The students were given the reading passage with the think-aloud protocol worksheet for each of the think-aloud activities. The think-aloud worksheet was a tool to promote the students' engagement in the think-aloud practice. They were assigned to complete the think-aloud protocol worksheet after reading the passage and they had to participate in the group discussion which was a part of the think-aloud activity.

### READING TASKS

The four reading texts used in this study were part of the course materials. They were selected from commercial books based on the main objectives of the reading task, which included determining main ideas, recognising specific details, and making inferences. The four reading passages used for this study featured different topics with no prior disciplinary knowledge required. The two main types of texts were expository and narrative. These texts varied in terms of language difficulty, task requirements and word lengths. Table 3 summarises the four reading tasks specifications. These tasks were chosen carefully in order to prevent an overload of working memory (Charters, 2003). Generally, the word lengths were not too long and the more difficult texts were shorter than the easier ones. The level of difficulty or comprehension level was measured by Flesch-Kincaid Grade Level via <https://www.textcompare.org/readability/flesch-kincaid-grade-level>. The shortest passage (120 words) was arranged in the first week so that students would not feel too stressed completing the still-unfamiliar think-aloud activity. However, this shortest passage was the most difficult with respect to the required cognitive load compared with longer tasks which followed. Subsequent tasks were longer because it was assumed that students would have become more familiar with the think-aloud protocol. Task 3, which was the only narrative text, was the longest passage (650 words) because narrative texts are full of descriptive language and the character's dialogue. However, it was in the easiest range level and assumed to be appropriate because it did not require too much working memory load while reading the long passage within the time limit.

TABLE 3. A summary of the reading passage specifications

	Reading task 1	Reading task 2	Reading task 3	Reading task 4
Topic	American painting development during 1800s	Types of shopping goods	The tragedy of Echo and Narcissus	Classroom potatoes
Types of text	Expository	Expository	Narrative	Expository
Source	TOEFL test preparation materials	Reading exercise book	Reading exercise book	Reading exercise book
Task requirement	Multiple-choice + summary	Summary	True/ False Gap-fill + summary	Summary
Comprehension level (Flesch-Kincaid Grade Level)	18.4 (Extremely difficult to read)	12.56 (Fairly difficult to read)	5.0 (Very easy to read)	10.24 (Fairly difficult to read)
Word length	120 words	250 words	650 words	370 words

#### RETROSPECTIVE SEMI-STRUCTURED INTERVIEW

After the think-aloud session, each of the eight participants took part in an individual semi-structured follow-up interview for approximately 15 minutes each week. Five open-ended questions were prepared prior to the interview session and asked about how the participants perceived themselves when doing the tasks and the strategies they used. The following questions were asked of the participants in their L1 (first language) to make sure that there was no unclear issue.

1. What do you think about the strategies you have used in the reading task?
2. How do you evaluate your understanding of the text you have read?
3. What were the problems when you were trying to comprehend the text?
4. What did you do when you encountered a problem whilst reading?
5. What do you plan to do after you have finished reading the text?

#### DATA ANALYSIS

The data collected involved verbatim transcripts of think-aloud protocols and interview data. Both data types were transcribed in Thai and then translated into English. During the analysis process, the data from the think-aloud activities and retrospective interviews were repeatedly analysed to ensure their triangulation. An open-coding analysis was initially used to allow for an overview of data segmentation and coding to occur naturally. This stage was then followed by a constant recursive coding with the use of the conceptual framework as a coding guide, as illustrated in Table 1, to ensure that data categorisation was consistent. The codified data were categorised into four main themes: cognitive (bottom-up), cognitive (top-down), metacognitive, and social. Inter-rater checks were employed to establish the validity and reliability of the data detected.

#### FINDINGS

The reported strategies were obtained from two main data sources: think-aloud activities and retrospective interviews. Data from the retrospective interviews complemented the data from the think-aloud sessions, as it was highly likely that some data, particularly cognitive level data



(Alkhaleefah, 2017), would be missing from the think-aloud sessions. This process of data triangulation also increased the reliability and validity of the study.

#### TYPES AND FREQUENCY OF READING STRATEGIES

The overall data for the four reading tasks obtained from both think-aloud and retrospective interviews demonstrated 225 utterances, indicating the use of 25 reading strategies among the participants. Table 4 summarises the strategies used from both think-aloud and retrospective interviews. The most frequent strategies used by both groups were: determining the most important ideas (23, 10.22%), summarising (23, 10.22%), acknowledging a lack of linguistic resources (18, 8.00%), think-aloud technique as a useful reading tool (18, 8.00%), evaluating the text (17, 8.02%), using resources like a dictionary (15, 7.08%), translating (15, 7.08%) and discussing with others (14, 6.60%).

TABLE 4. Summary of the strategies used from both think-aloud and retrospective interviews

Strategies used	Task 1		Task 2		Task 3		Task 4		Total	%
	High	Low	High	Low	High	Low	High	Low		
Determining the most important ideas (COG)	4	4	5	5	0	2	3	0	23	10.22
Summarising (COG)	3	4	2	3	4	3	3	1	23	10.22
Acknowledging a lack of linguistic resources (META)	3	3	2	3	0	1	2	4	18	8.00
Think-aloud (positive) (META)	1	2	0	2	2	3	3	5	18	8.00
Evaluating the text (META)	2	2	2	2	2	2	2	3	17	7.55
Resourcing (COG)	5	5	1	0	0	2	0	2	15	6.66
Translating (COG)	5	5	1	0	0	2	0	2	15	6.66
Discussing with others (SOC)	1	1	1	3	3	1	3	1	14	6.22
Monitoring comprehension (Content) (META)	2	1	2	2	0	0	2	3	12	5.33
Rereading (COG)	2	3	1	1	0	2	0	2	11	4.88
Making connections (COG)	0	1	0	1	2	2	2	1	9	4.00
Using knowledge of grammar (COG)	1	0	1	1	0	0	1	2	6	2.66
Visualisation (COG)	0	0	2	2	0	2	0	0	6	2.66
Activating prior knowledge (COG)	0	1	0	0	3	2	0	0	6	2.66
Making inferences (COG)	1	1	0	0	2	0	0	1	5	2.22
Looking for keywords (COG)	0	1	1	1	0	0	1	0	4	1.77
Think-aloud (negative) (META)	2	1	0	0	1	0	0	0	4	1.77
Using context clues to interpret for word (COG)	0	3	0	0	0	0	0	0	3	1.33

Overviewing the text (COG)	0	0	0	0	0	3	0	0	3	1.33
Paraphrasing (COG)	0	0	0	0	0	1	1	1	3	1.33
Asking questions (COG)	0	0	0	0	0	0	1	2	3	1.33
Classification (COG)	0	0	2	0	0	0	0	0	2	0.88
Skimming (COG)	0	1	0	0	1	0	0	0	2	0.88
Planning (META)	1	0	0	1	0	0	0	0	2	0.88
Recognising text structure (COG)	0	0	0	0	0	0	1	0	1	0.44
	<b>30</b>	<b>37</b>	<b>25</b>	<b>28</b>	<b>20</b>	<b>27</b>	<b>27</b>	<b>31</b>	<b>225</b>	<b>100</b>
	<b>67</b>		<b>53</b>		<b>47</b>		<b>58</b>			

The analysis of frequencies of occurrences of strategies used by both groups from the two data sets clearly revealed the differences in the types of strategies used. Table 5 presents the most frequently used strategies by both groups obtained from the two data sources, think-aloud and retrospective interviews. The overall data showed differences in the uses of strategies practised by both groups. High-score readers reported the use of the following strategies: determining the most important ideas (12, 11.76%), summarising (12, 11.76%), discussing with others (8, 7.84%), evaluating the text (8, 7.84%), acknowledging a lack of linguistic resources (7, 6.86%), resourcing (7, 6.86%). On the other hand, the low-score readers reported different sets of strategies: positive effects of think-alouds (12, 9.75%), determining the most important ideas (11, 8.94%), summarising (11, 8.94%), acknowledging a lack of linguistic resources (11, 8.94%), translating, evaluating the text (9, 7.31%). However, a closer look at the top three strategies allows an interpretation of similar uses of two strategies: determining the most important ideas and summarising, by both groups.

TABLE 5. A comparison of the most frequently used strategies by both groups

Strategies used	High scorer readers		Total	%	Strategies used	Low scorer readers		Total	%
	Think-alouds	Retro. interviews				Think-alouds	Retro. interviews		
Determining the most important ideas (COG)	10	2	12	11.76	Think-aloud (positive) (META)	4	8	12	9.75
Summarising (COG)	11	1	12	11.76	Determining the most important ideas (COG)	3	8	11	8.94
Discussing with others (SOC)	0	8	8	7.84	Summarising (COG)	8	3	11	8.94
Evaluating the text (META)	2	6	8	7.84	Acknowledging a lack of linguistic resources (COG)	5	6	11	8.94
Acknowledging a lack of linguistic resources (COG)	2	5	7	6.86	Translating (COG)	8	1	9	7.31
Resourcing (COG)	4	3	7	6.86	Evaluating the text (META)	4	5	9	7.31

Comparisons of the two data sources are shown in Figure 1. Students' testimonies were found to be more frequent from the retrospective interviews than the think-aloud activities, which can be attributed to the unfamiliarity with the practice of think-aloud activities. For example, Cat



reported that she used the planning technique in the interview session, but not in the think-aloud protocol. It seems that the practice of the think-aloud technique appeared to be unusual for the students, as the technique had never been taught as part of their learning experience (Ghavamnia et al., 2013). For example, they may not have been familiar with talking about making-notes or underlining while reading. Moreover, the students were doing the think-aloud activities in their first language, so that some aspects such as paraphrasing in English did not occur. However, data from the retrospective interviews after the think-aloud activities were found to be consistent with the think-aloud data.

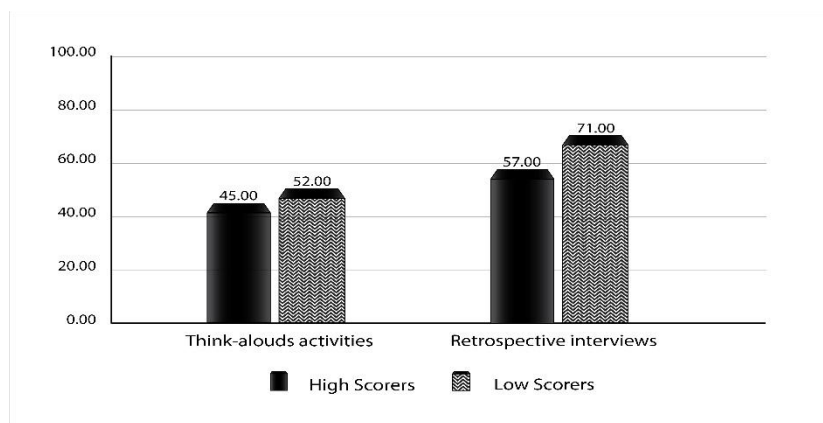


FIGURE 1. A comparison between strategies used from think-aloud activities and retrospective interviews

#### DIFFERENCES IN THE STRATEGIES USED BY BOTH GROUPS OF PARTICIPANTS BASED ON TASKS

This section reports on the major findings from students' verbalisation in think-aloud activities and retrospective interviews. It was noticeable that the length of think-aloud transcripts appeared to be different between the two groups, which reflected the differences in their use of strategies. The transcripts for high-score readers were shorter than the lower-score readers. The lengthy transcripts found among the lower-score readers mainly showed how they translated the text word-for-word along with their confusion about the use of comprehension strategies. In contrast, the high-score readers' transcripts demonstrated a more effective use of reading strategies, and more precise investigation of word meanings and main idea construction. In short, the data from the think-aloud activities clearly demonstrated that proficient readers selectively used complicated strategies to resolve their problems, while the less proficient readers tended to translate the text word-for-word. Data from think-aloud and retrospective interviews are presented in combination as they complemented each other and are now discussed in relation to the tasks.

#### MAJOR FINDINGS FROM TASK 1

Task 1, an expository text of approximately 120 words, was about the history of American painting. It was taken from TOEFL test preparation materials. The readability level was 18.4 (extremely difficult to read). From think-aloud activities, students with high reading proficiency (Cat, Nut - high) were trying to verbalise the summary of the text and determine the main idea.

Name	High/low	Source	Data	Strategies
Cat	high	Think-aloud	This can be summed up that American painting is being developed during 1820-1830. I think this is the main idea of the passage and the following is the support.	Summarising
Nut	high	Think-aloud	From this point on we can then see the difference between paintings in 19 <sup>th</sup> century and 18 <sup>th</sup> century. The major themes were focusing on portraits in 19 <sup>th</sup> century while landscapes and the daily activities of ordinary people were the main themes for paintings in the 18 <sup>th</sup> century.	Main idea

In contrast, the lower proficiency level students (Tong, Khao - low) tended to translate the message into Thai without determining or analysing the function of ideas. It seems that the low level readers were struggling with word-related level problems when compared to the good readers. When struggling with the meanings of unknown words, some students in both groups (Nut- high; Lula - low) reported that they had to look up the meanings in a dictionary.

Name	High/low	Source	Data	Strategies
Nut	high	Think-aloud	...this part "pristine beauty", I don't know the word "pristine" so I had to find it from google then I know	Lack Vocab/Resourcing
Tong	low	Think-aloud	...I don't know the word "inclination" so I need to look it up from the internet and this word "concern" I also don't know...	Lack Vocab/Resourcing

In the retrospective interviews, Joy (high) reported that she used context clues to infer the meanings of some unknown words.

Name	High/low	Source	Data	Strategies
Joy	high	Retro. int.	I don't know some words but I decided to guess from the context. I wouldn't use the dictionary until I get stuck or if I'm not really getting it right.	Context

Participants' justifications for the think-aloud protocol were found in a positive and a negative way for both groups. Cat (high) found that the think-aloud technique was useful for her, while Joy (high) deemed it as not much of a help for the exercise, as she concentrated on translation and was not able to determine the main idea of the text.

Name	High/low	Source	Data	Strategies
Cat	high	Retro. int.	The think-aloud allows me to stick to the ideas and not jumping around or forget things. It helps me to read more closely and it makes me more confident about my understandings even if I'm misunderstood.	Think-aloud (positive)
Joy	high	Retro. int.	I don't think think-aloud helped me much in this exercise because I know almost all words; however, I found it helped me when I listened to my recorded voice. I found that I still lacked the main idea determining. I was just translating into Thai.	Think-aloud (negative)

It was noticeable that in this task, most students shared the same experience of not being accustomed to the think-aloud practice.

MAJOR FINDINGS FROM TASK 2

Task 2, an expository text of approximately 250 words in length, was about types of shopping goods. It was taken from a reading exercise book. The readability level was 12.56 (Fairly difficult to read). The reading exercise involved writing a summary of the text.

In this task, most students in both groups did not translate the text out loud, except Tong (low) who was doing some translation from the start. In the think-aloud activities protocol, most students were focusing on distinguishing between the types of goods. Cat (high) was trying to analyse parts of the text to confirm the correct identification of the types of goods.

Name	High/low	Source	Data	Strategies
Cat	high	Think-alouds	...this paragraph talks about shopping goods. It gives the features of shopping goods. From the second sentence it said shopping goods are compared with hmm...product for price, quality, style all service by consumer before purchase	classification

In retrospective interviews, more strategies were employed by students in both groups. Tong (low) was saying that she was using more strategies than she did in the first task. Some students in both groups were visualising the text:

Name	High/low	Source	Data	Strategies
Tong	low	Retro. int.	This text is easier than the one last week. There were fewer words I didn't know. I felt I was using more strategies. I used visualisation, re-reading. I was over-viewing in the first reading then I scanned it for details and analysed sentences. The third round I translated words I even paraphrased it using my own words.	Monitoring comprehension/ visualisation/ lack of vocab/ re-read/ overview/ scan/ classification/ translation/ paraphrase
Joy	high	Retro. int.	I was visualising in my mind from the description of the goods.	visualisation

In the retrospective interviews, students were confused about main idea identification as they found that everything was equally important. For example, Joy (high) had no problem understanding the text, but she was not certain about determining the main idea, because she thought it was all equally important.

Name	High/low	Source	Data	Strategies
Joy	high	Retro. int.	I didn't think it's hard when I read, but when I had to write the main idea, everything seemed to be equally important. I didn't know what to put for main idea.	Monitoring comprehension

In this task, only low-range scorers had positive views towards the think-aloud protocol.

Name	High/ low	Source	Data	Strategies
Lula	low	Retro. int.	I like to read aloud the text. I can hear my voice so I was able to understand the text more. If I read it silently, I would forget what I think.	Think- alouds (positive)

Students in both groups found that discussion with their group members about the text was useful.

Name	High/ low	Source	Data	Strategies
Cat	high	Retro. int.	When I discussed with my classmates, I was able to see that I was wrong at some parts.	Discussing with others

#### MAJOR FINDINGS FROM TASK 3

Task 3, a narrative text of approximately 650 words, was about the tragedy of Echo and Narcissus. It was taken from a reading exercise book. The readability level was 5.0 (very easy to read). The reading exercise was true/false and gap-fills for the text summary.

In the think-aloud activities, the participants from both groups understood the text clearly after they had read it, because the language was fairly easy and they were familiar with the story.

Name	High/ low	Source	Data	Strategies
Khao	low	Think- alouds	I had known this story before...	Activating prior knowledg e
Fern	high	Think- alouds	I have some background about this story.	Activating prior knowledg e

Students from both groups used a summarising technique whilst reading, except Tong (low) who kept translating the text. The participants did not voice anything much about the techniques used, as it seemed that the story was engaging and interesting, and they all enjoyed reading it. Most participants' testimonies were derived from the retrospective interviews. Both groups of participants graded the text as easy. Students from the high-proficiency group remembered that they used some particular techniques, such as making connections to other texts and skimming.

Name	High/ low	Source	Data	Strategies
Nut	high	Retro. int.	I tried to link some information to other texts I had read before.	Making connection s
Cat	high	Retro. int.	I overviewed the text before I read more closely at specific parts...I was quite familiar with the story so I skimmed through before I read closely.	Overview/ skim

Both groups of participants reported the use of visualisation while they were reading.

Name	High/low	Source	Data	Strategies
Khao	low	Retro. int.	I feel I was reading a story that I can imagine accordingly.	Visualisation

Students from the low-proficiency group said they benefited from the think-aloud technique.

Name	High/low	Source	Data	Strategies
Lula	low	Retro. int.	Think-aloud technique allows me to focus on the reading. I was not distracted.	Think-alouds (positive)

#### MAJOR FINDINGS FROM TASK 4

Task 4, an expository text of approximately 370 words, was about an American high school problem on the hardworking attitude of American students. It was taken from a reading exercise book. The readability level was 10.24 (fairly difficult to read). The reading exercise involved making a summary of the text.

All participants voiced their opinion that this task was full of difficult words. They said that they did not understand the text and had to re-read it several times. They were also summarising the text and looking for keywords, except Tong who was translating the text. Uses of strategies were more evident among the skilled readers when compared to the unskilled readers. The proficient readers were looking for key words and main ideas whilst reading. Two examples are shown below:

Name	High/low	Source	Data	Strategies
Cat	high	Think-alouds	Bright American kids don't need to work hard. Look at this word "modest" is the key. They don't need to work hard but they can still get an A.	Main-idea/ Keywords
Joy	high	Think-alouds	This paragraph talks about the bright kids who are competent by nature. They don't have to work too hard. They can still do well.	Main-idea

As evident during the think-aloud protocol, almost all of the participants were unsure of the phrase "coasting through", so they had to consult a dictionary for the meaning.

Name	High/low	Source	Data	Strategies
Cat	high	Think-alouds	This phrase 'coasting through' I don't understand so I had to look it up from the dictionary.	Lack of vocab/ resourcing

From retrospective interviews, all participants evaluated their comprehension negatively and reported that the passage was difficult. The participants' evaluation of the text seemed contradictory to the readability score of the texts. This text was scored 10.24, meaning fairly difficult to read, which was different from the participants' perception.

Name	High/low	Source	Data	Strategies
Khao	low	Retro. int.	This passage is difficult. I wasn't sure if it was about the school or the students.	Evaluating texts/ monitoring comprehension

Most viewed the think-aloud technique as a very useful reading strategy, because it helped them to comprehend the text more clearly when they spoke their thoughts out-loud.

Name	High/low	Source	Data	Strategies
Joy	high	Retro. int.	This week is good for doing the think-aloud. It helps me a lot. I can see the main idea of the paragraphs better than reading silently.	Main idea/ think-alouds (positive)

Tong's response is shown below:

Name	High/low	Source	Data	Strategies
Tong	low	Retro. int.	I've done this think-aloud practice for four times. I'm more capable of organising ideas in my head. I feel that I need to read more. I want to learn more words	Think-aloud (positive)

When asked about the result of group discussion, students found that it was useful to exchange their ideas with their classmates.

Name	High/low	Source	Data	Strategies
Joy	high	Retro. int.	My classmate and I did not share the same views. We see some parts differently. I viewed it negative but my classmate found it neutral.	Discussing with others

In conclusion, findings from the think-aloud activities and retrospective interviews revealed that participants with higher proficiency (Cat, Joy, Nut, and Fern) were focusing on main-idea construction, while their lower proficiency counterparts (Tong, Khao, Lula, Stang) were paying more attention to word-related levels. Lower proficiency readers seemed to use translating strategies more than higher proficiency readers, particularly Tong who was translating all of the reading texts. In expository texts (tasks 1, 2, and 4), the level of difficulty of some words was reported as the key problem, thereby undermining the level of comprehension for both groups, especially in text 4 where all participants struggled with word difficulty. Moreover, the highly skilled participants responded that they were using more complicated strategies and were more selective in their use of those strategies. For the narrative text, all participants from both groups used a summarising technique whilst reading, except Tong (low) who was the only one that kept translating the text. The participants did not voice anything much about the techniques used, as it seemed that the story was engaging and interesting, and they all enjoyed reading it.



## DISCUSSION AND CONCLUSION

This study examined the types and frequencies of strategies used among the participants with high and low reading proficiency (research question 1). Based on the analysis of frequencies counting the most frequently used strategies reported by both groups, it was seen that both higher proficiency and lower proficiency readers seemed to be using higher-order level strategies: determining main ideas and summarising. This result can be attributed to the expected course outcomes clearly set out in the reading tasks and the instructions. This reading programme mainly focused on training the students to master the skills needed to identify main ideas and make summaries of the reading texts, and also to locate specific details and make inferences explicitly. Therefore, the training helped students to become strategically aware which was similar to Akkakoson (2012). However, this result could be further analysed and interpreted from the qualitative data obtained from the think-aloud activities and retrospective interviews. Moreover, regarding the data collection tools, indications of strategies used found from retrospective interviews were more frequent than those found in the think-aloud activities protocol. It was possible that the practice of the think-aloud technique may have been unusual for the students, as this technique had never been taught to them before (Ghavamnia et al., 2013).

This study also aimed to determine the extent to which the differences in the strategies were found between the participants in the high-proficient and low-proficient reader groups (research question 2). The answer to this question was derived from the analysis of the qualitative data which allowed for further analysis of the complicated issues underlying the participants' verbalisation while performing different reading tasks, which complemented the frequency count data of the strategies used. From the think-aloud transcripts, it was noticeable that the verbatim report from the lower reading proficiency group was longer and not quite as precise in their uses of strategies. These lengthy transcripts found among the lower reading proficiency readers mainly showed that they translated the text word-for-word, and were confused about using comprehension strategies. This is consistent with the findings from a qualitative study conducted with ten Taiwanese EFL high school freshmen (Wang, 2016), senior undergraduate university students majoring in TEFL in Iran (Ghavamnia et al., 2013), and eight grade 7 Chinese students in Hong Kong (Lau, 2006).

### VARIATIONS OF STRATEGIES USED DEPENDING ON READING TEXTS

The answer for research question 2 is also associated with the analysis of the data discussed in relation to different reading texts, because the strategies used were contextually-oriented (Alkhaleefah, 2017). Data obtained from both the think-aloud activities and retrospective interviews were discussed based on two types of text, i.e. expository and narrative.

#### EXPOSITORY TEXTS

Upon analysing the qualitative data for the use of strategies detected while reading expository texts in tasks 1, 2, and 4, each task had some highlighting testimonies which can be discussed in four main themes: determining the main idea of the text, lack of knowledge on word difficulty, classifying pieces of information within the text, and effects of the think-aloud protocol.

For determining main ideas, it was clearly seen from the think-aloud data obtained from task 1 and 4 that students with high reading proficiency (Cat, Nut, Joy) were trying to verbalise the summary of the text and to determine the main idea. In contrast, the lower proficiency level students (Tong, Khao) tended to translate the message into Thai without determining or analysing

the function of ideas. It seems that the lower level readers were struggling with word-related level problems when compared to the higher level readers. This finding is similar to a previous study conducted with ten Taiwanese EFL high school freshmen by Wang (2016).

For the lack of knowledge on word difficulty, participants in both groups voiced that they acknowledged a lack of knowledge on some difficult words and that they had to look up the meanings in a dictionary. However, the unknown words for both groups were different. Lower-proficient readers were struggling with a wide range of words, while the higher-proficient readers reported difficulties in understanding some unknown words, such as “pristine” in task 1 and “coasting through” in task 4. These lexical difficulties are consistent with the problem found for both high and low proficiency readers by Alkhaleefah (2017).

For classifying pieces of information within the text, it was highlighted from data by most students in both groups, especially in task 2. During the think-aloud activities, most students were trying to categorise the types of goods, even though they were unsure of some types. This is probably because this particular type of text is about classification of types of goods, which requires readers to analytically group the information into categories. However, from the testimonies given by Tong about task 2, it was found that she continued to translate the text.

For the effects of the think-aloud protocol, data indicating this issue was mostly obtained from the retrospective interviews. Data frequently found among low-proficient readers revealed the benefits of think-aloud activities as a reading strategy. For task 1, when the participants were not familiar with this method, Khao, a less-proficient reader, was worried that she would not be able to finish everything within the time limit. High-proficient readers viewed think-aloud activities in both positive and negative ways. For the benefits, they deemed it to be a very useful reading strategy, because it helped them to comprehend the text when they spoke their thoughts out-loud.

#### NARRATIVE TEXT

The major findings detected from the data reported by both groups when reading task 3 revealed the readers’ feelings together with their uses of strategies. From both think-aloud activities and retrospective interviews, the participants from both groups reported that they enjoyed reading this text and reported the use of visualisation. Also, they understood the text clearly, because the language was well understood and they were familiar with the vocabulary and background of the story. Participants from both groups used a summarising technique while reading, except Tong (low) who kept translating the text. Furthermore, those from the high- proficiency group also remembered that they used some specific techniques, such as making connections to other texts and skimming. Regarding the issue of comprehension, the findings from this study were at odds with the study by Alkhaleefah (2017), who found that reading narrative texts was more challenging than expository texts because they contain some unique characteristics and writing features (e.g. narrative description, cultural contexts etc.) which are not easily identified when compared to expository texts. The discrepancy between the findings of the two studies can be attributed to the different levels of text readability that affected the level of comprehension. However, it is obvious that this study was able to detect the strategies used for the narrative text.

In conclusion, the analysis of qualitative data complements the results obtained from quantitative analysis methods. The qualitative analysis could explain the reasons why the frequencies of strategies use were similarly found among both groups of participants. However, the similar uses of higher-order level strategies, i.e., determining main ideas and summarising, among both groups of participants reflected the focus of the reading instructions and task

requirements. Despite the similar uses of strategies among both groups, the qualitative analysis revealed the more efficient use of higher-order level strategies reported by the group of highly proficient readers. Focusing on the two text types, the major pattern found from reading a narrative text was the readers' enjoyment as well as the typical use of a visualisation technique for this type of text. While reading expository texts, the participants were strategically engaged to comprehend the text as they were instructed. The most important strategies found were main-idea construction, and summarisation. Also, the meta-cognitive strategies regarding the common problem found for both groups of participants were acknowledging a lack of knowledge of some words, which led to commonly found strategies in search of the meanings of unknown words from an online dictionary.

#### PEDAGOGICAL IMPLICATIONS

The present study examined the types and frequencies of strategies used and the extent to which the differences in the strategies were found between participants with two different levels of reading proficiency. With the use of quantitative and qualitative data analysis, similar patterns of strategies used were found among both groups. However, the qualitative analysis revealed the more efficient use of higher-order level strategies reported by the group of highly proficient readers. The similar use of higher-order level strategies, i.e. determining main ideas and summarising, among both groups of participants reflected the focus of the reading instructions and task requirements. Hence, it is evident that reading strategies are achieved through explicit training, regardless of the different levels of reading proficiency. This finding implies that EFL reading programmes should focus on an explicit implementation of expected reading strategies in the reading practices.

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