

Changes in the Metacognitive Reading Strategies and Learning Process of Japanese
University Students Before, During, and After Study Abroad

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Abstract

This present research aims to investigate how university students are motivated, utilize metacognition, and engage in English learning, and how their metacognitive reading strategies develop before and after study abroad, which affects their English reading ability. The participants were Japanese university students who enrolled in the program of study abroad in English-speaking universities for two semesters. Three-year longitudinal research was administered via mixed methods before and after study abroad. Questionnaires about in- and out-of-class learning and metacognitive reading strategies at the three reading stages were conducted to investigate the changes in the learning and reading processes. TOEFL iBT and TOEIC IP scores were used to analyze the changes in English reading ability. Interviews ($N = 17$; $N = 22$) were carried out to grasp the students' voices in English learning in-depth. The research had seven research questions and was composed of three separate studies. Study 1 ($N = 84$) investigated the relationship between metacognitive reading strategies and English reading ability before studying abroad. Study 2 ($N = 75$) explored the relationship between the metacognitive processes in self-regulated learning and English reading ability before studying abroad. Study 3 ($N = 34$) investigated the changes in the metacognitive reading strategies and English reading ability, and the changes in the learning process, motivation, and behavior (during) and after studying abroad. In the results of Study 1, higher-level students used the strategies significantly at the post-reading stage and tended to reflect more on the content of the reading topics. This indicates that continuous reflective activities by reading strategy instruction might promote metacognition and contribute to deepening

reading comprehension. The results of Study 2 showed that the students acquired more effective reading strategies after learning in class, which improved their reading scores significantly. Moreover, self-regulated learners who controlled learning improved their scores greatly, and linguistic knowledge could be an important factor in L2 reading. This indicates that it is important to regulate both metacognitive monitoring and control. In addition, motivation might be an important element for achieving goals. As for Study 3, students' English reading ability improved significantly after studying abroad, and they tended to utilize higher-level metacognitive reading strategies such as selective attention strategies. The factors behind this improvement might include in-class learning that deepens reading comprehension and the integrated learning of the four skills. In addition, all the students thought about what to do, behaved actively, and engaged in English learning with high motivation while studying abroad. In conclusion, studying abroad might promote metacognition not only for improving English reading ability but also for enhancing intrinsic motivation for English learning, which encourages self-regulated learning. However, not only having motivation, but also setting goals for learning could be an important factor to continue learning after studying abroad.

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Chapter 1: Introduction

According to the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan, the government has encouraged study abroad to educate young people, who have a global outlook and can succeed in tomorrow's world. To help achieve its objective, the government launched *the Tobitate!* (Leap for Tomorrow) Study Abroad Initiative, which hopes to make Japan a nation in which all ambitious youths can go overseas.

The Japanese government addresses the significance of studying abroad in its vision statement. Studying abroad for Japanese students not only improves language skills but also provides an opportunity to enrich international sensibilities. The experience of overcoming difficulties and conflicts in the overseas environment can greatly enhance students' humanity and can be expected to have various benefits such as broadening of perspective, increasing interest in the world, accepting diversity, establishing identity, building self-esteem, and enduring stress (MEXT, 2023).

From the above, studying abroad might promote metacognition in which one reflects on oneself objectively and controls one's mental processing; however, few studies have highlighted the development of metacognition by studying abroad. Flavell (1971, 1979) defines metacognition as deliberate, planned, intentional, goal-directed, and future-oriented mental processing that can be used to accomplish cognitive tasks. I consider that utilizing metacognition could be an important factor in improving language skills and tackling difficulties and conflicts in the overseas environment.

Metacognition is identified as metacognitive knowledge and metacognitive regulation, and it works as a cyclical process, while metacognitive knowledge and regulation interact with each other (Flavell, 1979, 1987). In addition, metacognitive regulation is classified into metacognitive monitoring and control, and its cyclical process could be interpreted as the metacognitive processes. Zimmerman (1990) defines metacognitive processes in self-regulated learning as learners planning, setting goals, organizing, self-monitoring, and self-

evaluating. Therefore, this present research defines the metacognitive processes as a cyclical process of metacognitive regulation that monitors and controls learning.

Ito (2013) asserts that metacognition plays a core role in self-regulated learning. According to Zimmerman (1990), a common concept of self-regulated learning has emerged through the notion of active participants who are “metacognitively, motivationally, and behaviorally active in their learning” (p. 4). In short, metacognitive processes in self-regulated learning facilitate learners’ motivation or behavior control actively, which would lead to improving language skills and cultivating humanity.

Although numerous studies have reported that the study abroad experience has positive effects in various aspects such as improvement of English proficiency as well as self-confidence or mitigation of speaking anxiety (e.g., Harada, 2013; Hidai et al., 2021; Hirai, 2018; Iida, 2013; Kusaba & Yoshida, 2020; Saito & Iida, 2015), there is little research focusing on changes in the learning process behind these results before and after study abroad. I believe that the learning process involves how learners think, discover their problems, behave actively, and engage in their learning to solve them, which leads to the metacognitive processes in self-regulated learning. Moreover, to investigate the learning process, it is necessary to integrate the elements including motivation and behavior. However, few studies have treated all three components: metacognition, motivation, and behavior in self-regulated learning. Accordingly, this research investigates the changes in the learning process from the perspective of motivation, behavior, and metacognitive processes in self-regulated learning before and after study abroad, and discusses whether studying abroad could promote metacognition. This research will help provide insights and suggestions regarding the benefits of studying abroad and the importance of metacognition.

When I joined a reading class of my supervisor as a teaching assistant as part of my graduate research, even university students who had high motivation to study abroad had difficulties with academic reading. Academic reading is indeed challenging because learners are required to have academic vocabulary and various kinds of background knowledge. In

such a situation, it is important to cultivate academic reading ability in university education.

Researchers in the reading field have pointed out the importance of reading for university students. Thongwicht (2018) states that reading is the way to acquire knowledge in all areas, and the ability to read and comprehend the message is crucial to the learners' academic achievement. Mc et al. (2000) emphasize that reading literacy is important for gaining knowledge and that it is a prerequisite for an individual to become a good reader. From the above, I consider that Japanese university students are required to improve their academic reading skills because reading comprehension is a critical skill for getting the most out of lectures and carrying out research.

From the view of instructors, Zhang and Seepho (2013) suggest the need for teaching reading strategies. It implies that an instructor should be aware of the significance of teaching reading strategies so that learners can make use of them. Therefore, reading strategy instruction might be important because learners who receive its instruction could improve their English reading ability by utilizing reading strategies.

Previous studies have suggested the importance of the relationship between metacognition and reading strategies in improving English reading ability (e.g., Ahmadi et al., 2013; Barnett, 1988). Sannomiya (2021) describes that reading consists of three stages: before, during, and after reading stages, and utilizing metacognition at each stage deepens understanding of the text and improves reading ability. However, the previous reviews have not sufficiently discussed the relationship among metacognitive reading strategies at the three stages, reading strategy instruction, and English reading ability. To the best of my knowledge, few studies focus on reading strategy items at the post-reading stage and discuss what topics readers reflect on. This present research highlights the metacognitive reading strategies, especially in the post-reading stage. For Japanese university students, who are required to acquire academic reading skills, it is crucial to promote metacognition and improve reading ability. Therefore, it is important to investigate how metacognition and reading strategies in academic reading are related to English reading ability. I hope that this research will

contribute to gaining suggestions for improving reading proficiency and deepening reading comprehension in English learning instruction.

In summary, this research focuses on metacognition, reading strategies, and English reading ability before and after study abroad. The purpose of this research is to investigate how Japanese university students develop metacognition to engage in English learning before, (during), and after study abroad, which affects their English reading ability. To be more precise, the research aims to investigate how their motivation, behavior, and learning process changed, and how their metacognitive reading strategies developed before and after study abroad.

Three-year longitudinal research was conducted with the students who enrolled in a study abroad program for a year. The research was divided into three separate studies. Study 1 investigated the relationship between metacognitive reading strategies and English reading ability before study abroad. Study 2 explored the relationship between the metacognitive processes in self-regulated learning and English reading ability before study abroad. Study 3 investigated the changes in the metacognitive reading strategies including English reading ability, and the changes in the learning process such as motivation and behavior before, during, and after study abroad. This research integrates the three studies 1, 2, and 3.

Finally, I will overview this research. Chapter 2 presents a personal rationale, the theoretical rationale, research questions, and hypotheses. Chapter 3 describes the research design and how I conducted this research. Chapter 4 reports the results of this research. Chapter 5 discusses the findings. Chapter 6 provides the conclusions that summarize the most important findings of this research, the implications, limitations, and suggestions for further study.

Chapter 2: Review of Literature

This chapter introduces a personal rationale and explains the concept of metacognition, linguistic knowledge in L2 reading, metacognitive reading strategies, metacognition in self-regulated learning, L2 motivation, and reviews on study abroad, which are closely related to this present research. This chapter also explains seven research questions and hypotheses including the reasons why these questions have been chosen.

A Personal Rationale

When I was an English teacher in junior high school, almost all the students had difficulties with long passages even though their English proficiency was high. I asked myself why they did not like reading. When I joined a reading class of my supervisor as a teaching assistant, even university students at the tertiary level had difficulties with academic reading. Not only the levels between junior high school and university students but also their motivation toward English might be quite different. However, it was surprising that the weakness of reading was similar. I thought that it might be necessary to investigate the students' voices in English learning such as motivation or reading process in-depth. To figure out the factors behind students' perceptions of their weaknesses in reading, I decided to focus on reading.

In my master's thesis, I investigated the relationship between metacognition and English reading ability because metacognition might be an important factor in reading (Ueno, 2020). I defined metacognition as reflection and investigated the quality of reflection and English reading ability. The study showed that there was a weak correlation among them. This indicates that English reading ability might be related to multiple factors not only the quality of reflection. Deepening my research during the doctoral course, I have stressed metacognition in L2 reading, linguistic knowledge, reading strategy instruction, metacognitive reading strategies, and the study abroad experience. This research investigates

the changes in the learning and reading processes of Japanese university students before, during, and after study abroad, which might contribute to improving English reading ability.

Metacognition in Reading

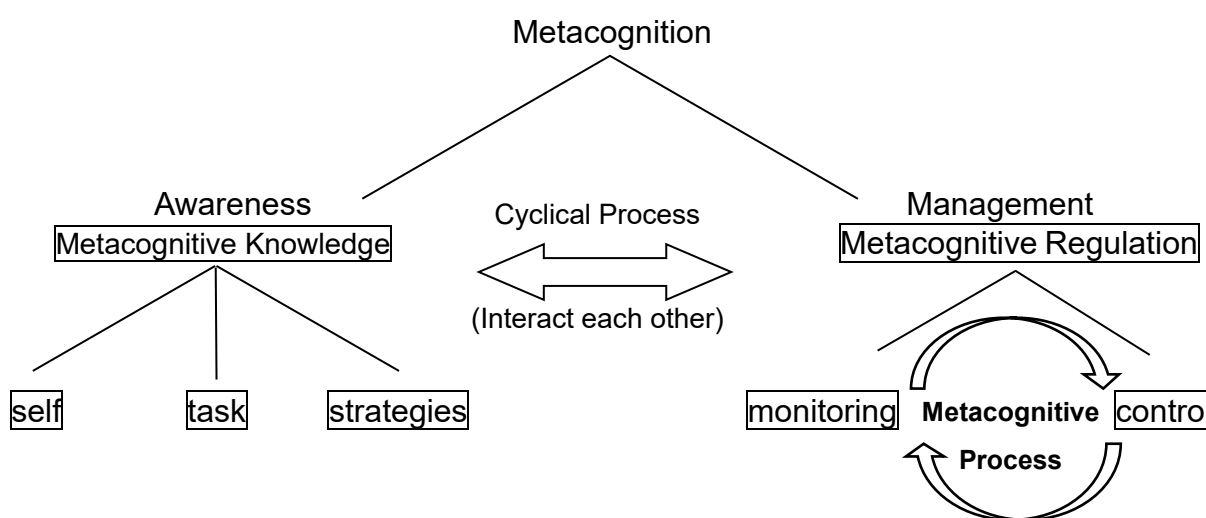
Grabe (2009) defines “reading as an interaction between a reader and a writer” (p. 15). Comprehension occurs when the reader extracts and integrates various kinds of information from the text and combines it with what is already known (Koda, 2005, p. 4). Flavell (1979) states that metacognition plays an important role in reading comprehension.

Metacognition in reading involves thinking about the reading process. In other words, it can be stated as the process of thinking about what reading strategies the reader uses before, during, and after reading a text. Akita (2008) explains that metacognitive knowledge in reading is the knowledge about cognition that consists of three categories: self, task, and strategies. Thus, metacognitive knowledge involves awareness of one’s reading. On the other hand, metacognitive regulation is the ability to manage one’s reading process. It can be classified into metacognitive monitoring and control. Metacognitive monitoring in reading represents cognitive processing activities such as noticing, checking, or evaluating one’s reading process. This means that learners ask themselves about the effective strategies or the necessary skills for their reading. Therefore, metacognitive monitoring could be interpreted as reflection on the reading process. On the other hand, metacognitive control in reading works after monitoring. It represents cognitive processing activities such as revising goals, plans, and strategies. In addition, metacognitive regulation can be divided into pre-, during-, and post-stages. Metacognitive monitoring and control may operate at each stage (Sannomiya, 2008, 2021). It is considered that the metacognitive processes might work not only when reading a text but also when coordinating the learning process actively. For instance, some learners are aware that vocabulary is important when reading a text. They notice their lack of vocabulary by monitoring the reading process. After the monitoring, they memorize 20 words every day for self-study. Such metacognitive processes that coordinate the learning process

might be embodied in self-regulated learning that helps learners achieve their goals. Figure 1 illustrates the mechanism of metacognition in language learning.

Figure 1

Mechanism of Metacognition in Language Learning



An example of L2 reading

Metacognitive Knowledge: (self) My reading speed is slow. (task) If I enrich my vocabulary, it will be faster to read a text. (strategies) It is necessary to write and memorize for vocabulary acquisition.

Metacognitive Regulation: (monitoring) There were many unknown words in the text. I need to increase my amount of linguistic knowledge. (control) I will guess the meaning of unknown words from context when reading. I will not only write but also listen to 20 words every day.

Note. Figure 1, after the Classification of Metacognition devised by Sannomiya (2021, p. 15).

Metacognition and Linguistic Knowledge in L2 Reading

Researchers have emphasized the importance of linguistic knowledge such as vocabulary or grammar knowledge in L2 reading. Hamid et al. (2020) report that grammatical and vocabulary knowledge influences learners' reading comprehension. Zhang (2012) examined the contribution of vocabulary and grammatical knowledge to L2 reading comprehension. The study showed that vocabulary knowledge related more significantly to reading comprehension than grammatical knowledge. In addition, it indicates that the size

and breadth of vocabulary are related to reading comprehension. Kremmel et al. (2017) explored the role of phraseological knowledge in contributing significantly to foreign language reading performance. Grabe (2009) highlights that vocabulary and syntactic knowledge are crucial components of EFL reading comprehension. Akbari (2014) notes that knowledge of structure was regarded as having less to do with comprehending a text but rather was more concerned with levels of other components such as vocabulary, background knowledge, and reading strategies; however, Akbari stressed the role of grammar in L2 reading and the importance of structural knowledge.

From the above, although the previous studies found that linguistic knowledge such as grammar and vocabulary make a significant contribution to L2 reading, they did not discuss the relationship between linguistic knowledge and metacognition in L2 reading. In other words, they have not discussed how learners organized metacognitive regulation: monitoring and control, and how they acquired the linguistic knowledge that is necessary for reading comprehension. To be more precise, learners reflect on their reading process and understand their situations. After monitoring, they control their learning such as how they acquire vocabulary knowledge. Thus, the metacognitive processes might function to increase the amount of linguistic knowledge, which is involved in self-regulated learning. Learners should not only reflect on the importance of linguistic knowledge but also control their learning to increase the amount of vocabulary and grammatical knowledge. Hence, it could be considered that the metacognitive processes in self-regulated learning that coordinate the learning process could be essential for reading comprehension.

Although previous studies show that there is a weak relationship between metacognition and L2 reading (e.g., Jeon & Yamashita, 2014; Kimura, 1999; Mori, 2020), these studies have not investigated how learners coordinated the metacognitive processes. In short, the studies have not conducted an integrated investigation from both perspectives of metacognitive monitoring and control. It might be stated that metacognition is a mental process; therefore, longitudinal research combining qualitative and quantitative studies is

necessary to collect more precise data. Metacognition includes the ability to reflect on, understand, and control one's learning (Schraw & Dennison, 1994). It means that only reflection on the reading process might be inappropriate to investigate metacognition. It can be stated that it is important to use multiple ways to measure metacognition from wide perspectives. Hence, the present research focuses on metacognitive regulation: metacognitive monitoring and control in L2 reading. It investigates how university students reflect on their way of reading and how they organize their learning process to increase the amount of linguistic knowledge or what they do to acquire academic reading skills.

Metacognitive Reading Strategies

Metacognitive Regulation at Three Reading Stages

Researchers (e.g., Linda et al., 2015; Zhang & Seepho, 2013) state that metacognitive reading strategies can be divided into three stages: planning (e.g., setting a goal for reading or making a plan before reading), monitoring (e.g., interacting with the readers' background knowledge, working on problem-solving, controlling reading during reading), and evaluating (e.g., reviewing or self-evaluating after reading). According to Sannomiya (2021), metacognitive regulation is important for deepening reading comprehension. It consists of metacognitive monitoring and control, which work on three reading stages: pre-, during-, and post-reading stages respectively. For instance, before reading, planning such as predicting the gist of the text, making a plan, and self-evaluating the difficulty of the text is performed, and then goal setting and strategy selection are controlled. During reading, monitoring such as awareness of the differences in prediction at the pre-reading stage, and reality during reading is implemented, and then revisions of the goal setting, plans, and strategies are controlled. After reading, confirming such as checking the difficulties, reflecting on the reading process, and self-evaluating the goals for reading is implemented, and then resetting the goals, plans, and strategies is controlled.

Similarly, it is important to work on metacognition and integrate the three reading

stages in L2 reading. At the pre-reading stage, readers activate their background knowledge, infer the content of a text, and set a reading purpose. At the during-reading stage, readers select the strategies that are necessary to understand the text. At the post-reading stage, readers reflect on their reading process or self-evaluate themselves, and then control their learning process. Many researchers argue that good readers organize the metacognitive processes and can utilize these reading strategies in this kind of cyclical process (Karbalaei, 2010; Nordin et al., 2013; Zhang & Seepho, 2013). It means that readers who can regulate their reading process at the three reading stages tend to have high English proficiency.

Selective Attention as Metacognitive Reading Strategies

Grabe (2009) points out that selective attention is an essential strategy; however, there has been little research examining selective attention. O'Malley and Chamot (1990) state that selective attention is one of the metacognitive strategies, which encourages second language acquisition. Zhang and Seepho (2013) indicate that the high use of selective attention strategies is to do with the nature of metacognitive strategies and is important for readers. In short, this suggests that selective attention is one of the effective strategies for learning, as well as metacognitive strategies: planning, monitoring, and evaluating.

Selective attention as the metacognitive reading strategy is used in planning and monitoring (Prichard & Atkins, 2019; Smallwood et al., 2007). The selective attention strategy in the pre-reading stage is related to having a reading purpose and deciding what parts are important to read, which is referred to as skimming. At the during-reading, the strategy includes selecting necessary reading strategies or picking up important information, which can be stated as scanning. Such skimming or scanning strategies are cognitive strategies. Therefore, the ability to regulate (monitor or control) these strategies might be considered selective attention as the metacognitive reading strategy. Although previous studies demonstrated that the selective attention strategy was correlated with the pre-reading stage significantly, they did not examine it in the during-reading stage (Zhang & Wu, 2009). This research will discuss the selective attention strategy at the during-reading.

Metacognitive Reading Strategies at the Post-Reading Stage

Although the importance of metacognitive reading strategies in the post-reading stage has been reported (e.g., Blachowicz & Ogle, 2008; Saricoban, 2002), the relationship between the strategies in the post-reading stage and English proficiency has not been sufficiently clarified. In a metacognitive reading questionnaire on the three reading stages, different results are seen on the use of post-reading stage.

A study of Malaysian university students (ESL learners) by Nordin et al. (2013) found differences correlated with English proficiency in the post-reading stage. The result showed that learners with high English proficiency tended to use items in the post-reading stage the most. However, learners with low English proficiency used items in the post-reading stage the least, and they used items in the during-reading the most. On the other hand, in a survey of Chinese university students (EFL learners) by Zhang and Seepho (2013), learners with high English proficiency used more strategies in the during-reading stage than lower-level learners. In addition, low-level learners tended to avoid setting goals in the pre-reading stage. In short, there was a difference in English proficiency in both the pre-reading and the during-reading stages. However, there was no difference in the post-reading stage between the two groups, and the strategy used in the post-reading was the lowest among the three stages. From these results, the researchers suggest that reading strategy instruction would be necessary to utilize the reading strategies in the post-reading stage. Besides, some studies that compared the use of metacognitive reading strategies in EFL and ESL English learners are seen (e.g., Karbalaee, 2010; Mokhtari & Reichard, 2004). Their results showed that although the reading strategies used when reading academic English texts were similar, ESL learners used more global reading strategies. Compared to EFL learners, ESL learners probably have more opportunities to use English in their daily lives. Hence, it might be stated that the differences in cultural backgrounds and learning environments are also probably related to strategy use.

In summary, these results suggest that readers with high English proficiency are more likely to use metacognitive reading strategies. However, the former studies have not

discussed the relationship between English reading ability and the use of strategy including reading strategy instruction. Accordingly, this research investigates the relationship between the use of metacognitive reading strategies and English reading ability for Japanese EFL learners who received reading strategy instruction.

Reflection at the Post-Reading Stage

Metacognition can be divided into metacognitive knowledge and metacognitive regulation (Flavell, 1979). Metacognitive regulation is divided into monitoring and control. Metacognition looks at oneself objectively, and metacognitive monitoring can be considered one of reflection. Reflecting on one's learning process and behavior facilitates metacognition, which is important for achieving goals (Itagaki et al., 2016; Moon, 2004). In English learning, deepening reflective activities using the four skills such as listening, reading, speaking, and writing promotes metacognition and can be expected to improve English proficiency.

Among the three reading stages, the post-reading strategies are especially important for deepening reading comprehension. Karbalaee (2010) asserts that reading is not only the process of understanding the direct meaning of a text but also the process of understanding the writer's thoughts and intentions hidden in the text, which contributes to deepening reading comprehension. Blachowicz and Ogle (2008) report that self-evaluation should be important to deepen the comprehension of a text. This suggests the importance of post-reading strategies. Saricoban (2002) concludes that successful readers are more likely to evaluate or critique the material of a text after reading in order to broaden their understanding of the text. It can be considered that it is important to self-evaluate and reflect on the materials of a text for deepening comprehension.

The reflection in the post-reading stage can be classified into "Reflection on the Learning Process" and "Reflection on the Material of the Text." The former means reflecting on the content related to one's own English reading ability and reading process. On the other hand, the latter means to reflect on the content of the reading material. Hatton and Smith

(1995) created the criteria for the four-grade reflective levels: Descriptive Writing, Descriptive Reflection, Dialogic Reflection, and Critical Reflection. They explain that Descriptive Writing is the shallowest reflective level, a description with no discussion beyond description or writing that is not considered to show evidence of reflection. Critical Reflection is the deepest reflective level with multiple perspectives or incorporating one's own experiences. In other words, the reflection in a reading class includes not only reading skills but also the contents of the topic. For instance, it can be interpreted as Critical Reflection as the following comments, in a class dealing with the topic of Japanese women's social progress, "As a woman who is about to progress in society, I could not think of it as someone else's problem. The weakness of the women's position in Japan gathered attention from overseas, which left a strong impression on me." When their levels are applied, it can be considered that "Reflection on the Material of the Text" that incorporates one's own experiences enables one to deepen reading comprehension, compared to "Reflection on the Learning Process."

"Reflection on the Material of the Text" is considered to be at a higher level than "Reflection on the Learning Process." I consider that in order to reflect on the material, the ability to understand the contents of the text (World Knowledge) would be essential. In other words, English reading ability is related not only to the use of strategies in the post-reading stage but also to the content and topics that lead to reflection after reading a text. In previous studies, reflection after reading a text has been emphasized because it promotes metacognition. However, there is little research that focuses on reading strategy items in the post-reading stage and discusses the contents of the reflection. Therefore, this research explores the relationship between metacognitive reading strategy items in the post-reading stage and English reading ability.

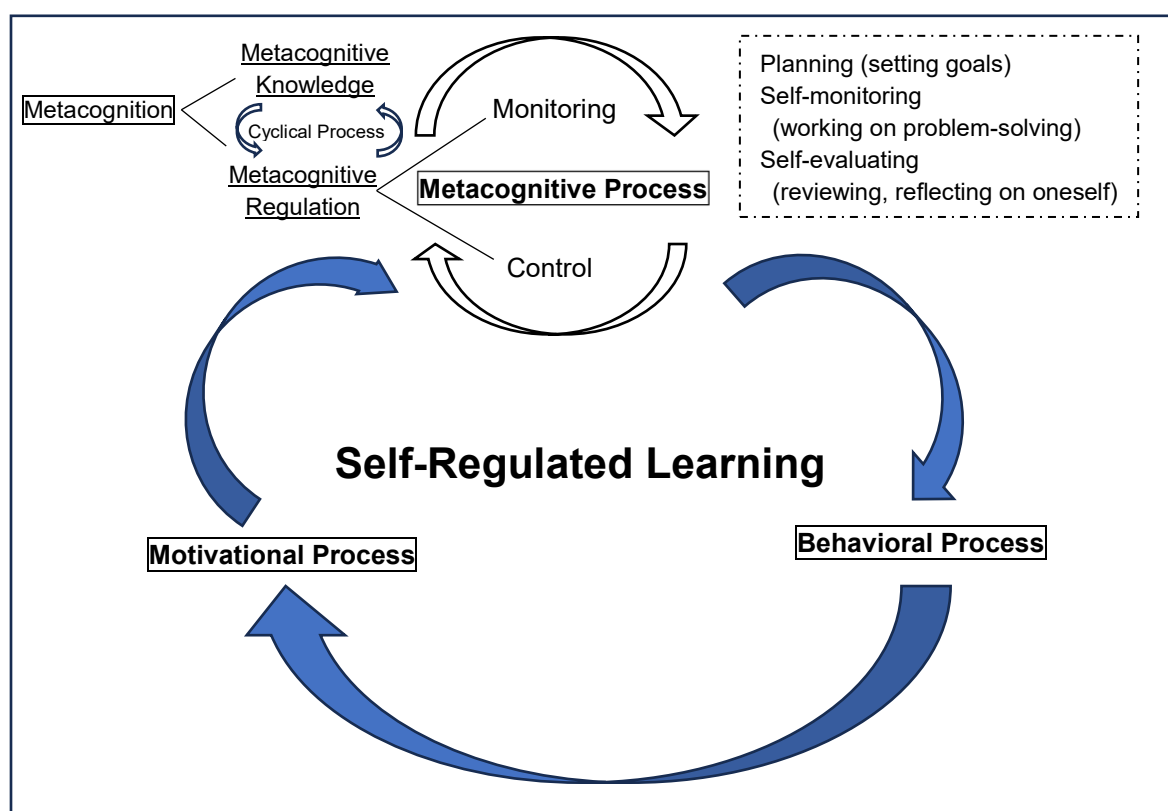
Metacognition in Self-Regulated Learning

According to Zimmerman (1986, 1990), self-regulated learning consists of

metacognitive, motivational, and behavioral processes. Ito (2013) explains that the motivational process leads to learning actively; the behavioral process means specific activities that learners take such as asking a teacher or using reference materials; and the metacognitive process is a cognitive process such as setting goals, self-monitoring, and self-evaluating. It implies that if all three processes interact and work properly, the learner will be able to achieve the goal. Additionally, self-regulated learners plan, set goals, organize, self-monitor, and self-evaluate at various points during the process of acquisition (Zimmerman, 1986). This involves metacognition and leads to autonomous learning. Figure 2 describes the relationship between self-regulated learning and metacognition.

Figure 2

Concept of Self-Regulated Learning and Metacognition



L2 Motivation in Self-Regulated Learning

Although the nature and role of motivation in L2 learning process have been extensively researched (Dörnyei, 1994), few studies on studying abroad have had a lot of discussion about changes in the motivation types or what kind of motivation is related to continuing autonomous learning. Motivation is a psychological process that leads people to achieve a goal (Cohen, 1990). In general, motivation is divided into mainly two types: extrinsic motivation and intrinsic motivation (Deci & Ryan, 2002). Dörnyei (1994, p. 275) defines extrinsic motivation as one that the individual performs to receive some extrinsic reward such as good grades or avoid punishment, and intrinsic motivation as intrinsically motivated behavior in the rewards are internal such as the joy of doing a particular activity or satisfying one's curiosity.

According to Gardner and Lambert (1972), there are concepts of integrative motivation and instrumental motivation. Sato (2021) describes this concept in self-regulated learning of a second language as integrative motivation that represents a desire to participate as a member of a group of English speakers, and as instrumental motivation that is a tool for achieving goals. Dörnyei (1994) states that integrated regulation is the most developmentally advanced form of extrinsic motivation.

Deci and Ryan (2002) describe extrinsic motivation types as extrinsic, introjected, identified, and integrated regulations. Nishimura et al. (2011) examined differential effects of intrinsic and identified motivation on the academic performance of Japanese junior high school students. The result suggests that identified motivation is a significant factor in academic performance more than intrinsic motivation. I consider that this motivational type, identified motivation is deeply related to continuous autonomous learning because the learner thinks that it is important to oneself and behaves with its motivation.

Welesilassie and Nikolov (2022) note that motivation and anxiety are related to learning foreign languages. Brown (2000) explains that anxiety can be divided into debilitating anxiety and facilitative anxiety, and facilitative anxiety is considered to be

competitive. It indicates that facilitative anxiety might work positively in improving learners' performance. It can be considered that the changes to motivation types could be involved in learners' anxiety.

Although there are individual differences, it is considered that the motivation for learning English among Japanese university students who are going to study abroad would be extrinsic or instrumental motivations in general. This is because studying abroad will not be achieved unless the students improve their English skills or raise their TOEFL scores for admission to overseas universities. However, there are not many studies on the changes in motivation types to the experience of studying abroad. Therefore, this research focuses on not only changes in the learning process but also changes in the motivation types for learning English before and after study abroad. It will also discuss extrinsic and intrinsic motivations, integrative and instrumental motivations, and identified and intrinsic motivations.

Reviews on Study Abroad and English Proficiency

Although there are many positive results regarding the improvement in English proficiency after studying abroad, not so many studies investigated the changes in the learning process behind these results before and after study abroad. Hidai et al. (2021) investigated the relationship between vocabulary size and IELTS scores in 196 Japanese university students who had studied abroad for nine months. As a result, they reported that the students' vocabulary size increased dramatically after study abroad, which affected their English proficiency after study abroad. Kusaba and Yoshida (2020) surveyed 51 Japanese university students who had studied abroad for less than 18 months about the influence of studying abroad on their motivation to learn second language. The result showed that the experience of studying abroad strongly promoted language acquisition, significantly improved the CEFR levels after studying abroad, and enhanced the motivation for reading such as reading books, newspapers, and magazines after studying abroad.

On the other hand, it could not be concluded that studying abroad works positively in

all respects. Regarding the relationship between study abroad and English proficiency, Iida (2013, 2016) investigated the relationship between English proficiency and the form of taking the course: Academic Courses (AC), English as a Second Language (ESL)→AC, and the ESL-only for Japanese university students who had studied abroad for about a year. As a result, the TOEIC scores improved after studying abroad, but there was no difference between the groups in the form of taking the course, which suggested that English proficiency before study abroad has an effect during and after study abroad. In addition, the experience of studying abroad improves TOEIC scores, but the improvement in TOEFL scores cannot be expected. The results indicate that the study abroad program helps learners develop their general English proficiency, but does not always help improve some parts of their academic English proficiency. In addition, the goals and motivation for learning English might change during the four years of university. In other words, before studying abroad, the students study hard to acquire academic skills for TOEFL iBT. While studying abroad, they learn English for their daily lives. After studying abroad, they study English for job hunting. Thus, their reason for studying English might change during their university lives. In summary, the results above showed that studying abroad leads to improvements in students' English proficiency and motivation. However, changes in the learning process before, during, and after study abroad have not been investigated.

This present research is composed of three studies. Regarding Study 1, previous reviews have not discussed the relationship between English reading ability and metacognitive reading strategies for L2 learners who received sufficient reading strategy instruction. Moreover, few studies have focused on the strategy items in the post-reading stage and discussed the topic of reflection after reading. Therefore, Study 1 investigates the relationship between the metacognitive reading strategies at the three reading stages and English reading ability. For Study 2, previous reviews prove that linguistic knowledge is important in L2 reading. However, they did not discuss how learners acquired linguistic knowledge by utilizing metacognition. Hence, Study 2 addresses metacognitive processes in

self-regulated learning and investigates how learners monitor their reading process and control learning. Regarding Study 3, there is little research that investigates the learning process behind the improvement of English proficiency before and after study abroad. Therefore, Study 3 investigates the changes in English reading ability and reading process including selective attention strategies before and after study abroad. Moreover, few studies have treated the three elements of motivation, behavior, and metacognitive processes in self-regulated learning. Therefore, Study 3 also investigates how learners think, behave actively, and regulate their metacognitive processes before, during, and after study abroad. In addition, I focus on the changes in the motivation types and whether studying abroad helps enhance students' metacognition. The purpose of this research is to investigate metacognition and English reading ability. Three-year longitudinal research was employed to investigate the changes in the learning and reading processes of Japanese university students before, (during), and after study abroad.

Based on the literature reviews of studying abroad, I set the following as seven research questions and hypotheses.

Research Questions

Study 1

1. Are the student's use of metacognitive reading strategies related to their English reading ability?
2. How does the students' metacognition operate at the post-reading stage?

Hypotheses

Study 1

1. Metacognitive reading strategies are related to students' English reading ability because good readers can utilize metacognition in reading.
2. Students with higher English reading ability can utilize metacognitive reading strategies

and understand the meaning of a text. Therefore, the students tend to reflect on not only their reading process but also the contents of reading topics, which could be expected to deepen their reading comprehension.

Research Questions

Study 2

3. How do university students monitor and change their way of reading including their English reading ability?
4. Are the metacognitive processes in self-regulated learning related to English reading ability?

Hypotheses

Study 2

3. University students tend to reflect on the importance of linguistic knowledge because it is necessary to increase the amount of vocabulary in L2 reading. After learning in class, the students can acquire more effective and advanced reading strategies, which will contribute to their English reading ability.
4. The cyclical process of both metacognitive monitoring and control might be important for the acquisition of reading skills. Self-regulated learners who control learning to increase linguistic knowledge or reading skills are expected to improve their English reading ability more than non-self-regulated learners who do not control learning.

Research Questions

Study 3

5. Does studying abroad enhance the English reading ability of Japanese university students and promote their metacognitive reading strategies?
6. How did the students utilize listening, reading, speaking, and writing skills to engage in

English language learning for out-of-class learning during study abroad?

7. How have the students' motivation, behavior, and metacognitive processes in English language learning changed before and after study abroad?

Hypotheses

Study 3

5. The students can control their metacognitive processes when reading a text and improve their reading ability because they can acquire their reading skills and enhance their metacognition through in- and out-of-class learning before, during, and after study abroad.
6. The students might promote metacognition and engage in English learning while studying abroad because they set a clear goal and have a high motivation for English learning.
7. Studying abroad might encourage students' metacognition and positively change their motivation types and behavior for learning English because it can be expected that the overseas environment encourages their autonomy and problem-solving ability. Studying abroad would raise the motivation types from extrinsic to intrinsic motivations because the outer environment of studying abroad allows the students to learn English more easily.

Chapter 3: Research Design

This chapter explains the Research Design for the present longitudinal research that integrated Studies 1, 2, and 3. It comprises the flow of the present longitudinal research, participants, curriculum through four years and class design in the department, data collection, procedures, and data analyses.

Flow of the Present Longitudinal Research

Figure 3 displays the flow of this longitudinal research. Study 1 was administered at the beginning of the Fall term in 2020. Study 2 was conducted at the end of the Fall term in 2021. Study 3 was carried out during the Fall term in 2022 to 2023.

Figure 3

Period of Study Abroad and Flow of Survey

First year		Second year		Third year		Fourth year			
Before Study Abroad				During Study Abroad		After Study Abroad			
2020.4	2020.9	2021.4	2021.9	2022.4	2022.9	2023.4	2023.9		
2020.7	2021.1	2021.7	2022.1	2022.7	2023.1	2023.7	2024.1		
Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall		
Term	Term	Term	Term	Term	Term	Term	Term		
Study 1 (N = 84)	Study 2 (N = 75) (N = 17)					Study 3 (N = 34) (N = 22)			

Note. Study 2: questionnaire (N = 75), interviews (N = 17); Study 3: questionnaire (N = 34), interviews (N = 22).

Participants

The participants were female university students in the Kansai area of Japan who entered as first-year students in April 2020. Their department included the program of study abroad in English-speaking universities for about a year, from the Fall semester of the second year in 2021 to the Spring semester of the third year in 2022. Therefore, the participants took specific programs that were necessary to bolster the four academic English skills, listening, reading, speaking, and writing for admission to overseas universities. Within 10 months after entering university, they were required to get higher scores on TOEFL iBT. They had high motivation and enthusiastically engaged in English learning for studying abroad.

The participants were the same students in Studies 1, 2, and 3. However, the sample size was different in each study (Study 1 [$N = 84$]; Study 2 [$N = 75$, $N = 17$]; Study 3 [$N = 34$, $N = 22$]) because going abroad was restricted due to the pandemic of the coronavirus disease 2019 (COVID-19). Some of the students were compelled to give up studying abroad or decided to take a leave of absence from the university. In Study 2, the participants were 75 first-year students before study abroad because nine out of 84 participants in Study 1 did not fully complete the questionnaires or agree on the consent form. The number of interviews was 17 participants who were chosen randomly. In Study 3, the participants were 34 out of 39 junior students after study abroad. Five students did not consent all out to the questionnaire and the other 45 students were affected by COVID-19. The number of the interviews was 22 participants with their consent.

The reading section of the TOEFL iBT consisted of three to four passages of about 700 words in each. As a result of measuring reading sample questions (Educational Testing Service, 2021) from the TOEFL official website with Readability Formulas (2022), it was equivalent to B2 level at the Common European Framework of Reference for Language (CEFR) levels. The time allocation was 54 to 72 minutes for the reading section. Therefore, they were required to read one passage within 18 minutes. In addition, various kinds of background knowledge were necessary because reading topics included various academic

subjects such as natural sciences, humanities, and social sciences, which were required to learn as the basic knowledge at university. Comparing the students' reading scores of TOEFL iBT to CEFR levels, 4 students (4%) represented A2 level, 72 students (86%) represented B1 level, and 8 students (10%) represented B2 level. It can be considered that the reading section was a little high level for the participants in the research.

Curriculum Through Four Years and Class Design in the Department

Reading Class Before Study Abroad

Before studying abroad, the students had to take Intensive Reading Class I / II (the Spring and Fall terms of the first year) and Extensive Reading Class (the Spring term of the second year). In the Intensive Reading Class I / II, the aim was to develop academic reading skills, enhance motivation for academic reading, and enjoy reading with classmates. The Extensive Reading Class aimed to motivate students to read extensively and to have an interest in reading in English.

Studies 1 and 2 were administered in the Intensive Reading Class I / II from 2020 to 2021. The class consisted of 45-minute lessons, twice a week, 30 weeks a year. An instructor guided students in developing reading strategies for academic reading to achieve the goals. I observed the class as a teaching assistant for a year.

The instructor set the following six course objectives for the students: (a) to become autonomous readers and read text critically, (b) to gain reading strategies, (c) to increase and utilize vocabulary and to guess the meaning of a word or phrase from the context, (d) to improve grammatical knowledge and understand structures in the passage, (e) to understand the construction of academic paragraphs and discourse, and (f) to obtain and improve academic reading skills.

The instructor used online teaching materials, articles from English newspapers, and the textbook of TOEFL iBT. Before class, students were required to read some materials and finish the worksheets. The average out-of-class learning time was about 90 minutes a week.

During class, students took a vocabulary quiz, read new materials, checked their answers with partners, and discussed topics with them. At the end of each class, they reflected on their reading for a few minutes. This facilitated self-monitoring, enabling the students to develop their reading skills and deepen their understanding of the reading topics. The instructor checked the worksheets and made comments on them.

During and After Study Abroad

The students aimed to take regular classes at the university while studying abroad. Students in this department before COVID-19 had studied abroad in the five following countries: the U.S., Canada, the U.K., New Zealand, and Australia. However, the students in the research could choose only from three countries: the U.S., Canada, and the U.K. The period of studying abroad was from 9 months to 12 months including English as a Second Language (ESL) course. Most students took ESL at the beginning and then took regular Academic Courses (AC). Some students took ESL and AC at the same time. A few students took only AC from the beginning without taking ESL. The students had three types of accommodation: only dormitory, only homestay, and both types. There were various extracurricular activities such as volunteering, circles, interaction with other international students or local communities, and internship, which students could freely choose.

After studying abroad, the students took advanced skill classes that focused on many activities such as reading academic literature, writing essays, discussions, and presentations, and seminars to write a graduation thesis in English.

Data Collection

English Reading Ability

In Study 1, I used two English groups: Lower-level ($n = 40$) and Higher-level ($n = 44$). The participants ($N = 84$) were divided into two classes according to their level of English proficiency based on the results of a placement test in April 2020. The test consisted of three parts: writing (40 points), listening (50 points), and reading (50 points), and the total score

was 140 points. As seen in Table 1, there was a significant difference between the two groups, Total Score: $t(81) = 9.30$; $p < .001$, $d = 2.04$; Reading Score: $t(81) = 2.20$; $p < .031$, $d = 0.49$. Thus, these two groups showed a statistical difference in English reading ability.

Table 1

Means and Standard Deviations of Placement Test Scores for Two Groups

Skills	Lower group		Higher group		p	Cohen's d
	M	SD	M	SD		
Writing (40)	16.98	4.02	27.07	3.28	$< .001$	2.75
Listening (50)	20.40	4.08	25.70	5.47	$< .001$	1.10
Reading (50)	21.15	4.69	23.93	6.61	.031	0.49
Total (140)	58.53	8.72	76.70	9.06	$< .001$	2.04

Note. Lower group ($n = 40$); Higher group ($n = 44$).

In Study 2, I used scores from the TOEFL iBT taken at the end of the Spring term (pre-test) and the Fall term (post-test) before study abroad. The participants took the TOEFL iBT in June 2020 (pre-test) and in December 2020 or January 2021 (post-test). I collected the scores with student consent.

In Study 3, I used scores from the TOEIC® Listening & Reading Test taken before and after study abroad. The participants took the TOEIC® Listening & Reading Test in June 2021 (before study abroad) and in October 2022 (after study abroad). I collected the scores with student consent.

Metacognitive Questionnaire Before and After Study Abroad

The 27 Items on Metacognitive Reading Strategies. The same questionnaire on metacognitive reading strategies was administered in all Studies 1, 2, and 3. It consisted of 27 items, which were statements about what people did when they read academic texts. It was a

self-report measure scored on a five-point Likert scale, ranging from five points (*strongly agree*) to one point (*strongly disagree*). It contained three reading stages: pre-reading (3 items), during-reading (17 items), and post-reading (7 items). In designing the questionnaire, I referenced the metacognitive reading strategy items used by some researchers (Carrell, 1989; Grabe & Stoller, 2013; Ikeda & Takeuchi, 2003; Karbalaeei, 2010; Mokhtari & Reichard, 2002) and combined the strategies taught in the class (see Appendix A).

Open-Ended Questionnaire. In addition to the metacognitive reading strategy items, an open-ended questionnaire was carried out in Studies 2 and 3.

In Study 2, the reflective comments were used to see how the students self-monitored their reading process in the Spring term and the Fall term before study abroad. The question asked “Remember the texts you read in this reading class during the Spring (Fall) term. How did you read the texts? Reflect on your reading process.” As a pilot study, five colleagues took the questionnaire including the 27 items on the metacognitive reading strategies to ensure the reliability and flow of questions. There was no need for revision. However, it took more time to fill in the questionnaire than I had expected. Therefore, the investigation time was set for 15 minutes (see Appendices B & C).

In Study 3, an open-ended questionnaire on the learning process during and after study abroad was carried out in the Fall term after study abroad. It consisted of mainly three parts: the students’ background information (Part A), class-related and out-of-class learning during study abroad (Parts B and C), and self-evaluation after study abroad (Part D). I created the questionnaire because few studies have focused on the learning process before, during, and after study abroad (see Appendix D). As a pilot study, three M.A. students, who had graduated from the same department as the participants in this study, and two colleagues took the questionnaire to ensure the reliability and flow of questions. An M.A. student suggested that reading strategies might be used automatically because of not thinking about reading strategies consciously when reading a text. It can be considered that good readers who can utilize the reading strategies might have automatized lower-level processing such as decoding

or recognizing words in a text. Morishima (2013) explains that L1 readers have automatized lower-level linguistic processes to a greater degree and are thus able to devote much of their resources to higher-level processing. Thus, not only quantitative research but also qualitative research would be necessary to grasp the students' voices in English learning in-depth.

Accordingly, I decided to ask about the details of their open-ended comments in an interview.

Interview

All interviews in Studies 2 and 3 were in Japanese. I translated their conversation into English in this thesis. In Study 2, interviews were carried out with 17 students chosen randomly to see how they regulated metacognitive monitoring and control. The questions in the interview were as follows; "How did you read the texts and change the way of reading?" and "How did you increase linguistic knowledge or what did you actively do besides homework?" In Study 3, I asked all participants for an interview. As a result, 22 students willingly cooperated to have an interview. The questions were as follows.

(For Research Question 5)

Question 1. Class-related learning during study abroad

"This is a question about the content of the classes you took as ESL or AC. Please tell me which skills (listening, reading, speaking, writing) you mainly used, what assignments or homework you did, and what kinds of reading materials you read."

Question 2. Changes in the reading process

"How did your reading process in academic reading change after study abroad?"

Question 3. Changes in English reading ability

"Do you think your English reading ability has improved compared to before study abroad? Please tell me the reasons."

(For Research Question 6)

Question 4. Out-of-class learning during study abroad

"Please tell me about your extracurricular activities and self-study."

(For Research Question 7)

Question 5. Changes by experiencing the study abroad

“Did you recognize any changes in your motivation, behavior, thoughts, or learning English by experiencing the study abroad?”

Procedures

Due to COVID-19, the Spring term was conducted via online classes in 2020. Therefore, the surveys on Studies 1 and 2 were implemented at the beginning and the end of the Fall term in person.

In Study 1, the questionnaire was administered in my supervisor's class on October 13, 2020. I received their consent in advance. I visited the two classes ($n = 40$; $n = 44$) to obtain the participants' consent and to explain the procedure of the questionnaire. It took about 15 minutes to complete it.

The research for Study 2 took for about a year and a half. The first questionnaire at the beginning of the Fall term had been already carried out on October 13, 2020. The second questionnaire at the end of the Fall term was administered in my supervisor's class on January 19, 2021. I visited the classes to obtain the participants' consent and to explain the procedure of the questionnaire. It took about 15 minutes to complete it. Regarding the interviews, I contacted each participant individually by e-mail before their study abroad and conducted online or in person interviews for 15 minutes from July to September 2021. The content of the interview was recorded with the consent of the students before starting the interview.

In Study 3, the survey was administered in the Senior Seminar I from November 2022 to January 2023. I received the instructors' consent in advance. I visited seven classes to obtain the participants' consent and to explain the procedure of the questionnaire. It took about 20 minutes to complete it. Regarding the interviews, I contacted all participants ($N = 34$) individually by e-mail after the open-ended questionnaire and interviewed only the

students who gave their consent ($N = 22$) via online or in person for about 15 to 20 minutes. The content of the interview was recorded with the consent of the students at the beginning.

Data Analyses

Regarding the data analysis on qualitative data, I obtained the cooperation of analysis from an M.A. student, who had graduated from the same department as the participants in the research. Because the M.A. student had had the same experience as the participants, I was able to discuss the situation and feelings of the participants and conduct a more reliable analysis.

Study 1

Research Question 1. I used the items on metacognitive reading strategies. An independent samples *t*-test was performed to compare the use of metacognitive reading strategies at the three reading stages between the lower-level group ($n = 40$) and the higher-level group ($n = 44$).

Research Question 2. A principal factor analysis with a promax rotation was employed to investigate on the seven items in the post-reading stage by SPSS.28.0 (IBM, 2022). An independent samples *t*-test was performed, with the two factor scores of post-reading stage as dependent variables, and higher- and lower-level groups as independent variables to examine if there was a difference between the two groups.

Study 2

Research Question 3. A paired samples *t*-test was employed to examine if there was a difference between the pre-test and the post-test of TOEFL iBT. The questionnaires of metacognitive reading strategies were analyzed by SPSS. 28.0. First, the reliabilities of the questionnaire were calculated. Second, factor analyses were performed with a maximum likelihood method with varimax rotation. Concerning the open-ended questionnaire, NVivo. 12.0 (USACO, 2020) was used to categorize their reflective comments on the reading process into three nodes: bottom-up processing (e.g., reading sentence by sentence), top-down

processing (e.g., skimming, making inferences), and other (e.g., taking notes, reading aloud).

Research Question 4. I summarized the students' changes in the reading process and the contents of their out-of-class learning. The out-of-class learning in this study means how students conducted self-study, excluding homework because homework is related to in-class learning. In addition, based on the concept of self-regulated learners by Zimmerman (1986), this study defines a self-regulated learner as a learner who has set a clear goal and has high motivation to improve in English, which shows the learner who takes control of their learning (e.g., I used a textbook every day; I memorized the vocabulary on the train). Whereas a non-self-regulated learner is defined as a learner who is not willing to improve their reading skills, which is an example of a learner who does not take control of their learning (e.g., I did not do anything except for homework; I did my homework, but I did not do anything else because I was busy). I divided the 17 students into two groups: self-regulated learners (Group A: $n = 11$) and non-self-regulated learners (Group B: $n = 6$). To check whether the grouping was appropriate, I first analyzed the interview data item by item and discussed the grouping with two colleagues, which confirmed the great reliability. Then, a paired samples *t*-test of each group was employed to examine the differences between the pre-test (Spring term) and the post-test (Fall term) of four skills of TOEFL iBT respectively.

Study 3

Research Question 5. I used the scores on TOEIC® Listening & Reading Test and items on metacognitive reading strategies. A paired samples *t*-test was performed to analyze English reading ability, metacognitive reading strategy use before and after study abroad, and their correlations after study abroad. With respect to the relationship between English reading ability and metacognitive reading strategy use after study abroad, I used the reading scores and divided the participants ($N = 34$) into two groups: higher-level (Group C: $n = 21$) and lower-level (Group D: $n = 13$) by Cluster Analysis using a dendrogram by SPSS.29.0 (IBM, 2023). Table 2 shows that the two groups had significant differences in TOEIC scores after studying abroad.

Table 2*TOEIC Section Scores for Two Groups by Cluster Analysis*

TOEIC scores	<i>N</i>	<i>M</i>	<i>SD</i>	
Reading (495)	21	397.14	27.14	$t(32) = 9.67, p < .001, d = 3.20$
	13	275.38	46.52	
Listening (495)	21	447.14	41.64	$t(32) = 2.97, p < .001, d = 1.05$
	13	403.85	40.88	
Total (990)	21	844.29	55.71	$t(32) = 7.74, p < .001, d = 2.67$
	13	679.23	67.54	

Note. Group C: Higher-score group ($n = 21$); Group D: Lower-score group ($n = 13$).

In order to investigate changes in English reading ability and the factors behind the use of metacognitive reading strategies before and after study abroad, I focused on in-class learning while studying abroad based on their written comments from the open-ended questionnaire. Out-of-class learning was investigated in research question 6.

According to an M.A. student who graduated from the same department as the participants in the study, the class before studying abroad was separated into four skills; however, the class while studying abroad was integrated into four skills, listening, reading, speaking, and writing. Therefore, I asked 22 students who cooperated in the interview about the content of class-related learning in ESL and AC respectively. The questions were as follows: (1) What kinds of other skills did you need in the reading class? (2) What kind of homework was assigned? and (3) What kinds of reading texts were dealt with? I transcribed what I listened to and summarized them in a table. First, regarding the use of the four skills in Question (1), I created three categories: Reading + Listening (R+L), Reading + Speaking (R+S), and Reading + Writing (R+W). For instance, if a reading assignment was given and the class was in a lecture, it can be considered that R+L skills would be used. If a reading

assignment was given and discussions were held in the class, R+S skills would be utilized. If the assignment was to write a comment or a report after a reading assignment, I interpreted it as the use of R+W skills. I classified each item into three categories while discussing with an M.A. student who cooperated in the study. Regarding reading genres, I summarized the genres by ESL and AC. Regarding the contents of the assignments, I summarized them in a table, but since there were considerable individual differences, we discussed the tendency or differences between ESL and AC.

I summarized the contents of written comments about the reading process in each participant. The content of the interviews was transcribed after listening to the recorded voices again. I combined the written comments and the interview data. As a result of a discussion with the analysis collaborator, I divided the students' comments into online and offline processes, and then created two categories: "Changes in the Reading Process While Reading" and "Changes in the State of the Reading Process." In addition, I divided the former into four categories: Selective Attention (reading a text while selecting necessary information or having a purpose to read); Metacognitive Reading (reading a text while asking yourself questions); Making Inferences (reading a text while guessing); and Sentence Structure (reading a text while paying attention to grammar). On the other hand, I divided the latter into two categories: Reading Speed and Other.

Twenty-six out of 34 students, that is 76% of the students answered positively that their English reading ability had improved. On the other hand, eight students, 24% of the total gave negative comments such as they did not think that their English reading ability had improved before and after study abroad. I asked 20 of the 22 interviewed students (16 positive answers; 4 negative answers) the reasons for improving (not improving) their English reading ability in detail through interviews.

Research Question 6. It is considered that out-of-class learning and self-study promote the metacognitive processes in self-regulating learning because learners find the problem by themselves and engage in learning. I asked 22 interviewees about extracurricular activities

such as club activities, volunteer activities, and interaction with others in detail. Regarding the content of self-study, I asked them how the students thought and behaved actively working on metacognition. I created three types of out-of-class learning and self-study: “Self-Study From Intrinsic Motivation,” “Self-Study Using Productive Skills,” and “Self-Study Integrated Input and Output Activities.” For instance, students actively participated in extracurricular activities and interacted with other native classmates, roommates, and host families to improve their speaking skills. Students purchased books of interest and read them to improve their reading skills. I interpreted these behaviors as “Self-Study From Intrinsic Motivation.” Second, students reflected on daily conversations or wrote diaries using productive skills of speaking and writing. I interpreted this as “Self-Study Using Productive Skills.” Third, students found their own problems in learning and engaged in self-study such as writing what they read (Reading + Writing) or speaking what they listened to (Listening + Speaking). I categorized them as “Self-Study Integrated Input and Output Activities.”

Research Questions 7. I interviewed 22 students based on their written comments from the open-ended questionnaire to investigate changes in motivation, behavior, and metacognitive processes related to English learning before and after study abroad. After the interview, I transcribed the data while listening to the recorded data. I created three categories: “Changes in Language Awareness,” “Changes in Behavior and Motivation,” and “No Changes Before and After Study Abroad.” First, regarding “Changes in Language Awareness,” I categorized the contents such as “English is a communication tool,” or “I do not have to speak perfect English.” Second, the category of “Changes in Behavior and Motivation” represented the contents such as “I am reading my favorite English book,” “I am using English when I research something,” “I want to do something like volunteer using English,” and “I want to go to graduate university.” Third, I categorized those who answered that they had not engaged in their English learning with motivation after study abroad, even though they behaved actively during study abroad, as having returned to the same learning habits as before study abroad into “No Changes Before and After Study Abroad.”

In summary, this present research was administered via mixed methods to explore the changes in students' learning and reading processes, motivation, behavior, and in- and out-of-class learning from wide perspectives.

The 27-item questionnaire about metacognitive reading strategies measured by a five-point Likert scale designed by the author was used in Study 1. After collecting the data, a factor analysis was employed to see the difference at the post-reading stage. An independent samples *t*-test was used to compare between the two English reading groups

Both quantitative and qualitative data were analyzed in Study 2. For quantitative data, the same 27-item questionnaire was used to see the difference between the Spring term and the Fall term. After collecting the data, factor analyses were carried out to compare the differences. For qualitative data, the open-ended questionnaire was conducted to see how the students reflected on their reading process. The written reflective comments were categorized into three nodes: bottom-up processing, top-down processing, and other comments. Interviews were conducted to investigate their out-of-class learning and to see how their metacognitive processes work. After the interviews, I divided into two groups: the self-regulated learners' group and the non-self-regulated learners' group based on the content of their out-of-class learning. The scores of TOEFL iBT were used and a paired samples *t*-test was employed to examine the difference between the two groups.

Study 3 was conducted to compare the changes in the learning and reading processes, motivation, and behavior before and after study abroad. The same 27-item questionnaire and the TOEIC scores were used to compare the differences by a paired samples *t*-test. The open-ended questionnaire about in- and out-of-class learning, and the changes in the reading process during and after study abroad were conducted after study abroad. Interviews were administered to grasp changes in the motivation and behavior in-depth. I created some categories of the changes in the reading process, out-of-class learning, and the learning process including motivation and behavior, and then analyzed their data before and after study abroad.

Chapter 4: Results

This chapter illustrates the results of each research question. It consists of three sections: Results of Studies 1, 2, and 3.

Results of Study 1

Responding to Research Question 1

As shown in Table 3, the strategy use at the during-reading stage was the highest frequency in the two groups. The higher-level group used the strategies more frequently than the lower-level group in all reading stages. Moreover, there was a statistically significant difference in the post-reading stage, $t(82) = 2.45$; $p < .016$, $d = 0.53$, which suggested students with high English reading ability tended to use metacognitive reading strategies more frequently than the lower-level group at the post-reading stage.

Table 3

Means and Standard Deviations of Strategy Use Between the Two Groups

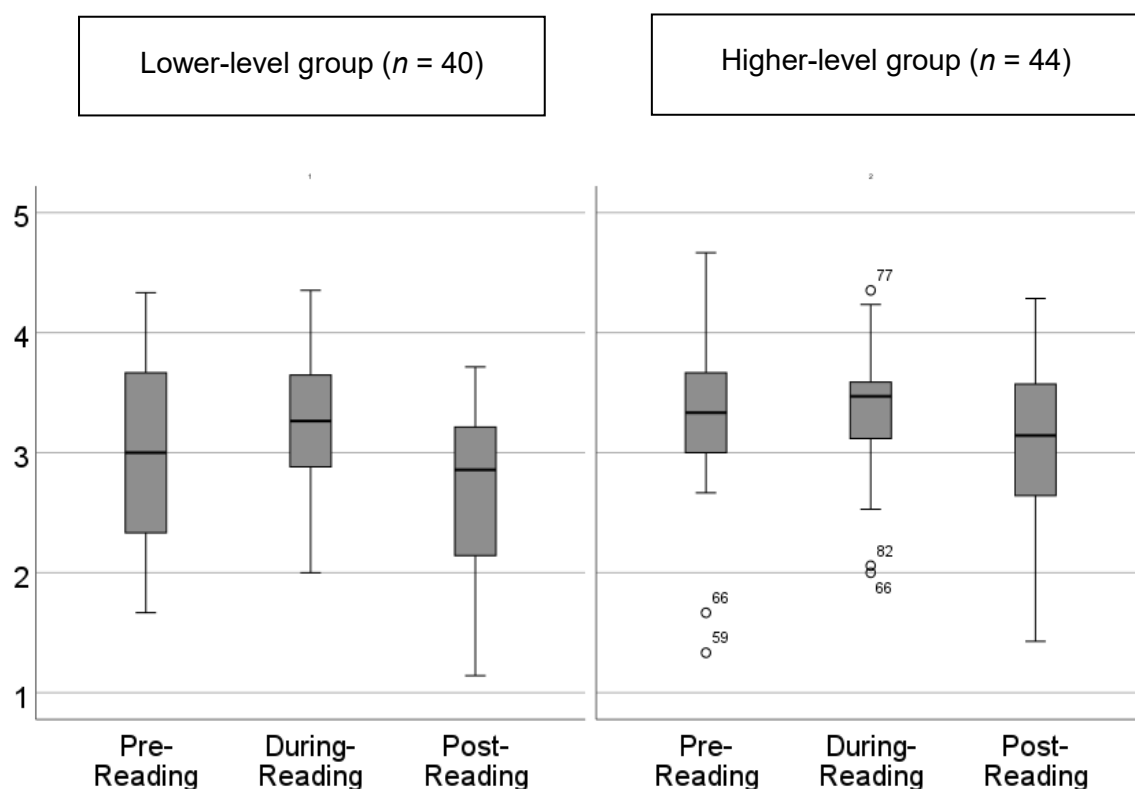
Reading stage	Items	Lower-level ($n = 40$)		Higher-level ($n = 44$)		p	Cohen's d
		M	SD	M	SD		
Pre-Reading	3	3.01	0.70	3.30	0.70	.064	0.41
During-Reading	17	3.26	0.51	3.38	0.51	.282	0.23
Post-Reading	7	2.73	0.64	3.07	0.63	.016	0.53
Total	27	3.00	0.62	3.25	0.61		

Figure 4 displays the results of Table 3 in a box plot. The pre-reading stage had greater variability in the lower-level group than in the higher-level group. There was not a big

difference between the two groups in the during-reading stage. In the post-reading stage, the higher-level group tended to use strategies more than the lower-level group.

Figure 4

Box Plot for Metacognitive Reading Strategy Use



Responding to Research Question 2

Before the analysis, the reliability of the instrument was examined by using Cronbach's Alpha reliability analysis ($\alpha = .76$). This provides an acceptable coefficient. A principal factor analysis with a promax rotation was employed to find out the factors of the seven items in the post-reading stage. The reason why I used the promax rotation was that the factors had some correlations among them. I tried several analyses. As a result, it produced two factors with eigenvalues greater than 1.0 and factor loading ($> |.40|$).

Table 4 shows the result of factor analysis. First, Factor 1 included three items, items 22, 23, and 27 accounting for 38.5% of the variance. These items are related to reflection, in which students reflect on what they have learned from the textbooks and the author's intentions. For instance, "Critiquing the author (item 22)," "Thinking about my interpretation of the whole meaning of a text deeply (item 23)," and "Reflecting on what has been learned from the text (item 27)." In addition, Factor 1 consisted of the items that cultivate their critical thinking and deepen their reading comprehension. Hence, I labeled Factor 1 "Reflection on Reading Materials." Second, Factor 2 consisted of four items, items 24, 25, 21, and 26. It accounted for 13.8% of the total variance. Factor 2 is related to reflection on learning process. For instance, "Identifying difficulties (item 24)," "Taking steps to repair faulty comprehension (item 25)," "Checking comprehension (item 21)," and "Judging how well purposes for reading were met (item 26)." I interpreted it as a reflection item on their English ability or reading process. Therefore, I named it "Reflection on Reading Process."

Table 4

Results From a Factor Analysis of the Items of Post-Reading Stage

Items in the Post-Reading stage	F1	F2	% of Variance	Cronbach's α
22.Critiquing the author	0.91			
23. Thinking about my interpretation of the whole meaning of a text deeply	0.82		38.5	0.77
27.Reflecting on what has been learned from the text	0.52			
24.Identifying difficulties		0.76		
25.Taking steps to repair faulty comprehension		0.71		
21.Checking comprehension		0.55	13.8	0.74
26.Judging how well purposes for reading were met		0.44		

Note. F1 (Factor 1) = Reflection on Reading Materials; F2 (Factor) = Reflection on Reading Process.

Table 5 illustrates the results of comparing the factor scores of the two groups by means of a *t*-test. Both groups of students tended to reflect on their own reading process at the post-reading stage; however, the higher-level group showed significantly higher frequency than the lower group in Factor 1: Reflection on Reading Materials, $t(82) = 2.92$; $p < .004$, $d = 0.64$. In other words, students with high-level English reading ability tend to reflect on the content of reading materials in addition to reflecting on their own reading process. It can be stated that readers with high English reading ability might deepen their reading comprehension through reflection on the material of the text. This result suggests that there are differences in the content or topics to reflect on by English reading ability.

Table 5

Means and Standard Deviations of Two Factor Scores for Two Groups

Factor	Groups	<i>n</i>	<i>M</i>	<i>SD</i>	<i>p</i>	<i>Cohen's d</i>
1. Reflection on Reading Materials	Lower	40	-0.30	0.82	.004	0.64
	Higher	44	0.27	0.95		
2. Reflection on Reading Process	Lower	40	-0.15	0.97	.147	0.32
	Higher	44	0.13	0.80		

Note. Lower ($n = 40$); Higher ($n = 44$).

In summary of the results of Study 1, higher-level students tend to use the strategies significantly at the post-reading stage. As a result of a factor analysis of the items in the post-reading stage, two factors were produced: Reflection on Reading Materials (Factor 1) and Reflection on Reading Process (Factor 2). There was a significant difference in Factor 1 between the higher-level and lower-level groups. This indicates that higher-level students tend to reflect more on the content of the reading topics.

Results of Study 2

Responding to Research Question 3

As shown in Table 6, there was a significant difference between the pre-test and the post-test, which suggested that reading strategy instruction contributed to students' English reading ability, $t(74) = 2.79, p < .007, d = 0.32$. However, the effect size was relatively small and the score difference between the pre-test and the post-test was only about two points. The results showed that there was not a big difference.

Table 6

Means and Standard Deviations of TOEFL iBT Section Scores

Section (30)	Pre-test (Spring Term)				Post-test (Fall Term)				<i>p</i>	<i>Cohen's d</i>
	Max	Min	<i>M</i>	<i>SD</i>	Max	Min	<i>M</i>	<i>SD</i>		
Reading	23	2	11.7	4.6	23	1	13.2	4.7	.007	0.32
Listening	20	1	11.9	4.2	23	1	13.4	4.2	.009	0.36
Speaking	22	7	13.5	2.8	22	1	14.6	3.1	.002	0.37
Writing	21	7	14.4	3.0	23	8	15.9	3.3	<.001	0.46
Total (120)			51.5				57.1			

Note. $N = 75$.

For quantitative data, the same questionnaire was administered at the beginning of the Fall term to examine the reading process used in the Spring term. In conjunction with this, it was also administered at the end of the Fall term to observe changes in the reading process. After collecting the data, the reliabilities of the instrument were examined by using Cronbach's Alpha reliability analysis (Spring term: $\alpha = .74$; Fall term: $\alpha = .76$). These provided an acceptable coefficient (Dancey & Reidy, 2020, p. 450), which showed the questionnaire used in the study seems to be reliable. Then, I tried several factor analyses. As a

result, it produced four factors with eigenvalues greater than 1.0 and factor loading ($> |.40|$) with a varimax rotation. The reason why I used the varimax rotation was that it was the most common way of rotating (Dancey & Reidy, 2020, p. 460), and the result of its rotation was suitable to make interpretation of the factors.

Table 7 shows the number of factors after factor loading. The questionnaire had 27 items in total. However, the 10 unclassified items (items 1, 2, 3, 4, 5, 11, 12, 14, 20, 24) in the Spring term and the 8 unclassified items (items 1, 2, 5, 9, 12, 15, 18, 20) in the Fall term were eliminated because their values of factor loading were lower. As shown in Table 7, the total accumulation of the factors accounted for 36.2% (Spring term) and 39.4 % (Fall term). Consequently, almost the same factors were extracted in both analyses. The results revealed that there was not a big difference from extracted items, though the orders of Factors 2 and 3 changed in the Fall term.

Table 7

Results From Factor Analyses at Spring Term and Fall Term

Spring Term				Fall Term			
Factors	Items	V (%)	Cronbach's α	Factors	Items	V (%)	Cronbach's α
F1(IR)	9,10,7, 8,6	11.3	.79	F1(IR)	4,3,25,6, 24,8,10,11	13.8	.86
F2(DR)	19,22,23, 18,27,13	10.3	.80	F2(MR)	26,27	8.7	.70
F3(MR)	25,26,21	7.8	.69	F3(DR)	21,19,17, 23,22	8.5	.74
F4(BR)	15,16,17	6.8	.68	F4(BR)	14,7,13,16	8.4	.74
Total	17	36.2	.74	Total	19	39.4	.76

Note. IR = Interactive Reading; DR = Deeper Reading; MR = Metacognitive Reading; BR = Bottom-up Reading, V (%) = Variance (%).

I labeled four factors as follows. Factor 1 was labeled “Interactive Reading”, which consists of both bottom-up processing such as paying attention to discourse markers (item 9) or sentence structure (item 7), and top-down processing such as making inferences (items 6 and 8). Factor 2 in the Spring term and Factor 3 in the Fall term are the items that deepen the text comprehension including the post-reading stage such as predicting the writer’s intentions (item 19), critiquing the author (item 22), and thinking about my interpretation deeply (item 23). I labeled it “Deeper Reading.” Factor 3 in the Spring term and Factor 2 in the Fall term were named “Metacognitive Reading.” All the extracted items were at the post-reading stage, in which students reflect on their reading process such as judging how well purposes for reading were met (item 26). I suppose that Factor 4 might include the element of bottom-up processing. For instance, “paying attention to the types of each verb (item 16), sentence structure (item 7), or pronouns (item 14)”. Learners read a text while finding out major information or checking the types of each verb. It could be interpreted as reading by sentences rather than grasping the meaning from the whole text. I named Factor 4 “Bottom-up Reading.” In summary of the factor analyses, the students’ awareness of reading strategy use did not seem to change between the Spring term and the Fall term. It indicates that almost all students had acquired some strategies in the Spring term.

For qualitative data, Table 8 illustrates the results of their reading process by NVivo.12.0. In the Spring term, students made reflective comments on both top-down (50%) and bottom-up processing (48.2%). In the Fall term, top-down processing (65.2%) was seen the most; bottom-up processing produced only seven comments (7.4%), all about “paying attention to sentence structure.”

The result indicates that it is important for the students to acquire top-down processing in academic reading because the number of comments on top-town processing increased. In addition, other strategies such as “reading aloud” and “taking notes” were given. It implies that each student might find and use more effective reading strategies.

Table 8*Reading Process at Spring Term and Fall Term by NVivo.12.0*

Coding name	Examples	Spring Term		Fall Term	
		N of C	%	N of C	%
Bottom-up	Reading sentence by sentence, Paying attention to sentence structure	56	50	7	7.4
Top-down	Skimming, Making inferences, Reading each paragraph, Predicting from the heading	54	48.2	62	65.2
Other	Reading aloud, Taking notes, Starting to read after confirming the questions, Never give up	2	1.8	26	27.4
		112	100	95	100

Note. N = 75, N of C = the number of comments.

Concerning the interview data, all the students changed their way of reading effectively by reading strategy instruction throughout the class. For example, Student A-5: “In the Spring term, I translated each sentence into Japanese. I was able to answer the questions because I learned how to paraphrase in the Fall term.” Student A-3: “I read sentence by sentence. In the Fall term, the teacher explained how to read a text. I could read focusing on paragraphs, topic sentences, and sentence structure. The way of reading changed gradually, and the reading speed increased.” Not all of the students changed from bottom-up processing to top-down processing. For instance, Student A-1: “I read roughly in the Spring term. Then I could get the gist of the whole meaning of a text and its features by paying attention to each paragraph. In the Fall term, I focused on sentence structure.” Student B-3: “I read each paragraph in the Spring term. I guessed the content from the title in the Fall term.”

In summary, the results suggest that reading strategy instruction influenced the students’ awareness, which led to slightly higher reading scores on TOEFL iBT. The result of

the factor analyses showed that the students had acquired some reading strategies such as bottom-up and top-down processing in the Spring term. Then, the reflective comments analyzed by NVivo. 12.0 revealed that they acquired more effective reading strategies as individuals in the Fall term. Moreover, the contents of the interview indicate that the students chose their appropriate reading strategies and utilized them. The qualitative results imply that the students' metacognitive processes operate when reading an academic text.

Responding to Research Question 4

Table 9 displays the result of TOEFL iBT divided by Groups A and B. As shown in the result, there was a significant difference between the pre-test and the post-test of Group A, which suggested that students who controlled learning tended to improve their English reading ability, Reading Score: $t(10) = 5.44, p < .001, d = 1.49$; Total Score: $t(10) = 7.82, p < .001, d = 1.53$.

Table 9

Means and Standard Deviations of TOEFL iBT Scores by Groups A and B

G	Reading Section (30)						Total (120)					
	Pre-test		Post-test				Pre-test		Post-test			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>p</i>	<i>d</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>p</i>	<i>d</i>
A	10.3	4.34	16.1	3.37	<.001	1.49	49	9.11	63.2	9.40	<.001	1.53
B	13.7	6.38	12.5	4.18	.493	0.24	56.5	14.4	50.8	13.5	.230	0.41

Note. G = Group, A = self-regulated learners ($n = 11$); B = non-self-regulated learners ($n = 6$), Pre-test = Spring term; Post-test = Fall term, d = Cohen's d .

The students in Group A (self-regulated learners), who continuously engaged in conducting self-study, improved not only their reading scores but also their total scores significantly in the post-test. They worked on both metacognitive monitoring and control:

planning, self-monitoring, and self-evaluating. They engaged in English learning to increase linguistic knowledge or raise their TOEFL scores. It is considered that their metacognitive processes operated successfully. On the other hand, there was not a significant difference in Group B (non-self-regulated learners). It is considered that they did not work their metacognitive processes successfully. In other words, their metacognitive processes did not operate as a cyclical process of metacognitive monitoring and control.

In the pre-test, the students in Group B achieved higher scores than those in Group A. It indicates that the English proficiency in Group B had been higher than that of Group A at the pre-test stage. It suggests that the students in Group B had acquired more vocabulary or grammatical knowledge than those in Group A. However, the non-self-regulated learners in Group B decreased their scores at the post-test stage, implying that they did not utilize the metacognitive processes to improve their reading skills. The result indicates that the metacognitive processes in self-regulated learning (out-of-class study) could be an important factor in English reading ability.

Table 10 displays the reading scores of TOEFL iBT in the pre-test and the post-test of Group B (non-self-regulated learners). In the interviews, the students in Group B ($n = 6$) reflected on their necessary reading skills as follows: increase the amount of vocabulary (B-1, B-2, B-3, B-5); read a text quickly (B-4, B-6); acquire structural knowledge or syntax knowledge (B-1, B-5). However, none of them conducted self-study. This indicates that the students' metacognitive control did not operate after monitoring. Accordingly, their scores did not improve significantly. Meanwhile, two students (B-1, B-2) increased their scores in the post-test. It suggests that homework and instruction in class might contribute to enhancing their English reading ability to a certain degree.

Table 10*Reading Scores of TOEFL iBT of Group B*

Non-self-regulated learners	Pre-test	Post-test
B-1	11	14
B-2	9	11
B-3	14	13
B-4	6	5
B-5	19	17
B-6	23	15

Note. reading section (30), Pre-test = Spring term; Post-test = Fall term.

The following two students (B-5, B-6) reflected on their reading during the interview. They self-monitored and self-evaluated their reading; however, they did not control learning. Student B-5, the non-self-regulated learner, had decreased scores (reading scores: 19 to 17 points; total scores: 63 to 52 points). Student B-5 did not work on the metacognitive control. Therefore, the student was not successful in raising the scores on TOEFL iBT at the post-test stage. Student B-5 reflected on the learning process and expressed the state of mind. Our conversation was in Japanese, which I then translated into English.

How did you increase linguistic knowledge or what did you actively do besides homework? (Interviewer)

Excerpt 1

I had been burned out with studying for the university entrance exam, so I have not studied English hard since entering the university. I asked myself to do something, but in the end, I did not do anything except for homework. Recently, I cannot concentrate even when reading, the vocabulary is difficult, and I cannot understand the syntax of complicated sentences, so I give up reading. I need to review what I learned in high school, but I do not know how to do it by myself. (Student B-5)

Student B-6 is a non-self-regulated learner who decreased scores at the post-test stage (reading scores: 23 to 15 points; total scores: 76 to 59 points). The student's reading score was the highest at the pre-test stage of all students. However, the motivation to improve in English was not higher than in high school. Student B-6 reflected on the reading including the experience in high school.

Excerpt 2

I had no special for reading skills, but I was good at reading. In high school, I focused on reading long texts quickly and comprehending the texts for university entrance exams. I think my reading speed got faster naturally because I read a lot of academic texts. (Student B-6)

The reading scores were both (B-5, B-6) high in the pretest. I think that they had already acquired reading skills because they had studied English very hard in high school. However, they did not conduct self-study for reading skills after entering the university, which affected the post-test. This indicates that it is necessary to coordinate not only the metacognitive processes that monitor reading but also the processes that control learning.

Table 11 displays the reading scores of TOEFL iBT in the pre-test and the post-test of Group A (self-regulated learners) and describes the contents of self-study. In the interviews, the students in Group A reflected on their necessary reading skills as follows: increase the amount of vocabulary (A-1, A-3, A-5, A-6, A-8, A-9, A-10, A-11); read a text quickly (A-4, A-7); practice TOEFL iBT (A-2); increase grammatical knowledge (A-3); get the gist of a text (A-4); be careful about time allocation (A-6); cultivate inference ability (A-7); learn by reading aloud (A-10). As shown in Table 11, the students in Group A conducted self-study and controlled learning after monitoring. They used some materials such as a textbook, a vocabulary book, and online news to learn actively through out-of-class learning. In addition, most students built up academic vocabulary for TOEFL iBT and raised their scores to a

significant degree. It may be suggested that it is necessary to increase the amount of linguistic knowledge to improve reading comprehension. It indicates that the metacognitive control after monitoring might be an important factor in English reading ability.

Table 11

Reading Scores of TOEFL iBT and Contents of Self-Study of Group A

SRL	Contents of self-study	Pre-test	Post-test
A-1	I used a textbook every day. I read the same passages for 20 minutes. I memorized vocabulary.	6	16
A-2	I read one passage for 20 minutes. I memorized the vocabulary.	2	12
A-3	I reflected on why I made mistakes. I read one passage and recorded the time. I listened to vocabulary repeatedly.	6	15
A-4	I used a textbook before the test. I reviewed the reading class.	12	20
A-5	I read BBC News to increase my background knowledge.	16	23
A-6	I listened to <i>Super Eigo</i> and TED Talks in my spare time.	12	19
A-7	I reviewed the textbook for the next learning. I wrote unknown words.	10	16
A-8	I read online news to increase my background knowledge. I memorized vocabulary related to prior knowledge deeply.	9	13
A-9	I used a textbook. I reflected on the reading topic.	13	14
A-10	I used shadowing to read aloud.	16	17
A-11	I wrote three essays every day.	12	13

Note. SRL = Self-regulated learners, reading section (30), Pre-test = Spring term; Post-test = Fall term.

The following two students (A-3, A-6) reflected on their reading during the interview. Their conversation was in Japanese, which I then translated into English. Student A-3 is a self-regulated learner, who did self-study continuously and improved the scores (reading scores: 6 to 15 points; total scores: 41 to 62 points). The student had set a clear goal and had a high motivation to raise the scores on TOEFL iBT.

Excerpt 3

I realized that my TOEFL score was low when talking with my classmates. I set the goal for more than 60 points in total. I used a textbook and read one passage for 20 minutes. I recorded the reading time and reviewed the passage every time. I listened to vocabulary repeatedly for two hours on the train. (Student A-3)

Student A-6 is a self-regulated learner, who got a high score at the post-test stage (reading scores: 12 to 19 points; total scores: 59 to 66 points). The student had already developed the learning strategies from high school, and the metacognitive processes operated successfully.

Excerpt 4

When I was in high school, I listened to the CD recorded by our ALT (Assistant Language Teacher) many times for a speech contest. I focused on listening rather than writing. I listened to *Super Eigo* (e-learning) and TED Talks in my spare time rather than sitting at my desk. (Student A-6)

In summary of Study 2, the results from research question 3 reported that the students acquired more effective reading strategies after learning in class, which enhanced their reading scores significantly; however, the effect size was relatively small between the pre-test and the post-test. This means that it might be difficult to conclude that only the changes in their way of reading contributed to improving the students' English reading ability. The results from research question 4 found that self-regulated learners who controlled learning improved their scores greatly and linguistic knowledge such as vocabulary or grammatical knowledge could be an important factor in reading comprehension. Accordingly, the results of Study 2 suggest that the metacognitive processes in self-regulated learning might

contribute to the changes in English reading ability. Hence, the cyclical process of metacognitive monitoring and control could be an essential factor in L2 reading.

Results of Study 3

Responding to Research Question 5

As shown in Table 12, TOEIC® Listening & Reading Test scores significantly improved in all reading, listening, and total scores after study abroad. It demonstrated that studying abroad has the effect of improving English reading ability.

Table 12

TOEIC Section Scores Before and After Study Abroad

TOEIC scores	Before / After	<i>M</i>	<i>SD</i>	
Reading	Before	290.74	81.84	$t(33) = 6.20, p < .001, d = 0.79$
	After	350.59	69.57	
Listening	Before	358.97	64.99	$t(33) = 6.54, p < .001, d = 1.27$
	After	430.59	45.99	
Total	Before	649.71	125.78	$t(33) = 9.84, p < .001, d = 1.15$
	After	781.18	100.84	

Note. $N = 34$, Before = Before study abroad; After = After study abroad.

As shown in Table 13, compared to the means of metacognitive reading strategy use before and after study abroad, after study abroad was significantly higher than before study abroad in all reading stages, $t(33) = 5.31, p < .001, d = 0.97$. It suggests that studying abroad might enhance the use of students' metacognitive reading strategies greatly.

Table 13

Use of Metacognitive Reading Strategies Before and After Study Abroad

Reading stage	Before / After	<i>M</i>	<i>SD</i>	
Pre-Reading	Before	3.12	0.61	$t(33) = 4.09, p < .001, d = 0.87$
	After	3.67	0.66	
During-Reading	Before	3.20	0.54	$t(33) = 4.89, p < .001, d = 0.93$
	After	3.66	0.45	
Post-Reading	Before	2.92	0.61	$t(33) = 3.04, p < .001, d = 0.60$
	After	3.28	0.60	
Total scores	Before	3.12	0.48	$t(33) = 5.31, p < .001, d = 0.97$
	After	3.56	0.43	

Note. $N = 34$, Before = Before study abroad; After = After study abroad.

A paired samples *t*-test was performed, with the means of each reading stage as dependent variables, and higher- and lower-score groups divided by Cluster Analysis as independent variables (see Table 14). The results showed that there was a significant difference in the during-reading stage, $t(32) = 2.13$, $p < .041$, $d = 0.73$. This illustrated that the higher-score group (Group C; $n = 21$) utilized the strategies in the during-reading stage more frequently than the lower-score group (Group D; $n = 13$) when reading a text.

Table 14

Use of Metacognitive Reading Strategies for Two Groups

	Group	<i>N</i>	<i>M</i>	<i>SD</i>	<i>p</i>
Pre-Reading	C	21	3.71	0.65	.599
	D	13	3.59	0.68	
During-Reading	C	21	3.78	0.41	.041
	D	13	3.47	0.44	
Post-Reading	C	21	3.34	0.60	.481
	D	13	3.19	0.62	
Total	C	21	3.66	0.42	.096
	D	13	3.41	0.42	

Note. Group C: Higher-score group ($n = 21$); Group D: Lower-score group ($n = 13$).

Table 15 figures out the content of in-class learning in ESL and AC, divided into the four skills. Regardless of ESL or AC, the result indicates that students deepened their reading comprehension at the post-reading stage by using other skills such as listening (e.g., lecture), speaking (e.g., discussion, debate), and writing (e.g., essay, report, reflection). It shows that the courses during study abroad fostered the learning strategies that integrated the four skills, and that the students deepened their comprehension in the post-reading stage through output activities.

Table 15

Learning Style in ESL and AC During Study Abroad

Learning style	ESL	AC
Reading + Writing	13	12
Reading + Speaking	4	2
Reading + Listening	1	7
Speaking + Writing	1	2
Reading + Listening + Writing or Speaking	0	3
No comments	15	8
Total	34	34

Note. $N = 34$.

The results of the interviews indicate that although class-related learning of ESL was mostly a passive learning style, that of AC was a more active style. Class-related learning in ESL, all students studied almost the same content regardless of different countries. The length of reading materials was not so long, and the difficulties were the same as university entrance exams. In short, it was not difficult for students to read and comprehend the text in ESL. The genres that students read while studying abroad were short stories, subjects and topics

included the environment, sociology, animals, indigenous people, historical buildings, human geography, gender woman, and work-life balance. Indeed, there were some differences in topics, each class was given a reading assignment of about 2 to 10 pages, and output activities such as writing essays, discussions, and debates were carried out based on what they had read in the class.

Regarding class-related learning in AC, although there were some differences depending on the selected class, the amount of reading assignments was generally greater than in ESL. Moreover, the assignments dealt with more academic topics, and the level of difficulty seemed to have been higher than in ESL. The classes that students selected included a wide variety of subjects such as economy, sociology, psychology, computer science, East Asian studies, religion, P.E., theater introduction, geography, and language acquisition. Some students had very few assignments and the classes were given in a lecture; other students were required to find their own themes, search for literature reviews, and read and write essays or reports.

Table 16 shows the changes in the students' reading process after study abroad. With respect to Changes in the Reading Process While Reading, most students have changed in their reading process such as selective attention that is focusing on understanding the major information or reading for grasping information. In addition, two students acquired metacognitive reading such as reading a text while talking to themselves. It seemed that the students acquired their own reading strategies and were aware of the purpose of reading and improved their reading skills to a higher level before and after study abroad.

On the other hand, with respect to Changes in the State of the Reading Process, two out of 11 students reported that reading speed has changed. However, other nine students did not change their reading process greatly or realize their changes before and after study abroad.

Table 16*Changes in Reading Process After Study Abroad*

Categories	Comments
Changes in the Reading Process While Reading ($N = 23$)	
Selective Attention ($n = 18$)	I grasp information, I read roughly, I read while selecting major information, I read only important parts, etc.
Metacognitive Reading ($n = 2$)	I read while talking to myself.
Making Inferences ($n = 2$)	I read while making inferences.
Sentence Structure ($n = 1$)	I pay attention to grammar.
Changes in the State of the Reading Process ($N = 11$)	
Reading Speed ($n = 2$)	I can read faster, I can read in time.
Other ($n = 9$)	I understand more, I do not know how things have changed, I am still not good at reading, I rely on translation, etc.

Students A, B, and C acquired selective attention strategies and talked about changes in reading process in the interview. Students A and B felt that their reading process had changed because they were able to understand the difference between major and minor information.

Regarding how to read a text on TOEIC, Student C became conscious of grasping vital information, and the purpose of reading was clear. The student was able to arrange the way of reading by the purpose of reading a text. Thus, these students might have acquired selective attention strategies and improved English reading ability. The interviews were in Japanese, which I then translated into English.

Excerpt 5

Before studying abroad, I read all of the text, but after studying abroad, I realized that it is important to grasp the meaning of only important information. I have started to

understand what the writer wants to say. I am no longer weak at reading. I learned how to read an academic text, so I can understand the important parts such as abstract, introduction, and summary. I can read more naturally than before. (Student A)

Excerpt 6

Before I studied abroad, I focused on paragraphs and sentence structure, and had to increase the vocabulary size, so I read by guessing from the context. After studying abroad, I am able to select essential information while reading a text. Academic texts are long, so I skim and then am able to quickly read it and decide what information I need, and I am able to read more quickly. (Student B)

Excerpt 7

I had paid more attention to topic sentences and paragraphs before studying abroad. Now I read roughly having an idea that “It is OK to understand the text.” Reading speed is required to grasp the information in TOEIC anyway, so I have become conscious of grasping information rather than reading by paragraphs. (Student C)

Students D and E began to read aloud while reading a text, and their reading process had changed so that they read while talking to themselves. In an interview, Student D reported that they read as if they are speaking in their mind, and Student E reads a text while moving their mouth.

Excerpt 8

Before I studied abroad, I reread the text many times. Gradually, I became more careful about paraphrasing words, stopped reading minor information, and became able to imagine the whole content from the heading. Gradually, the amount of vocabulary increased, and reading speed improved. After studying abroad, my reading process

changed as I read in my mind while my eyes are moving, and I began to read as if I was speaking to myself. I realized that to be able to pronounce the words means to understand a text. (Student D)

Excerpt 9

I read a text with speaking aloud when I can. I read while moving my mouth even with lip synchronization. I lost my weak awareness of reading. Before I studied abroad, my vocabulary was poor, so I was desperate to read and translated into Japanese or relied on translation. While studying abroad, I started to read a text with speaking aloud. The amount of vocabulary increased, and I was able to read more fluently than before. (Student E)

Students F and G talked about guessing strategies. Student F began to read a text while predicting, and Student G liked reading before studying abroad and was able to guess more while reading. These interviews imply that studying abroad could strengthen students' reading strategies.

Excerpt 10

Before studying abroad, I had paid attention to each sentence and paragraph, but after studying abroad, I began to read the text while predicting the content. (Student F)

Excerpt 11

I like reading, so I could guess unknown words before studying abroad. After studying abroad, my reading speed became faster, and I was able to read more accurately. (Student G)

Regarding self-evaluation of changes in English reading ability, the results revealed that English reading ability significantly improved after studying abroad. Moreover, the interviews above show that the students' reading process has changed positively. However, eight out of 34 students did not feel that they improved their English reading ability because of studying abroad. It indicates that even if the scores on TOEIC increased, their self-evaluation of English reading ability would not be the same as the increase in the scores.

Four out of eight students who gave negative comments about improving their English reading ability gave the reason in an interview. Student H wrote in the questionnaire that they were able to read the all passages and answered all the TOEIC reading questions within the time, so I considered that their English reading ability improved by studying abroad. However, when I asked Student H about the English reading ability, the student answered that they had to improve the reading scores after studying abroad because studying abroad had not contributed to enhancing the English reading ability. Although the reading score of the student increased by 135 points after studying abroad, I surmise that Student H had wanted to improve more or had expected more dramatic improvement from studying abroad. The student felt the difference between expectation and reality.

Excerpt 12

I am not good at reading; I think it is difficult. Vocabulary is the most important to reading. I did not improve dramatically, so I thought I should study more TOEIC reading. (Student H)

Student I, the same student as A-3 in Study 2 was a student who cooperated in the interview before study abroad. In order to increase the amount of vocabulary, the student studied for two hours on the train every day with a vocabulary book before study abroad. In the interview after studying abroad, the student had learned to utilize reading strategies such as the purpose of reading or grasping the gist. Although the TOEIC reading score improved

by 50 points, Student I felt that the time spent on reading so far had not contributed to the score.

Excerpt 13

While studying abroad, I read a lot of literature, but my reading skills did not improve as much more as I had expected after studying abroad. I think that I did not read difficult literature but just increased the amount of reading material during my study abroad. (Student I)

Furthermore, the results of interviews suggested that studying abroad was not the only way to improve reading ability. Students J, K, and L self-evaluated that their reading skills had improved before and after study abroad more than they did during study abroad. In addition, some students felt that they have improved in listening or speaking skills more than in reading ability. It could not be concluded that studying abroad has positive effects in all aspects. As an overall tendency, English reading ability has improved by experiencing the study abroad. However, the content of the interviews and reading scores imply that even if TOEIC scores were raised, students' feelings toward English reading ability might not be enhanced proportionately.

Excerpt 14

I hated just seeing the reading passage, but while studying abroad, everything was in English, so I got used to it and felt less of a sense of rejection. I did study reading before studying abroad a lot more than after studying abroad. Because I had been worried that I might not be allowed to study abroad. My TOEIC reading increased by 105 points, but I feel that my speaking and listening skills improved more than my reading skills. (Student J)

Excerpt 15

I had a lot of opportunities to read academic texts even in Japan before study abroad, so I do not think that studying abroad particularly improved my reading ability, but I think that it has become easier to read than before. (Student K)

Excerpt 16

Before studying abroad, I spent hours for reading. A lot of reading assignments were given in Japan. While studying abroad, I had a chance more likely to speak and express my opinions. I am sure that my reading has improved the most now after studying abroad. There are many assignments in classes. I have to read a text first, then write a report, and then attend class. (Student L)

In summary, the students' English reading ability improved significantly after study abroad, and they tended to utilize metacognitive reading strategies. The factors behind this improvement might include in-class learning that deepens reading comprehension and the integrated learning of the four skills. In addition, it suggests that the selective attention strategies or the strategies that make use of metacognition improve their reading. However, 24% of the students feel that they have not improved even though their scores have improved. The results indicate that studying abroad always might not work positively in all aspects.

Responding to Research Question 6

Table 17 describes the students' out-of-class learning for the four skills. For example, the number of speaking skills, was over 34 students because multiple answers were allowed. The result showed that speaking skills were used the most. Moreover, all 34 students actively interacted with people in their daily lives and engaged in improving their speaking skills while studying abroad with intrinsic motivation. In addition to speaking skills, they engaged in reading and listening skills actively through their favorite books or movies; however, writing skills were the least developed. It can be considered that during study abroad students

were surrounded by an English-speaking environment, which increased the chances of using speaking skills the most. Moreover, there were 20 students in total, who continued intrinsic motivation to improve their English after studying abroad. It is considered that the motivation that students gained during study abroad has raised the motivation types from extrinsic motivation to intrinsic motivation because the students were interested in learning through their daily lives and enjoyed learning while studying abroad. The result suggests that the students thought about what to do by themselves, behaved actively, and engaged in English learning. It indicates that their metacognitive processes in self-regulated learning operated during study abroad.

Table 17

Out-of-Class Learning While Studying Abroad

Skills	During	After	Contents
S	(<i>n</i> = 57)	(<i>n</i> = 0)	(with others) international students (<i>n</i> = 26), volunteer (<i>n</i> = 15), circle (<i>n</i> = 9), club activities (<i>n</i> = 5), dance competition (<i>n</i> = 1), internship (<i>n</i> = 1)
	(<i>n</i> = 5)	(<i>n</i> = 0)	(with oneself) tweet or reflection on conversations
L	(<i>n</i> = 9)	(<i>n</i> = 7)	SNS (YouTube, podcast), movies, radio, Netflix
R	(<i>n</i> = 14)	(<i>n</i> = 7)	textbooks, various materials, books, newspapers, signboards, articles on the Internet, SNS (chat, Instagram)
W	(<i>n</i> = 3)	(<i>n</i> = 0)	practicing essays, asking friends to check spelling or grammatical mistakes
	(<i>n</i> = 5)	(<i>n</i> = 4)	(with oneself) writing the events or a diary
Other	(n = 4)	(n = 2)	taking notes or writing down what I do not know
			changing the language setting on my smartphone to English studying with a vocabulary book every morning to increase vocabulary
Total	97	20	

Note. S = Speaking; L = Listening; R = Reading; W = Writing, During = During study abroad; After = After study abroad.

As shown in Table 17, the students activated metacognition using productive skills for out-of-class learning or combined input and output activities for self-study in their daily lives. Regarding using productive skills, 10 out of 34 students engaged in self-learning through reflective activities that used their writing and speaking skills. Interviews revealed that five students reflected on the day or event and wrote about it in a diary, three students talked to themselves in English, and two students reflected on their conversations. It indicates that studying abroad might have the effect of promoting metacognition and making use of productive skills in speaking and writing, contributing to the improvement of English proficiency. With respect to input and output activities for self-study, five out of 34 students engaged in English learning by integrating input and output activities. Regarding reading and writing integration, Student M recognized that it was not good at reading and writing. It is, however, the class during study abroad was required to read and write essays. Therefore, Student M practiced writing essays or reports after reading for the test. Regarding reading and speaking integration, Student N actively participated in the local community and worked hard to improve the reading and speaking skills. In the self-study of listening and speaking integration, Students O and P practiced pronunciation by watching videos on YouTube, TED Talks, or shadowing. Student Q listened to and sang foreign songs that were interested in, which utilized listening and speaking skills. The results imply that the students tried to find an appropriate way to learn English with a goal or intrinsic motivation.

To summarize research question 6, regarding out-of-class learning, the students actively behaved in their daily lives and engaged in English learning with intrinsic motivation. In other words, they thought about what to do, found interesting materials, and did self-study, which implied that they organized their metacognitive processes such as having a purpose, self-monitored, and self-evaluated. It could be considered that studying abroad might have the effect of increasing intrinsic motivation and promoting metacognition. Moreover, activating metacognition might be important when not only reading a text but also learning English for out-of-class learning. Regarding whether students continue to learn

English actively for out-of-class learning after studying abroad, differences in the social environment are greatly related to the opportunity to use speaking skills. However, continuous autonomous learning seems to be related to intrinsic motivation gained from studying abroad and a clear goal.

Responding to Research Question 7

Table 18 explains the result of changes in the students' learning process, motivation, and behavior. In addition, the contents of interviews ($N = 22$) describe the changes in the metacognitive processes of how the students thought, behaved actively, and controlled themselves.

Table 18

Changes in Learning Process, Motivation, and Behavior After Study Abroad

Categories	<i>N</i>	Examples of comments
Changes in Language Awareness	6	<ul style="list-style-type: none"> • English is a communication tool. • I do not have to have perfect English. • Reading or speaking skill is important.
Changes in Behavior and Motivation	11	<ul style="list-style-type: none"> • I listen/watch TED Talks, SNS, Netflix, etc. • I found my favorite author. • I became able to express my opinion. • I want to do something like a volunteer. • My motivation to English increased. • I was shocked that foreign students' motivation was much higher than that of Japanese university students.
No Changes Before and After Studying Abroad	5	<ul style="list-style-type: none"> • I am busy with job hunting or homework. • I do only my homework very hard.

Note. $N = 22$.

After studying abroad, 17 students had an influence on something in their life experienced during study abroad. Six students out of 17 noticed that language is just a communication tool; 11 students out of 17 changed their behaviors from the experience of studying abroad, which indicated that their motivation types might be more intrinsic motivation. The experience or motivation that the students gained from their daily lives while studying abroad might have a chance to change their life after studying abroad. Meanwhile, five students returned to the same daily lives as before studying abroad.

Regarding Changes in Language Awareness, six students noticed it in a real communicative situation through the study abroad experience. Before studying abroad, Student R thought that they had to speak in perfect English. The student in an interview talked about the changes. While studying abroad, it was surrounded by English, and there were many chances to communicate in English, so it seems that the real experience changed the way of thinking about language awareness.

Excerpt 17

When I was in Japan, I thought about American English and British English. I was quite concerned about pronunciation, but in an environment where speaking English is common, I realized that it is normal for each country to have an accent. I thought it was important to be able to communicate even if it was not in good English. (Student R)

Student S continues to write a diary after studying abroad, works on reading TOEIC textbooks for job hunting, and listens to interesting materials such as Netflix with intrinsic motivation gained from studying abroad. Even after study abroad, the student engages in English learning with clear goals. While studying abroad, the student tried to make friends and do things that one can only do during study abroad. Before studying abroad, the student did not realize the importance of reading, but during study abroad, the student realized that reading is necessary for gathering information and deepening knowledge.

Excerpt 18

I thought that reading was meaningless and speaking was important, but when I was studying abroad, I read articles to gather information and the written material was in English, so I think reading is necessary to deepen my knowledge. (Student S)

Before studying abroad, Student T set a goal to improve the English skills, which was necessary for studying abroad. However, while studying abroad, the student began to enjoy learning English as a hobby rather than studying, which enhanced the intrinsic motivation. As a result, the learning habits have changed. Student T is continuing to learn English even after studying abroad because the student wants to keep the listening skills that improved through studying abroad. This change suggests that the motivation for second language acquisition after studying abroad might be influenced by the motivation gained from studying abroad.

Excerpt 19

I was not good at listening at all, but I feel my listening has improved a lot lately. I have been able to listen naturally, so I have been enjoying it a bit. I am listening to people from overseas on Instagram or listening to my favorite foreign dramas on Netflix with English subtitles; I think I have spent more time on that sort of thing. After studying abroad, it is fun to listen to English such as daily conversations. (Student T)

Student U has been able to understand English more after studying abroad, so the student began to read interesting novels. In addition, Student U reflected on studying abroad in high school, since they had spent time with Japanese friends at that time. Therefore, the student decided to spend time with English speakers while studying abroad at university. Student U made use of the experience gained in high school to change the behavior during the university study abroad.

Excerpt 20

I want to keep my English proficiency, so I study for TOEIC, and now that I understand English, I buy interesting novels and read them.

When I studied abroad in Australia during high school, I felt like I was on a trip, but in university, I made friends and spent time with English speakers rather than with Japanese people. (Student U)

Student V reviewed what they learned in class, and studied English how to get higher scores on TOEFL iBT on websites such as YouTube for the test before studying abroad. While studying abroad, Student V felt lonely because of the poor English communication skills and had a strong motivation to blend in and willingly interact with the natives or other international students. This behavior can be interpreted as integrated motivation. Thus, life in an overseas environment might make the motivation types from instrumental to integrative motivations. Student V reflected on and talked about the changes in the character and awareness of themselves in the interview. The student realized that they had to behave actively and insist on what the student did not know while studying abroad because nobody cared about Student V. Such an experience brought about changes in the behavior. From this interview, the overseas environment can enhance independence and problem-solving ability, and promote the metacognitive processes in self-regulated learning.

Excerpt 21

I wanted to communicate. I wanted to have a good relationship with my friends. I wanted to live a normal life there, and I wanted to blend in well with the community. There were many native students in the dormitory, and I felt lonely. I wondered what my friends were talking about, but they spoke so fast that I could not answer when they asked for my opinion. It was very frustrating when I could not speak well.

I thought that I must not give up speaking, so I came to think that I had no choice but to speak up. I insisted that I did not know what I did not know, because if I did not say it, nobody cared about me. Through my experience of studying abroad, I realized that I was rough in an effective way. After studying abroad, I became able to express my opinion and became stronger than before. (Student V)

Student W is the same student as B-5 in Study 2. The student had a low motivation for English learning before studying abroad and felt impatience about the declining English proficiency. However, the student could raise the motivation for learning because of studying abroad. Student W applied for an internship and behaved actively. After studying abroad, the student felt fulfilled and seemed to be confident about English. Studying abroad might be a factor in raising intrinsic motivation. It can be concluded that the experience of studying abroad worked positively. In addition, Student W reflected that university students should be more independent and able to solve problems by themselves. That is the difference between high school and university students. It indicates that metacognition develops with age, so problem-solving ability increases.

Excerpt 22

When I was in high school, I thought that the reason I could not pass the Eiken Pre-1st grade was because my English was not good enough, but now that I passed, I think the reason I failed was that I was forced to do study for it in high school. I was not motivated or had sense of mission that I had to study English. I was able to truly study English by studying abroad. Also, I wanted to do something different while studying abroad, and I wanted to do an internship, so I chose the university where I could do that. When I was in high school, I went abroad in the middle of the process of learning English, but in university, even if I do not understand everything, I can manage by myself. (Student W)

Student X organized the metacognitive processes to increase linguistic knowledge for the TOEFL iBT test with extrinsic motivation and improved English reading ability before studying abroad. That student was the same student as A-3 in Study 2, Student C, and Student I in Study 3. During study abroad, the student always tried to talk with friends or the host family and read articles of news and literature for the research with intrinsic motivation. After study abroad, the student changed the motivation for second language acquisition. The aim for English learning moved from themselves to other people.

Excerpt 23

Before studying abroad, I hoped it would be good if I could improve my English, but now I want to do something like be a volunteer, who uses English. I have changed my mind to study not only for my improvement but also to help others. (Student X)

Before studying abroad, Student Y practiced writing three essays every day and increased vocabulary knowledge using a vocabulary book. Studying abroad changed the value of learning and motivation types. That student became conscious of "participating" in classes, and the attitude changed from passive to active. In addition, that student who had been influenced by other international students found a career path to go to graduate school in the future, and the future goals were clarified.

Excerpt 24

Before studying abroad, I did not like reading. I just had to read the text. After studying abroad, I changed my mind. I was shocked by the positive attitude of other international students, whose motivation was different from that of most Japanese. I thought that studying might be surprisingly fun, so I started thinking about going to graduate university. I was conscious of "participating" rather than just listening to the

class. I worked hard on homework because I wanted teachers to praise me. I asked the professors to provide additional materials or literature to increase reading opportunities. I learned the joy of studying for the first time after studying in Canada. I wanted to absorb more things and experiment in more ways, so I was able to actively become natural. (Student Y)

The study abroad experience might give the students not only a large amount of input, output, and interaction but also changes in the motivation and behavior from a serious attitude toward learning of other international students, which could promote students' metacognition.

In summary, the result of research question 7 explained the changes in students' metacognitive processes: how the students self-monitored, self-evaluated, and controlled themselves before and after study abroad. Students' motivation types changed from extrinsic to intrinsic motivations or from instrumental to integrated motivations for language acquisition by studying abroad. In other words, their motivation types before studying abroad might represent instrumental motivation because they had to get higher scores on TOEFL iBT test for study abroad. During study abroad, some of the students might have multiple types of motivation such as integrative, identified, and intrinsic motivations. Moreover, students' behavior changed and more actively interacted with others. This suggests that the outer environment of studying abroad allows students to learn English more easily, develop independence, and broaden their perspective on things and ways of thinking. The results imply that studying abroad facilitates the students' metacognition. However, for all the students who experienced study abroad, their motivation gained from studying abroad does not always affect the life after studying abroad. The metacognitive processes that set a goal could be related to continuing autonomous learning.

Chapter 5: Discussion

This chapter discusses the findings of previous chapters to answer the seven research questions. After the discussion of each study, English reading ability before and after study abroad will be discussed.

Responding to Study 1: Research Questions 1 and 2

The result of research question 1 showed that higher-level students used metacognitive reading strategies more frequently than lower-level students. It suggests that higher-level readers recognize the importance of using strategies and tend to utilize those strategies before and after reading in addition to while reading a text. According to previous reviews, readers with high English proficiency tend to use strategies for comprehending a text in the during-reading stage (Karbalaei, 2010). Additionally, higher-level readers might use the strategies in both the pre-reading and post-reading stages more frequently than lower-level readers (Nordin et al., 2013). Similar results were obtained in this study.

Moreover, there was a significant difference in the use of strategies at the post-reading according to English reading ability, which suggested the importance of the post-reading stage for reading comprehension. The result of research question 2 indicates that readers with high English reading ability tended to reflect not only on their own English reading ability or reading process but also on the material of a text. In other words, high-level readers have a high ability to promote metacognition in reading. Based on these results, I discuss the relationship between metacognition, reading strategies, and English reading ability.

Why do readers with high English reading ability use reading strategies more frequently? I suppose that the amount of linguistic knowledge might be related to a factor. Previous studies have reported that linguistic knowledge such as vocabulary, phraseological knowledge, grammar, and sentence structure are important factors in reading comprehension (Akbari, 2014; Grabe, 2009; Kremmel et al., 2017; Zhang, 2012). In other words, linguistic

knowledge would be deeply involved in the acquisition and frequency use of metacognitive reading strategies because readers with linguistic knowledge are more likely to be able to understand a text more smoothly than those without such knowledge. Therefore, it is important to promote metacognition in order to increase the amount of linguistic knowledge as well as the acquisition of reading strategies.

Regarding the use of metacognitive reading strategies in the post-reading stage, it could be related not only to English reading ability but also to reading strategy instruction. A previous study by Zhang and Seepho (2013) found no significant difference in English reading ability at the post-reading stage. From this result, they suggest the importance of post-reading strategy instruction and reflective instruction. In addition, Linda et al. (2015) imply that for Japanese learners of English, texts in English are more complex than texts written in Japanese because of their different linguistic characteristics, and therefore, metacognitive strategy instruction is crucial. As suggested above, the students who cooperated in this research differed from the previous research (Zhang & Seepho, 2013) in that they conducted reflective activities in class. At the end of each class, they were provided a few minutes to reflect on what was impressive or learned in the class or on the materials of a text. Thus, they conducted reflective activities as a habit, which seems to lead to using the metacognitive reading strategies at the post-reading stage. Here are some students' reflective comments about the learning process and the content of the teaching materials. The following sentences are the written expressions of what the students said. First, the awareness of English learning was seen in "Reflection on Reading Process." Student AA (higher-level group): "I will be careful about the difference between apposition and relative pronouns," Student AB (lower-level group): "I had a hard time grasping the meaning because the sentences were long." Second, regarding "Reflection on Reading Materials," the students had their own viewpoints on the topic. In a class dealing with the topic of Japanese women's social progress in English newspaper articles, Student AC (higher-level group): "As a woman who is about to progress in society, I could not think of it as someone else's problem. The

weakness of the women's position in Japan gathered attention from overseas, which left a strong impression on me," Student AD (lower-level group): "Knowing that women's progress in society has not been advanced, can I only hope for improvement? I felt helpless." In addition, in a class dealing with topics related to whales in online teaching materials, Student AE (lower-level group): "The meat of whales is not often eaten now, but I think that whaling techniques should be preserved as a traditional culture." This suggests that the students deepened their reading comprehension by conducting reflective activities after reading. This kind of continuous reflective activities by reading strategy instruction might contribute to deepening reading comprehension regardless of English reading ability. Accordingly, reflecting on the learning process and the content of reading materials promotes metacognition, which is effective in improving English reading ability and deepening reading comprehension.

The result indicates that higher-level students tend not only to reflect on the learning process but also to reflect on the contents of reading materials. In other words, it can be stated that readers with high English reading ability might have the ability to foster their metacognition to deepen their reading comprehension through reflection. I discuss the difference from the view of the situation of the students who participated in the study.

The students had to improve their English skills and TOEFL iBT scores that were necessary for studying abroad in about 10 months after entering university. As noted above, about 90% of the students were at A2 and B1 levels of CEFR levels compared to TOEFL iBT reading scores. In such a situation, it is considered that it was hard for them to read and understand the academic texts of TOEFL iBT, which is equivalent to B2 level within the time limit, although there were individual differences. Only taking 30 classes (15 in the Spring semester and 15 in the Fall semester) throughout the year would not have been sufficient to raise the scores and reading skills for studying abroad within 10 months. It is true that some students who had clear goals for studying abroad and were highly motivated to study English increased their linguistic knowledge such as vocabulary and grammar for out-of-class study.

In such a limited time, it might be considered that the students were desperate to improve their English reading ability for studying abroad. For example, student A-3 (higher-level group) said, “I realized that my TOEFL score was low when talking with my classmates. I set the goal and used a textbook of TOEFL iBT.” The student felt impatient and started to control learning inspired by classmates. Observing the class, all the students worked very diligently, but it was not easy to improve their TOEFL reading scores. Student B-5 (lower-level group), who could not hide the confusion over the gap between the target score and the English reading ability said, “The vocabulary is difficult, and I cannot understand the syntax of complicated sentences, then I give up reading. I need to review what I learned in high school, but I do not know how to do it by myself.” Under these circumstances, lower-level students or students who were struggling to improve their English reading ability reflected on only their reading process after reading a text, and they might not have had time to reflect on the content of reading materials.

Responding to Study 2: Research Questions 3 and 4

As an overall tendency, although the students in the study improved their English reading ability through the class, the difference in the reading scores between the pre-test and the post-test was only about two points (Table 6). On the other hand, the self-regulated learners in the interview, who regulated their learning process, raised their reading scores on the TOEFL iBT greatly. Thus, not only reading strategy instruction but also the ability to control learning is important for English reading ability. It is necessary to regulate the metacognitive processes in self-regulated learning in order to acquire academic reading skills. The self-regulated learners in the study intensified their academic vocabulary using materials such as TOEFL textbooks or online materials, which improved their reading scores on TOEFL iBT significantly at the post-test stage. Accordingly, the role of metacognitive control in self-regulated learning has a great influence on linguistic knowledge for reading comprehension. That might be a factor raising the reading scores of TOEFL iBT significantly.

Indeed, the reading section of TOEFL iBT would require a higher level of reading comprehension, academic vocabulary, complex sentence structure, and various kinds of subjects. It indicates that it is not easy for students to raise scores on TOEFL iBT within 10 months. In the interviews, the students seemed to find it difficult to overcome the vocabulary and structural challenges of the text. In the reflective comments, most students noticed the importance of linguistic knowledge in reading by monitoring their reading process. Thus, linguistic knowledge is an important factor in reading comprehension. It might be said that this was supported by previous research (Akbari, 2014; Grabe, 2009; Hamid et al., 2020; Jeon & Yamashita, 2014; Kremmel et al., 2017; Zhang, 2012).

However, the study in this research does not discuss only the importance of linguistic knowledge. The results also showed that it is important to coordinate the metacognitive processes in self-regulated learning to strengthen linguistic knowledge. Learners should bolster their academic reading skills or linguistic knowledge that is necessary for reading comprehension while working on metacognitive processes. It is indispensable to increase the amount of linguistic knowledge through both in- and out-of-class learning while working on metacognitive processes that monitor and control learning. It is important that learners plan, self-monitor, or self-evaluate their learning process, and engage English learning to increase linguistic knowledge. Moreover, it is important to regulate their metacognitive processes when reading a text. In other words, they should coordinate their metacognitive process such as setting a reading purpose, working on problem-solving, and reflecting on their reading process or reading materials to deepen reading comprehension when reading a text.

Although the previous reviews reported that metacognition had a weak correlation in L2 reading (Jeon & Yamashita, 2014; Kimura, 1999; Mori, 2020), this study resulted in highlighting the importance of metacognition in L2 reading through quantitative and qualitative data. The result demonstrated that both metacognitive monitoring and control might be critical in L2 reading. The study expanded the perspective of metacognition and investigated the metacognitive processes in self-regulated learning that regulates students'

learning process. Regarding the qualitative data, the interviews explained how the students acquired their reading strategies throughout the class, and then increased the amount of vocabulary or developed academic reading skills while working on metacognition. As Schraw and Dennison (1994) stated above, metacognition includes the ability to reflect on, understand, and control one's learning. Thus, retrospective data such as interviews or reflective comments should be collected to investigate metacognition via mixed methods.

From research question 4, learners' motivation has a great impact on self-study and achieving their own goals. The interviews indicate that the students who got lower scores on the pre-test tended to feel anxiety because they had to raise their scores within 10 months of studying abroad. Therefore, their motivation to improve in English would be high. The facilitative anxiety made the students motivated to enhance their learning. On the other hand, it could be more challenging for the students who got higher scores at the pre-test stage to raise or keep the scores. It is necessary to have facilitative motivation to control learning. Hence, their motivation would be an important element to control learning for the development of reading skills.

Responding to Study 3: Research Question 5

As a whole trend, there was a remarkable difference in the use of metacognitive reading strategies at all three stages before and after study abroad. This suggests that studying abroad contributed to enhancing the use of metacognitive reading strategies. Regarding the two English reading groups by Cluster Analysis, the result revealed that the high-score group used the strategies at all three stages more frequently than the lower-score group. This obtained the similar result to research question 1, which was suggested by previous studies.

However, the use of metacognitive reading strategies in the reading stage was different between the higher-level and lower-level groups before and after study abroad. Before study abroad, there was a difference in the post-reading stage between the two groups; however, after study abroad, there was a difference in the during-reading stage between them. The

result of Study 1 (before study abroad) indicates that the post-reading stage encourages the students to deepen their reading comprehension. On the other hand, Study 3 (after study abroad) indicates that the during-reading stage helps them grasp the whole meaning of a text. This difference indicates that the purpose of reading was different and the students with high English reading ability might acquire selective attention strategy at the during-reading stage.

As discussed above, in reading class before study abroad, the students were required to improve their TOEFL reading scores and received reading strategy instruction for academic texts. They engaged in improving their English reading ability by reflecting on the reading process or the content of a text. In other words, metacognitive reading strategies were used in the post-reading stage as a habit. Therefore, there was a trend to utilize strategies in the post-reading stage. Furthermore, it is assumed that the students with high English reading ability were in a situation where they were able to understand the content of the text better because they were equipped with linguistic knowledge. Therefore, higher-level students might tend to use the post-reading strategies more frequently.

On the other hand, the class during study abroad was an integrated learning style of reading, writing, speaking, and listening. The students were required to deepen their reading comprehension through discussions, essays, or lectures by making use of speaking, writing, and listening in class. Therefore, it was necessary for the students to understand the gist of the whole meaning of a text as homework before they took the class. Accordingly, the students with higher English reading ability realized the importance of reading strategies at the during-reading stage, and thus it is considered that they acquired the selective attention strategy in the during-reading stage, which is necessary for understanding the meaning of a text. Zhang and Seepho (2013) reported that learners with high English proficiency used more strategies in the during-reading stage than lower-level learners. In addition, low-level learners tended to avoid setting goals in the pre-reading stage, which indicates that high-level learners might have the ability to set a goal for reading. Researchers assume that selective attention would be used at the pre-reading stage and the during-reading stage (Prichard & Atkins, 2019;

Smallwood et al., 2007). Therefore, it might be stated that the students with high English reading ability set a goal for reading and selected the strategies at the pre-reading stage, and then focused on important information while reading a text at the during-reading stage.

Why can the students acquire selective attention strategies and utilize metacognitive reading strategies? The factors might be considered that the students received reading strategy instruction before study abroad and integrated classes during study abroad. It might be stated that the students experienced a lot of academic texts before and during study abroad, which led to using the strategies automatically and utilizing effective strategies such as selective attention. I consider selective attention to be a higher-level metacognitive strategy. Selecting important information is necessary for reading ability in the native language when a reader tries to understand the meaning of a text in a foreign language. In addition, I consider that metacognition might be necessary to select the major information in a text.

Regarding the reasons why students self-evaluated that their reading skills were more difficult to improve than their listening skills, I think this is related to the difference in the characteristics of listening skills, which are dialogs with others through sounds, and reading skills, which are dialogs between oneself and the text through letters. Listening and speaking are dialogs with others, and can be said to be direct because students can instantly tell whether they have understood or not. On the other hand, as Grabe (2009) stated, reading is an interaction between a reader and a writer. Therefore, reading would be an indirect process that interacts with oneself and it might be difficult to realize the improvement.

Responding to Study 3: Research Questions 6 and 7

The results showed that the motivation gained from studying abroad affects the motivation to learn English after study abroad. This supports the previous research (Kusaba & Yoshida, 2020) that the study abroad experience promote motivation for reading, such as reading books, newspapers, and magazines after studying abroad. Students T and U continued to enjoy learning after study abroad because of the motivation gained during study abroad.

The common factor between the two students was that they became able to understand English and had a goal such as keeping the skills or proficiency. This illustrates that students' intrinsic motivation is strengthened by realizing improvement in their English proficiency and having a goal, which operates the metacognitive processes in self-regulated learning.

Indeed, studying abroad has the effect of increasing intrinsic motivation and promoting metacognition. All students enjoyed learning with intrinsic motivation during study abroad. However, not all students have the intrinsic motivation to continue to learn English even after studying abroad. The environment in English would indeed be an important factor. It is, however, considered that the students who do not keep the motivation gained from studying abroad, might not have a clear goal for learning English after study abroad. Iida (2013, 2016) suggests that goals and motivations for learning English change during the four years of university. In the interview, Student S had a clear goal and changed the learning process for each goal before, during, and after study abroad. The student increased the vocabulary for TOEFL iBT test before study abroad. During study abroad, Student S focused on speaking skills to experience things that can only be done by studying abroad such as making local friends, and after study abroad, the student used TOEIC textbooks for job hunting. Imai and Wakamoto (2021) stated that it is important to have a clear goal for learning English. From the results above, although intrinsic motivation might be effective for learning, I think that setting goals might affect learners' future learning.

Nishimura et al. (2011) suggest that identified regulation is more important than intrinsic motivation in learning. In other words, I consider that the motivation that is important for learners themselves or in which they can find value might contribute to autonomous learning compared to intrinsic motivation that enjoys the learning process itself. It is necessary to think about why one learns English when learning. Identified regulation could be involved in setting goals. In summary, it is true that intrinsic motivation is effective for learners, but setting goals for learning might be a more essential element to continuing learning with identified regulation.

The change in the learning process might be involved in setting goals. From the results of Study 3, all students had high intrinsic motivation and actively behaved in their daily lives, promoted metacognition, and engaged in learning English during study abroad for out-of-class learning. On the other hand, from research question 3 in Study 2, only the students who had high motivation engaged in English learning using a vocabulary book and a TOEFL textbook to raise their TOEFL scores for out-of-class learning. The change in the learning process occurred because the goals for learning were different. Ito (2013) suggests that motivation leads to learning. I believe that motivation and goals are involved in the learning process. Before studying abroad, the aim was to acquire the English skills necessary for studying abroad and the students used the materials such as TOEFL textbooks or vocabulary books for out-of-class learning. Whereas, during their study abroad, the aim was to improve English in daily life. It was in an environment where the students could learn English in real daily life. The students spoke English with people, read English signboards or messages in their life, and listened to English news on TV. In short, the materials during study abroad were in daily life. Therefore, it is considered that the difference in goals for learning made the changes in their learning process.

English Reading Ability Before and After Study Abroad

Studying abroad helps enhance the English reading ability of university students. The result from research question 5 showed that there was a statistically significant difference in the reading scores of TOEIC before and after study abroad. It proved that studying abroad has a great impact on English reading ability, which previous research (Harada, 2013; Hidai et al., 2021; Hirai, 2018; Iida, 2013; Kusaba & Yoshida, 2020) suggests.

Regarding the increase in TOEIC scores, the result of research question 6 showed that the students found interesting materials by themselves and actively engaged in self-learning in their daily lives while studying abroad. This indicates that learning English in daily life while studying abroad might contribute to improving TOEIC scores, a test that measures

practical communication skills in daily life and global business.

I discuss what factors are related to English reading ability from the comparison before study abroad and during study abroad. With respect to the factors before study abroad, English reading ability did not improve only during study abroad, and the English reading ability before study abroad also affects learning after study abroad (Iida, 2013; Iida & Herder, 2019). I consider that the present research got the same results as previous studies. In short, one might not conclude that only the factor of studying abroad contributed to the improvement of the English reading ability of the students.

It can be stated that English reading ability is related to two factors: reading strategy instruction such as reflection or reading strategy and metacognitive processes to engage in self-study for English learning before study abroad. First, I discuss the effect of reading strategy instruction. In the interviews, some students answered that English learning before going abroad contributed to improving their English reading ability. Student AF said, “I did study reading before studying abroad a lot more than after studying abroad,” Student AG: “I do not think that studying abroad improved my reading ability especially.” The contents of the interviews suggest that reading classes before studying abroad contributed to students’ English reading ability. For instance, in a reading class, the instructor gave the time to reflect on the contents of reading topics for a few minutes at the end of each class instead of just not reading a text or answering the questions. The students discussed topics with partners and reflected on the contents of reading materials, which deepened their understanding of the reading topics. It is considered that this facilitated self-monitoring, enabling the students to develop their reading skills and deepen their understanding of the reading topics. Thus, reading strategy instruction of reflection in-class learning might be one of the factors to improve English reading ability. Moreover, the findings of research question 3 showed that the students received reading strategy instruction on academic reading in the reading class before study abroad and then, they learned effective reading strategies. Hence, it can be considered that the students’ reading ability have been built up since before studying abroad.

Second, from the result of research question 4, the students who did self-study to increase linguistic knowledge for reading comprehension significantly improved their TOEFL reading scores. This suggests that even if students in Japan do not go abroad, it might be stated that their English reading ability may improve through reading strategy instruction and metacognitive processes that are necessary to strengthen linguistic knowledge. From the results above, although studying abroad might improve English reading ability, it is an important factor that the factor behind this increase in scores might be also related to English reading ability before study abroad.

I suggest what factors of studying abroad are related to contribute to enhancing English reading ability. The following four factors are important to reading progress: the reading process, integrated in-class learning, the environment surrounded by English, and motivation.

First, the students' reading process changed to a higher level after study abroad. In the Fall term after study abroad, the result implies that the students' reading strategies had been automatized, and that they could read a text for a specific reading purpose. Because of the number of academic reading experiences, they cultivated the ability to utilize selective attention strategies, such as having a reading purpose and selecting important information, or metacognitive reading in which one reads a text asking oneself questions. The results indicate that such changes in the students' reading process have been built up before, during, and after study abroad.

Second, regarding the flow of class during study abroad, multiple skills were integrated into a class. In addition to reading a text or material, the students listened to the lecture, wrote an essay or a report, or discussed it. In short, the students had integrated skills in a class. This means that metacognitive reading strategies in the post-reading stage such as reflection on the reading materials were activated through the integrated skills. Previous studies suggested that post-reading strategies are important for deepening reading (Blanchowiz & Ogle, 2003). During study abroad, the students were given some assignments to comprehend the contents of the reading materials before a class, and during the class, they engaged in activities to

deepen their reading comprehension using speaking, writing, and listening skills, which promoted metacognition. Before studying abroad, the reflective activities, in which students wrote the comments freely or discussed with partners were conducted to deepen the understanding of a text, but were mainly in Japanese. Whereas, during study abroad, the students had the opportunity to use productive skills such as discussion or essays in English, which represented higher-level processing than before study abroad. Hence, continuing activities to read and deepen the contents of a text since before they studied abroad might be considered to have contributed to the improvement of English reading ability.

Third, the physical and social environment of studying abroad is considered to be one of the factors that promoted the independence of students and contributed to the improvement of English reading ability. Ito (2021) points out that university students are in an environment that facilitates self-regulated learning in terms of the physical and social environment.

Student AH: “While studying abroad, everything was in English. Thanks to studying abroad, I feel that my weakness in reading long passages in English has faded, and my reading ability has improved,” Student AI: “I was surrounded by English during study abroad, so I became good at English,” and Student AJ: “Since I was exposed to English every day while studying abroad, now, if it is a short passage in English, it is no longer painful to read it.” These interviews also suggest that the environment was surrounded by English and that the students' daily lives were full of situations, where they used English. This result indicates that the physical and social environment of studying abroad in English-speaking countries, where English is inevitably used in daily life, might be a significant factor in improving the students' English reading ability.

However, even if it was in an environment surrounded by English, it does not mean that English reading ability will improve automatically. From the results of research question 4, students who worked with high motivation to increase linguistic knowledge before study abroad through out-of-class learning showed a remarkable increase in their TOEFL scores afterward. That is, not only the environment but also motivation seems to be a factor in

facilitating English reading ability because motivation leads to behaving actively.

Fourth, it is considered that the students' motivation changed from extrinsic motivation before study abroad to intrinsic motivation during study abroad in an English environment. The result of research question 6 showed that all the students in Study 3 ($N = 34$) activated metacognition and engaged in English learning through out-of-class learning. It is true that the environment might be greatly related to the opportunity to use speaking skills, in which one learns English easily. However, in addition to the environment, it suggests that they thought for themselves, and then acted in order to gain a lot of experiences while studying abroad because the students had strong motivation to study abroad even before studying abroad. In the interviews, Student AK: "I wanted to gain some results in my study abroad, so I actively talked to my host mother," Student AL: "Only English was a communication language, and it was important for me to go first, so I talked with my host brother actively without staying in my room," Student AM: "Even if I was with friends, I ordered first, and when I was in trouble, I told that. I asked about anything that I thought was different, or that I did not understand," and Student AN: "One of my goals in studying abroad was to improve my English. I always joined the community after school because I believed that interaction with local people led to practicing my English skills." This implies that strong motivation to improve their English reading ability through studying abroad enabled the students to act actively and work hard for out-of-class learning. However, as discussed above, not only motivation but also goals for learning could be an important factor to continue learning in the future. Accordingly, it would be indispensable to regulate the metacognitive processes.

In summary, before and after study abroad the students acquired higher-level metacognitive reading strategies after learning in class, which improved their English reading ability. The metacognitive processes in self-regulated learning could be important to increase linguistic knowledge and acquire effective metacognitive reading strategies for reading comprehension. In addition, it might be necessary to set a goal with high motivation for continuous autonomous learning.

Chapter 6: Conclusion

Conclusion

This longitudinal research investigated the changes in the metacognitive reading strategies and learning process of Japanese female university students who experienced the study abroad via mixed methods. This revealed that studying abroad might promote metacognition and could have a great influence on the students' English proficiency, motivation, behavior, and metacognitive processes. The findings are as follows.

Study 1

Research Question 1. Metacognitive reading strategies are related to English reading ability. Good readers tend to utilize the reading strategies, especially at the post-reading stage.

Research Question 2. Higher-level readers tend to reflect on not only their reading process but also the contents of reading topics. It indicates that reading strategy instruction might encourage metacognition and deepen their reading comprehension.

Study 2

Research Question 3. Japanese university students tend to reflect on the importance of linguistic knowledge. They could acquire effective reading strategies and utilize them after learning in class. It indicates that reading strategy instruction helps them improve their skills.

Research Question 4. The study showed that self-regulated learners who controlled learning and engaged in increasing linguistic knowledge improved their English reading ability significantly. The metacognitive processes include planning, organizing, self-monitoring, and self-evaluation, which suggests that the cyclical process of both metacognitive monitoring and control might improve English reading ability. Not only the changes in the reading process by reading strategy instruction but also the ability to control learning for out-of-class learning could be important in L2 reading.

Study 3

Research Question 5. Japanese university students tend to automatize their reading

strategies and acquire higher-level reading strategies through four years of university, which might contribute to improving their English reading ability.

Research Question 6. Studying abroad has positive effects of increasing intrinsic motivation and promoting metacognitive processes in self-regulated learning. They tend to engage in English learning using productive skills or interacting with others. This suggests that their metacognitive processes might work successfully during study abroad.

Research Question 7. Studying abroad might encourage students' metacognition and change their motivation types and behavior for learning English positively, which leads to encouraging their autonomy and problem-solving ability.

Pedagogical Implications

Study 1

It can be expected that readers with low English reading ability will be able to reflect on the reading materials of a text by receiving reading strategy instruction. Both linguistic knowledge and reading strategy instruction might be important factors in improving English reading ability.

Study 2

English reading ability involves multiple factors. It could be important to coordinate the metacognitive knowledge and the metacognitive regulation (monitoring and control) that utilize that knowledge. In addition, reading strategy instruction helps the students deepen their reading comprehension and acquire reading strategies.

Study 3

Studying abroad might contribute to improving English reading ability; however, it could be challenging to improve it only during study abroad because reading ability is related to multiple factors. The study abroad experience might affect the students' language awareness, motivation, behavior, and life afterward, which operates the metacognitive processes. Thus, studying abroad provides various benefits for Japanese university students.

However, it does not always have a positive impact on all aspects. This showed that the intrinsic motivation gained from studying abroad does not always continue after study abroad. Therefore, this indicates that not only having motivation, but also setting clear goals might be an important element to continue learning after study abroad.

Limitations of This Research

First, although all of the tests of Studies 1, 2, and 3 showed statistically significant differences in English reading ability, the different types of tests such as TOEFL iBT and TOEIC IP were used in each study. Second, compared to Studies 1 ($N = 84$) and 2 ($N = 75$), the sample size of Study 3 ($N = 34$) was small. It was an unavoidable situation in which there were students, who gave up studying abroad or took a leave of absence due to the influence of COVID-19. Third, in order to investigate learners' motivation and the value of learning more precisely, it is necessary to spend more time collecting precise data because their changes might be done automatically.

Suggestions for Further Study

The metacognitive processes that set one's goal and control oneself would play an important role in autonomous learning. Further study will be undertaken to suggest teaching methods for how learners promote metacognition and continue autonomous learning so that learners are willing to engage in English learning with motivation and clear goals because second language acquisition is deeply related to motivation.

Notes

1. Study 1 was based on the paper accepted by the LET Kansai Chapter Collected Papers, 2023.
2. Study 2 was based on the paper accepted by the JACET Kansai Journal, 2023.

References

- Ahmadi, M. R., Ismail, H. N., & Abdullah, M. K. K. (2013). The importance of metacognitive reading strategy awareness in reading comprehension. *English Language Teaching*, 6(10), 235–244. <http://dx.doi.org/10.5539/elt.v6n10p235>
- Akbari, Z. (2014). The role of grammar in second language reading comprehension: Iranian ESP context. *Procedia-Social and Behavioral Sciences*, 98, 122–126. <https://doi.org/10.1016/j.sbspro.2014.03.397>
- Akita, K. (2008). Bunsho no rikai ni okeru metaninchi [Metacognition in reading comprehension]. In M. Sannomiya (Ed.), *Metaninchi gakushuryokuwo sasaeru kouji ninchi kinou* [Metacognition Higher cognitive function to support learning ability (pp. 97–109)]. Kitaojishobo.
- Alderson, J. C., Brunfaut, T., & Harding, L. (2015). Towards a theory of diagnosis in second and foreign language assessment: Insight from professional practice across diverse fields. *Applied Linguistics*, 36 (2), 236–260. Doi:10.1093/applin/amt046
- Barnett, M. A. (1988). Reading through context: How real and perceived strategy use affects L2 comprehension. *The Modern Language Journal*, 72(2), 150–162. <https://doi.org/10.1111/j.1540-4781.1988.tb04177.x>
- Blachowicz, C., & Ogle, D. (2008). *Reading comprehension: Strategies for independent learners* (2nd ed.). Guilford Press.
- Brown, H. D. (2000). *Principles of language learning and teaching* (5th ed.). Longman.
- Carrell, P. L. (1989). Metacognitive awareness and second language reading. *The Modern Language Journal*, 73, 121–134. <https://doi.org/10.1111/j.1540-4781.1989.tb02534.x>
- Chamot, A. U. (2005). Language learning strategy instruction: Current issues and research. *Annual Review of Applied Linguistics*, 25, 112–130.
- Cohen, D. (1990). *Essential psychology*. Bloomsbury.
- Dancey, C., & Reidy, J. (2020). *Statistics without maths for psychology* (8th ed.). Pearson.

- Deci, E. L., & Ryan, R. M. (Eds.). (2002). *Handbook of self-determination research*. University of Rochester Press.
- Dörnyei, Z. (1994). Motivation and motivating in the foreign language classroom. *The Modern Language Journal*, 78(3), 273–284. <http://www.jstor.org/stable/330107>
- Doshisha Women's College of Liberal Arts. Retrieved August 1, 2023, from https://www.dwc.doshisha.ac.jp/english/faculty_dep_info/liberalarts/international
- Educational Testing Service. (2021). TOEFL iBT® Reading Practice Questions. <https://www.ets.org/content/dam/ets-org/pdfs/toefl/toefl-ibt-reading-practice-sets.pdf>
- Flavell, J. H. (1971). First discussant's comments: What is memory development the development of? *Human Development*, 14(4), 272–278. <https://doi.org/10.1159/000271221>
- Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. *American Psychologist*, 34(10), 906–911. <https://doi.org/10.1037/0003-066X.34.10.906>
- Flavell, J. H. (1987). Speculations about the Nature and Development of Metacognition. In F. Weinert, & R. Kluwe (Eds.), *Metacognition, Motivation and Understanding* (pp. 21–29). Erlbaum.
- Furuya, N. (2005). Tanki ryugaku ha koukateki de aruka? [Evaluating a short-term study abroad program]. *Journal of Bunka Women's University*, 13, 19–30.
- Gardner, R. C., & Lambert, W. (1972). *Attitude and motivation in second language learning*. Newbury House.
- Grabe, W. (2009). *Reading in a second language: Moving from theory to practice*. Cambridge University Press.
- Grabe, W., & Stoller, F. (2013). *Teaching and researching reading* (2nd ed.). Routledge.
- Hamid, R., Manda, M., Yassi, A., & Jubhari, R. (2020). Dominant influence of linguistic knowledge in EFL reading comprehension: Schemata analysis. *Universal Journal of*

Educational Research, 8(12), 6715–6721.

https://www.hrpub.org/journals/article_info.php?aid=10172

Harada, T. (2013). *Ryugakusei no doki to homestay* [Homestays and the motivation of international students]. Fukuroshuppan.

Hatton, N., & Smith, D. (1995). Reflection in teacher education: Towards definition and implementation. *Teaching and Teacher Education*, 11(1), 33–49.

[https://doi.org/10.1016/0742-051X\(94\)00012-U](https://doi.org/10.1016/0742-051X(94)00012-U)

Hayashi, H. (2011). *Dokiduke shiten de miru nihonjin no eigo gakushusha: Naihatsuteki gaihatsuteki dokiduke wo jikuni* [Japanese English learners through motivational perspective: With intrinsic and extrinsic motivation at the core]. Kinseido.

Hidai, S., Matsumoto, H., & Asaka, K. (2021). Goisaizu to IELTS score tono kankeisei nitsuite [On the relation between vocabulary size and IELTS scores: Focusing on the scores before and after studying abroad]. *Bulletin of the Faculty of Letters, Tamagawa University*, 62, 13–25.

Hirai, A. (2018). The effect of study abroad duration and predeparture proficiency on the L2 proficiency of Japanese university students: A meta-analysis approach. *JLTA Journal*, 21, 102–123. DOI: 10.20622/jltajournal.21.0_102

Iida, T. (2013). Ryugaku to daigakusei no eigoryoku: Kaigai ESL tono yoriyoi kankei wo motomete [Study abroad and English proficiency of university students: A consideration about the better relationship with ESL]. *JACET Kansai Journal*, 15, 106–124.

Iida, T. (2016). A study of university students who studied abroad for a year: The development of L2 proficiency and career selection. *Bulletin of the Institute for Interdisciplinary Studies of Culture, Doshisha Women's College of Liberal Arts*, 33, 15–35.

- Iida, T., & Herder, S. (2019). Second language development before, during, and after study abroad: A longitudinal study at a Japanese Women's University. *JACET Bulletin*, 63, 27–45.
- Ikeda, M., & Takeuchi, O. (2003). Can strategy instruction help EFL learners to improve reading ability? : An empirical study. *JACET Bulletin*, 37, 49–60.
<https://cir.nii.ac.jp/crid/1050282677887930752>
- Imai, Y., & Wakamoto, N. (2021). Daigakuichinenjisei no eigogakushuhoryaku ni okeru zentaitekikeikou [Overall trends in English learning strategies of first-year college students]. *Bulletin of the Institute for Interdisciplinary Studies of Culture, Doshisha Women's College of Liberal Arts*, 38, 19–23.
- Ito, T. (2013). Jikochousei no junkantekisaikuru to metaninchi [Cyclical process of self-regulated learning and metacognition]. In M. Seo (Chair), Jikochouseigakushu to metaninchi [Self-regulated learning and metacognition]. *Japanese Association of Educational Psychology*, 55, 142– 143.
https://www.jstage.jst.go.jp/article/pamjaep/55/0/55_S142/_pdf
- Ito, T. (2021). Daigakuseinihitsuyona jikochouseigakushu sukirunoikusei [Improvement of self-regulated learning skills necessary for university students]. In M. Nakatani., R. Okada., & M. Inuduka (Ed.), *Kodomo to otona no shutaiteki jiritsutekinamanabi wo sasaerujissen: Kyoshi shidosha notameno jikochouseigakushu* [Practice that supports actively autonomous learning: Self-regulated learning for teachers instructors (pp. 132–149)]. Fukumurashuppan.
- Jeon, E. H., & Yamashita, J. (2014). L2 reading comprehension and its correlates: A meta-analysis. *Language Learning*, 64(1), 160–212.
https://www.researchgate.net/publication/263679141_L2_Reading_Comprehension_and_Its_Correlates_A_Meta-Analysis

- Karbalaei, A. (2010). A comparison of the metacognitive reading strategies used by EFL and ESL readers. *The Reading Matrix*, 10(2), 165–180.
https://readingmatrix.com/articles/sept_2010/alireza_karbalaei.pdf
- Kimura, Y. (1999). Metacognitive awareness training and reading comprehension of Japanese EFL learners. *JACET Bulletin*, 30, 45–58.
<https://cir.nii.ac.jp/crid/1520853834872379392>
- Koda, K. (2005). *Insights into second language reading: A cross-linguistic approach*. Cambridge University Press.
- Kremmel, B., Brunfaut, T., & Alderson, J. C. (2017). Exploring the role of phraseological knowledge in foreign language reading. *Applied Linguistics*, 38(6), 848–870.
- Kusaba, K., & Yoshida, H. (2020). The influence of overseas experience on Japanese university students' motivation for learning a second language. *The Journal of Nagasaki University of Foreign Studies*, 24, 16–30. <http://id.nii.ac.jp/1165-00000769/>
- Linda, K., Regina, & Sutapa, Y. G. (2015). Improving EFL students' reading comprehension and students' perception on metacognitive reading strategies. *Jurnal Pendidikan dan Pembelajaran*, 4(10), 1–14. <http://dx.doi.org/10.26418/jppk.v4i10.11707>
- Maguire, M., Reynolds, A. E., & Delahunt, B. (2020). Reading to be: The role of academic reading in emergent academic and professional student identities. *Journal of University Teaching & Learning Practice*, 17(2), 1–12. <https://ro.uow.edu.au/jutlp/vol17/iss2/5>
- Mc, S., Mikulecky, L., Dreher, M. J., & Dole, J. A. (2000). What will be the demands of literacy in the workplace in the next millennium? *Reading Research Quarterly*, 35(3), 378–383. DOI:10.1598/RRQ.35.3.3
- Ministry of Education, Culture, Sports, Science and Technology (MEXT). *Ryugaku no merito* [Benefits About Studying Abroad]. Retrieved August 1, 2023, from <https://tobitate.mext.go.jp/about/merit/>
- Mokhtari, K., & Reichard, C. (2002). Assessing students' metacognitive awareness of reading strategies. *Journal of Educational Psychology*, 94(2), 249–259.

<https://psycnet.apa.org/doi/10.1037/0022-0663.94.2.249>

- Mokhtari, K., & Reichard, C. (2004). Investigating the strategies reading processes of first and second language readers in two different cultural contexts. *System*, 32(3), 379–394. <https://doi.org/10.1016/j.system.2004.04.005>
- Mori, A. (2020). The relationship between the effect of instruction for reading strategies using self-reflection and EFL reading proficiency. *CELES Journal*, 49, 103–110. https://doi.org/10.20713/celes.49.0_103
- Morishima, Y. (2013). The role of long-term working memory in second language comprehension. *Educational Studies, International Christian University*, 55, 71–78. <https://cir.nii.ac.jp/crid/1390572174841876736>
- Nakatani, M., Okada, R., & Inuduka, M. (Eds.). (2021). *Kodomo to otona no shutaiteki jiritsutekinamanabi wo sasaerujissen: Kyoshi shidosha notameno jikochouseigakushu* [Practice that supports actively autonomous learning: Self-regulated learning for teachers instructors]. Fukumurashuppan.
- Nishimura, T., Kawamura, S., & Sakurai, S. (2011). Autonomous motivation and metacognitive strategies as predictors of academic performance: Does intrinsic motivation predict academic performance? *Japanese Journal of Educational Psychology*, 59(1), 77–87. <https://doi.org/10.5926/jjep.59.77>
- Nordin, N., Rashid, S., Zubir, S., & Sadjirin, R. (2013). Differences in reading strategies: How esl learners really read. *Procedia- Social and Behavioral Sciences*, 90, 468–477. <https://doi.org/10.1016/j.sbspro.2013.07.116>
- Okada, R. (2022). Nihon niokeru jikochouseigakushu to sonokanrenryoiki niokeru kenkyunodokou to tembou: Gakkokyoiku nikansuru kenkyu wo chushinni [Trends and future perspectives of studies on self-regulated learning and related research areas in Japan: A review of studies on school education]. *The Annual Report of Educational Psychology in Japan*, 61, 151–171. https://www.jstage.jst.go.jp/article/arepj/61/0/61_151/_pdf

- O'Malley, J. M., & Chamot, A. U. (1990). *Learning strategies in second language acquisition*. Cambridge University Press.
- Prichard, C., & Atkins, A. (2019). Selective attention of L2 learners in task-based reading online. *Reading in a Foreign Language*, 31(2), 269–290.
<https://nflrc.hawaii.edu/rfl/item/428>
- Readability Formulas. (2022). Readability Scores: CEFR.
<https://readabilityformulas.com/free-readability-formula-tests.php>
- Saito, T., & Iida, T. (2015). Speaking anxiety and the effects of previous overseas experience in an English intensive program before study abroad. *Papers in Language, Literature, and Culture: Graduate School of Literary Studies, Doshisha Women's College of Liberal Arts*, 15, 1–24.
- Sannomiya, M. (Ed.). (2008). *Metaninchi gakushuryokuwo sasaeru kouji ninchi kinou* [Metacognition: Higher cognitive function to support learning ability]. Kitaojishobo.
- Sannomiya, M. (2021). *Metaninchi de manabuchikara wo takameru: Ninchishinrigakuga tokiakasu koukatekigakushuhou* [Enhancing the ability of learning by metacognition: An effective learning strategy that cognitive psychology solved out]. Kitaojishobo.
- Saricoban, A. (2002). Reading strategies of successful readers through the three phase approach. *The Reading Matrix*, 2(3), 1–16.
<http://www.readingmatrix.com/articles/saricoban/article.pdf>
- Sato, R. (2021). Daigakuseinihitsuyona jikochouseigakushu sukirunoikusei [Improvement of self-regulated learning skills necessary for university students]. In M. Nakatani., R. Okada., & M. Inuduka (Ed.), *Dainigengo no jikochouseigakushu* [Self-regulated learning for second language acquisition (pp. 150–168)]. Fukumurashuppan.
- Schraw, G., & Dennison, R. S. (1994). Assessing metacognitive awareness. *Contemporary Educational Psychology*, 19(4), 460–475. <http://doi.org/10.1006/ceps.1994.1033>
- Schunk, D. H., & Usher, E. L. (2013). Barry J. Zimmerman's theory of self-regulated learning. In H. Bembenutty, T. J. Cleary, & A. Kitsantas (Eds.), *Applications of self-*

regulated learning across diverse disciplines: A tribute to Barry J. Zimmerman.

Information Age Publishing.

- Smallwood, J., Fishman, D. J., & Schooler, J. W. (2007). Counting the cost of an absent mind: Mind wandering as an underrecognized influence on educational performance. *Psychonomic Bulletin & Review*, 14, 230–236.
<https://link.springer.com/article/10.3758/BF03194057>
- Sugiyama, E., & Suga, S. (2010). Gakushukatsudo niokeru naihatsutekidokiduke to jikoninchi tono kankeinitsuite [On the relationship between intrinsic motivation and self cognition in learning activities]. *Faculty of Education, Wakayama University bulletin of Center for Educational Research and Training*, 20, 57–64.
- Thongwichit, N. (2018). Metacognitive reading strategies with southern Thai university students. *Suranaree J. Soc. Sci*, 12(1), 1–16.
- Tseng, W. T., Dörnyei, Z., & Schmitt, N. (2006). A new approach to assessing strategic learning: The case of self-regulation in vocabulary acquisition. *Applied Linguistics*, 27(1), 78–102. <https://doi.org/10.1093/applin/ami046>
- Ueno, Y. (2020). *The relationship between metacognition and English reading ability*. [Unpublished master's thesis]. Doshisha Women's College of Liberal Arts.
- Ueno, Y. (2021). Investigating metacognitive awareness in L2 reading among Japanese female university students. *Papers in Language, Literature, and Culture: Graduate School of Literary Studies, Doshisha Women's College of Liberal Arts*, 21, 23–46.
- Ueno, Y. (2023a). A longitudinal study on L2 reading among Japanese university students: The effects on metacognitive process in self-regulated learning. *JACET Kansai Journal*, 25, 41–60.
- Ueno, Y. (2023b). Gakujutsutekina eigonodokkainiokeru joshidaigakuseino metaninchidokkaihoryaku to eigodokkairiyokuno kankei [Investigating Metacognitive Reading Strategies in Academic Reading Among Japanese Female University Students]. *LET Kansai Chapter Collected Papers*, 21, 59–74.

- Welesilassie, M. W., & Nikolov, M. (2022). Relationships between motivation and anxiety in adult EFL learners at an Ethiopian university. *Ampersand*, 9, 1–10.
<https://doi.org/10.1016/j.amper.2022.100089>
- Yamashita, J., & Yokoyama, Y. (2004). Dainigengogakushusha ga mochiiru reading strategy no hattatsu ni tsuitemo kosatsu [Consideration of improvement of reading strategies for ESL learners]. *Heles Journal*, 4, 65–82.
<https://iss.ndl.go.jp/books/R0000000004-I7199091-00>
- Zhang, D. (2012). Vocabulary and grammar knowledge in second language reading comprehension: A structural equation modeling study. *The Modern Language Journal*, 96 (4), 558–575. <https://doi.org/10.1111/j.1540-4781.2012.01398.x>
- Zhang, L., & Seepho, S. (2013). Metacognitive strategy use and academic reading achievement: Insights from a Chinese context. *Electronic Journal of Foreign Language Teaching*, 10(1), 54–69.
<https://e-flt.nus.edu.sg/wp-content/uploads/2020/09/v10n12013/zhang.pdf>
- Zhang, L. J., & Wu, A. (2009). Chinese senior high school EFL students' metacognitive awareness and reading-strategy use. *Reading in a Foreign Language*, 21(1), 37–59.
<https://files.eric.ed.gov/fulltext/EJ838388.pdf>
- Zimmerman, B. J. (1986). Becoming a self-regulated learner: Which are the key subprocesses? *Contemporary Educational Psychology*, 11(4), 307–313.
[https://doi.org/10.1016/0361-476X\(86\)90027-5](https://doi.org/10.1016/0361-476X(86)90027-5)
- Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist*, 25(1), 3–17.
https://www.researchgate.net/publication/243775466_SelfRegulated_Learning_and_Academic_Achievement_An_Overview

Appendices

Appendix A: Questionnaire About Metacognitive Reading Strategies

This is an English translation version. The questionnaire in the study was conducted in Japanese.

Pre-reading

disagree ← → agree

1. Specifying a purpose for reading	1	2	3	4	5
2. Previewing the text	1	2	3	4	5
3. Predicting the content of the text from the title, caption, or prior knowledge	1	2	3	4	5

During-reading

4. Connecting text to background knowledge	1	2	3	4	5
5. Summarizing information in my own words	1	2	3	4	5
6. Making inferences from context	1	2	3	4	5
7. Paying attention to sentence structure	1	2	3	4	5
8. Guessing the meaning of unknown words from context	1	2	3	4	5
9. Paying attention to discourse markers to see relationships	1	2	3	4	5
10. Paying attention to keywords to grasp the whole meaning of a text	1	2	3	4	5
11. Reading by paragraph	1	2	3	4	5
12. Translating each sentence into Japanese	1	2	3	4	5
13. Paying attention to the same meaning but different words	1	2	3	4	5
14. Paying attention to the pronouns	1	2	3	4	5
15. Paying attention to the difference between major and minor information	1	2	3	4	5
16. Paying attention to the types of each verb	1	2	3	4	5
17. Reading ahead rather than reading back	1	2	3	4	5
18. Reading aloud to help comprehension easier	1	2	3	4	5
19. Predicting the writer's intentions	1	2	3	4	5
20. Reading a text in English without translating into Japanese	1	2	3	4	5

Post-reading

21. Checking comprehension	1	2	3	4	5
22. Critiquing the author	1	2	3	4	5
23. Thinking about my interpretation of the whole meaning of a text deeply	1	2	3	4	5
24. Identifying difficulties	1	2	3	4	5
25. Taking steps to repair faulty comprehension	1	2	3	4	5
26. Judging how well purposes for reading were met	1	2	3	4	5
27. Reflecting on what has been learned from the text	1	2	3	4	5

Appendix B: Questionnaire Before Study Abroad (Fall Term in 2020)

博士論文データ収集への協力のお願いと同意書

私はメタ認知と英語読解力について研究しています。学術的な英語の文章の読解におけるメタ認知プロセスの変化を、2020年度から2021年度の2年間に渡り継続的に調査をしたいと思っています。具体的には授業観察、質問紙調査、振り返りワークシート、インタビューから分析し、2年間のデータを統合して英語読解力との関係を研究する予定です。

つきましては、授業の様子を観察させていただき、質問紙調査への協力、授業でのワークシート内容を研究材料として使用したいと希望しています。また、大学1年生から2年生の間で、英語の読解に関するインタビューを実施させていただきたいと考えています。

この調査を実施するに際して入手した個人情報は論文執筆以外には使用しないとともに厳重に管理することを誓います。何卒ご協力よろしくお願い申し上げます。

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データ収集についての同意書

どちらかに必ず☒してください。

☐ 上記に同意する

☐ 上記に同意しない

クラス

名前

学籍番号

英語の読解に関するメタ認知調査

あなたがこの授業(Intensive Reading)で読んでいるようなアカデミック（学術的、学問的）な英語の文章を読むとき、次の項目がそれぞれどの程度あてはまりますか？

春学期の自身の英語の文章を読んでいる様子を振り返り、率直にありのままお答えください。
大学の成績とは一切関係ありません。

下記の項目 1～27 は、読む前、読んでいる最中、読んだ後の 3 段階に分類されたリーディング
グストラテジー（読解方略）に関する文章です。最もあてはまる番号を 1～5 の中から選び、そ
の番号に○印をつけてください。

（回答例）

全くそう思わない	そう思わない	どちらでもない	そう思う	全くそう思う
1	2	3	4	5

読む前に・・・

思わない ← → 思う

1. 達成可能な目標を立てる。	1	2	3	4	5
2. 英語の文章全体を把握するために読み込む前にさっと目を通す。	1	2	3	4	5
3. タイトル、見出し、キーワードから背景知識（自分が知っていること）を活性化させ、英語の文章全体の内容を予測する。	1	2	3	4	5

読んでいる最中・・・

思わない ← → 思う

4. 英語の文章の話題(トピック)に関してテキスト（文章の内容）と背景知識（自分が知っていること）を関連づける。	1	2	3	4	5
5. 自分のことばで読んだ内容を要約する。	1	2	3	4	5
6. 前後の文脈をヒントにして内容を推理しながら読む。	1	2	3	4	5
7. 主語や動詞といった英語の文構造に注目する。	1	2	3	4	5
8. 知らない単語の意味を前後関係から推測する。	1	2	3	4	5
9. 文の構成や展開を理解するために、接続詞やつなぎことば（however, therefore など）に注目する。	1	2	3	4	5

10.英語の文章全体からキーワードに注目し、全体の意味をつかむ。	1	2	3	4	5
11.パラグラフ（段落）の構成（topic sentence, supporting sentence, concluding sentence）に注意し、パラグラフごとに読む。	1	2	3	4	5
12.単語の意味や文法を確認しながら一文ずつ日本語に訳している。	1	2	3	4	5
13.英語の文章の中での語の言い換えに注意している。	1	2	3	4	5
14.文中の代名詞が何を指しているのかを意識している。	1	2	3	4	5
15.重要な情報（major information）と、その具体例などのさほど重要でない情報(minor information)の違いに注目する。	1	2	3	4	5
16.文中の動詞の時制や種類（自動詞・他動詞など）に注目する。	1	2	3	4	5
17.英語の文章を読んでいる中でわからなくなってしまう時、前に戻って読み直すことよりも、先に読み進めることで疑問が解決できると期待しながら読む。	1	2	3	4	5
18.理解しやすいように英語の単語や文章を音読する。	1	2	3	4	5
19.文章全体の意味を理解するために筆者の意図を探りながら読む。	1	2	3	4	5
20.英語の文章を日本語に訳さずに英文のままで理解しようとする。	1	2	3	4	5

読んだ後・・・

思わない ← → 思う

21.英語の文章や内容をどのくらい理解できたかを確認する。	1	2	3	4	5
22.文章全体の内容について、筆者と異なる視点で考える。	1	2	3	4	5
23.文章全体の内容について、自分の解釈をさらに深く考察する。	1	2	3	4	5
24.難しかったところを確認する。	1	2	3	4	5
25.間違った解釈をしていた内容を修正するための手立てを講じる。	1	2	3	4	5
26.リーディングの目標が達成できたかどうかを自己評価する。	1	2	3	4	5
27.読んだ英語の文章やトピックから学んだことを振り返る。	1	2	3	4	5

ここからは自由記述です。ただし、3はあてはまる番号に○印をつけてください。

春学期の自身のリーディングしている様子を振り返り、自由に考えを記述してください。

1. 春学期に、この授業で読んだテキストを思い出して振り返ってください。あなたはどのような読み方をしていましたか？（例：一文ずつ丁寧に読んでいた、わかるまで何度も読み直していた、自分のことばで言い換えながら内容理解をしていた…など）

2. 英語読解力向上のために今後の課題はどんなことですか？（例：パラグラフを意識して読む、日本語で考えずに英語で理解していく、読むスピードをあげる…など）

3. 春学期のこの授業でのリーディング（自身の英語読解）について自己評価してください。
あてはまる番号に○印をつけてください。

- 1 （全く内容を理解できなかった）
- 2 （あまり内容を理解できなかった）
- 3 （少し内容を理解できなかった）
- 4 （少し内容を理解できた）
- 5 （だいたい内容を理解できた）
- 6 （十分内容を理解できた）

協力ありがとうございました。

Appendix C: Questionnaire Before Study Abroad (Fall Term in 2021)

博士論文データ収集への協力のお願いと同意書

私はメタ認知と英語読解力について研究しています。学術的な英語の文章の読解におけるメタ認知プロセスの変化を、2020年度から2021年度の2年間に渡り継続的に調査をしたいと思っています。具体的には授業観察、質問紙調査、振り返りワークシート、インタビューから分析し、2年間のデータを統合して英語読解力との関係を研究する予定です。

つきましては、授業の様子を観察させていただき、質問紙調査への協力、授業でのワークシート内容を研究材料として使用したいと希望しています。また、大学1年生から2年生の間で、英語の読解に関するインタビューを実施させていただきたいと考えています。

この調査を実施するに際して入手した個人情報は論文執筆以外には使用しないとともに厳重に管理することを誓います。何卒ご協力よろしくお願い申し上げます。

同志社女子大学大学院文学研究科 上野 裕子

E-mail: ib20101@dwc.doshisha.ac.jp

データ収集についての同意書

どちらかに必ず ☒ してください。

☐ 上記に同意する

☐ 上記に同意しない

クラス

名前

学籍番号

英語の読解に関するメタ認知調査

あなたがこの授業(Intensive Reading)で読んでいるようなアカデミック（学術的、学問的）な英語の文章を読むとき、次の項目がそれぞれどの程度あてはまりますか？

秋学期の自身の英語の文章を読んでいる様子を振り返り、率直にありのままお答えください。
大学の成績とは一切関係ありません。

下記の項目 1～27 は、読む前、読んでいる最中、読んだ後の 3 段階に分類されたリーディング
グストラテジー（読解方略）に関する文章です。最もあてはまる番号を 1～5 の中から選び、そ
の番号に○印をつけてください。

（回答例）

全くそう思わない	そう思わない	どちらでもない	そう思う	全くそう思う
1	2	3	4	5

読む前に・・・

思わない ← → 思う

1. 達成可能な目標を立てる。	1	2	3	4	5
2. 英語の文章全体を把握するために読み込む前にさっと目を通す。	1	2	3	4	5
3. タイトル、見出し、キーワードから背景知識（自分が知っていること）を活性化させ、英語の文章全体の内容を予測する。	1	2	3	4	5

読んでいる最中・・・

思わない ← → 思う

4. 英語の文章の話題(トピック)に関してテキスト（文章の内容）と背景知識（自分が知っていること）を関連づける。	1	2	3	4	5
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20.英語の文章を日本語に訳さずに英文のままで理解しようとする。	1	2	3	4	5

読んだ後・・・

思わない ← → 思う

21.英語の文章や内容をどのくらい理解できたかを確認する。	1	2	3	4	5
22.文章全体の内容について、筆者と異なる視点で考える。	1	2	3	4	5
23.文章全体の内容について、自分の解釈をさらに深く考察する。	1	2	3	4	5
24.難しかったところを確認する。	1	2	3	4	5
25.間違った解釈をしていた内容を修正するための手立てを講じる。	1	2	3	4	5
26.リーディングの目標が達成できたかどうかを自己評価する。	1	2	3	4	5
27.読んだ英語の文章やトピックから学んだことを振り返る。	1	2	3	4	5

ここからは自由記述です。ただし、4と5はあてはまる番号に○印をつけてください。

秋学期の自身のリーディングしている様子を振り返り、自由に考えを記述してください。

4. 秋学期この授業で読んだテキストを思い出して振り返ってください。春学期と比べて読み方（読解の仕方）は変わりましたか？変化したこととしていないことを書いてください。

春学期：

秋学期：

5. 秋学期この授業で最も努力したこと、頑張ったことは何ですか？

6. 秋学期に授業を通して読んだ教材を振り返ってください。

特に印象に残っているトピックに○印をつけてください（複数可）。

その中からひとつ選び、その教材を読んで感じたことやあなたの考えを述べてください。

(TOEFL iBT)

17 century European Economic Growth
Ancient Egyptian Sculpture
Begging by Nestlings
Reflection in teaching

(New York Times)

Women in waiting to shine

(スーパー英語)

Native Americans	American dream
Moral education	AIDS
The shipment of shoelaces	The Makah
The sacredness of religion	A Whale sanctuary
Egyptian temples, tombs, and places	A healthy mind and body
Women in America	Architecture
The September 11 th	Basketball association in Australia
Communication	Dreams
Australian government's attitude toward asylum seekers	

(選んだトピック： _____)

7. 毎授業後および秋学期の mid-term テスト後に振り返りの時間を設けましたが、読解に関する振り返り活動は、英語読解力向上に効果がありましたか？振り返ることで目標や課題が明確になったり、その達成の一助になりましたか？最もあてはまる番号をひとつ選び、○印をつけてください。またその理由を述べてください。

全くそう思わない	そう思わない	あまりそう思わない	どちらかといえばそう思う	そう思う	全くそう思う
1	2	3	4	5	6

(理由)

8. 秋学期のこの授業でのリーディング（自身の英語読解）について自己評価してください。最もあてはまる番号をひとつ選び、○印をつけてください。

- 1 (全く内容を理解できなかった)
- 2 (あまり内容を理解できなかった)
- 3 (少し内容を理解できなかった)
- 4 (少し内容を理解できた)
- 5 (だいたい内容を理解できた)
- 6 (十分内容を理解できた)

ご協力ありがとうございました。

Appendix D: Questionnaire After Study Abroad (Fall Term in 2022)

博士論文データ収集への協力のお願いと同意書

私は現在、留学前後を含めたメタ認知と英語読解力の関係を調査しています。みなさんに留学中および留学後の英語学習（reading と reading 以外）についてお伺いさせていただきたくアンケートの回答をお願いいたします。

調査後にアンケートの内容に関して、後日簡単なインタビューを実施させていただく場合がございます。

この調査を実施するに際して入手した個人情報論文執筆以外には使用しないとともに厳重に管理することを誓います。何卒ご協力よろしくお願い申し上げます。

同志社女子大学大学院文学研究科 上野 裕子

E-mail: ib20101@dwc.doshisha.ac.jp

データ収集についての同意書

どちらかに必ず ☒ してください。

☐ 上記に同意する

☐ 上記に同意しない

名前

学籍番号

メールアドレス

@dwc.doshisha.ac.jp

大学で授業がある日（インタビュー可能な曜日） 月 ・ 火 ・ 水 ・ 木 ・ 金

英語の読解に関するメタ認知調査

あなたが留学後の今、アカデミックな英語の文章（論文や専門的な研究内容について英語で書かれた文章）を読むとき、次の項目がそれぞれどの程度あてはまりますか？読解の様子を振り返り、率直にありのままお答えください。大学の成績とは一切関係ありません。

下記の項目 1～27 は、読む前、読んでいる最中、読んだ後の 3 段階に分類されたリーディングストラテジー（読解方略）に関する文章です。最もあてはまる番号を 1～5 の中から選び、その番号に○印をつけてください。

（回答例）

全くそう思わない	そう思わない	どちらでもない	そう思う	全くそう思う
1	2	3	4	5

読む前に・・・

思わない ← → 思う

1. 達成可能な目標を立てる。	1	2	3	4	5
2. 英語の文章全体を把握するために読み込む前にさっと目を通す。	1	2	3	4	5
3. タイトル、見出し、キーワードから背景知識（自分が知っていること）を活性化させ、英語の文章全体の内容を予測する。	1	2	3	4	5

読んでいる最中・・・

思わない ← → 思う

4. 英語の文章の話題(トピック)に関してテキスト（文章の内容）と背景知識（自分が知っていること）を関連づける。	1	2	3	4	5
5. 自分のことばで読んだ内容を要約する。	1	2	3	4	5
6. 前後の文脈をヒントにして内容を推理しながら読む。	1	2	3	4	5
7. 主語や動詞といった英語の文構造に注目する。	1	2	3	4	5
8. 知らない単語の意味を前後関係から推測する。	1	2	3	4	5
9. 文の構成や展開を理解するために、接続詞やつなぎことば（however, therefore など）に注目する。	1	2	3	4	5

10.英語の文章全体からキーワードに注目し、全体の意味をつかむ。	1	2	3	4	5
11.パラグラフ（段落）の構成（topic sentence, supporting sentence, concluding sentence）に注意し、パラグラフごとに読む。	1	2	3	4	5
12.単語の意味や文法を確認しながら一文ずつ日本語に訳している。	1	2	3	4	5
13.英語の文章の中での語の言い換えに注意している。	1	2	3	4	5
14.文中の代名詞が何を指しているのかを意識している。	1	2	3	4	5
15.重要な情報（major information）と、その具体例などのさほど重要でない情報(minor information)の違いに注目する。	1	2	3	4	5
16.文中の動詞の時制や種類（自動詞・他動詞など）に注目する。	1	2	3	4	5
17.英語の文章を読んでいる中でわからなくなってしまう時、前に戻って読み直すことよりも、先に読み進めることで疑問が解決できると期待しながら読む。	1	2	3	4	5
18.理解しやすいように英語の単語や文章を音読する。	1	2	3	4	5
19.文章全体の意味を理解するために筆者の意図を探りながら読む。	1	2	3	4	5
20.英語の文章を日本語に訳さずに英文のままで理解しようとする。	1	2	3	4	5

読んだ後・・・

思わない ← → 思う

21.英語の文章や内容をどのくらい理解できたかを確認する。	1	2	3	4	5
22.文章全体の内容について、筆者と異なる視点で考える。	1	2	3	4	5
23.文章全体の内容について、自分の解釈をさらに深く考察する。	1	2	3	4	5
24.難しかったところを確認する。	1	2	3	4	5
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26.リーディングの目標が達成できたかどうかを自己評価する。	1	2	3	4	5
27.読んだ英語の文章やトピックから学んだことを振り返る。	1	2	3	4	5

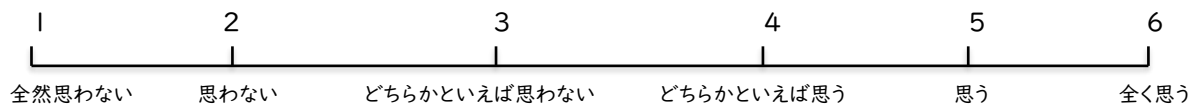
reading 力を伸ばすためにどのような活動に自主的に取り組みましたか？その内容を具体的に書いてください。

3. 上記以外で reading のスキルを向上させるために reading に関して自主的に取り組んだことがあれば、書いてください。なければ空白でかまいません。

Part C: 留学中の英語学習 (reading 以外) について教えてください。

4. reading 以外の授業内学習について（授業中の活動、授業で出された課題や宿題、AC (ESL → AC) の人は discussion, presentation, lecture を含めて教えてください）

listening / speaking / writing（最も力を注いだスキルに○をつけてください）の授業に積極的に取り組むことができた。

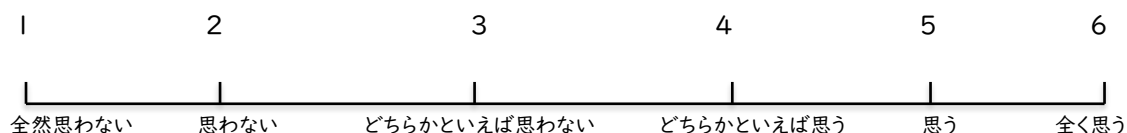


上記の番号を選んだ理由はなぜですか？その内容や理由を具体的に書いてください。

AC (ESL → AC) の人はどのような活動をどのように取り組んだのかを具体的に書いてください。

5. 授業外における reading 以外について（放課後や課題活動、宿泊先での交流など）

listening / speaking / writing（最も力を注いだスキルに○をつけてください）を向上させるために積極的に活動することができた。

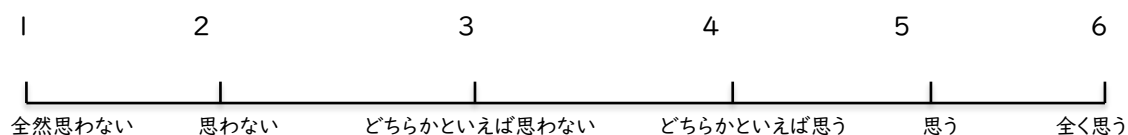


listening / speaking / writing（最も力を注いだスキルに○をつけてください）を伸ばすために、どのような活動に自主的に取り組みましたか？その内容を具体的に書いてください。

6. 上記以外で reading 以外のスキルを向上させるために listening/speaking/writing に関して自主的に取り組んだことがあれば書いてください。なければ空白でかまいません。

Part D: 留学後の今現在の英語学習（reading）について教えてください。

7. reading 力を向上させるために、授業以外のことで自主的に継続して取り組んでいる。

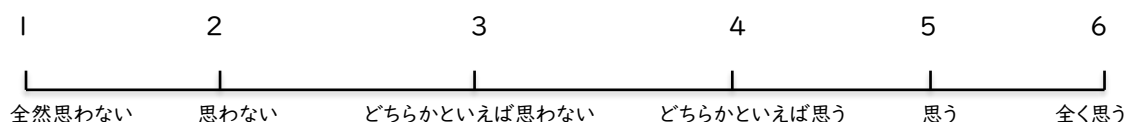


上記の番号を選んだ理由はなぜですか？その内容や理由を具体的に書いてください。

8. 留学前と比べて、今現在、アカデミックな英語の文章（論文や専門的な研究内容について英語で書かれた文章）の読み方について、回答ください。

留学前はトピックセンテンスに注目、文構造に注意、パラグラフで読むなど Intensive Reading の授業で様々な読み方を習得されたと思います。

留学を経験して留学後の今、アカデミックな英語の文章の読解方法は変わりましたか？



読み方に変化があった人は、どのように変わったのかを具体的に書いてください。

9. 留学前と比べて、留学後の今、あなたの reading 力は向上したと思いますか？

留学を経験して reading に関して変化したことがあれば自由に書いてください。どんなコメントでも歓迎です。（例：得意になった/苦手になった、英語の本や新聞を読むようになった、留学先の授業のおかげで読解力があがった、苦手意識がなくなった・・・など）

ご協力ありがとうございました。