英語学習者の語彙学習行動改善に資する方略指導プログラムの開発

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Developing Strategy Training Programs to Promote English Learners' Successful Motivated Vocabulary Learning

英語学習者の語彙学習行動改善に資する方略指導プログラムの開発

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Chapter 1

Introduction

Motivation is one of the most significant predictors for the success of second language (L2) learning. According to Masgoret and Gardner (2003), L2 motivation accounted for about 14% of the variance in language achievement scores. As Dörnyei and Ryan (2015) stated, without sufficient motivation, even individuals with the most remarkable abilities could not accomplish long-term goals like L2 acquisition. Thus, enhancing learners' motivation is a crucial mission for L2 teachers.

Teachers' interventions to elicit and stimulate learners' motivation are called motivational strategies (Guilloteaux & Dörnyei, 2008). Among many possible types of motivational strategies, developing strategies that can foster learners' vocabulary learning motivation (VLM) seems to be particularly important.

The first reason for it is that vocabulary knowledge is essential. As Wilkins (1972) famously stated, "without vocabulary, nothing can be conveyed" (p.11). Vocabulary is strongly related to various aspects of L2 abilities, including reading, listening, speaking, writing, grammatical accuracy, sociolinguistic

appropriateness, and language fluency (Schmitt, 2010). Therefore, whatever L2 learning goals the learner has, vocabulary learning is needed.

Second, vocabulary learning requires a great deal of effort. The new Course of Studies (MEXT, 2017a; 2017b; 2018) states that Japanese students are expected to learn at least 4000 English words in elementary school, junior high school, and senior high school in total. Considering that a research survey from the Benesse Educational Research and Development Institute (2020) showed more than 70% of first-year high school students in Japan find vocabulary memorization difficult, learning 4000 words seems very demanding. Nevertheless, a vocabulary size of 4000 words is still not sufficient to be a fluent English user. According to Nation (2006), a 6000 to 7000 word-family is needed to comprehend English spoken texts and an 8000 to 9000 word-family is needed to understand English written texts. Acquiring a vocabulary of that size cannot be achieved without intense motivation.

Third, learners are usually expected to learn vocabulary out of class. Most L2 teachers would hope to spend class time doing activities that require the teacher, classmates, and classroom equipment, such as communicative tasks and interpreting difficult passages. Vocabulary learning can be done alone, so few teachers would give learners sufficient time to do it in class. Unlike studying in a classroom, learners usually

do not feel strong pressure from their teacher and peers when studying individually. Thus, internalized motivation is important to get learners to study intensively in such an environment.

Finally, vocabulary learning is usually not fun. Zimmerman and Schunk (2007) claimed that L2 vocabulary memorization is a typical example of learning that many learners would describe as boring. The majority of teachers would agree that finding learners who are fond of speaking or reading English is not as difficult as finding learners who are fond of memorizing English words. Even those regarded as motivated learners, because of their active class participation, may be reluctant to study vocabulary.

When encouraging learners to do something that is important, requires great effort on their own, but is boring like vocabulary learning, using motivational strategies becomes especially significant. Nevertheless, while various strategies to enhance L2 motivation were suggested and the effects have been generally supported by many previous studies (e.g., Agawa & Takeuchi, 2017; Alrabai, 2016; Dörnyei, 2001; Guilloteaux & Dörnyei, 2008; Lee et al., 2019; Sugita & Takeuchi, 2010), strategies specifically targeting VLM have not been fully developed.

For this reason, this study attempts to develop motivational strategies that can enhance English learners' VLM and help them study vocabulary efficiently, diligently, and enjoyably. In order to achieve this goal, a literature review and four empirical studies are conducted.

In Chapter 2, relevant literature such as studies on L2 learners' motivation and learning strategies are reviewed. In the L2 motivation research review, *self-determination theory* (Deci & Ryan, 1985; 2002; Ryan & Deci, 2017) and *the L2 motivational self system* (Dörnyei, 2005; 2009) are discussed in detail. These are the motivation theories that are adopted in the present study. Their characteristics and strengths are reviewed to clarify their significance as frameworks. Moreover, possible motivational strategies are considered from the perspective of the two theories. In the learning strategies review, strategy training and vocabulary learning strategies are mainly discussed. Further, the relationships between learning strategies and motivation are also considered. At the end of the chapter, the research questions are stated.

Chapter 3 shows Study 1's findings. Study 1 investigates whether researching how to enhance learners' VLM is meaningful. In order to show this, it is first necessary to confirm that 1) the learners' VLM is not strong (i.e., There is room for improvement), 2) VLM and general English learning motivation are independent (i.e., not strongly

correlated), and 3) VLM predicts learners' vocabulary learning behavior more strongly than general English learning motivation. In this study, motivation is divided into two types: *intrinsic motivation* (IM) and *self-determined types of extrinsic motivation* (SDEM) based on self-determination theory. A survey study is conducted, where 88 English learners studying English at a university are selected as participants, and the data are statistically analyzed.

Chapter 4 presents Study 2's findings. In Study 2, a survey concerning not only IM and SDEM but also *vision of the ideal L2 self*, the most important component in the L2 motivational self system, is conducted. It includes 97 English learners. The results are statistically analyzed, and then possible factors for improving English learners' VLM are suggested.

Chapter 5 introduces Study 3. In Study 3, a training program to improve English learners' VLM and vocabulary learning efficiency is designed and conducted. 52 English learners are taught principles of vocabulary learning. Moreover, they develop effective and motivating learning strategies through discussions so that they can study vocabulary effectively and enjoyably. The effectiveness of the practice is measured by several methods such as analyzing the scores of the pre and post-vocabulary tests, survey results, and recording data of the group discussion.

Chapter 6 illustrates the findings of Study 4. In study 4, another training program to enhance English learners' VLM and vocabulary learning efficiency is designed. It is an improved version of the practice in Study 3. For instance, some vocabulary learnings apps are utilized to improve the efficiency of and motivation for vocabulary learning. The training is conducted for 41 English learners, and the effectiveness is examined. Moreover, tips to improve the quality of discussion are considered.

Chapter 7, which is the final chapter of the present study, summarizes the four studies, reviews the answers to the research questions, clarifies the significances of the study, discusses limitations, and provides suggestions for further studies and practices.

Chapter 2

Background

2.1 The Origin of Research on L2 Learners' Individual Difference Factors

In the 1940s, the experiences of World War II increased the need to develop effective L2 education. Consequently, the field of L2 education research came to receive attention. At first, researchers focused mainly on investigating effective L2 teaching methods (Takeuchi, 2010). As a result, various influential teaching methods, such as the Audio-lingual Method, the Silent Way, and the Suggestopedia were proposed (Richards & Rodgers, 2014). On the other hand, individual differences of L2 learners were not the main points of research interest in the field for the first few decades, though several notable studies on the topic were conducted (e.g., Carroll, 1962 on aptitude; Gardner & Lambert, 1959 on motivation).

However, in the 1970s, researchers gradually came to acknowledge the importance of investigating L2 learners' individual difference factors. For instance, a remarkable article called "What the 'good language learner' can teach us" written by Joan Rubin in 1975 highlighted the potential of individual difference research. She pointed out that even when learners study an L2 in the same class, the speeds of their L2 development vary. She claimed that "if we knew more about what the 'successful

learners' did, we might be able to teach these strategies to poorer learners to enhance their success record" (Rubin, 1975, p.42). In 1978, Naiman et al. also revealed the significance of examining good language learners' features with their book titled "The good language learner." These works attracted many researchers' attention to L2 learner research. For example, Krashen (1982), who proposed one of the most influential hypotheses in second language acquisition called the *monitor model*, mentioned the importance of learners' psychological factors such as anxiety and motivation in his model (cf. *the affective filter hypothesis*). Since the 1980s, a number of studies on L2 learners' individual difference factors such as motivation, learning styles, and learning strategies have been conducted, and plenty of significant findings about L2 learning were discovered. These findings have contributed to the development of L2 education.

2.2 The Significance of Researching L2 Motivation

Though *motivation* is a very famous term that people, including non-experts in psychology, use on a daily basis, defining motivation is extremely difficult. Dörnyei and Ushioda (2011) stated that a definition that satisfies all researchers does not exist yet. They claimed that the only thing most researchers agree on is that motivation concerns

"the direction and magnitude of human behaviour, that is: the choice of a particular action, the persistence with it, and the effort expended on it" (p.4).

While researchers have different ideas about a definition of motivation, they would probably agree that motivation plays an essential role in human behavior and achievement. It is often pointed out that, among the various L2 learners' individual difference factors that could influence L2 learning, motivation is one of the most important factors (Dörnyei, 2005). As Dörnyei and Ryan (2015) stated, without sufficient motivation, even individuals with the most remarkable abilities could not accomplish long-term goals like L2 acquisition. The significance of studying L2 motivation is widely acknowledged by researchers and research on the subject is ever increasing. According to Boo et al. (2015), "the study of L2 motivation has seen an unprecedented boom during the past decade" (p.145).

There are many possible ways to explain why motivation can lead to high achievements. For example, Zimmerman and Schunk (2007) suggested the five reasons for this from the perspective of self-regulated learning (see 2.6.2) as follows:

1) Motivated students are more attentive to their learning processes and outcomes than

poorly motivated students.

2) Students who are motivated to choose a task when given the opportunity display greater progress than unmotivated students.

3) Students who are motivated to put forth increased effort to learn a difficult task display higher levels of mastery.

4) Students who are more motivated to persist are more likely to learn on their own than less-persistent classmates.

5) Students who are highly motivated experience greater satisfaction and positive affect when given the opportunity to learn than poorly motivated students.

In summary, high motivation results in good learners who develop their abilities effectively and enjoyably. That being said, strong motivation does not always guarantee high achievement (Dörnyei & Ushioda, 2011), but still motivated learners are much more likely to succeed in L2 acquisition than unmotivated learners.

2.3 Self-determination Theory

2.3.1 How self-determination theory attracted attention

For three decades since the first major article on L2 motivation was published by Robert Gardner and Wallace Lambert in 1959, L2 motivation research was conducted

mainly from the social psychological perspective. The leading figure at that time was Robert Gardner. He and his colleagues conducted studies on L2 motivation in Canada where the English-speaking community and the French-speaking community coexist, and claimed that *integrativeness* is a significant factor that affects L2 motivation. According to Gardner (1985), integrativeness subsumes three components; integrative orientation, interest in foreign languages, and attitudes towards L2 community. Among the three, *integrative orientation* is the most widely known concept associated with Gardner's work (Dörnyei & Ushioda, 2011). It concerns a positive disposition toward the L2 group and a desire to interact with and even become similar to valued members of that community. Integrative orientation has often been discussed in comparison to *instrumental orientation*, which concerns the potential practical gains of L2 proficiency.

Many researchers surveyed L2 motivation adopting Gardner's framework and showed valuable findings. For instance, it was revealed that integratively motivated learners are more likely to be successful than instrumentally motivated learners in the long run (Gardner, 1985). However, some drawbacks of the framework were pointed out. One disadvantage of research using the framework is the difficulty of gaining useful suggestions for teachers (Crookes & Schmidt, 1991; Ushioda, 2008). Even if the importance of integrative orientation is clarified, the findings are usually not very

valuable to teachers, because it is difficult for them to improve learners' attitudes towards the L2-speaking community. Their attitudes are often determined by their communities' historical experiences, and so teachers cannot control them easily.

With the move towards more education friendly approaches to the study of motivation, research attention since the 1990s has increasingly turned to cognitive theories of learner motivation (Ushioda, 2008). Several cognitive theories were adopted to L2 motivation research, and have made significant suggestions for L2 education. Among them, *self-determination theory* (SDT: Deci & Ryan, 1985; 2002; Ryan & Deci, 2017), which is one of the theories the present study adopts as a framework, attracted much attention from researchers. As introduced below, SDT has been utilized to investigate L2 motivation in a number of studies, and nowadays, it is regarded as one of the most established and influential theories in the field of L2 education research (Agawa & Takeuchi, 2016b).

2.3.2 Introduction to self-determination theory

In the classic view of behavioral psychology, people were seen as receptive beings. Thus, external stimuli, such as rewards and punishments, were regarded as main motivating factors of people, and so people's cognition was not a part of prior research

interests. On the other hand, SDT assumes that all individuals are by nature active, with an evolved tendency to engage in their environment, assimilate new knowledge and skills, and integrate them into a coherent psychological structure (Reeve et al., 2007). In other words, the theory assumes that people are active beings who make effort towards self-realization and develop themselves through interacting with, rather than being influenced by their environment (Reeve et al., 2007).

SDT is organized by the six mini-theories; *cognitive-evaluation theory, organismic integration theory, basic psychological needs theory, goal contents theory, causality orientations theory,* and *relationships motivation theory*.

The first mini-theory is *cognitive-evaluation theory*. According to McEown and Oga-Baldwin (2019), this can be the most fundamental mini-theory in SDT and the most relevant to formal language education. Cognitive-evaluation theory primarily concerns how events in the social environment increase or decrease *intrinsic motivation* (IM) (Ryan & Deci, 2017). IM deals with behavior performed for its own sake in order to experience pleasure and satisfaction (Dörnyei & Ushioda, 2011). IM is often contrasted with *extrinsic motivation* (EM), which involves performing a behavior as a means to some separable end, such as

receiving an extrinsic reward or avoiding punishment (Dörnyei & Ushioda, 2011).

Previous studies on cognitive-evaluation theory suggested that when learners are in an environment where their autonomy is supported, teaching structure is appropriate (e.g., clear explanations, appropriate teaching pace), and they are cared for and emotionally supported, their IM tends to be enhanced (Deci et al., 1999; McEown & Oga-Baldwin, 2019). On the other hand, when learners have a sense that their behavior is dictated by rewards or punishments and they cannot control the environment, their IM tends to decrease (Deci et al., 1999; McEown & Oga-Baldwin, 2019). For instance, Deci (1971) showed that when money was used as an external reward, IM could deteriorate. Nevertheless, it is also pointed out that providing positive feedback could enhance learners' IM (Reeve et al., 2007). In other words, although giving tangible rewards (e.g., money) is not effective in enhancing learners' IM, giving verbal rewards can be meaningful.

The second mini-theory is *organismic integration theory*. The theory divides EM into four types; *external regulation*, *introjected regulation*, *identified regulation*, and *integrated regulation*, by the degree of the strength of self-determination (see Table 2-1 for their definitions). Some researchers claim that identified regulation and integrated

regulation are inseparable, and combine the two (e.g., Noels, 2001). In this study, they are called self-determined types of extrinsic motivation (SDEM).

Table 2-1

Four types of extrinsic motivation (Dörnyei & Ushioda, 2011, p.24)

External regulation	The least self-determined form of extrinsic motivation, coming entirely from external sources such as rewards or threats
Introjected regulation	Externally imposed rules that the person accepts as norms to be followed in order not to feel guilty
Identified regulation	A type of motivation that occurs when the person engages in an activity because he or she highly values and identifies with the behavior, and sees its usefulness
Integrated regulation	The most developmentally advanced form of extrinsic motivation, involving choiceful behavior that is fully assimilated with the individual's other values, needs and identity

In SDT, the six types of motivation: four types of EM as well as IM and amotivation (i.e., the state of lacking the intention to act), are situated at different points on a control-autonomy continuum (Ryan & Deci, 2002). *Amotivation* is seen as the non-self-determined state, IM is seen as the most self-determined type of motivation, and the four types of EM are located between them.

The SDT's characteristic of assuming the continuum enables researchers to validly describe learners' complex motivational development process (Dörnyei,

1998). The advocates of SDT believe less self-determined types of regulation could gradually change into more self-determined types of regulation. For instance, even if a learner started to study English by external motivational factors, such as parents' recommendation and school curriculum (i.e. EM with weak self-determination), s/he might gradually recognize the significance of English learning as s/he keeps studying it (i.e., SDEM), and finally find English learning interesting (i.e., IM). This process is called *internalization*. The more fully a regulation is internalized, the more it becomes part of the integrated self and the more it is the basis for self-determined behavior (Ryan & Deci, 2002). As discussed above, SDT assumes that all individuals inherently desire integrating new knowledge and skills into a coherent psychological structure. Therefore, internalization is regarded as a process that people inherently hope to occur.

Nevertheless, it should be noted that people's motivation may not necessarily progress through each stage of internalization in order to reach the self-determined types of motivation (Ryan & Deci, 2002). For instance, an elementary school student may go to a cram school because s/he enjoys English learning at elementary school and wants to study English outside of school as well (i.e., IM). However, after s/he enters a junior high school, the English classes may become boring and the purpose of going to the cram school becomes to get good scores in English tests at school (i.e., EM with weak-

self-determination). After a while, s/he may have a dream of becoming a scientist in the future, realize that studying English is necessary to attain the goal, and that might then be the main reason for studying English at the cram school (i.e., SDEM).

Moreover, learners could have various types of motivation at the same time (Hayamizu, 2019). For instance, a learner may be studying grammar for tomorrow's English test (i.e., EM with weak self-determination), but s/he may recognize that understanding the grammar is helpful to attain his/her future dream (i.e., SDEM) and also be enjoying learning new grammar rules that are very different from his/her native language's (i.e., IM).

Another key point that should be noted is that EM is not necessarily an inferior type of motivation to IM. Considering that IM is seen as the most internalized type of motivation in the SDT continuum, it could come across as the only ideal motivation, especially since EM seems as though it should change into IM. In fact, EM was traditionally viewed as inferior to IM (Hayamizu, 2019). However, many studies have revealed that SDEM for a learning activity forecasts the quality of learners' educational outcomes in much the same way that IM does (Reeve et al., 2007). For example, Noels et al. (1999) revealed that both identified

regulation and IM positively affected *motivation intensity for L2 learning* (identified regulation: *r*=. 36; IM: *r*=.39) and *intention to continue L2 study* (identified regulation: *r*=.55; IM: *r*=.49), while they were negatively correlated with *L2 classroom anxiety* (identified regulation: *r*=-.25; IM: *r*=-.24). McEown et al. (2014), who investigated Japanese language learners' motivation in Canada, indicated that not only IM but also identified regulation positively predicted intention to continue learning Japanese. Therefore, as Ushioda (2008) pointed out, what seems crucially important is not whether motivational factors are intrinsic or extrinsic, but whether they are self-determined or externally imposed. Ideally, learners should have both IM and SDEM for L2 learning so that they can keep studying it patiently and continuously (Hiromori, 2010).

The third mini-theory which organizes SDT is *basic psychological needs theory*. In SDT, needs are defined as "nutrients that are essential for growth, integrity, and well-being" (Ryan & Deci, 2017, p.10). The theory assumes that people have three innate universal psychological needs; needs for *autonomy*, *competence*, and *relatedness*. The need for autonomy refers to "being the perceived origin or source of one's own behavior" (Deci & Ryan, 2002, p.8). According to Ryan and Deci (2017), when learners are allowed to do something that they endorse, and feel that they do it based on their

own interests, their need for autonomy is satisfied. Giving learners choices is a typical example of practices that can be used to fulfill learners' need for autonomy. One important point about need for autonomy is that doing something with others or asking for help does not necessarily dissatisfy the need (Nishimura, 2019). Learning autonomously does not mean learning independently. For example, if a learner thinks studying with her/his classmates is more effective and enjoyable than studying alone, and voluntarily decides to do it, it still can be regarded as autonomous learning and does not affect her/his need for autonomy negatively even though s/he does not act independently.

The need for competence is defined as "feeling effective in one's ongoing interactions with the social environment and experiencing opportunities to exercise and express one's capacities" (Deci & Ryan, 2002, p.7) or "need to feel effectance and mastery" (Ryan & Deci, 2017, p.11). In order to satisfy learners' need for competence, it is essential for teachers to design a task carefully. The task should not be too difficult, because learners can be demotivated when they feel they are not competent enough to overcome the challenge. At the same time, it should not be too easy, because easy tasks usually do not enable learners to feel effectance and mastery. In addition, it is important for teachers to encourage

learners when they engage in tasks so that they feel they can overcome the challenge. In addition, it seems to be effective to let learners reflect on their achievement or receive positive feedback after the task. In contrast, negative feedback, person-focused criticism, and social comparisons may hinder the satisfaction of learners' need for competence (Ryan & Deci, 2017).

The need for relatedness refers to "feeling connected to others, to caring for and being cared for by those others, to having a sense of belongingness both with other individuals and with one's community" (Deci & Ryan, 2002, p.7). Letting learners feel that they are cared for by their teachers and classmates is essential to satisfy their need for relatedness. However, it may not always create a sense of belonging, because people usually cannot have that feeling unless they find themselves seen as significant by other community members. Thus, in order to satisfy learners' need for relatedness, it is also important for teachers to let them contribute to their classmates and feel that they are a significant member of the class.

In SDT, satisfying the three psychological needs is seen as necessary for proper human development. Internalization of motivation (i.e., developing less self-determined motivation into more self-determined motivation) is a typical example of human development. Previous studies have revealed that contexts supportive of autonomy,

competence, and relatedness foster greater internalization than contexts that do not satisfy these needs (Ryan & Deci, 2000). In other words, in the context where these three needs of learners are satisfied, s/he is likely to study with strong IM and SDEM. In fact, Noels et al. (2000) showed that freedom of choice (i.e., need for autonomy) and perceived competence (i.e., need for competence) positively affected French learners' IM and identified regulation. Additionally, Hiromori (2005) revealed that not only the need for autonomy and competence but also the need for relatedness was significantly related to English learners' IM and identified regulation. Though their influence on motivation seems to vary in accordance with learners' cultural backgrounds (Agawa & Takeuchi, 2016a) and current motivational profiles (Tanaka & Hiromori, 2007), still, the importance of satisfying these three needs is generally accepted.

The fourth mini-theory is *goal contents theory*. One characteristic of this theory is that it concerns the *what* of people's goal-directed behaviors (Ryan & Deci, 2017). Most of the other mini-theories focus on reasons (*why*) for people's behaviors, so goal contents theory is significant in a way that it provides SDT with the perspective of the *what* aspect of human behavior.

The main point of interest regarding goal contents theory research is the differences between people's behavior who pursue intrinsic goals (e.g., I study

English to experience personal growth) and those who pursue extrinsic goals (e.g., I study English to gain wealth). The pioneering study on the theory is by Kasser and Ryan (1993). They investigated how three intrinsic goal contents (self-acceptance, affiliation, and community feeling) and one extrinsic goal content (financial success) were related to university students' psychological factors. The results suggested that students who pursued intrinsic goals tended to have greater self-actualization, stronger vitality, lower depression, and less anxiety than those who pursued extrinsic goals. The majority of the following studies on goal contents theory indicated that intrinsic goals generally lead to greater well-being than extrinsic goals regardless of the research context (e.g., Schmuch et al., 2000). Moreover, educational psychology research that applied the theory revealed that learners with intrinsic goals are more likely to have deeper engagement and higher persistence in learning activities (Vansteenkiste et al., 2006). These results indicate that helping students set intrinsic goals is effective in increasing their motivation as well as their well-being.

The fifth mini-theory is *causality orientations theory*, which concerns individual differences in, and prime of motivational orientations (Ryan & Deci, 2017). In this theory, three causality orientations are assumed (Deci & Ryan, 1985). The first orientation is *the autonomy orientation*. It describes "the degree to which people orient

toward their environment by treating them as source of relevant information, as they take interest in both external events and the accompanying inner experiences" (Ryan & Deci, 2017, p.217). People who have this orientation tend to involve themselves in the environment and be willing to express their own interests (Nishimura, 2019). The second orientation, *the controlled orientation*, describes "the degree to which people's attention and concerns tend to be oriented toward external contingencies and controls" (Ryan & Deci, 2017, p.217). People in this orientation often concern external rewards and social pressure, and cannot explore their own interests and values sufficiently (Nishimura, 2019). The third orientation is *the impersonal orientation*. This describes "the degree to which people orient toward obstacles to goal attainment" (Ryan & Deci, 2017, p.218). People in this orientation tend to feel that they are not capable of affecting the environment and outcome even if they try (Nishimura, 2019).

Among the three orientations, the autonomy orientation is usually regarded as the most ideal. For example, McEown and Oga-Baldwinand (2019) stated that an autonomous orientation can enable learners to be self-determined, have a strong interest in learning, have high persistence, have a positive attitude towards learning, and learn in a self-regulated manner. In contrast, the impersonal orientation is seen as the least healthy and effective orientation, because it may

cause anxiety, a sense of incompetence, and amotivation (Ryan & Deci, 2017). Furthermore, Soenens et al. (2005) demonstrated that while the autonomy orientation promoted sound identity development of adolescents, the impersonal orientation could hinder it.

The sixth mini-theory, which was added to the SDT mini-theories most recently, is *relationships motivation theory*. One assumption of this theory is that, when people are given support to satisfy their three basic psychological needs by someone significant, the effect becomes greater (Nishimura, 2019). Furthermore, the theory also assumes that providing support for someone improves the relationship with him/ her (Deci et al., 2006; Patrick et al., 2007). Though this theory was developed mainly through research on relationships of friends and couples, it seems to make useful suggestions for teachers as well. As discussed in the following section, teachers could enhance learners' IM by satisfying their three basic psychological needs. Considering relationships motivation theory, it appears to be necessary for teachers to establish good relationships with learners in order to conduct such motivation interventions successfully. Moreover, it can also be pointed out that the interventions may further improve their relationships with the learners.

2.3.3 Self-determination theory in recent L2 motivation research

Though a few decades have passed since IM and EM received attention in L2 research, SDT is still utilized by many L2 researchers. One main reason for it is that SDT is a useful framework to examine L2 learners' motivation in classroom.

Traditionally, researchers paid attention to *trait motivation* (i.e., relatively stable forms of motivation), such as the integrative orientation and instrumental orientation in Gardner's L2 motivation theory. SDT is also used to investigate learners' trait L2 motivation. For instance, a typical question of IM, "Do you enjoy L2 learning?" can be seen as an item that examines trait motivation, because the answer would not change very frequently.

Though the research on trait motivation has provided many significant findings, it was not necessarily helpful for L2 teachers who desire to motivate their students in today's class. In class, their motivation changes dynamically all the time; students who are usually unmotivated could show strong interest in a task while those who seemed motivated at the beginning of class might suddenly start taking a nap. Presently, the main interest of L2 motivation researchers is to provide practical suggestions for L2 education through observing what is happening to learners' motivation in the classroom (Hiromori, 2014). In other

words, instead of trait motivation, *state motivation* (i.e., situation-specific types of motivation) is gradually attracting attention.

SDT, especially IM and the three basic psychological needs, is available in L2 state motivation research as well as trait motivation research, and can provide practical suggestions for L2 teachers. This is because strength of IM and the degree of satisfaction of the three basic psychological needs could change dynamically in class. As mentioned above, "Do you enjoy L2 learning?" is a question of trait motivation. However, if the question is "Do you enjoy the class?" or "Do you enjoy the task?", it becomes a question of state motivation. SDT provides suggestions about how to stimulate learners' IM and satisfy their three psychological needs in class. Thus, SDT is a useful framework to consider when developing motivating lesson plans and activities.

In fact, some studies have suggested motivating L2 activities, adopting psychological needs theory in SDT (e.g., Agawa & Takeuchi, 2017; Hiromori, 2006; Hiromori & Tanaka, 2006; Tanaka, 2010a, 2010b; Tanaka & Hiromori, 2007; Thorner, 2017; Yamamoto & Izumisawa, 2016). For instance, Hiromori and Tanaka (2006) and Tanaka and Hiromori (2007) hypothesized that a task-based activity called Group Presentation Activity would stimulate English learners' three needs and the activity was used in class for five weeks. The teachers gave the students the responsibility of the

decision-making processes about the presentation and respected their decisions (i.e., autonomy), provided encouraging feedback (i.e., competence), and let the students help each other when preparing for the presentation (i.e., relatedness). After the intervention, the authors administered a survey and confirmed that the activity actually satisfied their three needs and enhanced their IM. Further, Yamamoto and Izumisawa (2016) hypothesized that a delayed oral peer feedback activity called Group Work with Language Consultants would fulfill the three needs of English learners. They used it in class and evaluated the hypothesis with a survey. The results showed that it fulfilled the three needs and learners engaged in the activity with strong IM. Additionally, it was implied that satisfying their need for relatedness had a particularly strong influence on their IM.

As these studies indicate, referring to SDT enables teachers to design motivating lesson plans and tasks. Such practices would provide practical suggestions for teachers, which accords with a current research interest of L2 motivation researchers. Recently, Agawa and Takeuchi (2016b) developed a new questionnaire that examines the satisfaction of L2 learners' three needs in class. The questionnaire could encourage more researchers and teachers to do empirical classroom research using the SDT framework.

To sum up, research using the SDT frameworks is still popular even after a few decades have passed since it became a notable psychological theory and it keeps offering new valuable insights. This fact seems to imply that SDT will keep being an influential framework in L2 education research.

2.4 The L2 Motivational Self System

2.4.1 Introduction to the L2 Motivational Self System

These days, a framework called *the L2 motivational self system* (L2MSS; Dörnyei, 2005; 2009) is becoming influential in L2 education research (Boo et al., 2015). The L2MSS was developed by Zoltán Dörnyei based on well-established psychological theories such as the self-discrepancy theory (Higgins, 1987) and the theory of possible selves (Markus & Nurius, 1986). Considering these theories, Dörnyei (2005) assumed that a key to being a successful learner was possessing a superordinate vision of future self-image. He suggested two types of future selves which L2 learners can have; the *ideal L2 self* and *the ought-to L2 self*. In addition to the two, *the L2 learning experience* was seen as the other significant motivational factors in the L2MSS, because remembering past experiences is necessary to imagine the future. In other words, the L2 learning experience could affect the ideal and ought-to L2 self

images in a bottom-up process (Zheng, 2012) (see Table 2-2 for the definitions of the three components). More recently, Thompson and Vásquez (2015) found that some L2 learners were motivated by their desire to do something against social pressure and expectation, and proposed that *the anti-ought-to self* should be added to the L2MSS especially when discussing L2 learners' motivation whose target language is not English.

Table 2-2
Definitions of components in the L2 motivational self system (Dörnyei & Ryan, 2015, pp.87-88)

Ideal L2 self	a desirable self-image of the kind of L2 user that one would ideally like to be in the future
Ought-to L2 self	the attributes that one believes one ought to possess to meet expectations and to avoid possible negative outcomes in the process of L2 learning
L2 learning experience	the learner's present experience, covering a range of situated, executive motives related to the immediate learning environment

Over the past two decade, the L2MSS has been successfully utilized in quantitative surveys in diverse learning environments (You & Dörnyei, 2014). With a few exceptions (e.g., Lamb, 2012), previous studies have generally suggested that learners with a strong ideal L2 self tend to be highly motivated

(e.g., Al-Shehri, 2009; Busse, 2013; Csizér & Kormos, 2009; Papi, 2010; Ryan, 2009; Taguchi et al., 2009). Several previous studies investigated the relationship between the ideal L2 self and *motivated learning behavior*, which was defined as "effort expended to achieve a goal, desire to learn the language, and importance attached to the task of learning the language" (Csizér & Kormos, 2009, p.100). Reviewing multiple previous studies, Dörnyei and Ryan (2015) stated that the ideal L2 self generally explains more than 40% of the variance in motivated learning behavior. For example, Al-Shehri (2009), who conducted a survey study for 200 Arab students, found that the correlation between the ideal L2 self and motivated learning behavior was r=.78. This means that, in his study, the ideal L2 self explained more than 60% of the variance in motivated learning behavior.

Furthermore, more recent studies indicated that the ideal L2 self could have a significant effect on learning strategy use and performance (e.g., Csizér & Tankó, 2015; Jang & Lee, 2019; Saito et al., 2018). For example, Saito et al. (2018) revealed that English learners with a stronger ideal L2 self tended to develop their L2 oral proficiency more effectively than those with a weaker ideal L2 self. Jang and Lee (2019) found that the ideal L2 self positively predicted English learners' planning strategy use and writing outcomes.

A strength of the L2MSS is that it can overcome one of the challenge of Gardner's framework. As argued above, one drawback of his framework is unfriendliness for education, but it is not the only criticism of it. In addition, an important concept of his framework, integrativeness, is often criticized as being irrelevant to many English learners in today's world. Due to rapid globalization, English is now a global language, thus it is spoken not only by native English speakers but also by many non-native speakers (Kachru, 1994). As a result, more and more English learners are studying English not to integrate themselves with an English-speaking community but to be a part of the global society. In fact, Lamb (2004) and Yashima (2002) pointed out that, though integrativeness is a key motivational factor in English as a Second Language (ESL) contexts like Canada, it may not be very significant in English as a Foreign Language (EFL) contexts like Indonesia and Japan now. Rather, the desire to play an active role in the globalized world seems to be a stronger motivation for the majority of Japanese and Indonesian English learners. In Gardner's framework, it is difficult to discuss this motive.

Nonetheless, the fact that integrativeness is an essential motivational factor for some learners does not change. Integrativeness should not be deemed as the main motivational factor for every learner, but should not be ignored either. In the

L2MSS framework, both the desire to integrate into certain English speaking communities and to be a part of the globalized world can be explained by the ideal L2 self. For the former learners, the ideal L2 self can be them integrating into an English speaking community making the most of their high English skill. On the other hand, for the latter learners, the ideal L2 self can be them working globally making the most of their sophisticated English ability.

This means that the L2MSS incorporates the concept of integrativess without contradicting the fact that many English learners do not intend to become a part of certain English-speaking communities now (Hiromori, 2010). In fact, past studies have shown that the ideal L2 self is significantly correlated with integrativeness, typically over a .50 level, but is a more reliable predictor of motivated learning behavior than integrativeness (Dörnyei & Ryan, 2015). For example, Ryan (2009) administered a survey study for secondary school and university students in Japan, and revealed that the correlation between integrativeness and the ideal L2 self was r=.59. Also, he found that while the correlation between intended effort for English learning and integrativeness was r=.65, the correlation between intended effort for English learning and the ideal L2 self was r=.77. This is one reason why the L2MSS is becoming influential in L2 motivation research.

However, it should be noted that, despite these favorable research results for the ideal L2 self, the ideal L2 self cannot necessarily replace integrativeness. Claro (2020) claimed that these two frameworks are different in the way that the former concerns identification with an external locus (e.g., a certain L2 community), while the latter concerns identification with an internal locus. As she stated, the desire for identification with an external locus as well as an internal locus is essential for continued growth as human beings. Thus, it seems to be more appropriate to assume that they function as a complementary relationship rather than claiming that integrativeness should be replaced by the ideal L2 self.

2.4.2 Vision enhancement

As discussed above, learners with a strong ideal L2 self are likely to be motivated for L2 learning. How then can the ideal L2 self be strengthened? Dörnyei and Kubanyiova (2014) claimed that building *vision* is an effective way of doing so. Vision is defined as "a mental representation that occurs without the need for external sensory input" (Stopa, 2009, p.1). It is a concept that captures 1) the future, 2) the ideal, and 3) the desire for deliberate change (van der Helm, 2009). These characteristics of vision seem to be strongly related to the ideal L2

self. In fact, Dörnyei and Chan (2013) stated that the ideal L2 self can be seen as a vision of what the language learner wishes to be. Dörnyei and Kubanyiova (2014) stated that when learners obtain a vivid and realistic vision about their ideal L2 self, they learn to see themselves as potentially competent L2 users, to become excited about the value of knowing a foreign language in their own lives, and, subsequently, take necessary action. Hence, clarifying the vision of learners' ideal L2 self can be an effective motivational strategy. This strategy is called *vision enhancement*.

Dörnyei and Kubanyiova (2014) proposed seven ways to enhance learners' vision of the ideal L2 self (i.e., *creating language learners' vision, strengthening the vision through imaginary enhancement, substantiating the vision by making it plausible, transforming the vision into action, keeping the vision alive,* and *counterbalancing the vision by considering failure*), and introduced multiple ideas to realize them. Moreover, recently, some empirical studies showed that it is possible to strengthen learners' ideal L2 self through interventions (e.g., Chan, 2014; Mackay, 2019). For instance, Mackay (2019) conducted English classes incorporating vision enhancement strategies, and successfully improved learners' ideal L2 self.

2.4.3 The ideal L2 self and extrinsic motivation

As discussed in 2.4.1, the connection between the L2MSS and Gardner's framework has been investigated in several previous studies. Further, the relationship between the L2MSS and SDT has also been considered. As Dörnyei (2009) pointed out, the ought-to L2 self appears to be linked to EM with weak self-determination (i.e., external regulation and introjected regulation), and the ideal L2 self appears to be linked to SDEM (i.e., identified regulation and integrated regulation). Needless to say, EM is not exactly the same as the ideal self and the ought-to self. For example, while SDEM concerns the importance of the learning activity to becoming the ideal self in the future, the ideal L2 self concerns how vivid and detailed the self-image is.

McEown et al. (2014) showed that the ideal L2 self and SDEM had different advantages. For instance, the ideal L2 self predicted *engagement*, *anxiety*, and *intention to continue to learn the language* better, while integrated regulation predicted *self-evaluation* better. However, at the same time, they statistically demonstrated the similarities between SDEM and the ideal L2 self, and less self-determined forms of EM and the ought-to L2 self.

2.5 Specific Types of L2 Motivation

2.5.1 The significance of researching specific types of L2 motivation

The type of motivation the present study focuses on is vocabulary learning motivation (VLM) (see Chapter 1). VLM concerns motivation specific to vocabulary learning, so it can be called a specific type of L2 motivation. This section reviews previous studies on specific types of motivation including VLM and discusses the significance of investigating them.

According to Dörnyei and Ushioda (2011), motivation is responsible for *why* people do something, *how long* they are willing to sustain the activity, and *how hard* they are going to pursue it. Among the three, SDT mainly concerns the *why* aspect of motivation.

The main reason many researchers and practitioners have been interested in why aspect of motivation is that it affects learners' English learning behaviors and their achievements. For example, it can be predicted that when a learner is studying English because s/he feels English learning is exciting, s/he would study English eagerly and improve his/her English proficiency efficiently. On the other hand, when s/he is studying English because her/his parents tell him to study it, his/her engagement would be lower and the development of her/his English proficiency would be slower. As

discussed earlier, from the SDT perspective, it was revealed that learners with strong IM (e.g., “I am studying English because it is enjoyable.”) and SDEM (e.g., “I am studying English, because I seriously hope to be a pilot and achieving the goal requires high English proficiency”) tend to learn in a self-regulated way (Zimmerman & Schunk, 2007). Consequently, they are more likely to reach a high level of achievement.

Nevertheless, the relationship between motivation and achievement is not straightforward (Dörnyei & Ushioda, 2011). There are English learners who seem to be motivated, but cannot develop their English proficiency effectively. There could be many possible reasons for this, such as learners’ low aptitude and limited learning opportunities. Among them, unbalanced English learning seems to be one significant reason. Nation and Macalister (2010) claimed that L2 learners should spend their learning time on meaning-focused input, meaning-focused output, language-focused learning, and fluency development in a balanced manner. However, not all learners follow the principle. Most English teachers have probably met at least one student who likes speaking English and seems to practice speaking eagerly but is not interested in reading and grammar. English teachers may describe the student as a motivated learner, because s/he participates in communication activities in class eagerly and spends his/her

time practicing English. An SDT questionnaire may also deem her/him as a motivated learner, since s/he would answer that s/he is enjoying learning English. However, such a student could fail at gaining high English proficiency, because s/he might not be receiving a sufficient amount of meaning-focused input or doing language-focused learning seriously. On the other hand, in Japan, there seems to be many students who are only motivated to gain vocabulary and grammar knowledge and improve reading and listening skills, because university entrance examinations often do not examine their English speaking and writing skills.

The above examples imply that there are learners who are strongly motivated to study certain aspects of English, but are not motivated to study the other aspects. Though few studies (e.g., Kim, 2011) even mention this issue, assuming its existence is not unreasonable. As discussed at the beginning of this section, the significance of researching the why aspects of motivation are that it affects English learning behavior and achievement. If it were not related to learning behavior and achievement, considering it in the field of second language acquisition (SLA) would be almost meaningless (You & Dörnyei, 2014).

If so, investigating specific forms of motivation seems to be beneficial, because it could predict certain aspects of L2 learning behaviors more accurately than general L2

learning motivation. It would not be reasonable to presume that enhancing learners' general L2 learning motivation always motivates them to study all aspects of the target language, including speaking, listening reading, writing, grammar, vocabulary, and pragmatics. Rather, it appears more persuasive to hypothesize that motivation can be divided into several forms of specific motivation, like speaking motivation and grammar learning motivation, and they affect the corresponding learning behavior more strongly than general L2 motivation.

For this reason, researching specific forms of L2 learning motivation as well as general L2 learning motivation is important. Nevertheless, the majority of motivation research has dealt with motivation on a general level (Hiromori et al., 2012), and motivation on a specific level has not received much attention.

2.5.2 An example of specific-level motivation research: Motivation for extensive reading

Although the number of previous studies on specific-level L2 motivation is limited, research on motivation for extensive reading is a relatively well-researched area. In order to further discuss the significances of researching L2 motivation on a

specific level, this section introduces some of the studies investigating L2 learners' motivation for extensive reading.

It has been revealed that extensive reading is beneficial for developing L2 proficiency (Takase, 2010). Thus, motivating learners to work on extensive reading is crucial, and several studies explored how to enhance learners' motivation for extensive reading, and suggested some motivational strategies. For instance, 1) encouraging learners to choose interesting and comprehensible books (Kirchhoff, 2013; Nishino, 2007; Takase, 2008), 2) providing L1 marginal glosses to facilitate their understanding of the books and keep their motivation high (Nishino, 2007), 3) facilitating quiet and relaxing reading environments (Kirchhoff, 2013), 4) providing teacher role models who read books with their learners (Day & Bamford, 2002; Takase, 2010), 5) using books that do not have an L1 translated version (Nishino, 2007), 6) giving learners the freedom to choose what to read (Day & Bamford, 2002; Takase, 2007), and 7) letting learners discuss their books with peers (Takase, 2008; Protacio, 2012) were suggested as effective strategies to increase learners' motivation for extensive reading.

The suggestions above appear valuable to teachers hoping to motivate their students for extensive reading. Such concrete suggestions would not be provided if previous studies only focused on general L2 motivation. Moreover, they can be helpful

for learners as well. Extensive reading often becomes homework rather than an in-class activity, so learners need to motivate themselves to read English books. As Ushioda (2008) stated, learning to control one's own motivation is important for L2 learners. If a learner knows how to boost their motivation for extensive reading, s/he would be more likely to control her/his reading motivation of L2 books. For instance, a learner who learned those strategies could try to choose interesting and comprehensible books, read books in a quiet and relaxing place, and find an opportunity to talk about the books with a friend in order to stimulate his/her own extensive reading motivation.

As the findings of extensive reading motivation research demonstrate, researching specific types of L2 motivation appears to be valuable for both teachers and learners. If so, researching VLM should be also valuable. Nevertheless, as mentioned earlier in the previous chapter, the number of studies on that topic is scarce.

2.5.3 Previous studies on VLM

Despite the strong interest in motivation among L2 researchers, the number of previous studies which examined motivation's role in vocabulary learning is limited (Zhang et al., 2017). Nevertheless, there are a few notable studies on this topic (e.g., Laufer & Hulstijn, 2001; Tanaka, 2017; Tseng et al., 2006; Tseng & Schmitt, 2008;

Zhang et al., 2017; Zheng, 2012). One of them is Laufer and Hulstijn (2001) which proposed *the involvement load hypothesis*. In this theory, *need*, *search*, and *evaluation* are viewed as the three key components to determining the effectiveness of vocabulary learning tasks. Need means the requirement for a linguistic feature in order to achieve some desired task, search refers to the attempt to find required vocabulary information, and evaluation is the comparison of word, or information about a word, with the context of use to see if it fits or is the best choice (Schmitt, 2010). The importance of the three in terms of vocabulary learning was confirmed by the following empirical studies (e.g., Hulstijn & Laufer, 2001; Jing & Jianbin, 2009).

Among the three components, need is particularly related to motivation. In fact, need seems to be a part of EM in SDT. Until the involvement load hypothesis was proposed, few researchers had discussed vocabulary learning from the perspective of learners' motivation. In this sense, Laufer and Hulstijn (2001) is a significant study. Nonetheless, it is obvious that the theory pays attention to only a small part of VLM.

Another influential study on VLM is Tseng and Schmitt (2008). Using a structural equation modeling, they created a cyclic model of motivated vocabulary learning consisting of six components. The first component is the *initial appraisal of vocabulary learning experience*. It is conceptualized as the initial motivational level of

vocabulary learning. In Tseng and Schmitt (2008), it consists of *vocabulary learning anxiety*, *vocabulary learning attitude*, and *vocabulary learning self-efficacy*.

The next stage is *self-regulating capacity in vocabulary learning*, which includes *commitment control*, *metacognitive control*, *satiation control*, *emotion control*, and *environment control* (see 2.6.2 for discussion about *self-regulation*). The model shows that if a learner makes a positive appraisal of her/his vocabulary learning experience (i.e., low anxiety, positive attitude, and high self-efficacy), the learner is more likely to study vocabulary in a self-regulated manner (i.e., controlling their commitment, metacognition, satiation, emotion, and environment in vocabulary learning properly).

Self-regulating capacity in vocabulary learning affects the use of vocabulary learning strategies. In the model, the strategies are divided into two components: *strategic vocabulary learning involvement* and *mastery of vocabulary learning tactics*. In the model, the term "learning tactics" is used instead of "learning strategies" in order to emphasize that the key to being a good vocabulary learner is not what vocabulary learning strategies the learner uses but

her/his internal proactiveness (see 2.6.1). Nevertheless, as Schmitt (2010) stated, learning tactics and learning strategies are essentially interchangeable terms.

The former component, strategic vocabulary learning involvement, refers to the quantity dimension, while the latter, mastery of vocabulary learning tactics, concerns the quality dimension of vocabulary learning. Traditionally, researchers regarded learners using many learning strategies as competent strategy users. However, current studies have revealed that the quality of strategy use is essential (Tseng et al., 2006). Thus, the model pays attention to not only the quantity but also the quality of learners' vocabulary learning strategy use. It is assumed that strategic vocabulary learning involvement affects mastery of vocabulary learning tactics, because learners who are frequently involved in vocabulary learning and have a lot of experiences with it (i.e., quantity) are likely to use vocabulary learning strategies in a highly qualified manner (see 2.6.1 and 2.6.4 for more discussion).

The fifth component is *vocabulary knowledge*. Whether learners can gain vocabulary knowledge is mainly up to the effectiveness of their vocabulary learning strategy use, so the model presumes that *mastery of vocabulary learning tactics* affects vocabulary knowledge.

The final stage is *postappraisal of vocabulary learning tactics*, which is the period of self-reflection on learners' own vocabulary learning processes. The self-reflection is affected by whether the learners could successfully acquire vocabulary, so vocabulary knowledge and postappraisal of vocabulary learning tactics are connected in the model. Whether learners reflect on their vocabulary learning process positively or not influences their vocabulary learning anxiety, vocabulary learning attitude, and vocabulary learning self-efficacy. Thus, postappraisal of vocabulary learning tactics is connected with an initial appraisal of vocabulary learning experience.

In the present study, vocabulary learning that progresses following the positive cycle of Tseng and Schmitt's (2008) model is called successful motivated vocabulary learning. Therefore, learners with characteristics of having, for example, high self-regulating capacity in vocabulary learning, and deep strategic vocabulary learning involvement are seen as learners who do successful motivated vocabulary learning.

Among the six components in Tseng and Schmitt's (2008) model, self-regulating capacity in vocabulary learning seems to be the most relevant to VLM. In fact, in survey questions for it, there were many items that relate to motivation

(see Table 2-3). Therefore, the model seems to show that VLM plays a crucial role in vocabulary learning.

Table 2-3

Question items that are relevant to motivation in Tseng and Schmitt (2008: 397)

Sub-components	Question items
Commitment control	When learning vocabulary, I persist until I reach the goals that I make for myself.
Metacognitive control	When learning vocabulary, I think the methods of controlling my concentration are effective. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.
Satiation control	During the process of learning vocabulary, I feel satisfied with the ways I eliminate boredom. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.
Emotion control	When I feel stressed about vocabulary learning, I simply want to give up.

Another significance of Tseng and Schmitt (2008) as VLM research is that they indicated the importance of controlling one's own motivation. Their model does not pay attention to the strength of learners' motivation. Rather, they examined whether the learners attempted to control their own motivation using questions of self-regulating capacity in vocabulary learning, and showed that controlling their own motivation is essential to be a good vocabulary learner. In other words, the capacity to control one's

own VLM is indispensable for successful motivated vocabulary learning. This finding accords with Ushioda's (2008) argument that it is important for language learners to have the ability to stimulate their own motivation and push themselves to study diligently.

As reviewed above, Tseng and Schmitt (2008) provided meaningful suggestions in VLM research. Nevertheless, as they admitted, the model is not comprehensive. One limitation is that the model assumes anxiety, attitude, and self-efficacy are the only factors that affect self-regulating capacity in vocabulary learning. However, there could be more factors that affect it. For example, Zimmerman and Schunk (2007) argued that learners with high IM are usually willing to learn in a self-regulated way. Thus, IM may also play an important role in vocabulary learning.

There are a few studies that discussed vocabulary learning from the perspectives of SDT (e.g., Tanaka, 2017; Zhang et al., 2017). For example, inviting 107 Chinese high school students as participants, Zhang et al. (2017) statistically investigated the relationships among IM and EM for vocabulary learning, vocabulary learning strategy use, and vocabulary knowledge. As a consequence, they discovered that both IM and EM affected strategy use. IM

affected vocabulary knowledge as well, whereas EM affected vocabulary knowledge only when strategy use was mediated.

2.5.4 Topics about VLM that need further research

Even though Zhang et al. (2017) investigated VLM from a SDT perspective and provided meaningful suggestions, it does not mean that further study is unnecessary. Firstly, Zhang et al.'s (2017) results were findings in one context (i.e., a high school in China). Therefore, it is necessary to examine whether the significance of IM and EM in vocabulary learning are confirmed in other contexts, too.

In addition, Zhang et al. (2017) as well as other VLM research did not discuss how to enhance learners' VLM sufficiently. Though they stated that "it is important for educators to keep encouraging students to see vocabulary learning as an enjoyable process, in order to increase their intrinsic motivation for lifelong language learning" (p.15), they did not suggest specific motivational strategies to realize it. Even though some previous studies conducted motivation interventions for L2 learners, investigated the effects, and suggested motivational strategies (e.g., Alrabai, 2016; Dörnyei, 2001; Guilloteaux & Dörnyei, 2008; Lee et al., 2019; Sugita & Takeuchi, 2010), motivational strategies that specifically target VLM have not been fully developed.

2.6 Learning Strategies

2.6.1 Introduction to learning strategies

In order to investigate how to increase learners' VLM, it is indispensable to consider how they study vocabulary. In other words, it is necessary to consider *language learning strategies.* Language learning strategy, which is also called *language learner strategy*, is one of the most well-researched individual difference factors in SLA research. Since the importance of researching good L2 learners was emphasized in the 1970s (e.g., Rubin, 1975), a number of studies on learning strategies have been conducted and provided valuable insights and suggestions. For instance, as discussed in 2.6.3, research on learning strategy training has had a significant influence over L2 teaching methodology (Dörnyei & Ryan, 2015).

Though language learning strategies are common concepts in SLA now, the controversy over the definition still continues. Until today, a number of definitions have been suggested (e.g., Cohen, 1998; Griffiths, 2008; O'Malley & Chamot, 1990; Oxford, 1990; 2017). For instance, Oxford (1990) defined learning strategies as "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, and more transferrable to new situations" (p.8). Griffiths (2008) defined them as "activities consciously chosen

by learners for the purpose of regulating their own language learning" (p. 87). However, despite these attempts, the vague definitions of learning strategies have been often criticized (e.g., Dörnyei & Ryan, 2015; Tseng et al., 2006).

Recently, Oxford (2017) analyzed 33 learning strategy definitions in previous studies using the grounded theory approach and suggested a new definition as follows.

> "Strategies are complex, dynamic thoughts and actions, selected and used by learners with some degree of consciousness in specific contexts in order to regulate multiple aspects of themselves (such as cognitive, emotional, and social) for the purposes of (a) accomplishing language tasks, (b) improving language performance or use, and/or (c) enhancing long-term proficiency" (p. 48).

Furthermore, she supplemented her definitions by adding some characteristics of learning strategies, such as "Learners often use strategies flexibly and creatively; combine them in various ways" (p.48) and "Strategies are teachable" (p.48). Though this definition lacks simplicity, the problem of vagueness seems to be solved to a certain extent.

There are several ways to classify learning strategies (Cohen, 2018). One of the most common classifications is by functions (e.g., O'Malley & Chamot, 1990; Oxford,

1990). O'Malley and Chamot (1990) classified learning strategies into three types. The first type is *cognitive strategies*. They involve "the manipulation or transformation of the learning materials and input" (Dörnyei & Ryan, 2015, p.149). They are mainly used for enhancing comprehension, acquisition, and retention. For example, inferring, summarizing, note-taking, and using images are typical cognitive strategies. The second type is *social/ affective strategies*. Social strategies are "interpersonal behaviors aimed at increasing the amount of L2 communication and practice the learner undertakes" (Dörnyei & Ryan, 2015, p.149). Asking questions and cooperating with peers are common examples of social strategies. Affective strategies involve "taking control of the emotional (affective) conditions and experience that shape one's subjective involvement in learning" (Dörnyei & Ryan, 2015, p.149). *Self-motivating strategies*, which are defined as "ways for the learners to motivate themselves and thereby sustain the action when initial motivation is flagging" (Dörnyei & Ushioda, 2021, p.123), and anxiety coping strategies, which are used to control their own anxiety, are examples of affective strategies. The third type is metacognitive strategies. They are strategies to supervise learning and language use. For instance, planning, monitoring, and evaluating are usually classified into metacognitive strategies

(Cohen, 2018). They play a role as a conductor: they let the learner figure out when, where, and how s/he should use cognitive and social/ affective strategies (Ozeki, 2010). In other words, even if learners know many kinds of cognitive and social/ affective strategies, they cannot use them successfully unless they are effective metacognitive strategy users. In fact, it has been shown that even if new cognitive strategies are taught in class, learners with weak metacognition cannot use them autonomously after class and tend to forget them easily (Oxford, 2017). As Ozeki (2010) stated, metacognitive strategies are indispensable to be an autonomous learner, who has "the capacity to take charge of one's learning" (Benson, 2011, p.10).

One common controversy about learning strategy research is how to investigate learners' learning strategy use. For instance, the validity of *the Strategy Inventory for Language Learning* (SILL: Oxford, 1990), which is a measure instrument used in many early L2 learning strategy studies, has been questioned by several researchers. The SILL inquires about how often respondents use each of the 50 learning strategies and assesses their learning strategy use, based on the assumption that the more often they use learning strategies, the better learners they are. However, it was revealed that learners who use various learning strategies frequently are not always superior to those who use fewer kinds of learning strategies or use them less frequently (Ehrmam et al., 2003).

Thus, it is now believed that how well learners use learning strategies is more important than how often they use learning strategies (Mizumoto, 2017). This is the main reason why Tseng and Schmitt's (2008) motivated vocabulary learning model includes not only the quantity aspect of learning strategy use (strategic vocabulary learning involvement) but also the quality aspect of it (mastery of vocabulary learning tactics). Considering these findings, nowadays, most researchers seem to agree that it is important for learners to be internally proactive in choosing to use and in adapting learning techniques creatively to promote their L2 acquisition (Dörnyei & Ryan, 2015). For instance, Schmitt (2010) argued that it is essential for learners to understand how to learn best and how to be proactive in pursuing methods of learning that are effective for themselves.

2.6.2 Learning strategies and self-regulation

One term that is often discussed with learning strategies is *self-regulation*. Self-regulation refers to "the control that students have over their cognition, behaviour, emotions and motivation through the use of personal strategies to achieve the goals they have established" (Panadero & Alonso-Tapia, 2014, p.450). In 2005, Dörnyei presented

his controversial view on learning strategies and self-regulation. Firstly, he pointed out that the vague definition of learning strategies makes it difficult to distinguish an ordinary learning activity from a strategic learning activity. Then, he stated that the most common way to distinguish between them is to see whether learning is done based on learners' purposeful effort to select appropriate learning strategies. He argued that, if it is the way to decide whether the learning is strategic or not, learning strategies can only be defined relative to a particular user, and such concept cannot be utilized at the rigorous scientific level. For this reason, he claimed that researchers had shifted their interest and focus from the *product* (learning strategies) to the internal *process* for doing appropriate learning (self-regulation).

However, this argument requires careful interpretation. Firstly, learning strategies include not only the product but also the process. It seems true that cognitive strategies are usually products (e.g., inferring, summarizing, note-taking, using images). However, metacognitive strategies and affective strategies can be regarded as process, because the former is used to *self-regulate* learning (Ozeki, 2010), and the latter is used to *self-regulate* emotion to achieve a certain goal. In fact, Oxford (2017) stated that many of the processes of self-regulation can be viewed as learning strategies or sets of learning

strategies. Thus learning strategy researchers, as well as self-regulation researchers, are interested in process.

Secondly, even if researchers conduct studies based on a self-regulation framework, they may still need to pay attention to product (learning strategies). Panadero and Alonso-Tapia's (2014) definition (see above) shows that self-regulation is achieved through using learning strategies. As Griffiths' (2008) remarks below indicate, research on self-regulated learners could involve an examination of their learning strategy use.

> "If the term self-regulation is to be useful in any practical sense, the next question must surely be: "What do learners do in order to regulate their own learning?" In other words: "What are their strategies?"" (p.85).

Therefore, it seems unreasonable to conclude that researchers lost their interest in learning strategies.

Moreover, though there might be researchers who avoided using learning strategies as their research framework, few of them would deny the value of learning strategies in education. For example, if a teacher hopes to enhance learners' self-regulation in vocabulary learning, it would be necessary to teach some examples of

vocabulary learning strategies (product). In fact, even Dörnyei (2005) did not deny the effectiveness of strategy training (see 2.6.3).

Although Dörnyei's (2005) argument that process can be more important than product seems to be accepted by most researchers, it does not necessarily mean that all researchers lost their interests in learning strategies (Oxford, 2017). His argument largely came from the ambiguity of their definition, but the problem is gradually being resolved (see 2.6.1). In the 2015 version of his book (Dörnyei & Ryan, 2015), Dörnyei was less critical of learning strategies, stating that "strategies appear to sit much more comfortably than they did a decade ago, and therefore the question of learning strategies is an area that continues to demand our attention" (p.142).

2.6.3 Strategy training

Applying findings of learning strategy research, many practitioners have attempted to improve L2 learners' strategy use in order to help them become autonomous learners. This intervention is called *strategy training* or *strategy instruction*. For example, Mizumoto and Takeuchi (2009) taught English learners some vocabulary learning strategies such as input-seeking, oral rehearsal, and association, and surveyed the effectiveness of the instruction. Consequently, it was indicated that the

participants learned to use some new vocabulary learning strategies. Rasekh and Ranjbary (2003) and Wakamoto and Kitao (2013) also conducted vocabulary learning strategy trainings and reported that they were effective. Matsumoto et al. (2013) taught reading strategies such as identifying main ideas, summarizing, making inferences, and utilizing organization, and improved learners' strategy use. Nakatani (2010) showed that teaching *response for maintenance strategy*, which is one type of communication strategies, could improve learners' speaking performance.

Plonsky (2019) conducted a meta-analysis of 77 previous strategy training studies to investigate their effectiveness, and found that the overall weighted mean effect size was d = .66. This result demonstrates that implementing strategy training can have a positive influence on learners' strategy use and performances.

Moreover, Matsumoto et al. (2013) reported that learning strategy training could increase learners' IM. Cohen (2007) claimed that if strategy training is conducted successfully and learners can learn to complete a task more effectively than before, they may work on the task more enjoyably. The core of IM is enjoyment, so it is understandable that successful strategy training could enhance learners' IM. On the other hand, Mizumoto and Takeuchi's (2009) vocabulary learning strategy training did not increase learners' IM significantly. It is presumably because the IM scale used in

their study examined IM for general English learning. Vocabulary learning is just one part of English learning, so it can be difficult to significantly increase learners' IM for English learning with only a vocabulary learning strategy instruction. If a scale of IM for vocabulary learning (e.g., Tanaka, 2016; Zhang et al., 2017) had been utilized, a significant increase might have been found.

2.6.4 Tips to conduct successful strategy training

Plonsky (2019) pointed out that a common understanding of how to design and carry out strategy training has been gradually established among researchers and practitioners, and it helps them design successful strategy training programs. One principle that many strategy training studies have referred to is *the Cognitive Academic Language Learning Approach (CALLA) Model* (Chamot, 2008; Chamot & El-Dinary, 1999). This model consists of five stages; *preparation*, *presentation*, *practice*, *self-evaluation*, and *expansion* (see Table 2-4 for more detail). Ozeki (2010) stated that it has three characteristics: 1) learning strategies are explicitly taught, 2) not only letting learners practice a new strategy but also stimulating their metacognition is seen as essential, and 3) trying to make learners autonomous by gradually decreasing teacher's support as the stages progress. According to Gu (2019), it is the most common model

for strategy training at the present, and various training programs following the model have been proposed and conducted in second language education (e.g., JACET Learning Strategy Special Interest Group, 2006; Nguyen & Gu, 2013).

Table 2-4

The basic sequence of the CALLA Model (Chamot, 2008)

1. Preparation	Teacher identifies students' current learning strategies for familiar tasks.
2. Presentation	Teacher models, names, explains new strategy; asks students if and how they have used it.
3. Practice	Students practice new strategy; in subsequent strategy practice, teacher fades reminders to encourage independent strategy use.
4. Self-evaluation	Students evaluate their own strategy use immediately after practice.
5. Expansion	Students transfer strategies to new tasks, combine strategies into clusters, develop repertoire of preferred strategies.

Note. The model is recursive: teachers and students always have the option of revisiting prior instructional phases as needed.

Another tip for successful strategy training is to let learners practice choosing and developing learning strategies by themselves. Cohen (2018) stated that, in effective learning strategy training, "students arrive at their own strategies with teacher support, but without the teacher feeding them strategies... This provides greater credibility for students than if strategies are supplied by

teachers" (p.42). Suitable strategies vary according to each learner's individual difference factors, such as age, proficiency level, cultural and educational background, motivation level, cognitive/ learning style preferences, and prior experience (Cohen, 2018; Oxford, 2017). Therefore, it is essential for learners to understand how to learn best and how to be proactive in pursuing methods of learning that are effective for themselves (Schmitt, 2010). These claims seem supported by Tseng and Schmitt (2008). One of the components in their motivated vocabulary learning model is strategic vocabulary learning involvement. As seen in the question items (see Table 2-5), it mainly examines how much effort the learner autonomously makes to find and improve their strategy use. This implies that letting learners practice choosing and developing strategies could help them do successful motivated vocabulary learning.

In order to enable learners to find learning strategies that are suitable for them, they need to understand their own characteristics as language learners. Thus, raising awareness of their *learning styles* is often included in strategy training (Dörnyei & Ryan, 2015). According to Kinsella (1995), learning styles are "natural, habitual, and preferred ways of absorbing, processing, and retaining new information and skills" (p.49). For example, in psychologically-based learning styles, which is one of the

Table 2-5

Question items for strategic vocabulary learning involvement (Tseng & Schmitt, 2008, pp. 397-398)

Sub-components	Question items
Self-initiating behaviors of the newly-learned vocabulary learning tactics	I check the progress I make when using a new vocabulary learning method. I try to improve the newly learned methods that I try out.
Self-activating behaviors of vocabulary learning tactics	I try to find new vocabulary learning methods. I try to think about different ways to learn new words.
Self-experimenting behaviors of vocabulary learning tactics	I try out vocabulary learning methods that are different from those taught by my English teacher. I try to replace inappropriate vocabulary learning methods with new ones.
Self-improving behaviors of vocabulary learning tactics	I try to improve the vocabulary learning methods that I try out. Once I realize that my current vocabulary learning method is not good enough, I try to find a better one.

most common learning style families in SLA research, learners are classified into *visual learners* (learners who prefer learning L2 from visual information), *auditory learners* (learners who prefer learning L2 through listening and communication activities), and *kinesthetic/ tactile learners* (learners who prefer learning L2 through doing projects, working with objects, and moving around). It is pointed out that, through understanding their learning style, learners can consider ways of L2 learning that is suitable for themselves. For example, Tight (2010) indicated that learners who matched their

learning styles (visual, auditory, kinesthetic/ tactile) to a type of vocabulary learning strategies were more likely to memorize the target words than those who did not match them. Though there are also some counterarguments that regard learning styles as problematic concepts (e.g., Lethaby & Mayne, 2020), activities to raise learners' awareness of their learning styles have been implemented in many L2 classrooms, usually using a survey such as Cohen et al.'s (2002) *Learning Style Survey* (Dörnyei & Ryan, 2015).

2.6.5 Topics about strategy training that need further research

A topic that needs further investigation about strategy training is the significances of incorporating discussions among learners. Past strategy trainings tended to be teacher-centered. As seen in Table 2-4, the CALLA model has few stages in which learners can freely discuss learning strategy use with other learners.

Harris (2019) pointed out that adding pair and group collaboration to the CALLA model could make the practice more fruitful. One reason why discussion should be included in strategy training is that it can be helpful to develop learning strategies. It is often pointed out that autonomy is developed through social interactions (cf. *Zone of Proximal Development*: Vygotsky, 1978). Oxford (2017) stated that learners can

develop their learning strategy use from seeing models that the more capable other employs during dialogues.

Though "the more capable other" is typically a teacher or parents, dialogues with peers can also help learners become autonomous learning strategy users (Little, Dam, & Legenhausen, 2017). Rather, dialogues with peers may be even more effective in some cases. According to *near peer role modeling* (Murphey & Arao, 2001), when learners find that their peers who have many similarities with them (e.g., age, proficiency level, learning environments) have successfully worked on a task, they become motivated because they can assume the task is possible for them to do as well. Thus, if learners heard that their peers use a learning strategy well and find it helpful during a discussion with them, the learners would be willing to try the learning strategy.

In addition, sharing own learning strategies with each other through discussion can be rewarding. According to Dörnyei and Kubanyiova (2014), one of the most inspiring and instructive parts of strategy training is the sharing session, where learners share their own strategies with each other. Wang (2015) also claimed that strategy-sharing activities are effective, showing a case in which an English learner developed her vocabulary learning strategy by hearing her

peer's idea. Moreover, Dörnyei (2005) claimed that personal learning strategies are often very amusing and therefore students usually enjoy discussing them. Thus, discussing each other's learning strategies would provide meaningful and enjoyable learning opportunities.

Another reason why discussions can be helpful in strategy training is that it enables learners to be creative (Wegerif, 2006) and gain ideas that could not be developed alone (Yashima & Kubota, 2012). Being creative is important to develop one's own learning strategy use. Dörnyei and Ryan (2015) stated that it is important for learners to be internally proactive in adapting learning techniques *creatively* to promote their L2 acquisition. In order to achieve a goal, learners often need to combine several learning strategies (Cohen, 2018). Creativity is needed in that process. Moreover, if the instructor hopes to let learners develop learning strategies by themselves rather than teaching them learning strategies, they have to be creative enough to think of effective learning strategies.

Though few previous strategy trainings emphasized discussions, Butler (2015) showed that discussions could help learners develop learning strategies creatively. In her study, Japanese elementary school students worked on a task of creating fun and beneficial English vocabulary learning games in class. A large portion of the class hours

were spent on group discussions and learners' presentations rather than the teacher's lectures. The students discussed what would make games fun (game elements) and what kinds of learning strategies would be available to memorize new vocabulary effectively (vocabulary learning elements), designed their own games in groups through discussions, presented their games, and assessed each other. As a result, the students identified a variety of game elements and vocabulary learning elements, and designed attractive games using their astonishing creativity. The main purpose of her study was not to develop learners' learning strategy use but to discover effective vocabulary teaching/ learning methods for young learners and to uncover their creativity. Thus, it did not show how effective her practice was at improving their strategy use or whether it might work for older learners. Presumably, however, such practices may be an effective strategy training for L2 learners of all ages, because it seems to have the potential to stimulate learners' creativity.

Another topic that needs more research is the effect of affective strategy training. The importance of affective strategy use has been pointed out for many years. For instance, reviewing various previous studies on psychology, Sansone and Thoman (2005) concluded that when an uninteresting but valuable activity has to be done, it is effective to use interest-enhancing strategies and regulate own interest level. Previous

studies on self-regulation suggested that self-regulated learners often adapt affective strategies (Cleary, 2018; Oxford, 2017).

Miele and Scholer (2018) presented 16 samples of self-motivating strategies and discussed what motivation component (e.g., *self-efficacy, intrinsic value, self-relevance value*) each strategy would increase. For example, they suggested that *varying means or increasing challenge to make task more fun/enjoyable* and *approaching task like a game* can enhance own perceived intrinsic value toward the task. Oxford (2017) called metastrategies for regulating the motivational domain *metamotivational strategies* and introduced four strategy sets for them: paying attention to motivation (e.g., *imagining a positive, desirable, realistic ideal self and ways for that self to emerge*), planning for motivation (e.g., *setting mastery goals*), organizing learning and obtaining resources for motivation (e.g., *adding something motivating to the environment*), and monitoring and evaluating for motivation (e.g., *predicting which parts of the new lesson will be motivating for learning and which will not*). She also presented five strategy sets as motivational strategies: self-consequating (e.g., *providing oneself a reward or praise for progress or achievement*), using positive self-talk and positive self-image (e.g., *using self-talk about reasons for achieving the goals*), using defensive pessimism (e.g., *telling oneself that s/he is not ready*), enhancing learning

(e.g., *joining with other people*), and controlling attribution (e.g., *avoiding blaming academic setbacks on uncontrollable internal factors*).

Also, there are some studies that developed questionnaires to examine learners' affective strategy use. For instance, Tang and Toyama (2019) created a questionnaire of motivational regulation strategy use that consists of 18 question items, which are categorized into one of the five strategy types (e.g., *interest enhancement strategies, self-efficacy enhancement strategies*).

Despite the advance of affective strategy research, research on how to teach affective strategies is scarce. Bielak and Mystkowska-Wiertelak (2018) pointed out that the number of existing studies on affective strategy training is much fewer than studies on training of learning strategies for skill performance, such as communication strategy training and reading strategy training. As Tseng and Schmitt's (2008) motivated vocabulary learning model indicates, it is essential for L2 learners to control their own motivation. Therefore, it appears meaningful to research and design strategy training that can help learners develop self-motivating strategies.

Moreover, research methods of strategy training in past studies have room for further improvement. For example, Plonsky (2019) pointed out that because most of the

previous studies on strategy training did not conduct delayed posttest, the persisting effects have not been sufficiently discussed. Gu (2019) claimed that while many studies focused on a measure of improvement in language learning, not many studies examined learners' feelings after the training. In addition, Plonsky (2019) claimed that some research papers did not reveal detailed explanations of treatment procedures, so readers might not gain sufficient information to apply the practices to their own classes.

2.6.6 Vocabulary learning strategies

Learning strategies can be classified by skills such as listening, speaking, reading, writing, vocabulary, grammar, and translation strategies (Cohen, 2018). Among them, vocabulary learning strategy (VLS) is the most relevant type of learning strategy for the present study, which concerns successful motivated vocabulary learning.

VLSs refer to "teachable, dynamic thoughts and behaviors that learners consciously select and employ in specific contexts to improve their self-regulated, autonomous L2 vocabulary development for effective task performance and long-term proficiency" (Oxford, 2017: p.244). One of the main interests of VLS research has been to discover effective VLSs (e.g., Folse, 2006; Mondria, 2003). It has often been pointed out that *deep* vocabulary learning, typically learning vocabulary with context, is more

effective than *shallow* vocabulary learning like rote-memorization (e.g., Hulstijn, 1992; Wang, 2015). As Nakata (2019) pointed out, many teachers believe that vocabulary learning through extensive reading is superior to vocabulary learning with word cards, because learning vocabulary by guessing the meaning of words from the context helps the learner remember it more easily. However, Mondria (2003) showed that vocabulary learning with a vocabulary list was much more efficient than vocabulary learning through guessing the meanings from context. Moreover, in contrast to common understanding, the delayed posttest of his study revealed that the former vocabulary learning was more effective to retain vocabulary knowledge. Nation (2008) also supported the effectiveness of out-of-context vocabulary learning. He claimed that using word cards, which is a typical out-of-context vocabulary learning, is one of the most effective VLSs to memorize basic meanings of L2 words. Though vocabulary learning through making use of context seems to have some benefits, such as learning to understand how the word is actually used in context, the effect of out-of-context vocabulary learning should not be denied (Gu, 2003; Nakata, 2019; Tight, 2010).

One effective out-of-context vocabulary learning technique is to test vocabulary knowledge and retrieve the memories repeatedly. Karpicke and

Roediger (2008) asked English-speaking college students to memorize 40 Kiswahili words in different ways in order to investigate which is a better way of learning L2 vocabulary: 1) watching screens showing Kiswahili words, for instance, "*mashua*" and its meaning in L1, "*boat*" many times, and then testing their memories a few times, or 2) watching screens a few times and testing their memories by answering what "*mashua*" means, in this case, on the screen many times. The result revealed that testing was more helpful to memorize vocabulary than just watching. Nation and Webb (2011) suggested that output is crucial for vocabulary learning, and a test situation might be regarded as one method of output.

Previous studies that investigated the characteristics of good vocabulary learners' VLS use have also provided meaningful suggestions (e.g., Moir & Nation, 2002; Tseng et al., 2006; Tseng & Schmitt, 2008). For instance, Moir and Nation (2002) examined the differences between effective and ineffective English vocabulary learners who participated in a vocabulary learning program. They found that a good learner autonomously chose the words to study considering his interest and remembered various aspects of each word including meanings, formality, and context where the word is used. Additionally, he tried to use new words in speaking and writing. As a result, he found the vocabulary learning program effective, was confident about the

effectiveness of his vocabulary learning strategies, and was totally satisfied with his progress. Contrastingly, ineffective learners randomly chose words to study from the texts presented in class, remembered only one meaning of each word, and did not try to use new words. Consequently, they easily forgot the words they had studied in the program and could not learn to use the words in English communication, which made them frustrated with vocabulary learning in the program. These results indicate that effective vocabulary learners have strong motivation for developing their vocabulary, understand their own characteristics as learners, and try to use various VLSs effectively. These findings seem to accord with the results of previous studies on VLM and learning strategies which have been discussed in this chapter.

2.7 Research Questions of the Present Study

As the literature review in this chapter shows, few previous studies have researched VLM enhancement strategies, though increasing learners' VLM seems to be extremely important. Therefore, the present study attempts to develop a program that can increase English learners' VLM so that they can learn to implement successful motivated vocabulary learning.

The first step to achieving the goal is to confirm the significance of enhancing learners' VLM. For example, if most learners already have very high VLM without intervention, using VLM enhancement strategies is not needed. If VLM is strongly correlated with general L2 motivation, developing motivational strategies specifically targeting VLM would be meaningless (see 3.1 for more discussion). These possibilities need to be denied before beginning to develop a VLM enhancement program.

Moreover, it is also important to reveal factors that improve motivated learning behavior for vocabulary learning. Identifying such factors is necessary to design an effective VLM enhancement program. Though a few studies (e.g., Tanaka, 2017; Zhang et al., 2017) suggested that having high IM and EM for vocabulary learning improves motivated learning behavior for vocabulary learning, further research is needed, because it is not certain whether the results of the previous studies can be generalized in other contexts.

To sum up, the research questions (RQs) of the present study are:

1) Is enhancing English learners' VLM significant?

2) What are factors that affect English learners' motivated vocabulary learning behavior?

3) What teaching methodologies promote English learners' successful motivated vocabulary learning?

Study 1 (Chapter 3) mainly addresses research RQ 1 and 2. Study 2 (Chapter 4) considers RQ 2 further. Study 3 (Chapter 5) and Study 4 (Chapter 6) attempt to answer RQ 3.

Chapter 3

Study 1

3.1 Purposes and Research Questions of Study 1

The first purpose of Study 1 is to confirm the significance of researching motivational strategies to increase learners' vocabulary learning motivation (VLM). The main goal of this paper is to develop methodologies that specifically target VLM, which few previous studies have ever suggested. Thus, it is necessary to begin the study with considering whether the attempt can be meaningful.

In order to claim the significance of investigating VLM enhancement, the following three conditions need to be satisfied. Firstly, it has to be confirmed that learners' VLM leaves room for further improvement. If the majority of English learners already have high VLM, trying to increase it further would be almost impossible and meaningless. Second, VLM has to be independent of (i.e., is not strongly correlated with) general English learning motivation. If the correlation of the two were very strong, developing strategies specifically targeting VLM might not be valuable, because it would mean that stimulating general English learning motivation could automatically increase VLM. Third, VLM has to predict motivated learning behavior for vocabulary learning (MLB-V) significantly, and the prediction has to be stronger than general

English learning motivation's. Even if learners' VLM increased (e.g., finding vocabulary learning more enjoyable, understanding necessity of vocabulary learning), it would be almost meaningless unless their learning behavior improves, too. Thus, it is essential to confirm whether stimulating VLM can be effective in improving MLB-V.

The other purpose of Study 1 is to investigate factors that affect MLB-V. Discovering them can provide meaningful suggestions to design VLM interventions. In Study 1, it was hypothesized that intrinsic motivation for vocabulary learning (IM-V) and self-determined types of extrinsic motivation for vocabulary learning (SDEM-V) would affect it based on self-determination theory (SDT: Deci & Ryan, 1985, 2002; Ryan & Deci, 2017: see 2.3). One reason why SDT is utilized is that it is regarded as one of the most established and influential theories in SLA research (Agawa & Takeuchi, 2016b). A number of previous studies have indicated that increasing IM and SDEM improves learners' MLB (Zimmerman & Schunk, 2007), so the possibility that the hypothesis is verified seems to be high. Another reason is that several previous studies (e.g., Agawa & Takeuchi, 2017; Hiromori, 2006; Hiromori & Tanaka, 2006; Tanaka, 2010a, 2010b; Tanaka & Hiromori, 2007) have successfully increased English learners' IM by satisfying their three basic psychological needs (i.e., needs for

autonomy, competence, relatedness). Therefore, if the hypothesis is confirmed, interventions can be designed, referring to those studies.

To sum up, research questions (RQ) of Study 1 are:

1) Do English learners' IM-V and SDEM-V have room for improvement?

2) Are IM-V and SDEM-V independent of IM for general English learning (IM-G) and SDEM for general English learning (SDEM-G)?

3) Do IM-V and SDEM-V significantly predict MLB-V (i.e., Are IM-V and SDEM-V factors that affect MLB-V)? Are the predictions stronger than the predictions of IM-G and SDEM-G?

RQs 1 and 2 above correspond with RQ1 of this paper, and RQ 3 above corresponds with both RQ1 and 2 of this paper (see 2.7).

3.2 Method

3.2.1 Participants

The participants were 88 first-year university students studying English at a university in Japan. 52 of them were female, 31 were male, and the other five did not specify their gender. Their English proficiency was roughly at the upper A2 or B1 in the CEFR (Council of Europe, 2001), which is higher than average Japanese university

students' English proficiency. The department that the participants belonged to offers various English classes and study-abroad programs, and many of the students are studying English seriously to develop their communicative English ability.

3.2.2 Instrument

The author visited five English classes, explained the research purposes to the students, and asked them to answer a survey with 36 seven-point Likert scale questions (1: I don't think so at all.; 7: I strongly think so.) about motivation (see Appendix A). Some teachers of the classes were not Japanese speakers, so the survey was written partially in English so that the teachers could confirm what their students were answering. The survey inquired about not only VLM and general English learning motivation but also L2 speaking and reading motivation. This is because the strength of VLM can be discussed in comparison with other types of skill specific motivation.

In this study, vocabulary learning means memorizing and remembering new English vocabulary. Vocabulary learning is a vague term. If the survey said just "vocabulary learning," the participants might interpret the term differently, and collecting reliable data could become difficult. In order to avoid such a misunderstanding, the aforementioned definition shall be implemented for this study.

The structure of the survey is summarized with the values of Cronbach's alpha in Table 3-1. Cronbach's alpha values were higher than .70 in all factors, which supports the validity of the survey (Iino et al., 2012). The survey questions are listed in Appendix A. The questions regarding IM and SDEM were made referring to Tanaka (2016), and questions regarding MLB were made based on Aubrey (2014).

Table 3-1

The structure and validity of the survey

	General	Speaking	Reading	Vocabulary
MLB	Q.1-3 (α=.78)	Q.10-12 (α=.85)	Q.19-21 (α=.89)	Q.28-30 (α=.86)
IM	Q.4-6 (α=.94)	Q.13-15 (α=.95)	Q.22-24 (α=.92)	Q.31-33 (α=.92)
SDEM	Q.7-9 (α=.74)	Q.16-18 (α=.79)	Q.25-27 (α=.91)	Q.34-36 (α=.84)

3.2.3 Data analysis

First, the mean values and standard deviations for each question were calculated. This analysis corresponds to RQ1: whether IM-V and SDEM-V have room for further increase was considered. The values of IM and SDEM for general English learning, speaking learning, and reading learning were used for comparisons with IM-V and SDEM-V. It would be ideal if questions regarding listening and writing motivation

could be added. Nevertheless, these were not included because it would make the survey too demanding for the participants.

Second, the correlation coefficients between IM-G and IM-V, as well as the correlation between SDEM-G and SDEM-V were estimated in order to discuss whether VLM is independent of general English learning motivation. This analysis is correspondent to RQ2. Cheng et al. (1999), who investigated whether general L2 classroom anxiety and L2 writing anxiety were distinguishable, conducted a correlation analysis, found r=.65 between the two forms of anxiety, and concluded that they were independent. Thus, the current study used r=.65 as a criterion to interpret whether or not IM-V and SDEM-V are independent of IM-G and SDEM-G respectively.

To address RQ3, regression analyses were performed, setting the IM-V, SDEM-V, IM-G, and SDEM-G scores as the independent variables and the MLB-V score as the dependent variable. Through this analysis, it was examined whether IM-V and SDEM-V significantly predict MLB-V. Furthermore, the explanation rates (R^2) of IM-V and SDEM-V were compared with the ones of IM-G and SDEM-G.

The statistical analyses above were all performed using IBM SPSS Statistics.

3.3 Results and Discussion

3.3.1 RQ1: Do English learners' IM-V and SDEM-V have room for improvement?

The mean values and standard deviations are summarized in Table 3-2.

Table 3-2

Descriptive statistics

	MLB	IM	SDEM		MLB	IM	SDEM
Gen.	Q.1-3	Q.4-6	Q.7-9	Spe.	Q.10-12	Q.13-15	Q.16-18
M	4.34	5.09	5.87	*M*	4.33	4.92	6.01
SD	1.14	1.22	0.96	*SD*	1.23	1.32	0.95
Rea	Q.19-21	Q.22-24	Q.25-27	Voc.	Q.28-30	Q.31-33	Q.34-36
M	4.36	4.47	5.42	*M*	4.08	4.20	5.83
SD	1.24	1.31	1.16	*SD*	1.23	1.34	0.98

The results showed that the majority of participants did not possess very high IM-V. The mean value of IM-V was *m*=4.20 out of 7, which was lower than the values of IM-G (*m*=5.09), IM for speaking learning (*m*=4.92), and IM for reading learning (*m*=4.47). This indicates that many participants were not enjoying vocabulary learning. Therefore, it can be claimed that IM-V has room for further improvement.

On the other hand, the mean value of SDEM-V was extremely high (*m*=5.89 out of 7). The result accords with Benesse Educational Research and Development Institute (2018) and Horwitz (1999), who revealed that L2 learners generally believe vocabulary

learning is important. As these studies imply, it is easy for most learners to realize that vocabulary learning is indispensable to acquire high English proficiency. For the majority of the participants in this study, acquiring high English proficiency was an important goal. If so, it is not surprising that they already have very high SDEM-V. This result indicates that SDEM-V of the participants does not leave much room for further improvement. In other words, a motivation intervention that attempts to increase SDEM-V may not be very effective, at least for learners who already regard acquisition of high English proficiency as important to achieve their life goals.

3.3.2 RQ2: Are IM-V and SDEM-V independent of IM-G and SDEM-G?

The result of correlation analysis showed that the correlation coefficient between IM-G and IM-V was r=.46 (p<.01), which is a moderate correlation. On the other hand, the correlation coefficient between SDEM-G and SDEM-V was r=.63 (p<.01), which was seen as strong correlation. Though both values showed significant correlations, they were still lower than the criterion of the study (r=.65). Therefore, it can be concluded that IM-V was independent of IM-G, and SDEM-V was independent of SDEM-G.

3.3.3 RQ3: Do IM-V and SDEM-V significantly predict MLB-V? Are the predictions stronger than the predictions of IM-G and SDEM-G?

For the purpose of looking into how strongly IM-V and SDEM-V affect MLB-V, regression analyses were performed (see Table 3-3). Consequently, it was revealed that IM-V significantly predicted MLB-V (R^2=.17). This means that learners who enjoy vocabulary learning are likely to study vocabulary eagerly. On the other hand, IM-G did not predict MLB-V as strongly as IM-V did (R^2=.04). This result shows that stimulating IM-V can be more effective in improving MLB-V than stimulating IM-G.

Table 3-3

Results of simple regression analyses

independent variables	R^2	*r*	*B*	*t*	*p*
IM-V	.21	.43	.41	4.14	.00
IM-G	.04	.21	.21	1.98	.05
SDEM-V	.00	.05	.05	.47	.64
SDEM-G	.05	.21.	.21	2.03	.05

Note. The dependent variable is MLB-V.

Nonetheless, it was also suggested that SDEM-V did not predict MLB-V (R^2=.00) in this study. The explanation rate was even lower than SDEM-G's (R^2=.05). This is probably because the mean values of SDEM-V were very high (see 3.2.1), the standard

deviations were small, and consequently the value of R^2 became very small. This seems to be a notable finding because this case is exceptionally against an assumption of SDT that SDEM as well as IM significantly affects MLB.

3.4. Conclusion

The results indicated that researching motivational strategies to increase English learners' IM-V can be valuable for the following reasons. Firstly, the participants' IM-V was not necessarily high. In fact, it was lower than IM-G, IM for speaking learning, and IM for reading learning. Therefore, there is possibility that IM-V can be enhanced further. In addition, IM-V seems to be independent of IM-G. Hence, even if learners' IM-G can be successfully increased by an intervention, it may not increase IM-V sufficiently. Moreover, it was also shown that IM-V predicted MLB-V more strongly than IM-G did. This implies that enhancing IM-V is more likely to improve MLB-V than enhancing IM-G. These results show that, if a teacher hopes to improve learners' IM-V and MLB-V, s/he should use motivational strategies specifically targeting VLM rather than just utilizing motivational strategies that attempt to increase learners' general L2 learning motivation.

On the other hand, motivational strategies aiming to increase SDEM-V may not be very effective. Most of the participants already had high SDEM-V. In other words, most of them already recognized the importance of vocabulary learning. If so, it would be difficult to increase SDEM-V further. Moreover, the result of a regression analysis revealed that SDEM-V did not predict MLB-V, which was against the hypothesis formed based on SDT. Thus, it may be almost meaningless to try to foster SDEM-V (i.e. teaching L2 learners the importance of vocabulary learning for their goal attainment).

Finally, it should be noted that the result of this study does not necessarily deny roles of extrinsic motivation in vocabulary learning. There is the possibility that extrinsic motivation is helpful to attain a short-term vocabulary learning goal. For example, gaining reward or avoiding punishment, which are less self-determined types of extrinsic motivation, could be good reasons to study for a vocabulary test next week. In fact, as Study 3 and 4 suggest, reward can make learning for vocabulary tests exciting and enhance learners' VLM (e.g., using reward as a self-motivating strategy: see Chapter 5 and 6; Kahoot! contest: see Chapter 6). Thus, even if SDEM-V enhancement is not very effective, some types of extrinsic motivation can be helpful for short-term goal attainment.

Chapter 4

Study 2

4.1 Background

Study 1 indicated that while increasing English learners' intrinsic motivation for vocabulary learning (IM-V) may be effective in improving their motivated learning behavior for vocabulary learning (MLB-V), motivational strategies to enhance their self-determined types of extrinsic motivation for vocabulary learning (SDEM-V) may not be valuable (see Chapter 3). One possible reason why SDEM-V enhancement may not be effective is that, for learners who think having high English proficiency is necessary to attain their future goal, the importance of vocabulary learning can be easily recognized without a motivation intervention (cf. Benesse Educational Research and Development Institute, 2018; Horwitz, 1999).

Nevertheless, it does not necessarily mean that motivational strategies concerning learners' future self is meaningless. Strategies that approach learners' future self from a different angle could be effective. In order to explore such possibility, Study 2 investigates possible effectiveness of enhancing learners' *vision*.

Vision is defined as "a mental representation that occurs without the need for external sensory input" (Stopa, 2009, p.1). Dörnyei and Kubanyiova (2014) claimed

that building vision of one's own ideal L2 self is an effective way to motivate L2 learners (see 2.4). Study 2 focuses on vision of the future self who has gained superior vocabulary knowledge and utilizes it effectively (Vision-V), and it was hypothesized that Vision-V enhancement can be more effective than SDEM-V enhancement. It is because, unlike SDEM-V, the vividness of Vision-V may vary even among learners who hope to acquire high L2 proficiency for their future goal attainments. If so, it would mean that the vividness of their Vision-V still has room to improve. Considering that most previous studies on the ideal L2 self (e.g., Al-Shehri, 2009; Busse, 2013; Csizér, and Kormos, 2009; Papi, 2010; Ryan, 2009; Taguchi et al., 2009) have investigated it on a general level (i.e., future self who makes the most of sophisticated *English* proficiency) rather than a skill-specific level (e.g., future self who makes the most of sophisticated *reading* proficiency), Study 2's attempt that targets Vision-V seems to be unique and valuable.

4.2 Research Questions

The primary purpose of the current study is to verify the hypothesis that Vision-V enhancement can be more effective than SDEM-V enhancement in terms of improving

learners' MLB-V. Thus, research question (RQ) 1 is 'Can Vision-V enhancement be potentially more effective than SDEM-V enhancement?'

In addition, this study addresses three other RQs in order to examine the significance of researching and using Vision-V enhancement strategies. RQ2 is 'Does Vision-V account for MLB-V more than vision of the ideal L2 self at the level of *general* L2 use (Vision-G)?' Investigating it is extremely important because if Vision-G, which has already been investigated by various studies, predicts MLB-V as much as Vision-V does, developing motivational strategies specific to Vision-V may not be necessary. Study 1 showed that IM-V accounted for MLB-V more than IM for English learning in general. Whether Vision-V accounts for MLB-V more than Vision-G needs to be examined as well.

RQ3 is 'Is Vision-V correlated with other specific types of vision?' Although Vision-G has been investigated by many studies, more specific types of vision, such as vision of the future self who *speaks* L2 fluently and accurately in various settings (Vision-S) and who *reads* various challenging L2 passages fluently, accurately, and deeply (Vision-R), have not been studied sufficiently. Thus, it is uncertain how much specific types of vision are related to one another. If they were not correlated with one another, teachers might be unwilling to use motivational strategies specific to each type

of vision, because clarifying each type of vision by turns is too time-consuming. Instead, they would use motivational strategies to clarify Vision-G, which are probably related to every specific type of vision. On the other hand, if specific types of vision are correlated with one another, it would be reasonable for teachers to use strategies targeting a specific type of vision. They can consider what L2 motivation (e.g., reading motivation, speaking motivation, vocabulary learning motivation) of their students needs improving in particular and clarify a type of vision related to it (e.g., Vision-R, Vision-S, Vision-V), assuming that it can enhance other types of vision, too. Therefore, examining RQ3 is necessary to consider the significance of Vision-V enhancement.

RQ4 is 'How much do IM-V and Vision-V account for MLB-V?' If the significance of Vision-V enhancement is supported by the analyses for RQs1-3, the next step will be to design motivational strategies that can enhance IM-V, which was found possibly effective by Study 1, and Vision-V. Investigating RQ4 is needed to predict the effect.

4.3 Method

4.3.1 Participants

The participants were 97 English learners in a university in Japan, which is a different university from the participants' in Study 1. All participants in Study 2 were students in English classes taught by the author. They were first-year students at the time of their participation in the study and almost all of them were Japanese. Approximately 60% of the participants were female. Considering the author's observation in class and English test scores (e.g., TOEIC, IELTS) reported by some participants, most of the participants seemed to have the upper B1 or lower B2 level English proficiency in CEFR (Council of Europe, 2001). In TOEIC Listening and Reading, the scores of 550-780 are the B1 level, and 785-945 are the B2 level. In IELTS, the scores of 4.0-5.0 are the B1 level, and 5.5-6.5 are the B2 level. However, there were a few participants who had living experiences in English-speaking countries for one year or longer. They appeared to have higher-level proficiency than the lower B2. All of the participants majored in international relations and their motivation for English learning was relatively high compared to most university students in Japan. Most of them were strongly interested in gaining high English skills. Thus, it can be

assumed that the participants in this study were a similar group of English learners with those in Study 1.

The participants were informed that participation in the study was not mandatory, and the collected data would be used only for research purposes.

4.3.2 Instrument

A survey with 27 seven-point Likert scale questions was administered. It took approximately eight minutes for all the participants to complete it. The participants were not required to write their names on the survey so that they could answer the questions honestly.

The survey questions were written in English. Because the participants had at least the B1-level English proficiency, the author assumed that they would understand the English descriptions easily. Though he requested them to ask questions in Japanese if they found difficult parts in the survey, nobody asked questions.

The survey consisted of the eight parts: a) MLB-V (three questions, α=.90), b) SDEM-V (three questions, α=.71), c) Vision-V (four questions, α=.88), d) IM-V (three questions, α=.91), e) motivated learning behavior for speaking learning (MLB-S) (three questions, α=.88), f) Vision-S (four questions, α=.93), g) motivated learning behavior

for reading learning (MLB-R) (three questions, α=.90), and h) Vision-R (four questions, α=.90). Though the value of Cronbach's alpha in SDEM-V questions was a little low, .71 would be at an acceptable level (Iino et al., 2012). It would have been ideal to add questions about listening and writing as well as speaking and reading, but they were not included to prevent the survey from becoming too long.

The questions about MLB, IM, and SDEM were mostly adapted from the survey used in Study 1. Some questions were made, referring to Dörnyei and Ushioda (2011) and Tanaka (2016). The question items, mean values, and standard deviation values are presented in Appendix B.

4.3.3 Data analysis

First of all, whether all of the collected data should be used in the analysis was considered, and it was determined to exclude responses of one participant. It is mainly because the standardized residual of the responses in the multiple regression analysis (see 4.3.3.4) was -3.37. According to Field (2009), standardized residuals that are greater than ±3.29 are cause for concern because in an average sample case, such a high value is unlikely to happen by chance. Thus, the responses of 96 participants out of 97

were analyzed in the following ways. All statistical analyses were performed using IBM SPSS Statistics.

4.3.3.1 Analysis for RQ1

In order to examine whether Vision-V significantly accounts for MLB-V and the explanation rate is greater than SDEM-V's, simple regression analyses were conducted.

First, a simple regression analysis was made, setting the Vision-V score as the independent variable and the MLB-V score as the dependent variable. Busse (2013), who investigated German learners' motivation, found that correlation coefficient (r) between effort factors and the ideal L2 self ranged from .37 to.41 ($R^2 \fallingdotseq .16$) and stated that the ideal L2 self was a substantial component. Thus, R^2=.16 was used as a criterion to judge if the explanation rate in this study is sufficiently high.

Second, another simple regression analysis was made, using the SDEM-V score as the independent variable and the MLB-V score as the dependent variable. Then, the explanation rates (R^2) were compared. If the explanation rate of Vision-V is higher than that of SDEM-V, it can be indicated that fostering Vision-V is more likely to be effective than fostering SDEM-V.

In addition, mean values of Vision-V and SDEM-V questions were confirmed. It is because if these values are too high, it would be difficult to increase them further by motivational strategies.

4.3.3.2 Analysis for RQ2

To examine whether Vision-V accounts for MLB-V more than Vision-G, simple regression analyses were conducted. In this study, Vision-G is the sum of Vision-S and Vision-R. If Vision-V's explanation rate is higher than Vision-G's, it can be interpreted that giving motivational strategies which are specific to Vision-V is meaningful.

4.3.3.3 Analysis for RQ3

RQ3 is 'Is Vision-V correlated with other specific types of vision?' To answer it, the correlation coefficients between Vision-V and Vision-S, and Vision-V and Vision-R were calculated. In addition, in order to confirm that Vision-S and Vision-R account for MLB-S and MLB-R respectively at a significant level, simple regression analyses were performed.

4.3.3.4 Analysis for RQ4

A multiple regression analysis was implemented with the IM-V and Vision-V scores as the independent variables and the MLB-V score as the dependent variable. First, the correlation coefficient between the independent variables was checked to examine the possibility of multicollinearity. Then, the explanation rate was confirmed to investigate how much IM-V and Vision-V account for MLB-V.

4.4 Results and Discussion

4.4.1 RQ1: Can Vision-V enhancement be potentially more effective than SDEM-V enhancement?

The simple regression analyses revealed that Vision-V explained 19% of the variance in MLB-V (see Table 4-1). 19% can be regarded as sufficiently high, considering that it is higher than this study's criterion (16%). The result indicates that learners with vivid vision of the future self who has gained superior vocabulary knowledge and utilizes it effectively are more likely to study vocabulary eagerly than those with less vivid vision of it. Though the hypothesis that vision of the ideal L2 self affects learners' MLB has been verified mostly at the level of general L2 learning, it also appears to be valid in vocabulary learning.

Table 4-1

Result of the simple regression analysis (Vision V→ MLB-V)

Independent variable	R^2	*r*	*B*	*t*	*p*
Vision-V	.19	.43	.49	4.63	.00

Note. n = 96. The dependent variable is MLB-V.

On the other hand, it was shown that SDEM-V accounted for only 10% of the variance in MLB-V (see Table 4-2). Unlike the result of Study 1, SDEM-V significantly predicted MLB-V in this study. However, SDEM-V's R^2 value (.10) was smaller than Vision-V's (.19). Furthermore, whereas the mean value for SDEM-V questions was very high (5.99 out of 7), the value for Vision-V questions was not so high (4.54). This result indicates that Vision-V had more room to enhance than SDEM-V.

Table 4-2

Result of the simple regression analysis (SDEM-V → MLB-V)

Independent variable	R^2	*r*	*B*	*t*	*p*
SDEM-V	.10	.32	.48	3.30	.00

Note. n = 96. The dependent variable is MLB-V.

Considering these findings, it appears to be reasonable to assume that Vision-V enhancement can be potentially more effective than SDEM-V enhancement.

4.4.2 RQ2: Does Vision-V account for MLB-V more than Vision-G?

The results of regression analyses showed that while Vision-V explained 19% of the variance in MLB-V (see Table 4-1), Vision-G accounted for only 12% of it (see Table 4-3). Although the difference was not very large, it still can be concluded that Vision-V enhancement would improve MLB-V more efficiently than Vision-G enhancement. Therefore, it seems to be possible to claim that using motivational strategies which are specific to Vision-V is meaningful.

Table 4-3

Result of the simple regression analysis (Vision-G → MLB-V)

Independent variable	R^2	*r*	*B*	*t*	*p*
Vision-G	.12	.34	.19	3.50	.00

Note. n = 96. The dependent variable is MLB-V.

4.4.3 RQ3: Is Vision-V correlated with other specific types of Vision?

The correlation analyses indicated that the correlation coefficient between Vision-V and Vision-S was r=.81 (p<.01) and the one between Vision-V and Vision-R was r=.75 (p<.01). Both values were very high, which means that Vision-V enhancement may be effective for enhancing Vision-S and Vision-R, too. The simple regression analyses implied that Vision-S significantly predicted MLB-S (see Table 4-4) and Vision-R significantly predicted MLB-R (Table 4-5). Thus, enhancing Vision-V may indirectly improve MLB-S and MLB-R.

Table 4-4

Result of the simple regression analysis (Vision-S → MLB-S)

Independent variable	R^2	*r*	*B*	*t*	*p*
Vision-S	.35	.59	.54	6.99	.00

Note. n = 96. The dependent variable is MLB-S.

Table 4-5

Result of the simple regression analysis (Vision-R → MLB-R)

Independent variable	R^2	*r*	*B*	*t*	*p*
Vision-R	.15	.38	.43	3.95	.00

Note. *n* = 96. The dependent variable is MLB-R

4.4.4 RQ4: How much do IM-V and Vision-V account for MLB-V?

Firstly, in order to make certain that multicollinearity would not occur in the multiple regression analysis, the correlation coefficient between IM-V and Vision-V was confirmed. The value was r=.47, which is not high enough to suspect multicollinearity.

Then, a multiple regression analysis was performed. The results are summarized in Table 4-6.

Table 4-6

Result of the multiple regression analysis (IM-V & Vision-V → MLB-V)

Independent variables	R^2	r	B	t	p
IM-V	.34	.55	.40	4.69	.00
Vision-V		.43	.25	2.35	.02

Note. n = 96. The dependent variable is MLB-V

The results demonstrated that both IM-V and Vision-V significantly predicted MLB-V. The two variables accounted for 34% of the variance in MLB-V. Though it is difficult to determine whether the value is large or not, it seems to be rather large considering that MLB is affected by a number of factors and the values of p are

below .05. Thus, it can be concluded that it is worth designing motivational strategies targeting IM-V and Vision-V.

4.5 Conclusion

Overall, the results seem to support the significance of developing motivational strategies that target Vision-V. Vision-V of most participants was not very high, so it can be increased further. Vision-V predicted MLB-V significantly, and the explanation rate was greater than SDEM-V's and Vision-G's. In addition, enhancing Vision-V may have positive effects on other specific types of vision, such as Vision-S and Vision-R. The potential effectiveness of fostering IM-V in MLB-V improvement was also indicated, which is consistent with Study 1's results.

These findings indicate that motivational strategies that enhance learners' IM-V and Vision-V can be effective in improving their MLB-V. Though some previous studies have suggested possible strategies to enhance IM and Vision (see 2.3.3 and 2.4.2), few of them specifically target vocabulary learning motivation. Thus, it appears to be valuable to consider what strategies can make IM-V and Vision-V enhancement possible.

Chapter 5

Study 3

5.1 Introduction

Study 1 and Study 2 investigated several factors that can improve English learners' motivated learning behavior for vocabulary learning (MLB-V). One of the findings in those studies was that intrinsic motivation for vocabulary learning (IM-V) significantly affected MLB-V. Based on the finding as well as findings of previous studies in related fields, Study 3 designed and conducted a training program that aims to promote English learners' successful motivated vocabulary learning and examined the effectiveness.

5.1.1 Two types of motivational strategies

Motivational strategies, which are defined as "instructional interventions applied by the teacher to elicit and stimulate student motivation (Guilloteaux & Dörnyei, 2008, p.57)," can be divided into two types. The first type is an intervention that *directly* improves learners' motivation. For example, designing classes that satisfy learners' three basic psychological needs (e.g., Agawa & Takeuchi, 2017; Hiromori, 2006; Hiromori & Tanaka, 2006; Tanaka, 2010a, 2010b; Tanaka & Hiromori, 2007; Thorner,

2017: see 2.3.3 for more discussion) and enhancing learners' vision of their ideal L2 self (Chan, 2014; Dörnyei & Kubanyiova, 2014; Mackay, 2019; Thorner, 2017: see 2.4.2 for more discussion) can be categorized into this type, because these attempts can directly develop learners' motivation.

On the other hand, there are also *indirect* types of motivational strategies. In this type, teachers help learners develop ways to control their motivation so that they can increase their own motivation autonomously. In this case, the teachers do not develop learners' motivation directly, because the learners try to develop their own motivation by themselves. For this reason, this study calls such motivational strategies indirect types. Though indirect motivational strategies may not be able to motivate learners immediately, it can help learners become autonomous. Dörnyei and Ushioda (2021) pointed out that learners need to acquire strategies to boost their motivation beyond the classroom autonomously. Tseng and Schmitt (2008) indicated that having capacity to control their own motivation is essential to do successful motivated vocabulary learning (i.e., self-regulating capacity in vocabulary learning: see 2.5.3). Therefore, indirect motivational strategies can be an effective intervention in the long run.

Giving learners the capacity to control their own motivation could be achieved through teaching self-motivating strategies. In other words, conducting strategy training

of self-motivating strategies can be regarded as an indirect motivational strategy. Though such practices seem to be effective in fostering learners' self-regulated learning, research on teaching affective strategies is scarce (Bielak & Mystkowska-Wiertelak, 2018). Therefore, Study 3 attempts to design a strategy training program that can help learners control their vocabulary learning motivation (VLM) through indirect motivational strategies so that they can learn to do successful motivated vocabulary learning.

5.1.2 Characteristics of the strategy training program

Among researchers and practitioners of strategy training, *the Cognitive Academic Language Learning Approach (CALLA) Model* (Chamot, 2008; Chamot & El-Dinary, 1999) is known as a reliable framework (see 2.6.4). Nevertheless, it is pointed out that the framework could be strengthened further.

The first possible way is to let learners choose and develop learning strategies by themselves so that they can acquire suitable strategies for them. Cohen (2018) claimed that, in strategy training, learners should arrive at their own strategies with teacher support rather than being given strategies by the teacher. Tseng and Schmitt (2008) also indicated that it is essential for learners to learn to find and improve their strategy use

actively and autonomously (cf. strategic vocabulary learning involvement: see 2.6.4). One main reason for it is that each learner has different characteristics, so learning strategies they favor can be different from each other (Oxford, 2017). For example, a learning strategy that a learner finds enjoyable is not necessarily an enjoyable one for her/his classmate. Thus, it is not always the best way to teach learning strategies that the teacher believes effective. Such strategy training may not be able to stimulate learners' inertial proactiveness, which many researchers regard as essential in strategy use (e.g., Dörnyei & Ryan, 2015; Schmitt, 2010). The CALLA model does not necessarily emphasize the importance of letting learners autonomously arrive at their own strategies.

Another possible way to strengthen the CALLA model is to add discussions among learners. Harris (2019) claimed that pair and group collaboration could make the CALLA model more effective. Developing learning strategies through discussions with peers can be seen as a typical pair and group collaboration. As Wegerif (2006) claimed, learners can be creative during discussions. Being creative is necessary to think of and develop learning strategies by themselves as well as consider how they should be used (see 2.6.5 for further discussion). Therefore, especially when the training aims at

learners' autonomous learning strategy development, using discussion must be effective.

Hence, in Study 3, a strategy training program in which learners were encouraged to develop strategies autonomously through discussion was designed, conducted in an English class, and the effect was examined. If the effectiveness is supported, it would provide valuable insights for strategy training research, because strategy trainings with those characteristics have been hardly reported.

5.1.3 Teaching vocabulary learning principles

As remarked in 5.1.2, the training in Study 3 includes discussions among learners. However, without any instructions from the teacher before discussion, it would be difficult for learners to make them meaningful. In order to let learners make the most of their creativity and develop their internal proactiveness during the discussion, three principles about vocabulary learning were taught prior to the main discussion session (i.e., discussion for making a vocabulary-learning plan: see 5.2.3.4).

Even though this training mainly focuses on self-motivating strategy development, which are relevant to the third principle (see below), principles that are not directly related to motivation are also taught. This is because even if learners can

learn to use motivating (e.g., fun) vocabulary learning strategies (VLSs), it would be almost meaningless unless VLSs develop their vocabulary efficiently. In the first place, most learners would not be motivated if they cannot feel the VLSs are effective for vocabulary learning, even if using the learning strategies is fun (cf. need for competence: see 2.3.2). Therefore, considering whether the learning strategies are effective for vocabulary development as well as motivating is necessary.

The first principle is to test their vocabulary knowledge and retrieve the memories repeatedly. As Karpicke and Roediger (2008) indicated, recalling newly-learned vocabulary knowledge is very helpful to retain it (see 2.6.6). Understanding this basic vocabulary learning principle can be a basis for developing new vocabulary learning strategies.

The second principle is to figure out learners' own learning styles. Awareness-raising of them is often included in strategy training (Dörnyei & Ryan, 2015). As discussed in 5.1.2, it is important for learners to learn to find suitable learning strategies for themselves. It can be said that understanding their own learning styles may help them to do it successfully. Additionally, through learning about them, learners may realize that effective learning strategies could differ depending on learners and motivate them to find their own ways of learning. In other words, strategic vocabulary learning

involvement (Tseng & Schmitt, 2008: see 2.5.3) can be enhanced by thinking about learning styles.

The third principle is to satisfy the three basic psychological needs, namely, needs for autonomy, competence, and relatedness. According to self-determination theory (Deci & Ryan, 1985, 2002; Ryan & Deci, 2017), when the three needs are satisfied, people can learn with strong intrinsic motivation (IM) (see 2.3.2). When learners are intrinsically motivated to learn, they are likely to learn in a self-regulated way (Zimmerman & Schunk, 2007). In fact, Study 1 and 2 indicated that learners with strong IM-V tended to study vocabulary more diligently than those with weaker IM-V. Therefore, it seems to be crucial for learners to consider how to satisfy their three psychological needs and enjoy vocabulary learning so that they can control their own vocabulary learning motivation and behavior. It can lead to letting learners recognize the importance of motivating themselves autonomously and developing their self-motivating strategies. This may improve their self-regulating capacity in vocabulary learning, which is one of the components in Tseng and Schmitt's (2008) motivated vocabulary learning model (see 2.5.3).

5.1.4 Research questions

In this study, the strategy training program's effectiveness was examined from various perspectives. The following six research questions below are mainly addressed.

1) Do the participants have positive perceptions toward the training?

2) Could the training improve learners' self-regulating capacity in vocabulary learning and strategic vocabulary learning involvement?

3) Do the participants develop self-motivating strategies as well as vocabulary learning strategies during the training?

4) Does discussion help the participants develop learning strategies?

5) Does the training help participants study vocabulary?

6) Do the participants keep using the strategies even after the training?

5.2 Method

5.2.1 Participants

The participants were 52 learners taking compulsory English listening classes at a university in Japan. They are from the same university and department as Study 1's students. Their English proficiency level was roughly at the upper A2 or B1 in the CEFR (Council of Europe, 2001), which was higher than that of average English

learners in Japan. Many of the participants were interested in studying abroad and were studying English diligently to develop their communicative English ability.

5.2.2 The teacher

The teacher of the training was not the author but the teacher who was in charge of the listening class the participants were taking at that time. After the plan of the training was made by the author, she helped him develop it further to make it more suitable for her students based on her observation of them and her expertise in English education.

The strategy training in Study 4, which is presented in Chapter 6, was given by the author. Examining the effectiveness of two similar strategy training programs taught by different teachers can improve the generalizability of the results, because it can consider the possibility that the effectiveness depends on who conducts the training.

5.2.3 Contents of the training

The training was given during two English classes, which were one week apart (Day 1 and Day 2). Though a longer training program can be more effective (Plonsky,

2019), the training was kept as short as possible so that it can be implemented in an ordinary English course.

One week before Day 1, the purposes of the study and rights of the participants were explained and all of the students consented to participate in the study. Then, a vocabulary list was delivered with 60 English words, their pronunciation, and their Japanese meanings. The participants were asked to memorize the words to prepare for the vocabulary test on Day 1.

The details of the contents on Day 1 and 2 are as follows. Because lack of detailed explanation about the contents is a problem in previous strategy training research (Plonsky, 2019), this paper describes the contents in detail.

5.2.3.1 Pre-vocabulary test and Learning Style Survey (Day 1, 20 minutes)

At the beginning of the class, the participants took a vocabulary test (see 5.2.3.3 for more detail). In the test, the participants were asked to write Japanese meanings of 60 English words. After the test, they graded their own test on a maximum of 60 points.

Following the vocabulary test, the participants took the Part 1 of the Learning Style Survey designed by Cohen et al. (2002). It consists of 10 questions about each type of the three learning styles: visual, auditory, and tactile/kinesthetic. It was assumed

that, for the participants, understanding which type of learning they were good at can be meaningful to consider suitable vocabulary learning strategies autonomously (cf. Tight, 2010). For instance, if a learner who used to study vocabulary only from visual information (e.g., using word cards) realized that s/he might be an auditory learner, s/he may try to use auditory information in vocabulary learning, too (e.g., listening to the pronunciations of the target words).

It seems true that using the survey is not a flawless way to figure out learners' learning styles accurately, considering their self-reports are not always reliable (Krätzig & Arbuthnott, 2006; Lethaby & Mayne, 2020). However, for English learners, answering the survey questions and thinking about their own learning styles can be still beneficial, because it may become a trigger to consider their preferred ways of learning and realize that suitable learning strategies may differ depending on learners.

5.2.3.2 Group discussion about vocabulary learning (Day 1, 5 minutes)

First, two questions were asked to the participants: 1) "Do you like vocabulary learning? Why or why not?" and 2) "How did you study the English words for today's vocabulary test? Do you think the learning methods you used for the test worked well?" Then they shared their ideas in English in groups. The purpose of this discussion was to

let them reflect on their learning strategy use before receiving the following lecture about the three vocabulary learning principles.

5.2.3.3 Lecture about the three principles (Day 1, 10 minutes)

After the group discussion about vocabulary learning (see 5.2.3.2), the teacher introduced the three vocabulary learning principles to the participants: to test their own vocabulary knowledge repeatedly, to consider their own learning styles, and to satisfy their own three psychological needs (see 5.1.3). The main purpose was to supply the participants with information that could be used for their learning strategy development through discussion in the following stage. The lecture was given in English, though Japanese was used when needed. PowerPoint slides were shown to promote the participants' understanding. In the lecture, the teacher tried to explain the principles in an easy-to-understand way for the participants, like using many examples rather than discussing theories abstractly. For instance, in the explanation of the first principle, the experiment of Karpicke and Roediger (2008) was introduced. On the other hand, the teacher showed only a few examples of learning strategies to ensure that they can develop learning strategies proactively and creatively rather than simply adapting examples.

5.2.3.4 Making vocabulary learning plans in groups (Day 1, 25 minutes)

The participants discussed to make a vocabulary learning plan collaboratively in groups for the post-vocabulary test on Day 2. The groups were formed randomly.

In this session, Japanese use was permitted. They were advised to make a plan that would satisfy the three principles introduced in the lecture. However, it was also allowed to include any learning strategies that are not related to the three principles. The learning strategies in the plan can be either individual or collaborative strategies. They were encouraged to make their own personalized plans, because they may have different learning styles from group members'.

After the discussion, the participants were given another vocabulary list with new 60 English words and asked to memorize them following the vocabulary learning plan they made.

5.2.3.5 Post-vocabulary test (Day 2, 15 minutes)

On Day 2, the post-vocabulary test was given at the beginning: 60 English words were shown, and the participants wrote their meanings in Japanese (see 5.2.3.3. for more detail). After the test, they graded their own tests.

5.2.3.6 Reflection in groups (Day 2, 10 minutes)

In the Day 1's groups, the participants talked about 1) how they studied the English words and what they were conscious of then, and 2) good points and points needing improvement about their vocabulary learning plan. Japanese use was allowed during the discussion.

5.2.3.7 Presentation (Day 2, 15 minutes)

Each group gave a short presentation about what they had discussed in groups during reflection: what kinds of strategies they used and whether they worked well (see 5.2.3.6), to the other groups' classmates. Unlike typical strategy training in which the teacher chooses learning strategies to teach, strategies the participants used in this training can be very different from one another's. Thus, listening to the presentations would enable the participants to gain a lot of new ideas about vocabulary learning and self-motivating strategies.

The presentations were given in Japanese. The listeners took notes about learning strategies they were interested in.

5.2.4 Data collection and analysis

In order to assess the effects of the training from various perspectives, the data were collected in the following four ways: 1) a survey administered immediately after the training on Day 2 (Survey A), 2) the recording data of participants' discussions on Day 1, 3) pre and post-vocabulary tests, and 4) another survey administered one month after the training (Survey B). The relationships between the research questions and the data collection methods are summarized in Table 5-1.

Table 5-1

The relationships between the research questions and data collection methods

Research Questions	Data collection methods
RQ1	Survey A (Part 1)
RQ2	Survey A (Part 1)
RQ3	Survey A (Part 2)
RQ4	Recording data of participants' discussion
RQ5	Vocabulary tests
RQ6	Survey B

5.2.4.1 Survey A

Survey A consisted of two parts. The first part investigated participants' perceptions toward the training by five 4-point Likert scale questions (see Table 5-2)

and one open-ended question asking “please write your opinions about the training freely.” As for the Likert scale questions, the mean values and standard deviations were calculated. In the analysis of the qualitative responses for the open-ended question, text mining was conducted using the KH Coder (Higuchi, 2016, 2020) in addition to examining each response for the sake of discovering strengths and problems in the training.

In the second part, learning strategies used by the participants in the preparation for the post-vocabulary test was inquired. As discussed in 2.6.1, in order to do effective vocabulary learning, internal proactiveness is more important than what kinds of strategies learners uses. However, if the internal proactiveness did not lead to actual learning strategy use at all, the learner could not be considered as an autonomous strategy user. Therefore, learning strategies that the participants had used were examined.

The questions in the survey were written in Japanese to ensure that the participants can understand the meanings accurately.

5.2.4.2 Recording data of participants' discussion

The discussions among participants during vocabulary learning plan making (see 5.2.2.4) were audio-recorded by voice recorders. To investigate how the discussion developed participants' learning strategies is essential in the present study. In particular, whether the discussions had enabled the participants to be creative was carefully considered.

5.2.4.3 Vocabulary tests

To investigate whether the participants gained a higher score in the post-vocabulary test on Day 2 than in the pre-vocabulary test on Day 1, the mean scores on both tests were compared. In order to make the two vocabulary tests (Vocabulary Test A and B) with the same difficulty, all target words (see Appendix C) were selected from the 6500th-8000th most common words in the New JACET List of 8000 Words (JACET, 2016). The frequency level of the target words (6500-8000 levels) was determined for the following reasons. First, the words would be new to most of the participants. In order to examine the effect of the training, target words had to be low frequency words that the participants did not know. Considering their English proficiency level (the upper A2 or B1 in the CEFR), it was assumed that their

vocabulary size would not reach 6500-word level. On the other hand, if the frequency level of the words were too low, it would be ethically problematic because memorizing such extremely low-frequency words would be an almost unnecessary task for the participants. According to Nation (2006), a 6000 to 7000 word-family is needed to comprehend English spoken texts and an 8000 to 9000 word-family is needed to understand English written texts. Thus, memorizing the words of 6500-8000 levels was not meaningless. Furthermore, they seem to be appropriate frequency levels to justify out-of-context vocabulary learning, which is the type of vocabulary learning in the training that aims to gain receptive vocabulary knowledge. That is because it is not very important for most of English learners to learn to use those relatively low-frequency words in speaking and writing.

The words that are adopted to Japanese language as katakana words (e.g., napkin, aroma) were not included because they would be too easy for the participants to memorize. The words whose meanings can be easily guessed with their existing English knowledge (e.g., hopelessly, suspiciously) were not included either for the same reason.

The average word length in both tests were almost the same (7.27 letters in Test A and 7.25 letters in Test B), and the 60 words in each test consisted of 34 nouns, 5 verbs, and 21 adjectives. In case that the test difficulty was still different, about half of

the participants took Vocabulary Test A as the pre-test and Test B as the post-test, and the other half took the tests in the opposite order.

5.2.4.4 Survey B

Survey B was administered about one month after the training. As Plonsky (2019) pointed out, one problem of strategy training research is that most previous studies did not conduct delayed posttests. It makes it difficult to figure out persisting effects of strategy training. Thus, in this study, a delayed posttest (Survey B) as well as an immediate posttest (Survey A) was administered.

The main purpose of Survey B was to investigate whether the participants used learning strategies that they had learned or thought of in the training program. They had had the mid-term examination including some vocabulary questions before Survey B was administered, so the participants had an opportunity to use the new learning strategies.

In addition, it was also examined if the training had increased participants' confidence in vocabulary learning. When some data in Survey A and audio-recorded discussions were being analyzed, it was found that the training could be helpful to enhance learners' confidence. To confirm this hypothesis, the following question was

added to Survey B: “Did the training increase your confidence in VLSs you had already known before you received the strategy training?”

5.3 Results and Discussion

5.3.1 Survey A

The results of the five 4-point Likert scale questions are summarized in Table 5-2 (4: I think so.; 1: I don’t think so). The results suggest that the participants generally had positive perceptions toward the training. The majority of the participants found the training effective and enjoyable. The results of Q4 and Q5 indicated that they generally supported the effects of the lecture, discussion, and presentation. This could be evidence showing that it is meaningful to include collaboration with peers as well as instructions by a teacher in strategy training programs.

Table 5-2

Quantitative data about participants' perceptions toward the training

		M	*SD*
Q1	語彙学習に関する 2 回の授業は楽しかったですか? (Did you enjoy the two classes of VLS training?)	3.38	.60
Q2	今日のテストに向けて行った語彙学習は、普段の語彙学習よりも楽しかったですか？ (Did you enjoy preparing for today's vocabulary test more than usual?)	3.14	.71
Q3	語彙学習に関する 2 回の授業は、楽しく効果的な語彙学習方法を考えるのに役に立ったと思いますか? (Do you think the instruction was helpful for you to think of effective and enjoyable VLSs?)	3.42	.57
Q4	前回の授業の講義で学んだことは、楽しく効果的な語彙学習方法を考えるのに役に立つと思いますか? (Do you think what you learned in the lecture was helpful for you to create an effective and enjoyable vocabulary learning plan?)	3.54	.64
Q5	学生同士の話し合いやクラスメートの話しを聞くことは、楽しく効果的な語彙学習方法を考えるのに役に立つと思いますか? (Do you think discussion with your classmates was helpful for you to think of effective and enjoyable VLSs?)	3.52	.65

Note. The data of the participants who missed either Day1 or Day 2 are not included.

Next, the responses for the open-ended question were analyzed (see Table 5-3 for data summary). Figure 5-1 shows the results of the analysis by the KH Coder. It suggests that several participants thought "Discussion with classmates was fun," "It was

helpful to listen to others' strategies," and "My score has improved." These support the effectiveness of discussions among learners.

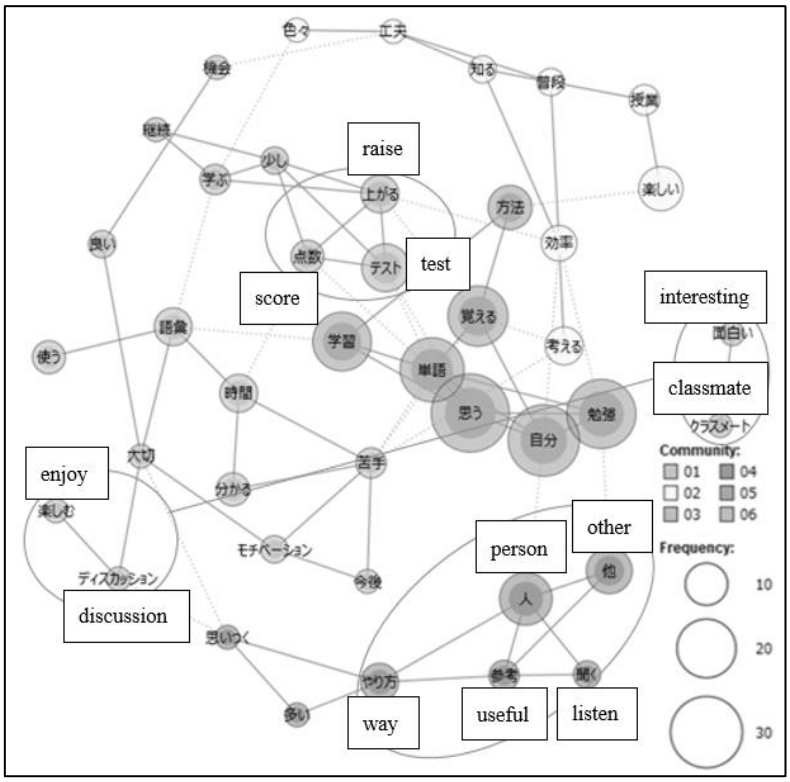
Table 5-3

Summary of the data analyzed by KH Coder

Number of responses	52 responses	Total number of letters analyzed by KH Coder	3169 letters
Average length of one response	59.8 letters	*SD*	30.2

Figure 5-1

Analysis by KH Coder



The participants' responses for the open-ended question (see Table 5-4) imply that the training could enhance learners' self-regulating capacity in vocabulary learning and strategic vocabulary learning involvement, which are two of the components in Tseng and Schmitt's (2008) motivated vocabulary learning model.

Table 5-4

Examples of responses for the open-ended question in Survey A

1	モチベーションが一番大事だと思いました。また、そのモチベーションをどう起こすか、自分なりに考えることができたので、今後活用していきたいと思います。 I think motivation is the most important. I was able to consider some strategies to motivate myself, so I want to use them.
2	単語を覚えるのは楽しみながらやっていこうと思いました。自分の学習法を作って、効果的に勉強していきたいです。 I realized that I should memorize vocabulary enjoyably. I will establish my own learning method and try to study effectively.
3	他の班の発表も自分で思いつかなかったものが多く役立ちました。やり方次第では楽しく勉強し、効率も落とさずできることがわかりました。 The presentations by other groups let me know some strategies that I did not think of on my own. I found that I could study vocabulary enjoyably without decreasing the efficiency of learning.
4	気分を楽にして勉強すると効率よく点数も上がることがわかりました。 I learned that studying with a relaxed feeling is effective and I can get a better score.
5	受験生のとき単語を覚えるのがとても苦手だったので、その時の自分も効率性を考えられていたらなと少し悔しい気持ちになりました。 I was very poor at memorizing vocabulary when I was preparing for university entrance examinations. I slightly regret I had not thought about efficiency at that time as I did in the training.

6	もっと頑張ろうと思いました。クラスメイトが色々な工夫していると知って、自分も何かしらの工夫をして、得点に結びつけたいです。 I've decided to work harder. I realized that my classmates use various strategies to study vocabulary effectively, so I will also do something new to get a better score.
7	見て覚える方がいい人と何かをしながら覚える方がいい人がいるのは驚きだった。自分の適性を見つけれてよかった。 It is surprising that some people are visual learners, while others are tactile/kinesthetic learners. It was useful for me to find my own learning styles.
8	自分が一番いいと思う学習法と他の人がいいと思う学習法はちがって、それぞれ自分に合った学習法をもっているんだと思いました。 I realized that my favorite strategies are different from those of others and that everyone has strategies appropriate for themselves.
9	自分の学習法を変えることにはならなかったけど、learning style を確認したことで、自分のやり方が合っていたことを認識できた。 I would not change my VLSs, but I checked my learning styles and I am sure that my way of vocabulary learning is correct.
10	テストする事の大切さや、自分だけでは思いつかなかった事をディスカッションを通して学べたので良かったと思いました。 It was beneficial for me to notice the importance of testing my vocabulary knowledge and learn something that I would not think of by myself.
11	ディスカッションするのは楽しかったが、別に効果的な学習ではないと思う。 I think discussion was just fun and not an effective way for learning.

For instance, Responses 1, 2, 3, and 4 show that the respondents recognized the significance of satiation or emotion control, both of which are regarded as essential in Tseng and Schmitt (2008). Responses 5 and 6 indicate that the respondents realized the importance of searching effective VLSs, which was also regarded as essential in their

study. Additionally, several participants realized that suitable learning methods differ depending on learners (Responses 7 and 8). Such awareness could enable them to recognize the importance of developing effective strategies on their own. Moreover, Response 9 implies that checking one's own learning styles could increase learners' confidence in their learning strategy use. Response 10 states that it was beneficial to learn something s/he would not think of on her/his own through discussion. This means that s/he thought developing learning strategies with peers is effective.

There were a few responses that mention a specific VLS, as Response 10 mentions a strategy of testing own vocabulary knowledge. However, such responses were not the majority. As Responses 1-9 show, many participants learned important lessons to develop learning strategies autonomously and motivate themselves rather than specific VLSs. These appear to be learning that most previous learning strategy trainings, which often tried to teach strategies chosen by the teacher and did not pay attention to self-motivating strategies, could not provide.

On the other hand, there were a few negative responses about the training, such as Response 11. The response suggests that it would be important to analyze possible reasons why some learners cannot find the discussion effective and consider how to support them.

The second part of Survey A inquired about what kinds of learning strategies the participants had used in the preparation for the post-vocabulary test on Day 2. Analyzing the participants' responses, it was suggested that self-motivating strategies (62 responses) and cooperation strategies (25 responses) were popular strategies. Among self-motivating strategies, testing their own vocabulary knowledge repeatedly and confirming the progress, setting a goal, and competing against classmates were common. Additionally, there were responses such as "I declared to my friend that I would get a better score in the vocabulary test than his," "My classmates and I reported our progress of vocabulary learning to each other," "The winner got all snacks that each group member had brought," and "I visualized my progress of vocabulary learning."

As for cooperation strategies, most responses say, "My classmates and I gave quizzes to each other" or something similar. A few participants reported that they had discussed possible ways to memorize vocabulary effectively with their classmates.

In addition, five participants used apps that give vocabulary tests in a random order. Other participants answered, "I listened to the pronunciations of the words," "I read the words aloud," or "I clarified images of each word in my mind." These may be learning strategies that the participants thought of through considering their own learning styles.

The results showed that many participants used self-motivating strategies, which means the training could improve learners' self-regulating capacity in vocabulary learning. This seems to be a unique characteristic of this training program, considering that few past trainings tried to improve learners' affective strategy use including self-motivating strategies.

5.3.2 Recording data of participants' discussions

In this section, five successful discussions made in the planning time on Day 1 are presented. Excerpts 1 and 2 show that discussion could help learners develop their learning strategy use.

In Excerpt 1, Participant A suggested rewarding oneself be a possible strategy to increase motivation. After hearing the suggestion, B made an additional proposal that each of the group members brings some snacks, and the winner in the vocabulary test takes all of them. In Excerpt 2, E suggested making a schedule chart, and then G proposed some additional techniques that make it more motivating. In both cases, the learning strategies might not have developed like these if the participant had worked on learning strategy development on his/her own. In other words, these examples imply that discussing learning strategies may make learners more creative than developing

learning strategies alone and help them creatively adapt learning strategies, which Dörnyei and Ryan (2015) consider as important.

Excerpt 1

1 A: お菓子とか買っていいみたいな、自分に。ご褒美。
How about making a rule of treating ourselves to favorite snacks when we get a good score in a vocabulary test. Reward ourselves.

2 B: 例えば、4 人でやるとしてさ、ひとりずつお菓子買ってきて...。
For example, each of us would buy some snacks and bring them with us...

3 C: それいいかも。
This may be good.

4 D: 頭いい！
You are so smart!

(snip)

5 B: この 4 人の中で競って、一番高い人が、全部もらう。
Let's compete among ourselves, and the winner (in the vocabulary test) will take all of them.

6 C: あーいいね！
Oh, sounds good!

7 A: 案外いいかもしれない。
This idea could be an unexpectedly good one.

8 D: それ、やる気出るかもしれない。絶対 1 位になろうって思う！
This can be motivating. I should win!

Excerpt 2

1 E: 予定表を作る、計画表を作る、みたいな。
How about making a schedule chart?
2 F: 予定表を作る超よくない？
Making a schedule chart sounds so good, doesn't it?
3 E: 計画表作って、それに合わせてやるみたいな。
Like making a schedule chart and studying in accordance with it.
4 F: 自分で計画を立てて自分でやるんでしょ？
We make a plan by ourselves and study, right?
5 G: 計画表立ててやってさ、その後にさ、自分で記録みたいのをつければさ、自分やればできるんじゃんみたいな。
Making a plan, studying, monitoring, and keeping a record, and then we would feel like "I can do it if I try."
6 E: あー。
Yeah.
7 G: やる前のテストの記録書いて、計画立ててやった後の記録書いたら、有能性。
Keep the record of the previous test, and make a plan for studying, and keep another record after practice, and then, (we could satisfy) the need for competence.
8 F: 比較みたいな。
Like comparison (between the results of before and after making a plan).
9 G: 比較比較。
Yes, exactly, a comparison.

In Excerpts 3 and 4, participants I, J, and L shared their favorite VLSs with their group members. Turn 15 and 16 in Excerpt 3 and Turn 1, 3, and 8 in Excerpt 4 imply that the group members were convinced of the effectiveness of using the learning strategy, and were enjoying learning about it. These conversations seem to accord with

Dörnyei (2005), who claims that personal learning strategies are often very amusing and therefore students usually enjoy discussing them.

Excerpts 3 and 4 also show that learners can successfully play a role of a teacher and teach effective learning strategies. This could be even more meaningful than teachers' instruction, because learners may think that learning strategies recommended by their peers should be useful for them, too (cf. near-peer role modeling: Murphey & Arao, 2001).

It is also worth mentioning that I, J, and L received many positive responses from their group members. I and J strongly agreed with each other about their favorite strategies' effectiveness, and L received very positive feedback about the app she was introducing. These experiences could enhance their confidence about vocabulary learning. Furthermore, their IM can be enhanced, because receiving positive feedback may satisfy their need for competence, and playing an appreciated role may satisfy their need for relatedness (see 2.3.2).

Excerpt 3

1 H: 1 週間で 1 日 10 個覚えるっていう。 How about memorizing 10 words a day for a week. 2 I: それはやだ。 I don't like it.

3 J: 私はそれはお勧めしない。

I don’t recommend it.

4 H: なんで？

Why not?

5 I: 一気に結構の量のやつを、何回も見て、それを違う日に同じメニューをやるのが好き。

I like checking lots of words at one time, and review the same words later again.

6 H: あー。

I see.

7 J: 私も受験期あれだよ。単語帳あるじゃん、1 冊。あれを 1 日 1 周してた。

When I was studying for university entrance exams, I checked all the words in a vocabulary book a day.

8 I: 私も 1 日 1 周してた！

I did it, too!

9 J: だからそれがいいんだよ。膨大な量を、何回も見ることで覚える。

So, I believe it is good. To check lots of words repeatedly to memorize them.

10 I: そうそうそうそうそう！

Yes, yes, yes!

11 J: 1 単語に時間かけない！

I don’t spend much time to memorize one word!

12 I: かけない！

You shouldn’t do!

13 J: 1 秒とか 2 秒とか。

Only 1 or 2 seconds is (enough)!

14 I: すぐぱっぱいっちゃう。

Move on to the next word quickly.

15 H: へー。

I see.

16 K: ためになるね。

You gave me really good advice!

Excerpt 4

(Participant L is introducing an app for vocabulary learning.)

1 M: めっちゃええやん！

It looks very cool!

2 L: めっちゃええよ。

Yes, indeed.

3 N: めっちゃええね。

Exactly.

4 L: で、テストもあるから。

We can also test our memory with that app!

5 N: 綴りも勉強できちゃうし。

We can memorize spellings at the same time.

(snip)

6 L: あとこれは、ゲームだから。

It's a kind of game.

7 M: あぁそうか。

Oh, really?

8 N: それ大好き。

I love it!

(snip)

9 L: なんか何パーセント中みたいなの出てくるよ。

It tells us what percentage we have achieved.

10 N: あともう少しです、みたいな。

Like "you have almost done!"

11 L: そうそうそう。

Yes, exactly!

Excerpt 5 is a discussion on the importance of motivation and how to keep it or stimulate themselves to learn. This discussion could help Participants O and P be better language learners for the following three reasons. First, they successfully analyzed and discussed processes about how they were motivated. They introduced some possible ways to keep or increase motivation to each other; such as working with peers, having a goal, and having a sense of accomplishment. Such interactive learning could develop their self-motivating strategies.

Second, both O and P seemed to clarify their own thoughts through the interaction. O talked about his experience in Turn 3, and summarized it saying, “it is very important to have clear motives.” P said, “...to feel happy when I could get something done” in Turn 6 and rephrased it as “sense of accomplishment” in Turn 8. This means that both of them shaped their ideas or experiences into more abstract concepts. Viewed from a perspective of socio-cultural theory, this can be a valuable moment that may help the participants improve their self-regulating capacity. According to the theory, shaping vague understanding learned through experiences (*everyday concept*) into abstract and systematic knowledge (*scientific concept*) is necessary to regulate one’s own psychological process consciously and effectively (Nakamura, 1998). O realized that his experience illustrates the importance of having clear motives,

and P realized that feeling happy when he could get something done means the satisfaction of his sense of accomplishment. The acquisition of scientific concepts about motivation enhancement may be helpful when they need to motivate themselves in the future.

Furthermore, in Excerpt 5, a teaching role and a learning role were not fixed. In Turns 1-5, O seemed to play a role of teacher because he was arguing the effectiveness of working with peers and of having an extrinsic motive. However, in Turns 6-9, P was playing a role of teacher: he proposed importance of having a sense of accomplishment, and after listening to his argument, O was convinced that not only extrinsic motivation but also IM is important. In this discussion, O and P shared their viewpoints over their learning, being relieved from a kind of "authorized existence" (Bakhtin, 1981). As Tsuda (2013) argued, learning occurring in such a circumstance is more likely to be meaningful than learning in the teacher-centered context.

Excerpt 5

1 O: モチベーションは英語をする上ですごく大事だなと思う。あんま良くないけど。 To have motivation is very important for English learning. It is not very good though.
2 P: うん。 Hmm…

3 O: やっぱり自分だけでやるよりモチベーションになるから、やっぱりそうやってなんか他人がいることでいい点を取ったり、あとは何か目的を持って勉強するとか。俺は留学したかったから TOEFL の勉強凄い頑張れたし、人生で初めてあんな英語頑張れたし、なんでもいいんだけど就活で有利になりたいから TOEIC 頑張ろうって思えたらたぶん、ただなんか特に目的もなく勉強している人より絶対頑張れるし。

I know that working with peers is more motivating to get better scores than working alone. And, studying with a purpose (should be also motivating). In my case, I studied hard to get a high score in the TOEFL test to get a chance to study abroad. It was the first time for me to study English so hard. I believe whatever goal of studying English should be fine, like studying English to get a high TOEIC score for the purpose of getting an advantage in job hunting. Then we would study English harder than those who study English without any purpose.

4 P: まぁね。

Well, I suppose so.

(snip)

5 O: だから P も単位危ないから単語テスト頑張れるとか、そういうモチベーションを、なんか意識的に持つことはすごい大事なのかなって。

So I believe it is very important to have clear motives. You would study harder for English vocabulary test, for fear of failing to get credit for the course.

6 P: 単位もそうなんだけど、できたら嬉しいなっていう気持ちだよねやっぱり。

I know you're right, but I'm sure it is more important for me to feel happy when I could get something done.

7 O: あー。テストで点取れたら。

I see, if you could get a good score in the test (, you would be happy.)

8 P: 達成感みたいのは確かに。

I think a sense of accomplishment is surely (motivating).

9 O: うんうん。

Yes, it is.

It is true that not all groups made as fruitful discussions as Excerpts 1-5. In discussions of a few groups, long pauses often appeared and the participants did not seem to make the most of the discussion time. It must be important to consider how to avoid this. However, it should be acceptable to claim that learners' discussion based on what they learned in the lecture has potential of helping them to be a better vocabulary learner.

5.3.3 Vocabulary tests

The results of the vocabulary tests are summarized in Table 5-5.

Table 5-5

Results of the vocabulary tests

	Day 1		Day 2			
	M	*SD*	*M*	*SD*	*p*	◿
A→ B	36.5	19.8	50.9	13.6	.03	.73
B→ A	46.7	15.0	46.9	15.5	.95	.01

Note. "A → B" is the group that took Vocabulary Test A on Day 1 and Test B on Day 2 (*n*=21). "B → A" is the group that took the tests in the opposite order (*n*=25). The data of participants who missed either the pre-test or post-post are not included.

The results seem to show that Vocabulary Test B unexpectedly became an easier test than Test A. In fact, some participants told the teacher that Test A was more

difficult. In addition, the ceiling effects are seen in the results. Therefore, it would be difficult to conclude that the average score in the post-test is significantly higher than the score in the pre-test. Nevertheless, the participants who took Test A, the difficult one on Day 1 as pre-test, and Test B, the easier one on Day 2 as post-test significantly improved their average scores, while those who had taken the tests in the opposite order received almost the same average scores in both tests. This may imply that the training helped the participants learn vocabulary effectively.

5.3.4 Survey B

Table 5-6 summarizes the results of Survey B, which was administered about one month after the training. (The questions in Japanese can be seen in appendix D).

The result of Q1, “Did the training increase your confidence in VLSs you had already known before you received the strategy training?” indicates that many of the participants increased their confidence about vocabulary learning; 36 participants out of 48 chose either 4 or 3 in the question. Two possible reasons for it are: 1) participants checked their learning styles and felt relieved when they confirmed their ways of learning to be suitable, as was seen in Response 9 (see 5.3.1), and 2) participants

received positive comments from their classmates when they shared their favorite VLSs (see Excerpts 3 and 4 in 5.3.2).

Table 5-6

Results of Survey B

Q1	Did the training increase your confidence in VLSs you had already known before you received the strategy training?	*M* = 2.94 *SD* = .83
Q2	Did you use VLSs after the training?	Yes: 23 participants No: 25 participants
Q3a	If you answered "Yes" in Q2, what VLSs did you use? Please write them as concretely as you can.	
	Common Responses: ・I read aloud when I memorized English words. (5 participants) ・I used an app. (5 participants)	
Q3b	If you answered "No" in Q2, why didn't you use the new VLSs?	
	Common Responses: ・I am satisfied with (used to) the VLSs I had started to use before the training. (15 participants) ・I did not have a chance to use the new VLSs. (4 participants)	
Q4	Please write VLSs that you learned in the training and want to use in the future, but have not used yet.	
	Common Responses: ・Study with an app (5 participants) ・Study with peers (4 participants)	

Note. Q1 is a 4-point Likert scale question (4: I think so.; 1: I don't think so.). The data of the participants who missed either Day1 or Day 2 are not included.

On the other hand, the result of Q2 shows that more than half of the participants did not use newly learned strategies from the training. Furthermore, in Q3, no participants mentioned self-motivating strategies or cooperation strategies, which were commonly used in the preparation for the post-vocabulary test.

These results suggest that the training was not effective enough to make the participants be willing to use new learning strategies voluntarily. One possible reason is that post-training tasks were not given to them. If post-training tasks had been given and the participants had been encouraged to keep using new learning strategies even after the training, the result might have been different.

Furthermore, difficulty of collaborating with classmates outside of the classroom may be another reason why the participants did not use cooperation strategies. Although many participants used them in the training and some of the participants were interested in using them (see the result of Q4), they did not use them after the training. This indicates that even if they are willing to learn with peers outside the classroom, doing it voluntarily may be difficult. If so, it would be effective for a teacher to give learners reasons to collaborate with each other, for instance, by forming vocabulary groups and having them compete against each other in the scores of vocabulary tests.

Another finding worth mentioning here is that many participants were interested in using apps for vocabulary learning. Five participants learned to use them after the training (see the result of Q3a), and another five participants hoped to use them in the future (see the result of Q4). This implies that it is meaningful to introduce apps that assist vocabulary learning in VLS training programs.

5.4 Conclusion

In Study 3, for the purpose of helping learners learn to do successful motivated vocabulary learning, a strategy training program was designed and conducted. As a result of investigating the effect using multiple research methodologies, it was suggested that the training was generally successful. The majority of participants felt that the training was helpful and interesting. There were also many participants who found vocabulary learning for the post-vocabulary test more enjoyable than usual. Analysis of some participant' comments in Survey A indicated that the training could enhance self-regulating capacity in vocabulary learning and strategic vocabulary learning involvement, which are two essential components to implement successful motivated vocabulary learning. In addition, some participants increased their confidence in their VLS use, presumably because they confirmed their own learning styles and

received positive feedback from their peers. It was also revealed that using vocabulary learning apps may increase their satisfaction with vocabulary learning.

This study could provide two significant insights for strategy training research. Firstly, it shows effectiveness of incorporating discussions in strategy training. Through discussion, many participants developed a learning strategy into a more sophisticated one, taught their favorite strategies to peers, and received positive feedback about learning strategy use from peers. Moreover, they seemed to enjoy discussions about learning strategies. These results demonstrate that if teacher's support is given in advance, learners can proactively think of, learn, and develop learning strategies by themselves through discussion. Many previous studies on strategy training attempted to teach learning strategies that the teacher hoped to teach even though letting learners think of and develop learning strategies autonomously has various benefits. Adding discussion parts to such strategy training programs can make their effectiveness even greater.

Secondly, it showed that learners could develop self-motivating strategies through strategy training. As discussed above, even though learning strategy instructions aiming to improve language skill performance (e.g., communication strategies, reading strategies) have been considered effective by previous studies, research on teaching

affective strategies is scarce (Bielak & Mystkowska-Wiertelak, 2018). Thus studying the effect of affective strategy training was demanded. In this study, some participants realized the importance of controlling their own motivation autonomously, and developed self-motivating strategies. This result shows that researching and conducting self-motivating strategy training can be valuable.

On the other hand, several issues that need further research were found. Firstly, it would be meaningful to investigate how the discussions among learners can be effective. Even though the majority of participants in Study 3 had a positive impression with the discussion and seemed to actively engage in it, some other participants did not regard the discussion as meaningful (see Response 11 in Table 5-4). Moreover, the recordings of discussions showed that there were a few inactive groups. Revealing factors that positively and negatively affect the quality of discussions is important because it may provide tips about how to support learners during discussion.

Secondly, ways to encourage out-of-class collaboration among learners need to be investigated. As argued in 5.3.4, it may not be easy for some learners to ask peers to study vocabulary together, even if they think learning vocabulary collaboratively can be helpful. Thus, the teachers should consider how they can give learners good reasons and initiatives to study vocabulary with peers outside of class.

Thirdly, it would be valuable to examine how vocabulary learning apps can be utilized in the training. Study 3 indicated that many participants were interested in apps or found vocabulary learning using them effective. In Study 3, the teacher did not introduce apps at all; some participants happened to know them and introduced them to peers during group discussion on Day 1 or presentations on Day 2. Thus, participants who heard about the apps in their peer's presentations for the first time did not have opportunities to actually use them. Therefore, it can be better if the teacher introduces an app before learners do vocabulary learning so that everyone who is interested in it can practice using it. In fact, many technology-incorporated learning systems have been utilized in vocabulary learning and their positive effects on learners' motivation and vocabulary development have been generally confirmed (Smith et al., 2013).

Finally, it is essential to investigate how to encourage learners to continue using newly learned strategies from the training. The result of Survey B (see 5.3.4) showed that many participants were not willing to use the new strategies after the training. This could be a problem for other strategy training programs, too. Therefore, post-training interventions can be a valuable topic to research.

Acknowledgments

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Chapter 6

Study 4

6.1 Introduction

6.1.1 Characteristics of the strategy training in Study 4

This chapter presents Study 4, which is the final study in this paper. In Study 4, an improved version of the strategy training program in Study 3 was conducted, and the effect was measured.

Though the strategy training programs in Study 3 and 4 have similar goals (e.g., Both of them attempted to promote learners' successful motivated vocabulary learning through improving their self-regulating capacity in vocabulary learning and strategic vocabulary learning involvement) and structures (e.g., Both of them spent a considerable amount of time on learners' discussion and taught vocabulary learning principles before the discussions), there are also some differences. Firstly, the strategy training in Study 4 (hereinafter called "the training") was more conscious of the Cognitive Academic Language Learning Approach (CALLA) Model (Chamot, 2008; Chamot & El-Dinary, 1999), which is arguably the most common and reliable framework in strategy training (see 2.6.4 for more detail). It consists of five stages;

preparation, presentation, practice, self-evaluation, and expansion. The training mostly followed the structure though discussion parts were added.

Secondly, the training program incorporated a vision enhancement activity. It is pointed out that building and clarifying vision of learners' ideal L2 self is an effective motivational strategy (Chan, 2014; Dörnyei & Kubanyiova, 2014; Mackay, 2019: see 2.4.2 for more discussion). Study 2 showed that Vision-V significantly affected motivated learning behavior for vocabulary learning. Thus, vision enhancement can be helpful to improve learners' vocabulary learning motivation (VLM).

Thirdly, a vocabulary learning app called *Quizlet* was introduced as a learning tool that could make vocabulary learning enjoyable and effective. Study 3 showed that there were many participants who were interested in vocabulary learning using apps and found them effective. Thus, the training introduced Quizlet, which is a popular vocabulary learning app, to learners. Quizlet is an app that helps users study vocabulary through various learning tools and games. For instance, there are practices in which learners make vocabulary cards online and study with them, hear the pronunciations of target words and enter their spellings, and enter a target word that matches a definition written on an "asteroid" to break it before it collides with a planet. The basic functions of it can be used for free. According to the website, Quizlet is used by more than 50

million learners a month (Quizlet, n.d.). Some studies investigated effects of Quizlet in vocabulary learning and supported its effectiveness (e.g., Chien, 2015; Dizon, 2015). Since vocabulary learning using Quizlet is like playing a game, learners may do it with strong intrinsic motivation. Additionally, learners can freely decide how to use functions and games in Quizlet, so using it for vocabulary learning could satisfy their need for autonomy.

Fourth, in order to encourage out-of-class collaborative learning and increase learners' VLM, a *Kahoot!* contest was held. Kahoot! is a game-based learning platform used by one billion people all over the word (Kahoot, n.d.). The platform allows teachers to make and give four-choice quizzes that learners can answer with their smartphones. Several studies have shown that learning with Kahoot! can be motivating and enjoyable as well as effective for learning (e.g., Licorish et al., 2018; Wang & Tahir, 2020). In the training, learners formed groups and competed against other groups in the Kahoot! vocabulary quiz. (see 6.2.2.7 for more detail). The winners were given extra credits, which were added to the score of the vocabulary test. This activity could give learners a reason to study vocabulary with team members outside of the classroom as well as stimulate their VLM. Furthermore, the contest would be an enjoyable one for

learners, assuming that learning vocabulary through competing against friends can fulfill learners' need for relatedness (Hiromori, 2015).

Fifth, some learning strategies that were suggested by the participants in Study 3 were introduced to the participants before the discussion. In Study 3's training, the teacher introduced only a few strategies in order to avoid hindering learners' creative development of learning strategies. However, this might have made it difficult for some participants to think of effective learning strategies during the discussion, and was, presumably, a reason why some discussions in Study 3 were not active. Thus, the training introduced some examples of learning strategies, and whether it hinders learners' creative learning strategy development was examined (see 6.2.3.2 for more detail).

6.1.2 Examining how discussions can be active

In addition to investigating the effectiveness of the training, Study 4 considered how discussions can be active. Learners' active involvement in discussions is essential in the strategy training which this study proposes. Nevertheless, in study 3, there were a few groups whose discussions did not seem to be very active. If a teacher finds such groups, s/he needs to offer support to solve the problem. Therefore, Study 4 examined

the moments when discussions become active or inactive so as to provide suggestions about how the teacher can improve the discussion's quality.

6.2 Method

6.2.1 Participants

The participants included 41 English learners (13 males and 28 females) at a university in Japan. Though the class had 45 students in total, four of the them were absent on the first day of the training.

The participants were from the same department and university as Study 2's. All the participants were students in the English class which the author was teaching once a week. They were first-year students at the time of participation in the study and all of them are native Japanese speakers. Considering the author's in-class observations and the English test scores (e.g., TOEIC, IELTS) reported by some participants, most of the participants seemed to have English proficiency levels of the upper B1 or lower B2 in CEFR (Council of Europe, 2001). This English proficiency level was relatively high among university students in Japan. The participants majored in international relations and generally had high motivation for English learning.

6.2.2 Contents of the training

A 3-day strategy training program, which was called “vocabulary learning project” in the class, was conducted in the English class the author was teaching. The three days were one-week apart from one another. Day 1 used all the class time (90 minutes), but Day 2, and Day 3 only used partial class time. Though a longer training program can be more effective (Plonsky, 2019), the training was kept as short as possible, considering that, in most L2 courses, it is impossible to spend a large amount of time on strategy training.

The training did not aim at letting all participants acquire the same learning strategies that the teacher recommends. Rather, it attempted to let them have many options of learning strategies and then choose their favorite ones. This is because each learner has different learning styles, and it would be difficult to introduce a learning strategy that every learner would like and find effective (Cohen, 2018). Thus, the training content is different from the content of a strategy training that aims at getting participants to learn to use a certain strategy chosen by the teacher. In the training, the participants were encouraged to choose their favorite learning strategies among various options suggested by the author and peers or developed through discussions.

The author spoke mostly in English, but Japanese was used when necessary. PowerPoint slides were shown to promote participants' understanding.

The training procedure was as follows. Generally, previous strategy training research lacked a detailed explanation of its contents (Plonsky, 2019), so this paper aims to describe its contents meticulously.

6.2.2.1 Introducing the training (Day 1, 12 minutes)

First, the purposes of the vocabulary learning project were explained. Second, the author talked about the importance of using effective vocabulary learning strategies. He told the participants that having a large vocabulary is necessary to gain high English proficiency showing some data (e.g., the number of word families needed to understand English written text. see Nation, 2006), and argued that studying vocabulary using efficient and enjoyable strategies is necessary. Then he advised that learners should actively try to find good vocabulary learning strategies rather than believing they already know the best strategies.

Third, the participants were informed that participation in the study was not mandatory and the collected data would be used only for educational and research purposes. All of the students in the class agreed to participate in the research. Then, the

schedule of the project was introduced. It was announced that a vocabulary test (see 6.2.2.8) would be given two weeks later, and the result would account for 15% of the final course grade. There were 151 words or phrases that could be on the test (see Appendix E). All of them were words or phrases which appeared in passages or lectures given during the course.

Finally, vocabulary learning groups made up of three or four participants were formed. In total, 12 groups were made. The group members were decided by the author based on the scores of the vocabulary test of the previous semester (i.e., Each group included a high-scoring and low-scoring student.). It was hoped that during the discussion, learners who received high scores in the test would share their learning strategies with those who received low scores.

6.2.2.2 Vision enhancement (Day 1, 12 minutes)

The objective of this part was to enhance participants' Vision-V. The activity was designed with reference to Dörnyei and Kubanyiova (2014).

Firstly, the author asked the participants what they wish to do if they memorize a lot of English words and learn to use them in communication effectively. They

brainstormed for two minutes, and shared their ideas in groups in English for four minutes.

Then, they were told to close their eyes for one minute, and imagine themselves pleased and confident to gain a large English vocabulary and learn to do what they hope to do making the most of it. This activity's effects were explained by informing the participants that vision enhancement was seen as meaningful in recent L2 studies. It was also pointed out that many outstanding sports players used vision enhancement to improve their performance. Further, the participants were advised to imagine not only what they would do if they gained a large English vocabulary but also how they would feel and how the people around them would react seeing you doing it.

6.2.2.3 Preparation: Sharing own learning strategies (Day 1, 5 minutes)

In groups, the participants shared what learning strategies they use to make vocabulary memorization effective and enjoyable with each other. As Dörnyei and Kubanyiova (2014) stated, one of the most inspiring and instructive parts of strategy training is the sharing session, where learners share their own strategies with each other. Moreover, personal learning strategies are often very amusing and therefore students usually enjoy discussing them (Dörnyei, 2005).

They were encouraged to use English in this session. The author walked around, listened to the discussions, and gave feedback.

6.2.2.4 Presentation (1) and practice: Introducing Quizlet (Day1, 12 minutes)

In this part, Quizlet was introduced as a learning tool that could make vocabulary learning efficient. Firstly, the importance of testing vocabulary knowledge and retrieving memories repeatedly was discussed by introducing Karpicke and Roediger's (2008) findings (see 2.6.6). Thereafter, the author introduced Quizlet and how to use it. Next, the author asked participants to practice using it with their smartphones for four minutes. The words or phrases that could appear on the vocabulary test were inputted into Quizlet by the author before the class so participants could start studying the vocabulary immediately.

6.2.2.5 Presentation (2): Introducing the three basic psychological needs (Day 1, 7 minutes)

In this part, the author introduced the basic psychological needs theory (see 2.3.2) and suggested strategies to satisfy them. Firstly, it was briefly explained that people tend to find a task interesting when their three basic psychological needs are fulfilled.

Then, the need for competence and the need for relatedness were defined, and several possible learning strategies to satisfy them were suggested (see Table 6-1). Because these were strategies used by participants in Study 3, the participants in the training could also find them effective and enjoyable. Learning strategies that could satisfy the need for autonomy were not mentioned because participants in Study 3 did not think of any.

Table 6-1

Learning strategies suggested to the participants

Learning strategies that could fulfill the need for *competence*
・Mark words and phrases that you have already memorized to feel a sense of accomplishment. ・Make a graph to visualize your progress. ・Share your efforts and achievement with classmates. ・Buy rewards for yourself when you studied as planned. ・Imagine the contexts the words and phrases can be used to recognize the value of memorizing them.
Learning strategies that could fulfill the need for *relatedness*
・Share good learning strategies with each other. ・Give each other questions. ・Have each group member make practice tests, give them to each other, and compete for the highest score. ・Compete against each other for the highest scores on Quizlet activities. ・Have each group member bring some snacks, and the winner of the vocabulary test takes all of them.

6.2.2.6 Making vocabulary learning plans in groups (Day 1, 35 minutes)

During this section of the project, how to study vocabulary for the vocabulary tests was discussed in groups of three or four participants. Firstly, the author announced the three requirements for out-of-class vocabulary learning during this project. The participants were requested to 1) use Quizlet for at least 30 minutes (The participants could freely choose which Quizlet functions they used), 2) study with group members for at least 30 minutes (i.e., satisfying the need for relatedness), and 3) use at least one learning strategy to satisfy their own need for competence in their out-of-class learning for the vocabulary test. Then, during a group discussion, they were asked to discuss 1) how to make the group learning session the most efficient and enjoyable vocabulary learning occasion in their vocabulary learning history, 2) what learning strategies they should use to satisfy their need for competence, and 3) whether there are other possible strategies to foster their VLM that can be utilized to study for the vocabulary test. They could either refer to the example learning strategies introduced by the author and classmates or create new learning strategies, regardless, they were encouraged to shape the learning strategies using their creativity and develop them suitably for themselves.

Despite some requirements, the participants were given great freedom in how they studied the vocabulary. This could satisfy their need for autonomy.

The language used during the discussion was chosen by each group. It was advised to begin the discussion with brainstorming and sharing to gain as many creative ideas as possible. While they were discussing, the author walked around the classroom, listened to the discussions, and gave feedback.

At the end of the class, the participants were requested to write learning strategies they would utilize in a planning worksheet and submit it to the author. In the worksheet, they wrote 1) how to study vocabulary efficiently and enjoyably in groups, 2) how to fulfill their need for competence, and 3) other learning strategies to enhance their own VLM in groups.

Participants were asked to study for the vocabulary test out of class, using the methods they wrote in the worksheet. This out-of-class vocabulary learning is the practice stage in the CALLA model. Moreover, the author announced that their vocabulary memorization progress would be checked using Kahoot! on Day 2 (see 6.2.2.7), and groups that gained the highest scores would be given extra credits that would be added to their vocabulary test scores. The participants had already experienced Kahoot! in the previous semester in the class, so they knew what it was.

6.2.2.7 Kahoot! contest (Day 2, 15 minutes)

Most of the class time on Day 2, which took place one week after Day 1, was spent on activities unrelated to the training. However, during the last 15 minutes of the class, the Kahoot! contest was held.

Prior to the Day 2 class, the author made 25 four-choice vocabulary quizzes in Kahoot! They included 15 quizzes where English words or phrases were shown on screen in the classroom and participants had to choose the correct meanings in Japanese. Further, 10 questions consisted of Japanese words or phrases shown on the screen and participants had to choose their correct English counterparts. All of the vocabulary in the quizzes were those that the participants were supposed to memorize for the vocabulary test.

Firstly, during the class, teams were formed based on the Day 1 groups. If a group had three people on Day 1, they became one team. If the group had four people, they were divided into two teams of two people. Each team used one smartphone and answered the vocabulary quizzes. Scores were determined by the speed and accuracy of their answers and winning teams were displayed on the screens after each question. This resulted in a fun and competitive atmosphere.

It was hoped that their desire to win the game would enhance the participants' VLM and encourage out-of-class collaboration among the participants between Day 1 and Day 2. Moreover, this activity aimed to prevent procrastination: the number of participants who start studying for the test right before Day 3 may decrease. Furthermore, reviewing vocabulary in the Kahoot! contest itself can be enjoyable and effective vocabulary learning.

6.2.2.8 Vocabulary test (Day 3, 15 minutes)

The vocabulary test was given at the start of Day 3, which took place one week after Day 2. The test had 45 questions in total (i.e., 45 words or phrases out of the 151 appeared on the test). Each question was worth 1 point, so a perfect score was 45. The test consisted of two parts: 30 questions in which the participants wrote the Japanese translations for English words or phrases and 15 questions where they wrote English translations for Japanese words and phrases. In the second part of the test, the first letters of the English words were given. Answers with minor spelling errors were marked as correct. However, if the spelling errors indicated incorrect pronunciation memorization, only 0.5 point was given.

6.2.2.9 Self-evaluation (1) and expansion: Group reflection (Day 3, 10 minutes)

After the vocabulary test, participants discussed the following three topics in their vocabulary learning groups: 1) whether the learning strategies they used were effective or not, 2) how the learning strategies could be improved further, and 3) whether the strategies could be applicable to other learning contexts besides vocabulary learning. During the discussion, speaking English was encouraged, while speaking Japanese was allowed.

6.2.2.10 Sharing learning strategies (Day 3, 20 minutes)

Based on the discussion in 6.2.2.9, each participant was given three minutes to prepare a two-minute speech that introduced 1) what learning strategies s/he used, 2) how effective the learning strategies were, and 3) how s/he could improve the learning strategies in the next vocabulary learning opportunity. Then, new groups of three or four people were formed, and each participant gave the speech to their new group members. They were encouraged to give their speeches in English, but some Japanese was permitted. After each speech, the listeners asked the speakers questions if they had any.

Following, a list of 53 learning strategies thought through by the participants during the discussions on Day 1 were distributed. The list was compiled by the author

based on the planning worksheets submitted by the participants at the end of Day 1. The participants read them and marked or underlined learning strategies that they found intriguing and effective.

As discussed in 6.2.2.3, strategy sharing activities such as this can be effective and interesting. It was expected that they might learn unique and appealing strategies that their classmates developed.

6.2.2.11 Self-evaluation (2): Essay writing (After Day 3, out-of-class activity)

About one and half months after Day 3, participants were requested to write a short essay about the training of 100 words or more in English. The instruction was as follows: “Please write what you feel about the vocabulary learning project (e.g., Do you value your participation in the Project? Why or why not?/ Are you using (or planning to use) the strategies you learned for vocabulary learning or other learning contexts? Why or why not?” The author hoped that writing the essay could be another opportunity to reflect on their learning in the training program. Moreover, this activity may encourage participants to voluntarily use learning strategies they learned in the training. As suggested in Study 3, there may be many learners who did not use new learning

strategies after the training. This essay writing opportunity might become a good reminder for such participants.

6.2.3 Data collection and analysis

6.2.3.1 Survey 1

Two kinds of surveys were created to examine the effect of the project: Survey 1 and Survey 2 (see 6.2.3.5). Survey 1 concerned the group discussion on Day 1 (see 6.2.2.6). It was administered at the end of the day. All items were written in Japanese, the participants' native language.

Survey 1 consisted of two parts. The first part asked seven 5-point Likert scale questions pertaining to how participants felt about the discussion. The mean values, standard deviation values, and the percentages of participants who chose 4 or 5 (i.e., favorable answers) were calculated for each question. Q1 and Q2 concerned IM for the discussion (α=.84). Q3 examined whether the participants regarded the discussion as effective for improving their capacity for vocabulary learning. Q4, Q5, and Q6 concerned important factors for collaborative learning such as cooperation, goal sharing, and contribution (cf. Johnson et al., 2002). Q7 investigated whether the participants learned something that could not be learned alone.

In the second part of Survey 1, the participants wrote what had motivated or demotivated them during the discussion. The purpose was to reveal motivating and demotivating factors in discussion for learning strategy development and consider what teachers can do before or during the discussions to make them more effective. For the analysis, the author translated the responses written in Japanese into English, and categorized them by forming groups of responses with similar meanings. The translation and categorization were checked by another Japanese researcher who has a Ph. D. in an English education-related field and has expertise in qualitative research. Based on his suggestions, revisions of translations and categorizations were made. The responses under each category were presented in appendix so that the readers can confirm the validity of the author's classification.

6.2.3.2 Planning worksheet for vocabulary learning

After the group discussion on Day 1, each group was asked to write down how they plan to study vocabulary out of class on the planning worksheet and then submit it to the author (see 6.2.2.6). Then, these responses were analyzed to investigate the participants' vocabulary learning methods. Most participants wrote their ideas in Japanese, so the author translated them into English. Next, the responses were

categorized, and common types of learning strategies were explored. Again, the translation and categorization was checked by another researcher (see 6.2.3.1) and revised based on his suggestions. In addition, it was examined whether participants were able to develop learning strategies creatively rather than simply adapting learning strategies introduced by the author as examples.

6.2.3.3 Scores of the Kahoot! contest

Kahoot! scores are automatically recorded and so the author could confirm them online. They were used to examine how well participants studied vocabulary by Day 2 (one week before the vocabulary test). If the overall score was high, it implies that holding a Kahoot! contest could prevent procrastination.

6.2.3.4 Scores of the vocabulary test

The average score and standard deviation value of the vocabulary test (see 6.2.2.8) were examined to consider how effective the practice was. In addition, the scores were compared to the students' scores who were absent on Day 1 of the training. The number of the absent students was only four, so the scores could not be compared statistically.

Nevertheless, it would be acceptable to use the scores as supplementary data to discuss the effect of the training.

6.2.3.5 Survey 2

After the strategy sharing activities (see 6.2.2.10), Survey 2 was administered. It mainly inquired about participants' opinions of various aspects of the training, such as the vision enhancement activities, out-of-class vocabulary learning with peers, out-of-class individual learning, and the Kahoot! contest.

Survey 2 consisted of 31 questions. 27 of which were five-point Likert scale questions (see Appendix F for more detail). Two questions inquired about how much time they had spent using Quizlet and doing vocabulary learning with peers outside of class. The other two were open-ended questions. All questions were written in Japanese.

As for the Likert-scale questions, the mean values, standard deviation values, and the percentages of participants who chose 4 or 5 (i.e., favorable answers) for each question were calculated. Using the results, learners' perceptions toward the training were considered. Q6, Q7, and Q8 examined IM for out-of-class vocabulary learning with peers (α=.92), Q12, Q13, Q14 examined IM for out-of-class individual vocabulary

learning (α=.82), and Q23, Q24, and Q25 examined IM for the vocabulary learning project overall (α=.85).

The responses to the open-ended questions were translated into English by the author and categorized into either positive or negative. Then, more detailed classifications were performed. Finally, the translation and categorization was checked by another researcher (see 6.2.3.1) and revised based on his suggestions.

6.2.3.6 Essays

The essays participants submitted about one and half months after Day 3 (see 6.2.2.11) were utilized for analyses. As Gu (2019) stated, although one main goal of learning strategy training is to enable learners to utilize the learning strategies beyond a completion of classroom, not many studies have revealed how they feel after the training. Therefore, participants' perceptions of the training a while after it had ended were investigated through analyzing the essays.

In the analysis, the KH Coder (Higuchi, 2016, 2020) was utilized. The summary of the data used for the analysis is presented in Table 6-2. Firstly, frequently used words in the essays were identified to reveal participants' general opinions of the training. Before interpreting the results, how the words were used in context was carefully

considered through reading every sentence that included those words. This was important as words that typically have a positive/ negative meaning can be used in the opposite way (e.g., “Good” could be used as “studying vocabulary with peers is not a *good* idea.”). Moreover, some frequently used words were chosen and analyzed further.

Table 6-2

Summary of the data analyzed by KH Coder

Number of essays	40 essays	Total number of words analyzed by KH Coder	4733 words
Average length of one response	118.3 words	*SD*	23.5

6.3. Results and Discussion

6.3.1 Participants’ perceptions toward the training

6.3.1.1 Survey 1 (Part 1)

The results of the first part of Survey 1 are summarized in Table 6-3. Overall, the participants seemed to have positive perceptions of the group discussion. For instance, more than 90% of the participants thought the activity of thinking about vocabulary learning strategies in a group was fun (Q1), and 80% of them answered that they became interested in it (Q2). This shows that the majority of the participants could participate in the discussion with strong IM. Further, the results of Q3 indicated that the

majority of participants felt the group discussion would help them become better vocabulary learners. In other words, many of the participants thought the discussion was effective as well as enjoyable.

The results of Q4 and Q5 implied that learners generally cooperated with each other and had a clear common goal. Though the mean value of Q6 was slightly lower than other question's, it can be regarded as sufficiently high, because it might be difficult for some people to confidently declare that "I was able to be helpful for other group members." Thus, it can be concluded that the discussion satisfied some requirements for successful collaborative learning.

Moreover, the result of Q7 suggested that 80% of participants gained new ideas that they would not think of by themselves. This can be regarded as evidence that supports the significance of incorporating discussion in strategy training.

Table 6-3

Participants' perceptions towards the discussion

		M	*SD*	% of 4 or 5
Q1	グループで語彙学習法を考えるのは面白かった。 It was fun to think about vocabulary learning strategies in a group.	4.10	0.77	92.5%
Q2	グループで語彙学習法を考えるという活動に興味を持てた。 I became interested in the activity of thinking about vocabulary learning strategies in group.	3.85	1.01	80.0%
Q3	グループで語彙学習法を考える活動は、効果的に語彙学習する力を高めるのに役立つと思った。 Thinking about vocabulary learning strategies in a group was helpful to improve our ability to study vocabulary effectively.	4.03	0.96	77.5%
Q4	グループで協力的に取り組めた。 I was able to cooperate with group members.	4.33	0.85	92.5%
Q5	グループ内で課題の目標 (goal) が明確だった。 We shared the goal of the project clearly.	3.90	0.89	77.5%
Q6	グループでの話し合いでは、グループメンバーの役に立てた。 I was helpful to group members during the group discussion.	3.65	1.04	70.0%
Q7	グループで語彙学習法について話し合うことで、自分一人では思いつかない学習法を学べた。 Through discussing vocabulary learning, I was able to learn strategies that I would not have thought of alone.	3.98	1.06	80.0%

Note. The choices are: 5: I strongly think so.; 1: I don't think so at all.

6.3.1.2 Survey 2

The results of the Likert-scale questions in Survey 2 are presented in Appendix F. Q 1 and Q2 concerned the vision enhancement activity (see 6.2.2.2). It was suggested that many participants thought the activity would clarify their Vision-V and increase VLM.

Q3 and Q4 were items about Quizlet. Q3 inquired about how much time (in minutes) participants spent on it. It was found that they used it for about 69 minutes on average. However, as the large *SD* (62.35) indicates, this differed substantially among the participants. Although they were asked to use Quizlet for more than 30 minutes, more than 15 % of the respondents answered 20 minutes or shorter. On the other hand, another 15% of the respondents used it for more than 180 minutes. Q4 revealed that the majority of participants felt vocabulary learning using Quizlet was effective. These results suggest that teaching Quizlet in vocabulary learning strategy training can be meaningful.

Q5-Q9 were items concerning vocabulary learning with peers outside of the class. Q5 showed that participants studied vocabulary with classmates outside of class for about 52 minutes on average. While 50% of the participants answered 30 minutes or less, there were two respondents who answered 180 minutes or more. Q6-Q8 were items

investigating participants' IM for out-of-class vocabulary learning with peers. The mean values of those questions were generally high. As Study 1 and 2 indicated, intrinsic motivation for vocabulary learning (IM-V) seems to affect motivated learning behavior for vocabulary learning significantly. Thus, it can be assumed that the participants studied vocabulary diligently in out-of-class learning with their peers. Q9 showed that about 55% of the respondents thought vocabulary learning with peers was effective. The value seems to be sufficiently high, considering that each learner has different learning styles.

Q10 and Q11 asked about the use of self-motivating strategies to satisfy participants' need for competence. The results showed that more than 50% of the respondents thought of and used such strategies, and increased their motivation. This suggests that the training has the potential to develop learners' self-motivating strategies (i.e., indirect motivational strategy: see 5.1.1), which would lead to the development of their self-regulating capacity in vocabulary learning.

Q12, Q13, and Q14 concern IM for individual out-of-class vocabulary learning for the vocabulary test. The mean values seem to be sufficiently high, considering that vocabulary memorization is not usually a fun task (Zimmerman & Schunk, 2007).

The mean values of Q15, Q16, and Q17 showed that many participants studied vocabulary more enjoyably, diligently, and efficiently during the training than in the past. However, there were also some participants who did not feel these effects. Possible reasons are discussed below.

The mean value of Q19 indicated that the Kahoot! contest motivated some participants to study vocabulary for it. Furthermore, seeing the results of Q20, most participants enjoyed the Kahoot! contest. However, according to the result of Q18, it might not necessarily prevent procrastination.

The mean value of Q21a was low. This indicates that many participants thought, even if they had not taken the training, they would have received as high a score as they actually did in the vocabulary test. In order to consider the reasons for this, negative responses in Q21b were reviewed (see Table 6-4). Consequently, some possible reasons were found. Firstly, as Response 1 in Q21b shows, they might be willing to study hard for the vocabulary test whether or not they took the training. The participants in the study were generally highly motivated English learners, so they might have studied diligently enough to get a high score regardless of if their way of learning was enjoyable and efficient. Another possible reason was that some participants were already confident about their vocabulary learning method they used before the training, and did not think

the new learning strategies were better ones (see Response 2). Moreover, as Responses 3-5 indicate, some learners did not find vocabulary learning with peers effective.

Table 6-4

Negative comments in Q21b

1	I planned to study even if I did not take the vocabulary learning project VLP の時間があってもなくても勉強するつもりだったので変わらないと思う。
2	I have already established my own way of vocabulary learning and I can get the perfect score in the test using it. It is individual learning, and I can enjoy it. 自分は既に満点をとれる勉強法を確立していて、その方法は 1 人向けの方法であり、自分はその方法で楽しめるから。
3	Studying in groups is more enjoyable than studying alone, but the efficiency of the two does not change much 一人で勉強するのと複数で勉強するのでは複数の方が楽しいけど、効率の面で見ると一人も複数も大差はないと思う。
4	Studying alone is the most satisfying and efficient. I do not need to concern about others. 自分のペースでする勉強（1 人でする）がいちばんしっくりくる、納得する、無駄がないから。人に合わせる必要ないから。
5	I can study by myself. 一人でも勉強できるから。

On the other hand, there were also many participants who thought the training was helpful for receiving a good score in the vocabulary test (see Table 6-5). In contrary to Responses 3, 4, and 5 in Table 6-4, some participants felt learning vocabulary with peers was effective. As Responses 1, 2, 3, and 4 in Table 6-5 show, studying vocabulary

with peers can be motivating in various ways: working for a shared goal (Response 1), playing a fun vocabulary learning game together (Response 2), seeing hard-working peers (Response 3), and competing against friends (Response 4) would be all considered helpful to study vocabulary with strong motivation. Moreover, Response 5 shows that there was a student who increased the quality of their vocabulary learning by studying with peers.

Table 6-5

Positive comments in Q21b

1	一人だとやる気が起きなかったりする。皆とやれば楽しいし目標（Kahoot 1 位）に向けて一生懸命になれた。 My motivation may not increase when I am alone. In the training, it was fun because I was studying with my friends and I was able to work hard to achieve the goal (becoming the winner in the Kahoot! contest.
2	グループメンバーとのカルタが楽しくて、そこに出てきた単語がより印象的に記憶に残った。楽しく勉強することで 1 人より効率的に暗記できることが分かったから。 Karuta (a Japanese traditional card game) was fun and the words that appeared on the game were memorable. I realized that studying enjoyably enables me to memorize vocabulary more efficiently than doing it alone.
3	集まって学習したときに、クラスメートがほとんどの単語を暗記しているのをみてやる気が出たから。 When my classmates and I got together to study, they already memorized most of the words. This motivated me.
4	Kahoot!や授業外学習でクラスメートに負けたくないという思いが無ければ、勉強時間は恐らくもっと減っていたから Without my desire to win against my classmates in the Kahoot! contest and out-of-class vocabulary learning, the length I spend on studying is probably shorter.

5	友達と問題を出し合うことで注目していなかった単語にもきちんと気づいて理解できたから。 Through giving quizzes to each other with my friends, I noticed and understood words that I had not paid attention to.
6	今まで通り非効率な勉強法(=単語を書くだけ)で楽しむこともせずにテスト当日を迎えてただろうと思ったから。 Because (if I had not participated in the VLP,) I would have used ineffective learning methods (i.e., just writing words down) without having fun.
7	いつもは直前に詰め込んでいたけど事前に勉強することができたから。 I usually study right before the tests, but this time, I was able to study in a more planned manner.
8	1 人でテスト勉強を行うときは、きっと前日にしか勉強をしていなかったと思うので、グループメンバーと前々から準備したのがよかったと思うから。 If I had studied alone, I only would have studied the day before the test. It was good to start preparing earlier with group members.
9	私はプロクラスティネーターなので、VLP がなかったら前日の夜から勉強していたと思うからです。 I am a procrastinator, so without participating in the VLP, I would have started studying on the previous night of the day of the vocabulary test.

Further, besides studying with peers, there were also some positive responses regarding other aspects of the training. Response 6 implies that the respondent was able to use more efficient and enjoyable vocabulary learning strategies than before. Responses 7-9 indicate that, for some participants, the training prevented procrastination. Thus, although the mean value of Q18 implies that the training was

overall not very helpful in preventing procrastination, there were at least some participants who were able to start test preparation earlier than usual because of it.

Q22's results showed that although more than half of the respondents enjoyed sharing their own learning strategies or hearing their peers' learning strategies, there were also many participants who did not enjoy doing so. Students who were already confident about their vocabulary learning methods might not think it was meaningful.

Q23, Q24, and Q25 were items examining participants' IM for the training overall and the results showed that the participants generally took the training with strong IM. In Q26, more than half of the respondents answered that they would learn to study vocabulary more enjoyably because of the training. Q27, Q28, and Q29 asked whether they were willing to keep using learning strategies that they learned in the training. Quizlet seemed to be seen as an effective vocabulary learning tool: 75% of the respondents answered they would keep using it after the training (Q27). Also, more than 70% of the respondents answered that they would use strategies to satisfy their need for competence (Q29). This implies that the training could help them learn self-motivating strategies, which would lead to developing their self-regulating capacity in vocabulary learning. However, learning strategies of vocabulary learning with peers seemed to be

less popular (Q28). This result accords with the discussion above: there were both participants who found studying with peers effective and participants who did not.

In Q30, the participants were asked to list both good aspects of the training and aspects that needed improvement. The positive comments were categorized (Appendix G). The results indicated that there were participants who had learned new learning strategies. Needless to say, providing learners with opportunities to learn new learning strategies is an essential goal in strategy training and participants who wrote the comments appeared to feel that such opportunities were given. Moreover, it was also shown that some participants felt the training increased their motivation for vocabulary learning. For example, working with peers, thinking about various learning strategies, and the Kahoot! contest can be motivating factors. Furthermore, there were some responses showing that the respondents enjoyed vocabulary learning. This result coincides with those of Q6-7 and Q12-14 showing that there were many participants who were able to study vocabulary with strong IM in the training.

Nevertheless, several negative responses were also found in Q30 (see Appendix H). Two of them were about how the groups were formed. One respondent pointed out that three people in a group was too small to think of sufficient ideas in discussions. The other respondent said s/he hoped to work with classmates whom s/he is close to. Hence,

group forming methods seem to be an issue that needs further consideration. In addition, one participant mentioned a problem regarding the Kahoot! contest. In the training, two or three participants formed a group and competed against each other, because it could be a good reason to study vocabulary in groups outside of the class. However, this might make it difficult for all team members to equally contribute to the team in the Kahoot! contest, as they were only allowed to use one smartphone. In fact, the author noticed that in some groups the student holding the smartphone answered most of the questions. This is an important problem to solve to ensure the Kahoot! contest is enjoyable and meaningful for every learner. For instance, the teacher could ask learners to place the smartphone in the middle and not touch it until the question appears on the screen.

6.3.1.3 Essays

The essays the participants wrote about one and half months after the training was analyzed using the KH coder. Words that appeared more than five times are presented in Table 6-6.

Table 6-6

Frequent words in the essays

Nouns
word (72), way (40), vocabulary (35), project (34), group (31), test (31), time (28), friend (26), score (17), karuta (16), card (15), game (13), member (13), strategy (13), fun (12), classmate (11), experience (10), method (10), study (10), lot (8), meaning (7), motivation (7), opportunity (7), result (7), addition (6), exam (6), example (6), learning (6), something (6), student (6), task (6), team (6), work (6), effort (5), goal (5), other (5), point (5), quiz (5), reward (5), thanks (5), university (5)
Proper nouns
VLP (26), Vocabulary (20), Project (16), Learning (15), English (13), Quizlet (14), Kahoot (12)
Adjectives
good (27), English (20), other (19), vocabulary (19), able (16), many (14), new (12), effective (9), important (9), interesting (8), difficult (7), efficient (7), more (7), much (7), useful (7), enjoyable (6), glad (6), great (6), hard (6), such (6)
Adverbs
so (18), very (18), also (17), more (15), alone (12), together (10), again (9), even (9), only (9), really (8), easily (7), efficiently (5), hard (5), now (5)
Verbs
be (183), study (83), learn(66), have (50), do (49), memorize(47), think (41), make (26), get(24), use (23), find (15), play (15), take (15), want (15), work (15), feel (11), help (11), remember (11), try (11), enjoy (10), know (10), join (9), write (8), give (7), keep (7), participate (7), realize (7), start (7), like (6), motivate (6), talk (6), improve (5), need (5), satisfy (5)

Note. The numbers in parentheses show how many times the word appeared in the essays.

The author found many positive adjectives and adverbs, which indicated that participants evaluated the training positively in general. Among the positive adjectives, "interesting" and "enjoyable" seem to relate to IM, and "effective" and "efficient" seem

to relate to the quality of vocabulary learning. In fact, reading each essay including those words, such relationships were found (Table 6-7). Nevertheless, it should be noted that these positive words were sometimes used negatively (e.g., “Actually, I think that VLP was meaningless for me. It is because it is more *effective* for me to memorize words by myself.”).

On the other hand, a negative word, “difficult” was also discovered. Although it was actually used negatively in some cases (e.g., “It was very *difficult* for our team to gather in the same day.”), there were also examples in which the training’s effectiveness was supported. For example, a participant wrote, “It is *difficult* for me to work hard alone, so it was worth studying with them (group members).”

The analysis also paid attention to words like “learn”, “find”, and “realize”, which were frequent verbs in the essays. This was because confirming the verbs’ objectives revealed what participants had learned in the training. The examples of the three verbs’ objects are presented in Table 6-8. They show that the participants gained various knowledge and ideas through the training, including tips to motivate themselves and tips for vocabulary learning. As discussed earlier, the goal of the training is not to teach a particular learning strategy but to present various options of learning strategies available in vocabulary learning and have them choose their favorite ones. After reviewing the

Table 6-7

Examples of sentences that include positive adjectives and adverbs in the essays

Interesting
I was very happy to be able to take part in VLP. I have never experienced such an *interesting* learning./ I assumed that learning vocabulary was troublesome, but this experience told me that learning vocabulary can be *interesting*./ This project itself is so interesting, so I want to take advantage of this with my friends./
Enjoyable
The first thing I want to say is this project was very *enjoyable*./ VLP was very meaningful and *enjoyable* project, and it was nice to have joined it./ Many people feel difficulty to start studying, but there was an *enjoyable* competition, so we easily start.
Effective/ Effectively
In my group, we played a concentration game. It was very *effective* way of learning English because we could see and remember same cards again and again until we find the peer cards./ I found a good way to learn vocabulary. It was Quizlet. I could learn them very quickly and *effectively*./ I think that it was a good experience to participate in VLP, because this project was *effective* for me.
Efficient/ Efficiently
I thought vocabulary learning project was *efficient* for us to learn vocabulary, because we could enjoy and be willing to study for the test./ I thought most important was I had responsibility to my friends to make the time useful. Consequently I thought a lot how to study *efficiently*./ Before that, I simply tried to memorize them, but thanks to VLP, I understood that there are more *efficient* ways to learn unknown words, that use some strategies based on the key factors.

Table 6-8

Objects of learn, find, and realize

Learn
how to keep my motivation/ to imagine my ideal figure would help my studying/ basic psychological needs/ there are many other ways to study other languages' vocabulary/ what are important when learning new vocabulary/ the importance of repeating review test and reviewing it/
Find
what makes me motivated/ a delight in learning with my friends/ brilliant way of studying
realize
the importance of rewards in study/ if I make an effort (even a little one), a hard work could become a joyful work /if I repeat reviewing my mistakes, I can memorize English words more easily and for a longer time/ we should speak out vocabulary/ using such kind of tool (Quizlet) is useful

essays, it was suggested that each participant valued different ideas, but many of them learned something that they found effective for their own vocabulary learning.

On the other hand, there were a few participants who did not regard the training as effective at all. For example, one participant wrote:

> "I don't think the VLP is effective to me because I was not able to find a more efficient way of memorizing to me than the ways of memorizing that I use. Our tactic is to bring snack and take some tests that each of us makes and give a person who gets the highest score all of them. This tactic was fun. It can help

some people memorize but it is not efficient and takes much time. The other shared ways of memorizing also not really efficient to me. I can memorize many words even if doing that is not fun and it is important for me to take less time to memorize them. In other words, I find a more efficient way more important. You may find my way of thinking arrogant but this is just what I truly think of this program."

As this essay implies, learners who are confident in their vocabulary learning ability and strategies may not feel that the training is meaningful.

6.3.2 Scores of the Kahoot! contest and the vocabulary test

In the Kahoot! contest, 18 teams were formed in total. They answered 25 four-choice vocabulary quizzes. The average number of correct answers out of 25 questions was 21.8 (*SD*=2.54). This seems to be very high. Considering that scores of Kahoot! are determined not only by accuracy but also by speed, some participants might have made mistakes when answering questions they ordinary would have answered correctly if they were calm. If so, the number of words each team actually memorized might be even greater. The Kahoot! contest was held on Day 2. This means that many

participants had already started studying the vocabulary as of one week before the vocabulary test.

The average score of the vocabulary test was also very high: *m*=40.87 (*SD*=5.38) out of 45. This means that most of the participants studied vocabulary diligently enough to get a good score on the vocabulary test. On the other hand, the average score of the four students who missed Day 1 of the training was 31.00 (*SD*=8.12). Needless to say, the comparison with a contrast group of four people cannot lead to any decisive conclusion. Thus, the possibility that the vocabulary test was easy enough for the participants to get a high score on without taking the training cannot be denied. Nevertheless, considering the contrast group's low average score, it can, at least, be claimed that the test was not easy enough to get a good score on without any preparation.

6.3.3 Learning strategies developed through the discussion

The learning strategies that the participants wrote in the planning worksheet for vocabulary learning were classified as follows: a) Play games or give quizzes with classmates (11 groups), b) Set incentives to perform well in the competitions or test (10 groups), c) Praise (7 groups), d) Visualize efforts or progresses (5 groups), e) Think

about the significance of memorizing the vocabulary (3 groups), f) Think about fun things to do after the test (3 groups), g) Repeat memorizing a certain amount of words in a short period of time (3 groups), h) Set a goal of getting a high score in the Kahoot! contest (3 groups), i) Share learning strategies (2 groups), j) Make an environment that helps study vocabulary enjoyably (2 groups), k) Do vision enhancement (2 groups), and l) Others (see Appendix I for more detail).

There are some notable aspects to these results. Firstly, most of the groups were able to write several ideas that could improve the quality of vocabulary learning. 73 ideas were suggested by 12 groups. This means that each group wrote about six ideas on average. Consequently, various learning strategies that could be used in vocabulary learning were found. This shows that the training enabled the participants to think of and develop a variety of learning strategies. As Tseng and Schmitt's (2008) motivated vocabulary learning model shows, learners who consistently try to seek and improve their vocabulary learning strategies tend to be good vocabulary learners (i.e., strategic vocabulary learning involvement). Learners who participated in the training can have these seeking and improving experiences.

Second, the participants listed many learning strategies concerning motivation as well as vocabulary learning strategies that directly increased the efficiency of

vocabulary learning. Seeing the participants' ideas, it is clear that many participants seriously considered how to increase their own motivation. For instance, two groups decided to do vision enhancement to increase their own VLM, presumably because they found the vision enhancement activity in the training meaningful. This can be an effective self-motivating strategy (Dörnyei & Kubanyiova, 2014). In addition, some groups attempted to increase each other's motivation (e.g., Praise). This type of strategies cannot be called self-motivating strategies which the present study targets, but is nevertheless helpful to enhance motivation. Tseng and Schmitt's (2008) model emphasizes the importance of self-regulating one's own motivation in vocabulary learning (i.e., self-regulating capacity in vocabulary learning). The result appears to be another piece of evidence showing that learners who took the training can improve this capacity because the training facilitates ideas for increasing their own motivation in vocabulary learning.

Third, presenting examples of learning strategies did not seem to prevent the participants from being creative. Unlike the training in Study 3, the training in Study 4 taught examples of learning strategies before the discussion in order to decrease the likelihood of participants being unable to think of good learning strategies during the discussion. Nevertheless, teaching the strategies beforehand could possibly have a

negative influence on discussion. If learners decided to only use the given examples as they were, they would not experience the important process to be a good strategy user: being creative and proactive and trying to develop learning strategies that are suitable to themselves. Comparing the learning strategies provided as examples (see Table 6-1) with the ideas the participants wrote in the worksheet, there were some similarities. Nevertheless, the majority of the ideas were not related to the examples or developed versions of the examples. This implies that the participants considered effective learning strategies proactively and creatively rather than merely adapting the given examples.

6.3.4 Motivating and demotivating moments in discussion

The results of analyzing motivating moments during discussions are presented in Appendix J. Two common responses were a) when a good idea is found (21 responses) and b) when learners are developing an idea collaboratively (5 responses). Developing a learning strategy creatively and proactively in groups, and finding a suitable learning strategy for oneself are essential parts of the training. It was suggested that when participants did them successfully, they felt satisfied. In other words, what the training wants learners to do for their learning strategy development accords with what the

learners want to do. This is significant because even if a task is theoretically effective, it would not be effective in actuality unless learners are willing to achieve its goal.

Other common motivating moments are when c) ideas are conveyed to or shared with peers (5 responses), d) learners sympathize with peers' ideas (2 responses), e) learners' ideas are supported by peers (4 responses), and f) the discussion becomes vigorous (5 responses). These four appear to be related to one another. When a learner can successfully share an idea with his/her peers, the peers may sympathize with the idea if they also think it is useful. Then, the learner can receive positive comments from their peers. Positive feedback is a well-known factor to increase learners' IM (Reeve et al., 2007). Thus, it is understandable that positive comments are a motivating factor in the discussion. When such interactions occur during the discussion, a vigorous and enjoyable atmosphere would be created.

In contrast, the responses about the demotivating moments were categorized into five as follows: a) The discussion becomes inactive (19 responses), b) Learners feel pressure from peers (3 responses), c) Learners cannot understand what to do (2 responses), d) There is no time to meet up with group members out of class (2 responses), and e) Others (4 responses) (see Appendix K for more detail). Among the five, the number of responses in category a (The discussion becomes inactive) is

outstanding. Many of the groups seem to have experienced a moment when nobody came up with ideas and the conversation stopped. Reducing such moments can be important to make the discussion enjoyable.

To sum up, the key to creating active discussions is to ensure that learners can develop and find good learning strategies under a supportive atmosphere in which they can share ideas actively and enjoyably. For example, it may be helpful to show an example of conversations that develop learnings strategies (e.g., Excerpts 1 and 2 in Study 3) prior to the discussion. This might allow learners to recognize the significance of developing an idea rather than just accepting the idea as it is and understand how it can be achieved. It might also be effective to inform learners of the importance of giving their peers positive comments when they propose a good idea. When a learner received positive comments, s/he would gain confidence and be more willing to contribute to the discussion. Furthermore, exchanging positive comments can create an atmosphere where learners feel free to distribute ideas unreservedly. If the discussions are held in English, it can be helpful to teach some common expressions that can be used as positive comments (cf. Response for maintenance strategy: Nakatani, 2010) or consider what responses can make people happy during conversations with learners.

6.4 Conclusion

Study 4 designed and conducted a strategy training program to help learners learn to control their own VLM as well as find effective vocabulary learning strategies. The effectiveness of the training was measured using several research methods such as qualitative and quantitative analyses of survey data, scores of the Kahoot! contest and the vocabulary test, and the learning strategies the participants developed during discussions.

Generally, the results showed that the training was effective. The survey results indicated that many of the participants thought they had participated in the training with strong IM and learned effective learning strategies. Even though some participants did not evaluate all new learning strategies positively, this is not a serious problem. Each learner has different preferences, so it would be almost impossible to convince all learners of the effectiveness of a certain strategy. The training attempted to give the participants many learning strategy options so that they can choose their favorite learning strategies for vocabulary learning freely. It seems that overall this goal was achieved. Nevertheless, there appeared to be a few learners who did not find any of the new learning strategies effective. Though a possible reason was suggested, further research about this problem is needed.

The average scores in the Kahoot! contest and the vocabulary test were very high. These results indicate that the participants studied vocabulary diligently. However, it is uncertain how much the training contributed to these results, because the contrast group was too small and the vocabulary test might have been too easy enough to get a high score without the training. This is one limitation of Study 4.

In the analyses of vocabulary learning ideas taken from the planning worksheet, it was suggested that the participants autonomously developed learning strategies through discussions and found self-motivating strategies for vocabulary learning as well as vocabulary learning strategies. These results show that the training can improve learners' self-regulating capacity in vocabulary learning and strategic vocabulary learning involvement, which are two of the essential components of successful motivated vocabulary learning.

In addition to researching the effectiveness of the training, motivating and demotivating moments during the discussion were investigated for the purpose of considering what teachers should do to make the discussion active. Consequently, common motivating moments were when participants developed and found a good idea, when they successfully conveyed good ideas to peers, and when they received positive comments. On the other hand, when the discussion was inactive, they were

demotivated. Therefore, it seems important for teachers to teach learners how to develop ideas in advance and create an atmosphere where they can share their ideas freely and actively.

Chapter 7

Conclusion

7.1 Summary of the Studies and Answers to the Research Questions

In this paper, four studies were conducted in order to answer the following three research questions (RQs) below (see 2.7):

1) Is enhancing English learners' vocabulary learning motivation (VLM) significant?

2) What are factors that affect English learners' motivated learning behavior for vocabulary learning (MLB-V)?

3) What teaching methodologies can promote English learners' successful motivated vocabulary learning?

In Study 1, survey research concerning intrinsic motivation (IM), self-determined types of extrinsic motivation (SDEM), and motivated learning behavior (MLB) was conducted for 88 university students. After analyzing the data, it was indicated that 1) correlation between IM for vocabulary learning (IM-V) and IM for general English learning (IM-G) was not very strong, 2) IM-V predicted MLB-V more strongly than IM-G, and 3) IM-V of most participants was not very high. In other words, IM-V was independent of general English learning motivation, enhancing IM-V can be more effective for improving MLB-V than enhancing IM-G, and IM-V had room for further

improvement. These results show that enhancing IM-V, which is one type of VLM, can be significant. This is the answer to RQ1. On the other hand, it was also suggested that enhancing SDEM for vocabulary learning (SDEM-V) may not be very effective, because it did not predict MLB-V significantly and most learners already had high SDEM-V.

Study 2 was survey research concerning vision of the ideal L2 self as well as IM, SDEM, and MLB. The participants were 97 university students. As a result of the data analysis, it was revealed that 1) Vision-V predicted MLB-V more strongly than SDEM-V, 2) Vision-V had sufficient room for improvement, 3) Vision-V predicted MLB-V more strongly than Vision-G, and 4) IM-V and Vision-V accounted for 34% of the variance in MLB-V. Considering the results of Study 1 and 2, the answer to RQ2 is that IM-V and Vision-V are possible factors that affect MLB-V.

In Study 3, a strategy training aimed at helping learners learn to do successful motivated vocabulary learning was conducted for 52 university students. The three main characteristics of the training were 1) letting learners choose and develop learning strategies by themselves so that they can acquire their own suitable strategies, 2) discussions among learners were included in the training, and 3) teaching three vocabulary learning principles (testing their vocabulary knowledge and retrieving the

memories repeatedly, being conscious of their learning styles, and satisfying their own three basic psychological needs). The effect was examined by analyzing data collected by surveys, recordings of discussions, and vocabulary tests. The main findings were; 1) the majority of the participants felt the training was enjoyable and effective, 2) some participants were able to introduce their own vocabulary learning strategies and tell their effectiveness to classmates during the discussion, 3) discussions could help learners find and develop learning strategies creatively and autonomously, 4) common strategies the participants developed and used were self-motivating strategies and cooperation strategies, 5) the average score of the post-test was higher than that of the pre-test, 6) many participants felt they increased their confidence in vocabulary learning through the training, and 7) vocabulary learning with an app was popular among the participants. On the other hand, the survey result which was administered about one month after the training indicated that more than half of the participants did not use the new learning strategies they had learned in the training.

In Study 4, an improved version of the strategy training in Study 3 was conducted for 41 university students. There were also four participants who missed the training, but still took the vocabulary test. Study 4's training basically followed the same procedure as Study 3's but was more conscious of the CALLA Model, incorporated a

vision enhancement activity, and used the vocabulary learning apps: Quizlet and Kahoot! The data were collected by multiple methods such as surveys, the vocabulary test, and reflection essays that the participants wrote one month after the training. These data were analyzed using both qualitative and quantitative methods. Some of the major findings were 1) many participants had favorable perceptions toward the vision enhancement activity, 2) Quizlet and Kahoot! could improve learners' vocabulary learning efficiency and motivation, 3) the participants were able to think of various self-motivating strategies through the discussion, and 4) the average score of the vocabulary test after the training was very high. Considering the results of Study 4 along with of Study 3, letting learners discuss effective vocabulary learning strategies and self-motivating strategies after teaching vocabulary learning principles can be effective to enable them to learn to implement successful motivated vocabulary learning, which is the answer to RQ3.

7.2 Significances of the Present Study

7.2.1 Contribution to SLA research

The present study possibly contributes to two research areas: VLM and learning strategy training. Firstly, it provided valuable insights for VLM research. As Zhang et

al. (2017) stated, previous studies on VLM are scarce. Thus, findings about VLM provided by the present study, such as the factors that affect or do not affect MLB-V, activities that can increase learners' VLM, and self-motivating strategies available in vocabulary learning are valuable.

The present study also provided suggestions for research on learning strategy training. First, it was shown that developing self-motivating strategies through strategy training is possible. As Bielak and Mystkowska-Wiertelak (2018) pointed out, the majority of strategy training have targeted learning strategies that directly improve language skill performance, but strategy training targeting affective strategies are not common. Thus, the results of the present study showing that learners can learn self-motivating strategies in strategy training may encourage further research on affective strategy training.

Moreover, the present study indicated the effectiveness of incorporating discussion in strategy training. Though it was pointed out that having time for pair and group collaboration can strengthen the Cognitive Academic Language Learning Approach (CALLA) model, such practices have not been sufficiently conducted (Harris, 2019). The present study revealed that it is effective for learners to develop and learn

learning strategies through discussion with peers. This finding shows the possibility that the CALLA model can be developed further.

7.2.2 Contribution to English education

The present study might also offer some beneficial insights to English teachers. As discussed in Chapter 1, the amount of class hours that can be used for vocabulary teaching and learning is usually limited. Therefore, English teachers need to encourage learners to study vocabulary outside of class. Though most teachers would work hard to make their classes effective and enjoyable, they do not necessarily attempt to make learners' out-of-class learning effective and enjoyable. The present study can be a reminder of the significance of supporting learners' out-of-class vocabulary learning.

Furthermore, the present study emphasized that, besides just teaching vocabulary learning strategies, fostering learners' willingness and capacity for motivating themselves and developing learning strategies autonomously is essential to help them do successful motivated learning. Although this is not the original suggestion of the present study, the majority of the English teachers still would not recognize it. In addition, the present study showed clear examples of interventions to achieve that. Unlike many previous studies on strategy training, the present study offered detailed descriptions of

the trainings' contents. This will be helpful for English teachers to design their own versions of strategy training programs.

For these reasons, the present study has the potential to provide English teachers with unique and valuable insights to develop their learners' vocabulary and autonomy. These insights may help English teachers improve their classes.

7.3 Limitations

Although the present study provided some meaningful findings, there are also several limitations that further research should address.

First, it seems to be difficult to generalize the results. This is because all of the participants in the present study were university students who had relatively high English proficiency and motivation when compared to the average university students in Japan. Therefore, it is necessary to conduct further research for learners with different characteristics, such as younger learners, less-skilled English learners, and less-motivated English learners. Study 4 indicated that learners who are already confident about their vocabulary learning strategies and motivated for vocabulary learning may not find the strategy training very effective. If so, conducting the training for less-skilled

and less-motivated learners may be even more beneficial than conducting it for already good language learners like the participants in the present study.

Second, the present study focused only on vocabulary memorization. The vocabulary tests did not examine whether the participants could use the target vocabulary in speaking and writing. If learners are asked to learn to use target vocabulary in communication and take a vocabulary test that examines whether they can do it, learning strategies they would develop in strategy training can be different. In L2 learning, it is important to gain productive vocabulary knowledge in addition to receptive vocabulary knowledge. Thus, developing strategy training that can help learners expand their productive vocabulary would be worthwhile.

Thirdly, the present did not have a contrast group of sufficient size. If outcomes (e.g., score of a vocabulary test after the training) of a treatment group (i.e., participants who took a training) and a contrast group are compared, the effectiveness of the training would be presented more persuasively.

Fourth, further research is needed to consider how to encourage learners to continue using new learning strategies after the training. If the teacher did not do anything after the training, learners might not have opportunities to use the new learning strategies, and forget them. In fact, Study 3 found that there were many learners who did

not use the new learning strategies after the training, even though they found the learning strategies beneficial. Thus, it would be valuable to develop post-training activities that maximize the effect of strategy training. For instance, teachers could give vocabulary tests regularly after the training and let learners discuss their vocabulary learning strategy use for a short period of time in groups after each test.

Fifth, though the training in Study 3 and 4 seem to be effective overall, it is uncertain how much each activity in the training or each strategy the participants used is helpful. For instance, there is no evidence that every activity in the training of Study 4, such as introduction to Quizlet, strategy development through the discussion, and the Kahoot! contest or every strategy such as playing games and setting incentives contributed to the good scores in the vocabulary test, even though the participants generally had positive perceptions toward them. Hence, the effects of each activity and strategy need to be investigated in more detail in future studies.

Lastly, the teachers who conducted the trainings in Study 3 and 4 were the participants' teachers, which could lower the reliability of the data. Although they were clearly told that their responses in surveys and essays would not affect their class grades, it is difficult to deny that some of them may have written responses that they believed the teacher hoped for (cf. observer's paradox: Labov, 1972).

Future studies concerning these problems could present more beneficial insights to VLM and strategy training research. Development of research on these topics would be meaningful as it could help English learners who are struggling with vocabulary learning, which is important, requires great individual effort, but is usually boring. It is hoped that further tips to support such learners will be discovered by future studies.

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Appendix A

Items in the survey

(1) Compared to general university students, I try to learn English relatively hard.
(2) I am working hard at learning English.
(3) I think I am doing my best to learn English.
(4) Learning English is interesting.
(5) Learning English is enjoyable.
(6) I like learning English.
(7) It is important to acquire a high English ability.
(8) English is necessary to attain my life goals.
(9) English is useful.

(10) Compared to general university students, I practice English speaking relatively hard.
(11) I am working hard at practicing English speaking.
(12) I think I am doing my best to improve my English speaking ability.
(13) Practicing English speaking is interesting.
(14) Practicing English speaking is enjoyable.
(15) I like practicing English speaking.
(16) It is important to acquire a high English speaking ability.
(17) Improving my English speaking ability is necessary to attain my life goals.
(18) Having a high English speaking ability is useful.

(19) Compared to general university students, I practice English reading relatively hard.
(20) I am working hard at practicing English reading.
(21) I think I am doing my best to improve my English reading ability.
(22) Practicing English reading is interesting.
(23) Practicing English reading is enjoyable.
(24) I like practicing English reading.
(25) It is important to acquire a high English reading ability.
(26) Improving my English reading ability is necessary to attain my life goals.

(27) Having a high English reading ability is useful.

(28) Compared to general university students, I try to remember new English vocabulary relatively hard.

(29) I am working hard at remembering new English vocabulary.

(30) I think I am doing my best to increase my English vocabulary.

(31) Studying new English vocabulary is interesting.

(32) Studying new English vocabulary is enjoyable.

(33) I like remembering new English vocabulary.

(34) It is important to remembering a lot of English vocabulary.

(35) Increasing my English vocabulary is necessary to attain my life goals.

(36) Knowing a lot of English vocabulary is useful.

Appendix B

The survey items and descriptive statistics

		M	*SD*
	a) MLB-V (α = .90)		
Q1	Compared to general university students, I try to memorize new English vocabulary relatively hard.	4.29	1.54
Q2	I am working hard at memorizing new English vocabulary.	4.01	1.63
Q3	I think I am doing my best to increase my English vocabulary.	3.72	1.57
Q1～Q3		4.01	1.43
	b) SDEM-V (α = .71)		
Q4	It is important to memorize a lot of English vocabulary.	5.93	1.28
Q5	Increasing my English vocabulary is necessary to attain my life goals.	5.65	1.33
Q6	Knowing a lot of English vocabulary is useful.	6.39	0.99
Q4～Q6		5.99	0.96
	c) Vision-V (α = .88)		
Q7	I can imagine myself understanding most of the words in English movies.	5.09	1.41
Q8	I can imagine myself understanding most of the words in English newspapers.	5.00	1.42
Q9	I can imagine myself writing academic papers using various sophisticated English vocabulary.	4.40	1.46
Q10	I can imagine myself having as large a vocabulary as a native speaker of English.	3.68	1.61
Q7～Q10		4.54	1.27
	d) IM-V (α = .91)		
Q11	Studying new English vocabulary is interesting.	5.08	1.66
Q12	Studying new English vocabulary is enjoyable.	4.71	1.74
Q13	I like memorizing new English vocabulary.	4.15	1.81
Q11～Q13		4.65	1.60

e) MLB-S (α = .88)			
Q14	Compared to general university students, I practice English speaking relatively hard.	5.03	1.38
Q15	I am working hard at practicing English speaking.	4.75	1.39
Q16	I think I am doing my best to improve my English speaking ability.	4.50	1.51
Q14～Q16		4.76	1.28
f) Vision-S (α = .93)			
Q17	I can imagine myself having an English discussion with foreign classmates or colleagues effectively.	4.95	1.43
Q18	I can imagine myself giving an English presentation to foreign classmates or customers fluently.	4.83	1.42
Q19	I can imagine myself having a daily conversation in English with foreign friends smoothly.	5.32	1.55
Q20	I can imagine myself speaking English as if I were a native speaker of English.	4.12	1.67
Q17～Q20		4.80	1.38
g) MLB-R (α = .90)			
Q21	Compared to general university students, I practice English reading relatively hard.	4.51	1.38
Q22	I am working hard at practicing English reading.	4.23	1.38
Q23	I think I am doing my best to improve my English reading ability.	4.06	1.37
Q21～Q23		4.27	1.25
h) Vision-R (α = .90)			
Q24	I can imagine myself reading English newspaper fluently.	5.15	1.28
Q25	I can imagine myself reading English literature fluently.	4.84	1.22
Q26	I can imagine myself reading English textbooks of my favorite academic areas fluently.	4.87	1.24
Q27	I can imagine myself reading English as if I were a native speaker of English.	4.10	1.35
Q24～Q27		4.74	1.11

Note. The choices are as follows. 7: I strongly agree. 6: I agree. 5: I rather agree. 4: I cannot decide. 3: I rather disagree. 2: I disagree. 1: I strongly disagree.

Appendix C

Target words in the vocabulary tests

Vocabulary Test A
artery, binocular, camel. catastrophe. chore, cohort. crunch. décor, deviation, enzyme, fidelity, fluctuation, foyer, hepatitis, impetus, inflammation, jeopardy, jug, legion, lesion, leverage, nostril, porcelain, poultry, query, redemption, remnant, tuberculosis, variant, vengeance, veto, walnut, wreckage, zest, hover, shudder, sob, vow, whisk, barren, brittle, cardiovascular, compassionate, feeble, fuzzy, hefty, hilarious, immaculate, ludicrous, ominous, perpetual, pessimistic, provisional, prudent, rectangular, renal, solemn, stale, stray, unanimous
Vocabulary Test B
alignment, anthropologist, apprehension, bliss, bruise, bud, cache, cavity, consolidation, cot, creed, dread, dune, dynasty, forefront, imposition, insurgent, lava, lexicon, lumber, omission, orchard, petal, preoccupation, relegation, resonance, resurrection, retrospect, setback, stigma, sting, token, valuation, vogue, growl, indulge, mumble, suffice, weep, coronary, culinary, defiant, discrete, disposable, eerie, extravagant. hideous, impending, intuitive, lavish, numb, phenomenal, posh reciprocal, rusty, sly, stainless, stern, stringent, tedious

Appendix D

The original items of Survey B in Japanese

Q1	その授業のおかげで、授業を受ける前から使っていた語彙学習法（工夫）を、以前より自信を持って使えるようになった。
Q2	授業を受けたことがきっかけで新しく学んだ語彙学習法（工夫）のうち、2 回目の授業終了後から今日までの間に、実際に使用してみたものはありますか？
Q3a	（Q2 で「はい」と回答した方）使用した語彙学習法を、なるべく具体的に書いてください。
Q3b	（Q2 で「いいえ」と回答した方）新しい語彙学習法をまだ使用していない理由を教えてください。
Q4	授業を受けたことがきっかけで新しく学んだ語彙学習法（工夫）の中で、まだ実際に使用していないが、機会があれば今後使ってみたいものがあれば、教えて下さい。

Appendix E

Target words in the vocabulary test

pass down, allure, thesis, sort of, chronicle, dissident, bump up, depravity, assertive, tangible, imprison, brand-new, erupt, craftsmanship, incredible, staircase, optimistic, starkly, awesome, mark, game of chance, unrest, outlook, falconry, terrain, crackdown, weave, deadline, primate, remarkable, pull an all-nighter, feat. reactive, natural wonder, puppetry, intensify, procrastination, curb, laid back, vow to, landmark, oblivion, enroll in/at, descend into, treaty, perplex, intervention, complacency, rational, fuel, lab, immerse A in B, illicit, rebel, fateful, fold up, gratification, trafficking, centerpiece, proxy, witness, force, pillage, take the wheel, spit, forge, propagate, alliance, vial, hone, irreparable, height, aspire to, visualize, prime, arch-enemy, draw, convention, personnel, statesman, considerable, long-term, saliva, roll back, take A into account, spark, configure, lasting, patrimony, chlorine, turn back on, rapport, well-earned, fellow student, general, maintain, stay in contact with, stronghold, masterpiece, for the sake of, hold center stage, supremacy, guilt, confederate, value, down the road, thermal, topple, tight-knit, factual, dread, graduate school, rise up, on the verge of, cease-fire, conjure up, overwhelming, anxiety, literal, ostracize, tug of war, cosmopolitan, mansion, hatred, acumen, court, dormant, discourse, cause, identity, parody, showcase, mayhem, insane, vulnerable, Shabbat, Ph.D., superiority, flawed, pillar, erroneously, entrepreneurial, momentum, functionally, erode, show up, outrage, epiphany, mess, sneaky

Appendix F

Question items and descriptive statistics in Survey 2

		m	*SD*	% of 4 or 5
Q1	Warm-up 活動(1)は、豊富な語彙知識を獲得した将来の自分を想像するのに役立った。 The vision enhancement activities were helpful to imagine my future self who acquired plentiful vocabulary knowledge.	3.58	1.09	63.6%
Q2	Warm-up 活動(1)は、語彙学習へのやる気を高めるのに効果的だと思う。 I think the vision enhancement activities are effective in enhancing vocabulary learning motivation.	3.85	1.09	75.8%
Q3	授業外で、Quizlet をどのくらい使いましたか？ How long did you use Quizlet outside of class?	68.94 (min.)	62.35	
Q4	Quizlet を用いた語彙学習は効果的だと思う。 I think vocabulary learning using Quizlet is effective.	4.21	0.82	87.9%
Q5	授業外で、どれくらいクラスメートと語彙学習を行いましたか？ How long did you study with your classmates outside of class?	52.34 (min.)	40.74	
Q6	授業外で行ったクラスメートとの語彙学習は面白かった。 It was fun to learn vocabulary with classmates outside the classroom.	4.13	1.06	74.2%
Q7	クラスメートと一緒に語彙学習をするという活動に興味を持てた。 I became interested in learning vocabulary with classmates.	3.58	1.36	58.1%

Q8	クラスメートと一緒に語彙学習を行うことで、新たな気付きを得られた。 I was able to gain new findings through vocabulary learning with classmates.	3.65	1.31	58.1%
Q9	クラスメートとの語彙学習は、効果的だと思う。 I think vocabulary learning with classmates is effective.	3.52	1.36	54.8%
Q10	自分の need for competence を満たす勉強法を考え、使うことができた。 I was able to think of strategies to satisfy my need for competence and use them.	3.63	0.94	53.1%
Q11	自分の need for competence を満たす勉強法は、自分のやる気を高めるのに効果的だった。 Strategies to enhance my need for competence were effective in enhancing my motivation.	3.56	1.05	56.3%
Q12	VLP で学んだ方法を用いて、個人で語彙学習するのは面白かった。 It was fun to learn vocabulary individually using strategies I had learned in the VLP (vocabulary learning project).	3.75	0.92	56.3%
Q13	個人で語彙学習する際に、Quizlet や need for competence を高める strategy を用いることに興味を持てた。 I became interested in using Quizlet and strategies to satisfy my need for competence when learning vocabulary by myself.	3.97	0.82	65.6%
Q14	VLP で学んだ方法を用いて個人で語彙学習をしていた際、新たな気付きを得られた。 I gained new findings when I was learning vocabulary using strategies I learned in the VLP by myself.	3.41	0.91	37.5%

Q15	今回の語彙テストに向けた勉強は、これまで受けてきた語彙テストに向けた勉強よりも楽しかった。 Learning for today's vocabulary test was more enjoyable than learning for vocabulary tests in the past.	3.88	0.98	65.6%
Q16	今回の語彙テストに向けた勉強は、これまで受けてきた語彙テストに向けた勉強よりも頑張ることができた。 I was able to study for today's vocabulary test harder than for vocabulary tests in the past.	3.81	0.97	62.5%
Q17	今回の語彙テストに向けた勉強では、これまで受けてきた語彙テストに向けた勉強よりも、効率よく語彙を暗記することができた。 I was able to memorize vocabulary more efficiently for today's vocabulary test than for vocabulary tests in the past.	3.78	0.83	59.4%
Q18	今回の語彙テストに向けた勉強では、これまで受けてきた語彙テストに向けた勉強よりも、（テスト直前にまとめて暗記するのではなく）余裕を持って学習をすすめることができた。 I was able to study for today's vocabulary test in a more planned manner than for vocabulary tests in the past.	3.38	1.10	40.6%
Q19	チーム対抗 Kahoot!で良い成績をとるために、語彙学習を頑張った。 I studied vocabulary diligently to get a good score in the Kahoot! contest.	3.55	1.15	58.6%
Q20	チーム対抗 Kahoot!は楽しかった。 The Kahoot! contest was fun.	4.47	0.78	90.0%

Q21a	VLP に参加せず 1 人で勉強して今日の語彙テストを受けていたら、テストの出来は悪くなっていたと思う。 If I had taken today's vocabulary test without participating in the VLP, the score would have been lower.	2.94	1.24	35.5%
Q21b	そのように思う理由を書いてください。 Please write why you think so.			
Q22	VLP で、クラスメートに自分の学習法を紹介したり、クラスメートの学習法を聞いたりするのは楽しかった。 It was fun to introduce my strategies to classmates and learn about their strategies.	3.34	1.15	56.3%
Q23	VLP は面白かった。 The VLP was fun.	3.88	0.94	71.9%
Q24	VLP という取組みに興味を持てた。 I became interested in the VLP.	3.75	0.80	65.6%
Q25	VLP に参加することで、新たな気付きを得ることができた。 Through participating in the VLP, I gained new findings.	3.75	0.80	65.6%
Q26	VLP のおかげで、今後は今までよりも楽しく語彙学習を行うことができると思う。 Thanks to the VLS, I think I will enjoy vocabulary learning more than before.	3.69	1.00	53.1%
Q27	Quizlet は、機会があれば今後も使っていきたいと思う。 I hope to use Quizlet if I have another opportunity.	4.19	0.82	75.0%
Q28	VLP で学んだグループでの学習方法は、機会があればこれから使っていきたいと思う。 I hope to use the group vocabulary learning strategies that I learned in the VLP if I have another opportunity.	3.53	1.02	56.3%

Q29	VLP で学んだ Need for Competence を満たす方法は、機会があればこれから使っていきたいと思う。 I hope to use strategies to satisfy my need for competence if I have another opportunity.	3.81	1.03	71.9%
Q30	VLP の良かった点や、改善すべき点を教えてください。 Please write good points and points that need improvement about VLM.			

Appendix G

Positive responses in Q30

I learned new learning strategies.	
1	様々な学習法を知ることができた。 I was able to learn various learning strategies.
2	効率がよくなおかつ楽しい勉強法を見つけられた。 I was able to find efficient and enjoyable learning strategies.
3	単語学習は自分で確立したものがあったが、他の学習法を知ることができたのはよかった。 I have my own ways of vocabulary learning, but it was good that I learned other learning strategies.
4	他のチームの面白い勉強法が聞けてよかった。 It was good to hear about the interesting learning strategies of other teams.
5	他の人の勉強法を知ることができた。 I was able to learn others' learning strategies.
6	クラスメートと学習法を話し合うことで、みんなが普段どう勉強しているのか知ることができたのでよかった。 It was good that I learned how my classmates usually study by discussing learning strategies with them.
Using Quizlet was effective.	
1	Quizlet は効果的だと思った。 I think using Quizlet was effective.
2	Quizlet がよかった。 Quizlet was good.
3	Quizlet はすごくやりやすく効果的だった。 Using Quizlet was very easy and effective.
Motivation for vocabulary learning was enhanced.	
1	皆で頑張り合えるのはよかった。 It was good to work hard with classmates.

2	周りに圧倒されて悔しかったので頑張ることができました。1 人では悔しさを感じることはないのでよかったと思います。 I was overwhelmed by my classmates and frustrated, which made me study hard. It was good for me to feel the frustration, because I do not feel it when studying alone.
3	色々なやり方を考えることで自分が勉強する意欲が高まった点。 Through thinking about various learning strategies, my motivation for studying was enhanced.
4	Kahoot!がいいモチベーションになった。 The Kahoot! contest became a good motivation for me.
5	覚えなければならないというよいプレッシャーがかかること。 I was given good pressure to memorize vocabulary.
I enjoyed vocabulary learning.	
1	面白くない単語暗記を楽しくやれた。 I enjoyed vocabulary learning, which is not usually fun.
2	楽しい時間が多く、学習がおもしろいと感じた。 I had a lot of fun moments, and found learning enjoyable.
3	グループワークを延長して、1 時間くらい楽しいゲームができた。 The game was so fun that we prolonged the time of group work to one hour and enjoyed it.
4	「勉強」というよりゲームする感覚。 I was studying as if I was playing a game.
5	楽しく学習できたことはよかったと思う。 It was good that I studied enjoyably.
Others	
1	グループの人と話し合えるのはよかった。 It was good to discuss with group members.
2	他の人のひらめきを得られるのはよかったです。 It was good to hear ideas that my classmates thought of.
3	もう一度学習法を問い直すことができるのはよいと思った。 It was good to reconsider my learning strategy use.

Appendix H

Negative responses in Q30

自分が普段よくいっしょにいる友達と活動出来たらより楽しかった。 It could have been even more enjoyable if I had studied with my close friends.
3 人グループは少ないと思いました。クラス外活動では予定を合わせやすいですが、クラスでの討論の時間は黙ってる人も多く、時間を 10 分も 15 分もとっているのがもったいないです。 The group size (three people) was too small. It can be good in the way that we can arrange the out-of-class learning schedule easily. However, the discussion of the three people had a lot of silence, and I felt spending 10 or 15 minutes on such a discussion was not effective.
Quizlet を開くまでに時間がかかったので、Quizlet に興味を持つきっかけがほしいと思った。（みんなでアプリをインストールしてゲームをプレイする時間を設けるなど） It took some time for me to start using Quizlet, so it would be better if you provided an opportunity for students to become interested in it. (For example, we could install and play Quizlet together in class.)
よい strategy を思い浮かばなかったときは退屈だと思う。 I think it is boring when I cannot come up with good learning strategies.
Kahoot ひとつのスマホで 3 人で使うのが難しかったです。どうしても 1 人がスマホ使って答える状況になってしまいました。 In the Kahoot! contest, my team had three people. It was difficult for three people to share one smartphone. It was regrettable that one person dominantly held the smartphone and answered the questions.

Appendix I

Ideas the participants wrote in the planning worksheet

Play games or give quizzes with classmates.	
G1	各トピックの語彙早押しクイズ ⇒ Quizlet でテスト Play fastest-finger-first games of vocabulary and test our memory with Quizlet.
G2	友達と問題出し合う、友達とゲームをする。 Give quizzes to each other and play games with group members.
G3	Quizlet で 3 人で競う。 Compete with group members in Quizlet.
G4	互いにテストする。 Give tests to each other.
G5	カルタ Play karuta.
G5	リズムゲーム (ペナルティ、罰ゲーム有) Play rhythm games. There are batsu-games (punishment given to loser of the games).
G7	問題を出し合う。 Give quizzes to each other.
G7	テストをつくり合う。 Make tests for group members.
G7	カルタ Play karuta.
G8	英単語のカードを作り、かるたで遊びながら 4 人でバトルする。 Make vocabulary cards and play karuta.
G8	神経衰弱する。 Play concentration.
G9	単語オセロ Play vocabulary reversi.
G9	早覚え早押しクイズ Memorize as many words as possible for a certain period of time, and play

	fastest-finger-first games.
G10	問題の出し合いであおり合うことで、悔しさと嬉しさを大きくする。 Provoke each other while giving quizzes to make our feelings of frustration and delight bigger.
G11	Give each other quizzes.
G11	Play fastest-finger-first games and the person who answered correctly gets points.
G12	すごろく Play sugoroku. (Japanese board game)
Set incentives to perform well in the competitions or test.	
G1	Quizlet で 1 位になった人はお菓子 The winner in a competition of Quizlet will get snacks.
G1	各トピックの出題者は正解者にお菓子を渡す。 A person makes and gives quizzes, and presents some snacks to a person who got correct answers.
G2	ゲームで勝った人はお菓子 get。 The winner in games gets some snacks.
G3	ごほうびの基準を 3 人で共通のものを決める (ex. Quizlet1 位ならおかし etc...) We change what reward we can get depending on the achievement. (e.g., The winner in Quizlet can get snacks.)
G5	おかし（正解の分だけもらえる） We play games, and those who with many correct answers get many snacks.
G5	最下位が 1 位にプレゼント The loser of a game will give the winner a present.
G6	前期よりも全員が良い点数を取ったら皆で焼き肉に行く。 If everyone gets better scores in the vocabulary tests than in the review test in the first semester, we will go eat yakiniku (grilled meat) together.
G7	ごほうび→おかし、ジュース Rewards (snacks, juice)
G9	おかしのために頑張る。 Study hard for snacks.

G10	正解が一番多かった人に賞品 Someone who got the most correct answers can get some presents.
G10	木曜 2 限に皆で集まって問題の出し合い（5-6 人でもマンツーマンでも）成績の良かった人に昼食をおごるなりする。 We meet up and give quizzes to each other in the 2nd period of next Thursday, and those who did well are treated to lunch.
G11	Prepare treats as rewards and the winners in a game can choose treats first.
G12	順位をつけて、ごほうびの豪華さに違いをつける。 The students who did well in games can get better rewards than others.
Praise.	
G1	Quizlet で 1 位になった人はとほめ殺しの報酬がもらえる。 The winner in Quizlet will be praised a lot.
G5	みんなでめっちゃほめる。 Praise each other a lot.
G6	覚えてたら褒める。 Praise a group member who remembers vocabulary.
G7	ほめ合う。→プレーの振り返りをしてほめあう。 Play a game, and praise each other while reflecting on the performances in it.
G9	ほめてもらう。 Ask a group member to praise me.
G11	人に褒めてもらう。 → 報告して褒めてと頼む。 Report my progress to group members and ask them to praise me.
G12	互いをほめる。 Praise each other.
Visualize efforts or progresses.	
G3	暗記できた語句の隣にチェックをつけ、間違えたものはマーカーを引く。 Write “✓” next to words I have already memorized, and mark words that need memorizing.
G7	カルタの枚数→多くとれていると、自分ができていることがよく分かる。 By seeing the number of cards I got in Karuta and confirming that I have many cards, I can tell that I am doing well.

G8	Quizletの点数やその日に覚えた単語の数を日記のように記録しておいて、後から見たときにがんばったと思えるようにする。 Record the Quizlet score and the number of words I memorized each day like writing a diary. If I see it later, I will feel I worked hard.
G10	Instagram の story に自分が確実に覚えた！と思う単語を自分の好きなデザインで Post する。Story は Archive に残るので軌跡を残すことができる。 Post words that I surely memorized to Instagram Stories with my favorite designs. The posts are archived, so I can record my vocabulary learning history.
G11	Test several times in Quizlet and make graphs of the scores.
G11	間違えた単語をチェック → 何回も繰り返していく中でチェックの数が減っていく。達成感。 When I check my vocabulary knowledge, I will mark words that I do not remember yet. I will check it repeatedly, and the number of words I check will decrease. Then, I can feel a sense of achievement.
Think about the significances of memorizing the vocabulary.	
G3	TOEIC の勉強にもなる！と思ってする。(1 月受験) I will study vocabulary being conscious that it will be helpful for TOEIC as well. (I will take TOEIC in January.)
G3	読めるようになりたい本を買ってしまって見えるところに置いておく。 I will buy an English book that I want to learn to read and put it somewhere I can see.
G6	投げ出したくなったら「誰のためにやっているのか」を考える。 When I feel like giving up, I will think about who I am studying for.
G11	自分の英語スキルにつながると考える。 Be conscious that the vocabulary learning will lead to developing my English skills.
Think about fun things to do after the test.	
G3	冬休みしたいことをリストアップ ⇒ テストおわれば冬休み♪ List what I want to do during the winter break and be conscious that the winter break will come after the test.

G3	このテストを乗り切れば冬休みに楽しいことが待っていると自己暗示 Tell myself that I will have fun during the winter break after the test.
G9	ライブを楽しみに頑張る。 Study hard, looking forward to going to a concert.
Q12	テストが終わった後に欲しい物を買う。 I will buy something I want after the test.
G12	勉強した後に(楽しいこと)何するか決める。 Determine what fun things we can do after studying.
Repeat memorizing a certain amount of words in a short period of time.	
G5	短時間で覚えてペアワーク Memorize words in a short amount of time and do pair work.
G6	小さな目標を立てる。(10 分で 15 問覚えるを繰り返す) Set small goals. (Repeating the process of memorizing 15 words in 10 minutes.)
G11	20 words を 10 minutes で暗記 → test を 6 回繰り返す Repeat the process of memorizing 20 words in 10 minutes and test my memory 6 times.
Set a goal of getting a high score in the Kahoot! contest.	
G1	目標を Kahoot での得点にする。 Set getting a high score in the Kahoot! contest as our goal.
G6	Kahoot!で頑張る。 Do our best in the Kahoot! contest.
G8	Kahoot!で一位！ Determined to win the Kahoot! contest.
Share learning strategies.	
G3	お昼休みに集まって食べながら、各自調べた勉強法を持ち寄って実践⇒1 人でする時にも活用できる。 While having lunch together, we will report learning strategies that each of us searched and try to use them. The strategies can be used for individual learning.
G10	独自の単語暗記のための語呂合わせも披露してみたりする。 Share goroawase (mnemonic of associating an English word with a Japanese

	word) that each of us thought of.
Make an environment that helps study vocabulary enjoyably.	
G6	お菓子食べながら勉強する。話しながら、楽しみながら。 Study vocabulary while eating snacks and chatting. We will have fun.
G7	好きな音楽をかける。 Listen to our favorite music while studying vocabulary.
Do vision enhancement.	
G6	20 分瞑想（イメトレ）して 10 分勉強する。 Do meditation (vision enhancement) for 20 minutes and study for 10 minutes.
G7	イメトレ Do vision enhancement.
Others	
G2	音聞く、語呂合わせ、イメージと一緒に Listen to the pronunciations, use goroawase, and memorize with images.
G3	何度も単語確認、聞く、言いながら書く（Read, Listen, Speak, Write）をしっかりする。 Check the words repeatedly, listen to the pronunciations, write down words while saying them.
G3	ゲームをどうやる気につなげるか自分なりに理論を作る。 Establish my own theory about how the games could lead to increasing my motivation.
G7	替え歌 Make songs.
G9	書いて覚える。 Memorize through writing down words.
G10	正解したときは本気のドヤ顔→優越感 Make a smug face when I got a correct answer and feel a sense of superiority.
G10	友達との LINE で日本語を混ぜて使ってみる。 Try to use the English words while I am chatting with my friends by LINE (communication app that is popular among Japanese people) in Japanese.
G11	Report my efforts to my friends.

G12	勉強をする場所と時間を決めておく。（例: 午後の図書館、週 3 日） Decide where and when to study beforehand. (e.g., at the library in the afternoon 3 times a week)

Note. G means Group (e.g., G1 = Group 1). G11 wrote some of the learning strategies in English in the worksheet, so Japanese was not written.

Appendix J

Motivating moments during the discussion

A good idea is found.	
1	自分にできそうな案が出たとき When an idea that I can apply to my learning was suggested
2	みんなでお菓子を分けることにしたとき When we decided to share snacks
3	お菓子がもらえると分かったとき When I knew that I would get a snack
4	お菓子をご褒美に設定したとき When we set snacks as our rewards
5	神経衰弱の話がでたときトランプみたいに単語を覚えられるのは楽しいと思った。 When I heard an idea of playing concentration, I thought I would enjoy memorizing words as if I were playing a card game
6	楽しい strategy を思いついて、これなら勉強はかどりそうと思ったとき When I (or we) came up with a fun strategy and I thought I would study efficiently and intensely
7	良い案が出てやりたいと思ったとき When a good idea was suggested and I found myself hoping to use it
8	ご褒美を決定した時 When our reward was decided
9	カルタの案が出たとき When the idea of playing karuta was suggested
10	カルタがでてきたとき When the idea of playing karuta was suggested
11	かるたというアイデアが出てきた時にテンションが上がった When the idea of playing karuta was suggested, I got excited.
12	良い考えが出た時 When a good idea was suggested

13	良いアイデアを思い浮かんだとき When a good idea hit me
14	新しい良さげなアイデアが浮かんだとき When I (or we) came up with a new and good idea
15	面白いアイデアが出たとき When an interesting idea was suggested
16	カルタのためのカードを作ると決まったあと、それを神経衰弱にも利用しようと決まったとき When we agreed that the cards which we will make for karuta should be used for playing concentration as well
17	ごほうびの話をしているとき豪華さに差をつける話がでたとき When an idea of differentiating the quality of rewards (up to the result of the vocabulary test) was suggested while talking about rewards
18	1 人で考えても思いつかないようなアイデアが生まれたとき When an idea that I would never come up with on my own was created
19	みんなで話し合って良さそうな勉強法がでてきたとき When we discussed and came up with good learning strategies
20	自分では思いつかないアイデアが出たとき When an idea which I would never come up with was suggested
21	自分の考えにないものを発見したとき When I learned an idea that I did not have
Learners are developing new ideas collaboratively.	
1	皆良い点数を取ったら何をするかを決める時 When we were discussing what we would do if everyone gets a high score
2	どのようなカルタにするか話していたとき When we were discussing what kinds of karuta we should make/ play
3	ご褒美を決める時 When we were discussing our reward
4	ごほうびの話をしているとき When we were talking about rewards
5	パッと思い浮かんでそれを言って（聞いて）深めてるとき

	When we were developing ideas that my classmates or I came up with and suggested
Ideas are conveyed to or shared with peers.	
1	自分の考えを言えた時 When I was able to tell my idea
2	2 人でいいと思った案を共有できたとき When we shared good ideas with each other
3	自分の意見が言えたとき When I was able to tell my opinion
4	語彙学習に対する考え方がそれぞれちがい、意見交換がおもしろかった。 Each group member's belief about vocabulary learning was different, so exchanging opinions was interesting.
5	自分の理論を伝えられた時 When I was able to tell my own theory
Learners sympathize with peers' ideas.	
1	メンバーの経験や暗記法に共感できた時 When I related to my classmates' experiences and vocabulary memorization strategies
2	誰かの発言があって共感した時 When I related to my classmates' utterances
Learners' ideas are supported by peers.	
1	同じ方法に共感してくれたとき When my classmates related to my strategies
2	自分と似た考えを持つ人がいて共感してもらえたとき When I found that there was/were a classmate(s) with a similar idea and they related to my idea
3	自分の話が認めてもらえたとき When my ideas were supported
4	自分の意見にみんなが賛成してくれたとき When everyone agreed with my opinion

The discussion becomes vigorous.	
1	みんなが積極的に発言してくれる時はもっと共有しようってなった。 When my classmates were sharing their ideas actively, I was more willing to share mine, too.
2	話しが盛り上がってきた時 When the discussion was becoming vigorous
3	話し合いが活発になったとき When the discussion became vigorous
4	笑いが起きると楽しくてやる気が出た When I was laughing with my classmates, the discussion became fun and my motivation increased
5	笑いがおこったとき When we were laughing
Learners reached a conclusion.	
1	チームで意見を出し合い、それを実行しようと具体的に決まったとき When we shared our opinions with each other and decided how to apply them to our vocabulary learning
2	話がまとまった時 When the discussion reached a conclusion
3	やることが決まったとき When our plan was settled
4	具体的な方法が決まった時 When a specific plan for vocabulary learning was made
5	具体的な集まる日程が決まった時 When the schedule (of our vocabulary learning) was settled
6	チームで意見を出し合い、それを実行しようと具体的に決まったとき When we shared our opinions with each other and decided how to apply them to our vocabulary learning

Appendix K

Demotivating moments during the discussion

The discussion becomes inactive.	
1	いい案が思いつかなかったとき（無言になった） When we could not come up with good ideas (Everyone stopped speaking.)
2	話しがとぎれたとき When the discussion stopped
3	いい学習方法が思い浮かばず、話し合いが停滞した We did not come up with good learning strategies and the discussion became inactive.
4	アイディアが出にくくなった時 When it became difficult for us to come up with ideas
5	案が出づらくなった時 When it became difficult for us to come up with ideas
6	ディスカッションが滞った時 When the discussion became inactive
7	話し合いがおわったとき When the discussion was over
8	話し合いが終わった時 When the discussion was over
9	進まないとき When the discussion did not progress well
10	とりあえずアイデアを言って満足してるとき When we just shared ideas and got satisfied
11	方法が思いつかなかったとき When we could not come up with strategies
12	決定的なアイディアが出なかった時 When we could not come up with intriguing ideas
13	話し合いが停滞したとき When the discussion became inactive

14	話しがちょっと脱線したとき When the discussion became a little sidetracked
15	アイデアを出し切ったとき When we finished sharing all possible ideas
16	話しが煮詰まったとき When the discussion did not seem to progress anymore
17	アイデアがでつくしたかなとなったとき When we felt we had already shared all possible ideas
18	楽しいアイデアで盛り上がったけど、その盛り上がりが冷めたとき When the excitement that we felt through sharing fun ideas decreased
19	なかなか案が出なくて皆黙っちゃったとき When we could not think of ideas and stopped talking
Learners feel pressure from peers.	
1	自分だけアイデアが思い浮かばなかったとき When I became the only person who could not come up with an idea in group
2	みんな点が高そう When I felt that my group members would get good scores in the vocabulary test
3	毎日 Quizlet を利用し、点数を報告しようとなったとき When it was decided that we would use Quizlet and report the results to each other every day
Learners cannot understand what to do.	
1	目標が曖昧であったとき When the goal was vague
2	何していいかわからないとき When I did not know what to do
There is no time to meet up with group members out of class.	
1	集合できる日や時間が無く、お互いの意見を言い合うのみで、話し合いが進まず、解決策も改善策もなにも出なかった。 There was no day and time for us to meet up (out of class), we just told our opinions to each other, the discussion did not progress, but nobody suggested the solutions.

2	日程が合わない！ We could not find time to meet up out of class!
Others	
1	後半の集中力がない人間です。 I am not good at keeping my concentration in the second half.
2	声が届かず内容が分からなかったとき When my group members' voice was small and I could not understand what they said
3	アイコンタクトが減ったとき When the frequency of eye contact decreased
4	まだ 2 週間もあると気づいた時 When I realized that we have no less than 2 weeks until the test