研究論文

L2 Anxiety and self-efficacy:

Redefining the relationship in the Japanese EFL context with reference to motivation, procrastination behavior, and L2 proficiency

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This study aims to explore the relationship between L2 anxiety and self-efficacy beliefs and redefine that relationship in the Japanese EFL context with reference to L2 motivation, procrastination behavior, and L2 proficiency. A total of 1,019 Japanese EFL students participated in this study. Three hypotheses related to the research, as mentioned above, were examined using correlation, cluster analysis, and ANOVA analyses with post-hoc tests. The results indicated that 1) anxiety and self-efficacy were neither two sides of the same coin (i.e., they were not related), nor did they form a trade-off relationship in the Japanese EFL classroom context; 2) four distinct categories of students could be identified in terms of the levels of anxiety and self-efficacy; and 3) L2 behavioral variables such as L2 motivation (separately measured by motivated learning behavior and by investment in learning), active and passive procrastination behaviors, and L2 proficiency all uniquely differed within each group, thereby forming four distinct profiles of L2 learners in the context. Details of the profile for each group and a developmental sequence found among the groups are herein discussed. Furthermore, possible pedagogical interventions for each group are proposed.

Keywords:
L2 anxiety, self-efficacy, L2 motivation, procrastination behavior

Introduction

L2 learning anxiety has been one of the most frequently investigated affective variables in the field of second language acquisition (hereafter, SLA). It is generally considered to negatively affect learners, preventing them from learning L2 effectively, especially in the classroom contexts (Horwitz, 2010). In fact, empirical studies consistently have found learning anxiety's negative influence on L2 achievement as well as on L2 performance (e.g., Aida, 1994; Horwitz, 2001; MacIntyre, 1999; Saito & Samimy, 1996), although some studies acknowledge its facili-

tating aspect（e.g., Scovel, 1978; Yamane et al., 1995）.

Studies on L2 anxiety have often focused on its relationship with L2 learning motivation. In some of these studies, anxiety and motivation are reported to form a trade-off, or a seesaw relationship, where one goes up and the other goes down（Ueki & Takeuchi, 2012; Gardner et al., 1997; Ehrman, 1996; Noels et al., 1999; Noels et al., 2000; Tremblay & Gardner, 1995）. Recently, however, given the rising interest in positive psychology for SLA（e.g., MacIntyre & Mercer, 2014; MacIntyre & Gregersen, 2016）, researchers increasingly assume that negative emotions（e.g., anxiety）and positive ones（e.g., motivation）do not necessarily cancel each other out. MacIntyre and Gregersen（2012, p.193）, for example, argue that each has a different function and should not be located at opposite ends of the same spectrum. Several empirical studies also report that negative and positive emotions do not necessarily cancel each other out, suggesting a more complex picture exists between these emotions. Gardner et al.（1992）, for example, demonstrated in a controlled language learning environment that lack of anxiety did not necessarily imply a high level of motivation. Yashima et al.（2009）showed that Japanese EFL learner responses reflected different aspects of anxiety and these aspects related in different ways to intrinsic and extrinsic motivations. This rather complex profile shown in the study differs from that found in Canadian studies focused on anxiety and intrinsic motivation, wherein the two variables were negatively inter-related consistently（Noels et al., 1999; Noels et al., 2000）. Recruiting a total of 1,742 multilinguals online, Dewaele and MacIntyre（2016）also demonstrated that anxiety and learning enjoyment（i.e., a form of intrinsic motivation）, which were placed at opposite ends by Schmidt et al.（1996）, did co-exist with each other among learners. The results support the idea that the absence of a negative emotion does not automatically mean the presence of a positive one or vice versa.

Another learner variable, one that has been frequently investigated concerning anxiety in SLA, is "self-efficacy beliefs." The beliefs reflect positive perceptions of "one's capabilities to organize and execute the course of action required to produce given attainments"（Bandura, 1997, p.3）. As suggested by Lake（2013）, self-efficacy is considered a type of positive emotion. Ehrman（1996）, focusing on highly advanced students at the US Foreign Service Institute（FSI）, showed that anxiety and self-efficacy were moderately correlated negatively. However, the fact that the correlation was not high indicates that they may be independent factors, such that a learner can be both self-confident and anxious. Ueki and Takeuchi（2013）, using the structural equating modeling（SEM）technique on two different groups of Japanese EFL students, pointed out the possibility that anxiety and self-efficacy were not directly related to each other. They found that the two variables rather independently influenced L2 motivated

learning behavior.

On the other hand, Milles et al. (2006), based on Bandura's social cognitive theory (1997), showed that the anxiety of French learners in the US was negatively associated with self-efficacy, thereby claiming that efficacy beliefs play a central role in regulating anxiety arousal. Piniel and Csizér (2013), in the Hungarian secondary school FL context, found that enhancing self-efficacy beliefs had a direct positive impact on a facilitating form of anxiety and a negative impact on debilitating anxiety, which in turn influenced motivated learning behavior. In the study, a direct impact of self-efficacy on motivated behavior was also confirmed when self-efficacy was investigated with debilitating anxiety.

These mixed results suggest that the redefinition of L2 learning anxiety concerning self-efficacy merits further investigation. In investigating the relationship, as Piniel and Csizér (2013) argued, variables should be treated as variable complexes, not in isolation, so that a bigger and more stable picture better reflecting the reality can be depicted. We determined that Dörnyei's (2009a) tripartite model, in which motivation, cognition, and affect are treated as parts of one interwoven framework, would be suitable for our study, providing an appropriate foundation for understanding the relationship. In our study, following the argument made by Piniel and Csizér (2013, p.530), L2 learning motivation, anxiety, and self-efficacy beliefs were treated as forming a variable complex "despite, or rather because of, the fact that empirical evidence so far has been ambiguous in terms of how these variables are interconnected."

In addition, "learning context" or "environment," in which L2 learning is sometimes given unique meanings, might have an influence on the relationship, as was suggested by Yashima et al. in their 2009 study, where the results obtained in the Japanese EFL context were not consistent with those found in other contexts. Furthermore, in this connection, recent research (Ueki & Takeuchi, 2012, 2014) revealed that L2 procrastination behavior, a manifestation of failure in metacognitive strategy use, was closely connected with self-efficacy beliefs and motivation in the Japanese EFL context, where English is often taught as a mandatory academic subject and students generally have lower motivation to learn it. (e.g., Kikuchi, 2013; Tsuda & Nakata, 2013). We thus argue that these two variables, i.e., learning context and procrastination, need to be considered in relation to the variable complex explained above. In addition, as Aida (1994) and Saito and Samimy (1996), among others, found, L2 proficiency seems to be an important variable in considering the influence of anxiety: the influence of anxiety becomes more important as learners' L2 proficiency levels increase. Thus, the proficiency variable also needs to be taken into consideration in connection with the framework.

Research Question and Hypotheses

Accordingly, the research question for this study was formulated as follows: how could we redefine L2 anxiety in relationship to self-efficacy with reference to L2 motivation, procrastination, and L2 proficiency within a specific EFL context? More concretely, the following three hypotheses were drawn up:

1）L2 learning anxiety and self-efficacy beliefs neither are two sides of a coin, nor do they form a trade-off relationship in the Japanese EFL classroom context;

2）these two variables instead co-exist, producing four categories of students, i.e., high anxiety & high self-efficacy, high anxiety & low self-efficacy, low anxiety & high self-efficacy, and low anxiety & low self-efficacy; and

3）L2 behavioral variables such as L2 motivation（as separately measured by motivated learning behavior and by investment in L2 learning）, procrastination behavior, and L2 proficiency uniquely differ in each category described above, thereby forming four distinct profiles of L2 learners within the context.

Participants

The study was conducted in the spring semester of 2017. A total of 1,019 Japanese university students（age range: 18–23）participated in this study with written informed consent. They were from three different universities located in western Japan. These students were learning English as a foreign language as a required academic subject with similar learning objectives. Their academic backgrounds varied from humanities and social sciences to engineering, covering various interests and goals of students. They were asked to fill in a questionnaire （explained below）written in their L1（Japanese）, and then were requested to provide their basic bio data and an L2 proficiency score.

Instrument

The instrument used in this study was a questionnaire including six-point Likert type items （with 1: low and 6: high）for data collection from the following five constructs.[1] The constructs investigated in this study were defined as follows:

L2 anxiety （6 items: alpha = .79, *N* = 1,019）

L2 anxiety is defined as "the feeling of tension and apprehension specifically associated with second language contexts" （MacIntyre & Gardner, 1994, p.284）. Although some studies report a positive relationship between L2 anxiety and L2 performance （e.g., Scovel, 1978）, it is generally recognized as negatively affecting language learning （e.g., Horwitz, 2001; MacIntyre, 1999; Saito & Samimy, 1996）. In this study, L2 anxiety refers to the level of anxiety that learners experience with regard to L2 communication and learning. Six items in the questionnaire were originally developed by Ueki （2013）, based on the previous literature of L2 learning anxiety.

e.g., "I am not at ease while I am having a conversation in English."

Self-efficacy beliefs （5 items: alpha = .88, *N* = 1,019）

Self-efficacy beliefs reflect positive perceptions of "one's capabilities to organize and execute the course of action required to produce given attainments" （Bandura, 1997, p.3）. In the current study, the concept of self-efficacy measures the level of learners' belief or confidence in their ability to do a specific task, i.e., learning English and communicating in it. According to the definition, this concept needs to be closely related to performance in a specific task （Milles, 2014）. Thus, the original items developed by Pintrich and De Groot （1990） were modified in this study to align them closely with performance in learning English and communicating in it.

e.g., "I am sure that, compared with other students, I can communicate many things better in
English."

L2 motivation

In the current study, L2 motivation was measured separately as （a） L2 motivated learning behavior, and （b） investment in L2 learning. The original items were developed by Papi （2010） and Ryan （2009） and expanded in this study.

（1） *L2 motivated learning behavior* （5 items: alpha = .87, *N* = 1,019, and .89, *n* = 400）

This concept measures learners' perceptions of the effort levels they are making in L2 learning.

e.g., "I am working harder than other students to acquire English skills."

（2） *Investment in L2 learning* （5 items: alpha = .82, *N* = 1,019, and .88, *n* = 400）

This concept is used roughly synonymously with *volition* in the literature of educational psychology. It measures learners' perceptions of how much they invest of their time, money, and workload in order to achieve their goals in L2 learning.

e.g., "*I do not mind spending a certain amount of money to achieve my own goals in L2 learning.*"

Procrastination（7 items: 4 items for active procrastination, 3 items for passive procrastination: alpha for active procrastination = .68, *N* = 1,019, and .75, *n* = 400; alpha for passive procrastination = .71, *N* = 1,019, and.70, *n* = 400）

Procrastination is defined as "the lack or absence of self-regulated performance and the behavioral tendency to postpone what is necessary to reach a goal"（Chu & Choi, 2005, p.245）. Procrastination has been considered to be a failure of metacognitive strategy use and be harmful for learning or even lead to negative consequences in learning. Recently, however, Chu and Choi（2005）, among others, differentiated two types of procrastinators: active（intentional）vs. passive（resultant）. Active procrastinators prefer to work under pressure and make a deliberate decision to procrastinate. By contrast, passive procrastinators are incapacitated by their indecision to act and fail to complete tasks on time. In the current study, based on the items taken from the questionnaire developed by Aitken（1982）, a total of 7 items（four for active procrastination and three for passive procrastination）were created and used to measures the construct.

e.g.,（*active*）"*I do better when I am pressed for time.*"

（*passive*）"*I unintentionally put off tasks that I have to do until later.*"

Alpha values for active and passive procrastinations were relatively low in this study. As Dörnyei（2010）argues, internal consistency estimates for scales used in L2 research tend to be low because short scales are typically used. Likewise, in this study, the number of items used for active procrastination was four, whereas it was three for passive procrastination, thereby resulting in lower Cronbach's alphas. However, since both alpha values reached .60 or above, as recommended by Dörnyei（2010）, the internal consistencies were treated as acceptable for further analysis in this study.

L2 proficiency

L2 proficiency is defined here as English language abilities measured by a standardized proficiency test, i.e., the TOEIC test. Converted TOEIC scores from other standardized examinations such as TOEFL, GTEC, and Eiken were also used in this study for practical reasons.

Methods of Data Analysis

First of all, the normality of the data for all the variables obtained was confirmed by using

kurtosis and skewness values. Then, to test the first hypothesis, a Pearson product-moment correlation was conducted between L2 learning anxiety and self-efficacy using a total of 1,019 participants. To confirm the second hypothesis, a cluster analysis was performed to profile the learners based on their scores in the two measures, i.e., anxiety and self-efficacy beliefs. The Ward method with the squared Euclidean distance technique was chosen for a hierarchical cluster analysis. With the aid of the dendrogram obtained from the analysis, participants were categorized into four clusters. The dendrogram is a graphic representation of the clustering process, showing the steps in which individual participants start as small clusters and are combined into larger ones until the whole group forms one cluster. The number of learners in each cluster varied from 135 to 459 in this study. We randomly chose 100 learners from each cluster to avoid inequality among types of participants, and these 400 learners were subjected to later analysis. Lastly, to examine the third hypothesis, an ANOVA（one-way with four levels）analysis was administered in each cluster against five behavioral variables respectively: L2 motivation（as respectively measured by motivated learning behavior and by investment in L2 learning）, active procrastination behavior, passive procrastination behavior, and L2 proficiency. Since the ANOVA procedure was repeated five times on the same population of participants, to avoid Type I errors, the Bonferroni procedure was applied to each analysis. After detecting a significant difference in each ANAOVA analysis, Holm's sequential rejective Bonferroni procedure was performed as a post-hoc test. All the analyses described above were conducted using R, a free, open-source computer software environment for statistical computing and graphics（Mizumoto & Plonsky, 2016）.

Results

As for the first hypothesis, we found virtually no correlation（$r = -.16$; $N = 1,019$）between anxiety and self-efficacy. We thus contend that L2 learning anxiety and self-efficacy beliefs neither functioned as two sides of the same coin, nor did they form a trade-off relationship in the Japanese EFL classroom context. This finding（i.e., virtually no correlation）is in line with that reported in Ehman（1996）and others（Gardner et al., 1992; Yashima et al., 2009）. Since we confirmed that anxiety and self-efficacy were two separate variables, possibly coexisting in learners, we proceeded to test the second hypothesis. The results of the cluster analysis indicated that there were four distinct clusters of participants: high anxiety & high self-efficacy, high anxiety & low self-efficacy, low anxiety & high self-efficacy, and low anxiety & low self-efficacy（Table 1）, thereby supporting the second hypothesis.

Table 1　Four groups of participants based on cluster analysis.

Group	Anxiety（A）	Self-efficacy（SE）	Number
Group G1	**High**	**High**	100
	M = 27.56, SD = 2.96	M = 19.17, SD = 2.27	（178）
Group G2	**High**	**Low**	100
	M = 28.47, SD =3.69	M = 11.80, SD = 3.08	（459）
Group G3	**Low**	**High**	100
	M = 18.19, SD = 3.57	M = 19.26, SD = 4.29	（247）
Group G4	**Low**	**Low**	100
	M = 16.90, SD = 2.96	M = 9.99, SD = 1.94	（135）

Note. The maximum figure for anxiety is 36 and that for self-efficacy 30. The figure in each parenthesis under Number indicates the total number of participants before the random selection procedure was administered.

The next step in this study was to check the third hypothesis by comparing five L2 behavioral variables one by one among the four distinct groups. The variables compared were L2 motivation（as separately measured by motivated learning behavior and by investment in L2 learning）, procrastination behavior（as measured respectively as active and passive procrastinations）, and L2 proficiency.

Table 2　Descriptive statistics for motivated learning behavior.

Group	Mean	SD
Group 1（**High** anxiety & **High** self-efficacy）	16.34	5.17
Group 2（**High** anxiety & **Low** self-efficacy）	14.34	5.10
Group 3（**Low** anxiety & **High** self-efficacy）	16.83	4.80
Group 4（**Low** anxiety & **Low** self-efficacy）	13.92	5.16

（Max. = 30）

Table 2 illustrates the descriptive statistics for motivated learning behavior. It indicates that Groups 1（High-High）and 3（Low-High）tended to show higher values, while Groups 2（High-Low）and 4（Low-Low）had lower scores in motivated learning behavior. A statistically significant difference was found in the ANOVA analysis（$F = 8.10$, $df = 3$, $p < .00001$, partial eta^2 = .057）, and subsequent post-hoc tests confirmed that there were significant differences between Group 1（High-High）and Group 3（Low-High）, Group 1（High-High）and Group 4（Low-Low）, Group 2（High-Low）and Group 3（Low-High）, and Group 2（High-Low）and Group 4（Low-Low）, all at $p < .005$ or below levels.

Table 3   Descriptive statistics for L2 learning investment.

Group	Mean	SD
Group 1（**High** anxiety & **High** self-efficacy）	18.10	4.31
Group 2（**High** anxiety & **Low** self-efficacy）	15.42	4.07
Group 3（**Low** anxiety & **High** self-efficacy）	16.87	3.77
Group 4（**Low** anxiety & **Low** self-efficacy）	14.60	4.16

（Max. = 30）

Descriptive statistics for L2 learning investment are provided in Table 3. The table shows that learners in Group 1（High-High）invested a great deal into their L2 learning, while Group 4（Low-Low）did not. Groups 2（High-Low）and 3（Low-High）came in between, with Group 3 significantly higher than Group 2. A statistically significant difference was found in the ANOVA analysis（$F = 14.43$, $df = 3$, $p < .00001$, partial eta^2 = .098）, and subsequent post-hoc tests confirmed that there were significant differences between Group 1（High-High）and Group 3（Low-High）, Group 1（High-High）and Group 4（Low-Low）, Group 2（High-Low）and Group 3（Low-High）, and Group 2（High-Low）and Group 4（Low-Low）, all at $p < .005$ or below levels.

Table 4   Descriptive statistics for active procrastination.

Group	Mean	SD
Group 1（**High** anxiety & **High** self-efficacy）	11.99	3.38
Group 2（**High** anxiety & **Low** self-efficacy）	12.56	3.50
Group 3（**Low** anxiety & **High** self-efficacy）	13.85	3.21
Group 4（**Low** anxiety & **Low** self-efficacy）	13.25	3.12

（Max. = 24）

Table 5   Descriptive statistics for passive procrastination.

Group	Mean	SD
Group 1（**High** anxiety & **High** self-efficacy）	11.62	3.29
Group 2（**High** anxiety & **Low** self-efficacy）	12.60	2.38
Group 3（**Low** anxiety & **High** self-efficacy）	11.77	3.49
Group 4（**Low** anxiety & **Low** self-efficacy）	13.51	2.94

（Max. = 18）

As for active procrastination, the ANOVA analysis confirmed that there was a significant difference among the four groups（$F = 5.94$, $df = 3$, $p < .0006$, partial eta^2 = .043）. The following post-hoc tests proved that the mean score in Group 3（Low-High）was significantly higher than in Group 1（High-High）and Group 2（High-Low）at $p < .05$ or below levels. The significant difference between Group 1（High-High）and Group 4（Low-Low）was also

confirmed. Regarding passive procrastination, post-hoc tests after the ANOVA （$F = 8.10$, $df = 3$, $p < .00001$, partial eta$^2 = .057$） indicated that the mean score in Group 4 （Low-Low） was significantly higher than in the other two groups （Groups 1 and 3）.

Table 6　Descriptive statistics for L2 proficiency.

Group	Mean	SD
Group 1 （**High** anxiety & **High** self-efficacy）	482.75	152.37
Group 2 （**High** anxiety & **Low** self-efficacy）	416.45	139.81
Group 3 （**Low** anxiety & **High** self-efficacy）	519.84	179.26
Group 4 （**Low** anxiety & **Low** self-efficacy）	323.57	106.00

（Score range: 10–990）

Lastly, with regard to L2 proficiency, the mean score of Group 4 （Low-Low） was significantly lower than in the other three groups （$F = 34.41$, $df = 3$, $p < .00001$, partial eta$^2 = .206$; post-hoc tests at the level of $p < .00001$） as in Table 6. The only difference NOT confirmed here was between Group 1 （High-High） and Group 2 （High-Low）.

Discussion

In this section, we would like to discuss what characteristics were observed in each group and then propose possible pedagogical interventions.

Group 1 （*High Anxiety & High Self-efficacy*）

The learners in this group were characterized by not procrastinating in general. They tended to put effort and investment into learning English. Their English proficiency, in fact, was relatively high. Based on these results, we could argue that higher anxiety, combined with higher self-efficacy, had a positive effect on learning behavior. It is true that some studies conducted in EFL contexts have found a positive relationship between L2 anxiety and motivated learning behavior （e.g., Yamane et al., 1995）, which means that a certain level of L2 anxiety can motivate learners and induce their better performance in L2 （Scovel, 2001）. The finding of the current study also corroborated this facilitating nature of anxiety. However, our study also found that learners in this group possessed high self-efficacy in addition to high L2 anxiety. This is a finding that should not be overlooked. According to Csíkszentmihályi （1988）, learners with a higher sense of self-efficacy are likely to have more positive experiences. These positive experiences can provoke a facilitating nature of anxiety in learners and lead them toward better L2 outcomes, as was suggested in the Piniel & Csizér study （2013）. We thus presume that it may

not be anxiety itself but a balanced combination of higher anxiety and higher self-efficacy beliefs that guide L2 learning favorably or in a facilitating fashion.

Group 2（*High Anxiety & Low Self-efficacy*）

In this group, students did not intentionally procrastinate. Although no significant difference was observed（compared with Groups 1 and 3）, their tendency to passively procrastinate, on the contrary, was relatively high, and they were likely to exert less effort and avoid investment into learning English. As a result, their English proficiency was lower. It seems that the combination of high anxiety and low self-efficacy had a negative impact on L2 learning behavior in this group. Thus, in this group, we need to react to their low self-efficacy and increase it through educational intervention. Once their self-efficacy increases to a certain level, higher anxiety found in this group might act as a facilitating force as was the case with Group 1. In enhancing learner's self-efficacy, L2 learning experience plays an important role according to Dörnyei （2009b）. We thus postulate that giving these students successful and positive learning experiences is a possible pedagogical intervention for this group. In addition, since effort and investment made by the learners of this group did not work very well in attaining higher L2 proficiency, showing them（through models）what kind of effort and investment they actually need to make in order to achieve success in L2 learning may also be required.

Group 3（*Low Anxiety & High Self-efficacy*）

L2 proficiency in this group was the highest among the four groups. Due to their higher level of self-efficacy, learners were confident and tended to assume that they could complete a given task successfully even at the last minutes. However, the higher self-efficacy seems to have induced a higher level of active or intentional procrastination in this group（In contrast, their level of passive procrastination was low）. Active procrastination is an issue that we should not ignore. Although active procrastination can sometimes be a facilitator for learning（e.g., Chu & Choi, 2005）, unlike non-procrastination, it still is prone to result in a cutting-corner or labor-saving attitude, which carries with it other obvious negatives.

The higher level of active procrastination observed in this group may be accounted for by overconfidence. This type of overconfidence centers around overestimating one's abilities and acting as if one's beliefs are more certain than is actually the case. Such overconfidence has a huge impact on learners' performance toward a given task. As Hilary and Menzly（2006）claim, when people experience success repeatedly in a series of tasks that have a similar level of difficulty, they are likely to be overconfident and, as a result, become less sensitive to the quality of

outcomes. We thus may need to place this group of students in a more rigorous and demanding pedagogical environment—for example, by assigning them more challenging tasks—and reduce their overconfidence through the experience.

Group 4（*Low Anxiety & Low Self-efficacy*）

Learners in this group frequently exhibited both active and passive procrastination behaviors. They put neither effort nor investment into their L2 learning. Consequently, their English proficiency was the lowest. In this group, we presume that learners' anxiety as well as self-efficacy tends to stay lowest because the learners are basically indifferent to their L2 learning. They are also incapable of monitoring themselves as learners. In other words, learners in this group have given up on themselves and are not emotionally involved in L2 learning. A typical student in this group might say, "I'm sure I won't succeed even if I try very hard." This desperate and irresponsible attitude toward learning could have been caused by the co-existence of low anxiety and low self-efficacy. However, we assume that, since L2 learning is intimately bound up with affect (e.g., Dörnyei, 1994; Horwitz, 2001), as long as learners feel some kind of emotions (either negative or positive) toward learning, there could be room for improvement. Thus, creating an environment that makes the learners find a way to be emotionally engaged in L2 learning is necessary for this group. Other possible pedagogical interventions for this group might include putting them into a mildly challenging situation and giving them a successful learning experience, through providing them scaffolding on a step-by-step basis, thereby enhancing their self-efficacy in L2 learning. Moreover, giving them metacognitive instruction (such as how to set goals, make plans, and monitor them) might be desirable, because they have difficulties in metacognition. As for what kinds of scaffolding are appropriate, further studies are needed. Figure 1 is a schematic summary of the learner profiles for the four groups.

A closer look at L2 proficiency data obtained in this study (See Table 6 and Figure 1) could also lead us to an interesting interpretation of the results: as learners move from Group 4 through Group 2 and/or Group 1 to Group 3, they progress toward higher L2 proficiency, forming a "continuum," or a "developmental sequence" along the four groups. As learners gain successful experiences, they become more confident along the way. Then, their anxiety can sometimes play a facilitating role in their learning, or a debilitating form of anxiety can be controlled. Consequently, learners become more proficient in L2. This interpretation is worth being investigated through future longitudinal studies.

Lastly, a few remarks concerning a facilitating nature of anxiety are in order here. With the advent of positive psychology in the field of SLA, some researchers, such as MacIntyre and
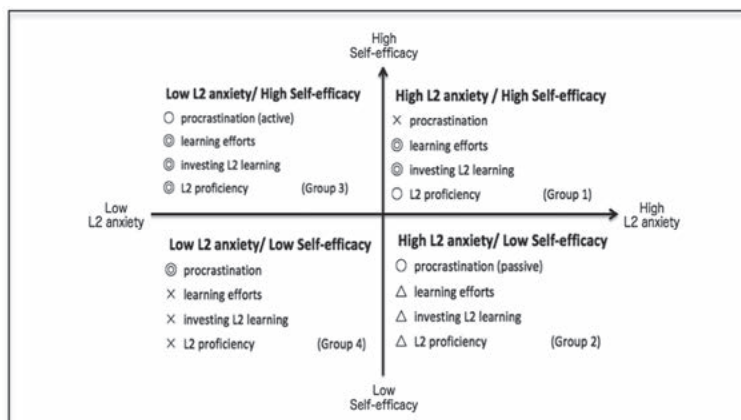
Figure 1　A schematic representation of the learner profiles.

Gregersen（2016），argue that anxiety only has a debilitating nature and no such thing as facilitating anxiety exists. Their alternative interpretation of facilitating anxiety is that it is not anxiety but an optimal level of excitement, enjoyment, or a positive form of emotion, all of which can lead to higher motivation and performance in L2 learning. In an EFL context such as Japan, however, many students are basically forced to study English as a requirement and, contrary to the results of the studies involving multilingual learners or highly advanced students in other contexts（e.g., Dewaele & MacIntyre, 2016），they are prone to be extrinsically motivated by such factors as anxiety, the feared self, or the ought-to L2 self（e.g., Ueki & Takeuchi, 2013, 2015）. In the context where enjoyment or joy of learning L2 is not a dominant or growing attitude and where "demotivation" is a major topic of research（e.g., Kikuchi, 2015; Kim & Kim, 2013），anxiety（or more concretely, an optimal combination of anxiety and self-efficacy as in Group 1）can be a driving force for learning at least on some occasions, regarding some points of development, or for some types of learners. Thus, the concept of facilitating L2 anxiety still needs to be preserved in EFL contexts.

Conclusion

This study empirically proved that the relationship between anxiety and self-efficacy was NOT two sides of the same coin. In addition, this study showed that four groups of students could be formed in terms of the levels of anxiety and self-efficacy beliefs in the Japanese EFL context. Thirdly, we confirmed that L2 behavioral variables such as L2 motivation（as measured by motivated learning behavior and by learning investment），procrastination behavior（active and

passive）, and L2 proficiency all uniquely differed in each group, thereby forming four distinct profiles of L2 learners in the context.

More specifically, the current study showed that anxiety and self-efficacy together acted as a facilitator for L2 learning behavior in Group 1 (high anxiety and high self-efficacy). It is true that previous research showed that learners with low anxiety and high self-efficacy (those in Group 3) tend to demonstrate higher L2 achievement and performance. This tendency was true of the present study, too. Its results, however, also indicated that learners with high anxiety and high self-efficacy (Group 1) performed well in L2 learning. They seem to have made the best of their higher level of anxiety, turning it into a tool for effectively controlling their L2 learning with the help of a higher sense of self-efficacy. We thus argue that a balanced combination of higher anxiety and higher self-efficacy has a favorable effect on L2 learning.

Learners with high anxiety and low self-efficacy (Group 2) demonstrated lower L2 proficiency as was reported in previous research. However, since their levels of effort and investment were higher (albeit by a small amount) than that of Group 4, guiding them to higher L2 performance by increasing their level of self-efficacy might be possible. Learners with low anxiety and low self-efficacy (Group 4) were indifferent to their own learning and thus had no control over it. This seems to be a kind of metacognitive deficiency that needs to be ameliorated by appropriate pedagogical interventions.

Lastly, some comments for research directions are appropriate. In future studies, individual variations in each group (as was found in this study) need to be closely investigated qualitatively. Since the present study was quantitative in nature, a larger picture concerning learners in a specific context can be obtained. The picture, however, is the sum total or a composite of learners, and thus the unique nature of individual learners might be missing in it. Transferability of the findings in this study to other contexts also needs to be examined. In future research, therefore, these missing pieces of information must be filled to understand EFL learners better.

Notes

1) The original version of the questionnaire was written in Japanese and translated by the authors into English. The study was conducted by using the original Japanese version. The questionnaire is available upon request.

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