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# The Japanese EFL Learners' Self-Regulated Language Learning and Proficiency*

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The purpose of this study was to explore the relationship between learners' self-regulated language learning and proficiency and to examine the differences in characteristics of self-regulated learning (SRL) between low- and high-proficiency learners. SRL is a learning process throughout setting goals, monitoring tasks, and reflecting on performance, which includes both cognitive and affective aspects. Participants were 97 Japanese university students of English. Based on their proficiency, 67 out of them were assigned to the L group and 30 to the H group in order to compare the difference of their SRL skills. They all took the Motivated Strategies for Learning Questionnaire (MSLQ) online to measure their SRL skills and reported their latest TOEIC scores to determine their English proficiency. The MSLQ includes 81 items that were administered on the website for ease of access. Exploratory factor analyses determined five motivational and six learning strategy factors. Based on these factors, multiple regressions and t-tests were performed. Multiple regressions examining the influences of SRLs on proficiency subsequently showed that three learning strategy factors in SRL—metacognitive strategies, effort regulation, and coping with problems—significantly predicted the variance in learners' proficiency; no motivational factors predicted it, even though correlations between three out of five factors and proficiency were found, namely, self-efficacy, intrinsic goal orientation, and test anxiety. Later t-tests, however, showed significant differences in SRL between low- and high-proficiency learners in the following motivational and learning strategy factors: self-efficacy, intrinsic goal orientation, test anxiety, metacognitive strategies, effort regulation, and coping with problems. The findings suggest that although they did not directly account for learner proficiency, yet motivational factors were evidently related to English proficiency level. Based on these results, the characteristics of less proficient learners compared to those of more proficient learners are discussed.

**Keywords**: self-regulated learning, L2 proficiency, MSLQ, motivation, learning strategy

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## 1 Introduction

In the field of educational psychology, the concept of self-regulated learning (SRL) has been developed to understand how students learn voluntarily or autonomously. SRL is the foundation upon which learners to build their academic skills (Zimmerman & Schunk, 2011). It has also been attracting attention in the field of second language acquisition (SLA) for decades because it allows researchers to examine the language learning process more comprehensively. However, there are as yet few studies investigating SRL on the center stage in Japan (Ito, 2009). In addition, SRL skill is considered to enhance academic proficiency because learners who acquire this skill can set learning goals, apply and implement effective learning strategies, and maintain their motivation, all of which contribute to ensuring successful academic performance (Zimmerman & Schunk, 2011). However, it would be too hasty to regard the self-regulatory traits of less proficient learners and those of more proficient learners as polar opposites. First, we need to reveal the commonalities and differences that exist between differing levels of L2 proficiency. With this in mind, the present study is focused on self-regulated learning and second language (L2) proficiency in the English as a foreign language (EFL) setting.

## 2 Literature review

### 2.1 Shift to self-regulated learning

The concept of SRL originates in the study of "good language learners" (e.g., Griffiths, 2008; Rubin, 1975) in SLA. Researchers have been making efforts to show how excellent language learners study L2 and what kind of learning methods they use (Griffiths, 2008; Stern, 1975). This research has shed light on how to turn learners with various problems into ideal learners. Related research found that skilled language learners apply various strategies for studying L2; such research then began to focus on language learning strategies (Cohen & Macaro, 2007).

Once studies found that good language learners get creative with many learning strategies, researchers examined which of the strategies used by L2 learners are most effective. Dependable taxonomies of learning strategies were classified (e.g., Oxford, 1990;[1] O'Malley & Chamot, 1990), and even now the relationship between learning strategies and other factors,

[1] She actually presented an idea integrating learning strategies and self-regulation that she labeled the Strategic Self-Regulation Model in her later book (Oxford, 2011). She organized strategies into three categories, cognitive, affective, and sociocultural-interactive, which allow us to understand L2 learning strategies more broadly.

for example, language anxiety (Liu & Chen, 2014) and learning beliefs (Tang & Tian, 2015), has received a lot of attention. Similar to good language learner research, the study of learning strategies described how high-grade learners used learning strategies as well as which learning strategies made learners more proficient. As Harris (2003) noted, "a major outcome of the research into the strategies used by successful language learners was the conclusion that learners should be taught not only the language but also the learning strategies they need" (p. 5).

However, studies have defined learning strategies in several ways, creating ambiguity and "a lack of theoretical rigor" in the field (Macaro, 2006, p. 320). Skehan (1989) suggested that "the area of learning strategies is at an embryonic stage" (p. 98). Dörnyei (2005) supported Skehan, indicating that "the use of the concept [learning strategies] turned out to be unfruitful for broader research purposes" (p. 193) in his overview of the history of learning strategies. In other words, we can infer that the study of learning strategies might be insufficient to uncover all L2 learners' traits. Thus, SRL, as a concept that comprehensively includes both affective and cognitive aspects, has received attention in recent years in SLA.

### 2.2 Focusing on the study of self-regulated learning

Self-regulated learning is defined as "self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals" (Zimmerman, 2000, p. 14), a description derived from a social cognitive perspective that views self-regulation as an interaction of three triadic phases: personal, behavioral, and environmental (Bandura, 1986). There have been several definitions of self-regulation and of learning strategies, but Pintrich (2000) summarized some common points between them, creating a general definition that explains the paradigm of SRL; it consists of four phases—forethought, monitoring, control, and reaction and reflection—and four areas for regulation in each phase—cognition, motivation, behavior, and context. These processes are carried out both explicitly and implicitly by learners, and each phase of regulation is assumed to take place successively, but they are indubitably dynamic functioning processes (Ito, 2009).

Researchers have explored to what extent SRL is beneficial for academic success. Zimmerman and Martinez-Pons (1990) hypothesized that intellectually gifted students would display academic SRL skills superior to those of average students. They explored the significantly higher mathematical efficacy, verbal efficacy, and strategy use demonstrated by gifted students, showing that mathematical and verbal efficacy had a relationship with the use of self-regulated learning strategies. Pintrich and De Groot (1990) also revealed that students' academic grades in mathematics had significant correlations with SRL strategies, self-efficacy, and a sense of

intrinsic value of learning. In the SLA context, Inan (2013) concluded, by examining SRL and English academic achievement in a Turkish EFL setting, that learners who used more SRL strategies were able to earn a higher GPA.

Specifically focusing on the components of SRL, there have been findings that strongly relate to learner achievement. Metacognitive strategies are critical to studying how learners regulate their learning by themselves, as Pintrich (2000) described in his framework. Metacognitive strategies have been shown to be of benefit to learner achievement by allowing high-achieving students to predict the results of tests more accurately, look more realistically at their goals, and choose questions that seem easier to answer in the exam first (Isaacson & Fujita, 2006). Metacognitive strategies can also be taught to improve the selection and implementation of suitable learning strategies, pre-reading comprehension, and maintenance of reading strategies (Tang & Moore, 1992), and they are useful for learners at any proficiency level.

On the other hand, not only cognitive but also motivational aspects are requisite to keep SRL working effectively. Pintrich (2000) emphasized the importance of the existence of affective elements as well as cognition in his definition; in fact, the components of cognitive and metacognitive strategies tend to be preferentially focused, with motivational aspects also contributing to learners' learning processes. Instead, restricting research to cognitive or metacognitive learning strategies causes motivational aspects in SRL to be "left out of the picture" (Boekaerts & Cacllar, 2006, p. 201). Motivation in SRL is closely related to Self-Determination Theory[2] (Schunk & Zimmerman, 2008), but slightly different from it because of "the awareness and purposefulness of students' thoughts and actions" (Wolters, Pintrich, & Karabenick, 2003, p. 16). The aforementioned study by Pintrich and De Groot (1990) found that, with the exception of text anxiety, motivational factors were correlated with cognitive engagement strategies. In other words, the authors asserted that higher levels of self-efficacy positively correlated with more effective SRL, and the learners who placed more intrinsic value on learning used more cognitive strategies and learned classroom tasks with self-regulation. With respect to self-efficacy, Wang, Schwab, Fenn, and Chang (2013) also investigated the relationship between self-efficacy, SRL, and English achievement in a comparative context of Chinese and German EFL students. Their study also concluded that self-efficacy and SRL were correlated within both EFL contexts; more precisely, self-efficacy more accurately predicted English achievement.

[2] Self-Determination Theory was advocated by Deci and Ryan (1985), which is explained with a five stages-continuum from amotivation to intrinsic motivation. The motivational degree depends on three psychological needs: autonomy, competence, and relatedness.

As previous studies show, SRL seems to be beneficial to learners, and metacognitive strategies and self-efficacy appear to be pivotal factors in achieving high proficiency. However, most data that focused on how learners developed proficiency was collected through post-questionnaire tests or interviews and lacked any detailed review to explore self-regulatory differences between lower and higher proficiency learners.

### 2.3 Problems and research questions

The findings reviewed above confirm that SRL is positively related to academic learning; indeed, they indicate that mastering SRL techniques will make learners more skillful in any subject. However, the number of studies investigating the relationship between SRL and L2 proficiency is still insufficient. In addition, the characteristics of SRL, which have the potential to vary depending on learner proficiency, need to be more explicitly delineated for use in comparing different proficiency levels. Therefore, the following two research questions will be discussed:

RQ1: How does self-regulated learning affect the proficiency of Japanese EFL learners?

RQ2: How do the characteristics of self-regulated learning differ in high- and low-proficiency learners?

## 3 Material and Methods

### 3.1 Participants

The study participants were all freshmen at a private university in Tokyo. There were 97 participants (67 females and 30 males) majoring in literature (n = 39), law (n = 30), intercultural communication (n = 13), science (n = 11), and sociology (n = 4). They were divided into two different proficiency groups to focus on the relationship between language learning features and proficiency. One group consisting of lower-proficiency students, called the L group, had 67 students; the other group, which was comprised of higher-proficiency students for contrast, had 30 students and was called the H group. The university has four modules (from level 1 to level 4) of English classes based on TOEIC IP scores (the test is used as a placement test at this university). The students from levels 3 and 4 volunteered to be members of the L group, while 30 students from levels 1 and 2 joined the H group. The length of time learning English was 6 to 13 years in the L group (mean = 6.76 years) and 3 to 13 years in the H group (mean = 7.86 years). Nine students in the L group had experience studying abroad for 1 to 3 months, and seven students had studied abroad from 1 month to 4 years in the H group. Participants were grouped based on their TOEIC scores, and a t-test was

conducted between the L and H groups to verify substantial academic difference between the two groups. The mean score of the L group was 394.30, and that of the H group was 644.90, and a significant difference was recognized ($t$ (95) = -24.939, $p$ < .05), which means the TOEIC score of the L group was definitively lower than that of the H group. The information pertaining to the L and H groups is shown in Table 1.

Table 1. Mean and Standard Deviation of TOEIC scores of the L- and H-groups

| | L group | | H group | |
|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* |
| TOEIC score | 394.00 | 45.50 | 644.90 | 35.74 |
| *N* (male: female) | 67 (22: 45) | | 30 (7: 23) | |

### 3.2 Materials: TOEIC / MSLQ

This study used students' TOEIC scores for defining their English proficiency and the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, Smith, Garcia, & MacKeachie, 1991) for measuring their self-regulated learning. The TOEIC used in this study measures only listening and reading skills, but this was adapted because it was the only measurement for which scores were available for all participants. The MSLQ measured the participants' self-regulated English learning. Pintrich et al. (1991), the authors of this questionnaire, already verified its reliability and validity through a confirmatory factor analysis that was performed for both the items in the motivational section and in the learning strategies section, respectively.

The original MSLQ has 15 factors: six for motivation scales (control beliefs, self-efficacy, intrinsic goal orientation, extrinsic goal orientation, task value, and test anxiety), and nine for strategy-learning scales, including five cognitive strategies (rehearsal, elaboration, organization, critical thinking, and metacognition) and four concerning resource management strategies (time & place of study, effort regulation, peer learning, and help-seeking). The MSLQ is applicable to any classroom subject (Pintrich et al., 1991); therefore, some subject-general terminology was varied to suit the Japanese EFL learners' academic subject of study. In addition, the MSLQ was translated into Japanese for participants so that they could understand the questions more clearly. (See the complete list of items for the MSLQ in the Appendix.)

The MSLQ assumes that students' motivations are directly linked to their ability to perform their SRL activities; therefore, the test allows us to understand learners' SRL in a way that accesses both motivational orientation at an academic level and use of different learning strategies. We can thus explore learners' SRL in language learning from two different perspectives.

### 3.3 Procedure and analysis

#### 3.3.1 Procedures of the questionnaire

The questionnaire was conducted on the website CREATIVE SURVEY, which was convenient for participants to access. They could access the site anywhere at any time and complete it without a time limitation. The participants were required to fill in their personal information, answer all the items, and indicate if they were willing to take part in an interview. This questionnaire had seven Likert scales (1 = not at all true for me, 7 = very true for me), and the participants answered by selecting only one value on the scale. The 81 items of the MSLQ were randomized to eliminate any order effect.

#### 3.3.2 Data analysis

Exploratory factor analyses were performed on the data from the MSLQ to identify the factors for the main study. After that, multiple regressions were conducted two times to determine the influence of SRL on proficiency; the analyses were done for the motivation and learning strategy sections separately. T-tests were also conducted to compare the L and H groups, which allowed us to unveil the features of SRL for each proficiency group.

## 4 Results

### 4.1 Factor analysis

All 81 items of the MSLQ were subjected to exploratory factor analyses. They were done separately for the motivation and learning strategy sections in accordance with the original procedure of Pintrich et al. (1991). Regarding the motivation section, the screen plot led us to conclude that a five-factor solution seemed to be the most acceptable. A principal factor analysis with Promax and Kaiser normalization was further conducted. The minimum loading was set at .40, and only one item did not meet this criterion. Five factors finally comprised a total of 30 items. By considering every item included in each factor, five determined factors were named: self-efficacy (SE, $\alpha$ = .90), intrinsic goal orientation (IGO, $\alpha$ = .87), extrinsic goal orientation (EGO, $\alpha$ = .67), test anxiety (TANX, $\alpha$ = .72), and control of learning beliefs (CLB, $\alpha$ = .62). These five factors accounted for 52% of the total variance (see Tables 2 and 3).

Likewise, another exploratory factor analysis was conducted for the learning strategy section shown in Tables 4 and 5. Judging by the initial eigenvalues plotted, a six-factor solution was deemed plausible. The minimum loading was set at .40, and 18 items that did not meet this criterion were eventually excluded. The six factors accounted for 49% of the total variance. Again, each factor was named based on the MSLQ in accordance with the included items: metacognitive strategies (MCS, α = .82), cognitive strategies (CS, α = .85), effort regulation (ER, α = .65), task approach (TAP,

Table 2. An Exploratory Factor Analysis for Motivational Items

| item text | 1 SE | 2 IGO | 3 EGO | 4 TANX | 5 CLB |
|---|---|---|---|---|---|
| I'm confident I can understand the most complex material presented by the instructor in the English class. | **.952** | -.190 | -.207 | .127 | .084 |
| I expect to do well in the English class. | **.746** | .160 | .026 | -.096 | -.024 |
| I believe I will receive an excellent grade in the English class. | **.699** | -.023 | .065 | -.23 | .095 |
| I'm confident I can do an excellent job on the assignments and tests in the English class. | **.697** | .124 | .141 | .065 | -.095 |
| I'm certain I can understand the most difficult material presented in the readings for the English class. | **.686** | -.026 | .101 | .141 | -.308 |
| I'm confident I can learn the basic concepts taught in the English class. | **.614** | .130 | .129 | .043 | -.002 |
| I'm certain I can master the skills being taught in the English class. | **.536** | .324 | .056 | -.039 | -.072 |
| Considering the difficulty of the English class, the teacher, and my skills, I think I will do well in the English class. | **.488** | .209 | .168 | -.085 | .024 |
| When I take a test, I think about how poorly I am doing compared with other students. | **-.485** | .202 | .157 | .351 | -.025 |
| When I have the opportunity in the English class, I choose course assignments that I can learn from even if they don't guarantee a good grade. | **.420** | .392 | -.207 | .158 | .128 |
| Understanding the subject matter of the English class is very important to me. | -.208 | **.734** | .198 | -.100 | .174 |
| In the English class, I prefer course material that arouses my curiosity, even if it is difficult to learn. | .105 | **.703** | -.098 | .019 | -.110 |
| I think I will be able to use what I learn in the English class in other courses. | .055 | **.688** | -.140 | .038 | .376 |
| It is important for me to learn the course material in the English class. | -.193 | **.681** | .224 | -.088 | .113 |
| I am very interested in the content area of the English class. | .055 | **.622** | .182 | -.144 | -.116 |
| I like the subject matter of the English class. | .210 | **.576** | .062 | -.051 | .219 |
| If I try hard enough, then I will understand the course material. | .257 | **.538** | -.084 | -.056 | -.113 |
| In the English class, I prefer course material that really challenges me so I can learn new things. | .125 | **.480** | .156 | .233 | -.122 |
| If I study in appropriate ways, then I will be able to learn the material in the English class. | -.003 | **.475** | -.206 | .283 | -.071 |
| Getting a good grade in the English class is the most satisfying thing for me right now. | .082 | -.015 | **.673** | .078 | .006 |
| I want to do well in the English class because it is important to show my ability to my family, friends, employer, or others. | -.031 | .144 | **.666** | .003 | -.163 |
| The most important things for me right now is improving my overall grade point average, so my main concern in the English class is getting a good grade. | .179 | -.503 | **.569** | .086 | .398 |
| If I can, I want to get better grades in the English class than most of the other students. | -.079 | .286 | **.433** | .055 | .036 |
| When I take tests I think of the consequences of failing. | .020 | -.225 | -.003 | **.689** | .122 |
| I have an uneasy, upset feeling when I take an exam. | .063 | .018 | -.030 | **.678** | .096 |
| I feel my heart beating fast when I take an exam. | -.064 | .085 | .434 | **.523** | -.112 |
| When I take a test I think about items on other parts of the test I can't answer. | .046 | .129 | .125 | **.461** | .166 |
| If I don't understand the course material, it is because I didn't try hard enough. | -.063 | .074 | -.036 | .058 | **.732** |
| It is my own fault if I don't learn the material in the English class. | -.208 | .113 | -.134 | .207 | **.499** |
| I think the course material in the English class is useful for me to learn. | .181 | .286 | .063 | .029 | **.497** |

Table 3. Factor Correlation of Motivation

| Factor | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1 | — | | | | |
| 2 | .552 | — | | | |
| 3 | .445 | .398 | — | | |
| 4 | -.182 | -.086 | .078 | — | |
| 5 | .009 | .053 | .250 | .243 | — |

Table 4. An Exploratory Factor Analysis for Learning Strategies Items

| item text | 1 MCS | 2 CS | 3 ER | 4 TAP | 5 PLIC | 6 CP |
|---|---|---|---|---|---|---|
| I try to play around with ideas of my own related to what I am learning in the English class. | **.807** | -.067 | .026 | .147 | -.023 | .115 |
| I try to relate ideas in the subject of the English class to those in other courses whenever possible. | **.779** | .125 | -.113 | -.186 | .177 | .042 |
| When reading for the English class, I try to relate the material to what I already know. | **.769** | -.126 | .126 | -.008 | .024 | -.204 |
| I treat the course material as a starting point and try to develop my own ideas about it. | **.74** | -.165 | .047 | .202 | .038 | .148 |
| I try to understand the material in the English class by making connections between the readings and the concepts from the lectures. | **.618** | .080 | .122 | -.065 | .260 | -.086 |
| When a theory, interpretation, or conclusion is presented in the English class or in the readings, I try to decide if there is good supporting evidence. | **.555** | .119 | -.164 | .097 | -.141 | -.099 |
| I try to apply ideas from course readings in other class activities such as lecture and discussion. | **.536** | -.009 | .157 | .086 | .033 | .189 |
| Whenever I read or hear an assertion or conclusion in the English class, I think about possible alternatives. | **.502** | .185 | -.017 | .080 | -.274 | -.064 |
| I find it hard to stick to a study schedule. | **.430** | -.253 | -.104 | -.030 | .051 | -.034 |
| When I study for the English class, I go over my class notes and make an outline of important concepts. | -.048 | **.742** | -.060 | .100 | .114 | -.100 |
| When I study for the English class, I write brief summaries of the main ideas from the readings and my class notes. | .092 | **.686** | -.191 | .059 | .091 | .033 |
| I make simple charts, diagrams, or tables to help me organize course materials. | -.189 | **.663** | -.03 | .104 | -.199 | .092 |
| Before I study new course material thoroughly, I often skim it to see how it is organized. | .306 | **.630** | -.064 | -.161 | -.031 | -.215 |
| I make lists of important items for this course and memorize the lists. | -.044 | **.625** | .029 | .209 | -.031 | .136 |
| When I study the readings for the English class, I outline the material to help me organize my thoughts. | -.093 | **.604** | -.053 | .069 | -.078 | .041 |
| When reading for the English class, I make up questions to help focus my reading. | .259 | **.492** | .007 | -.094 | -.132 | -.212 |
| When I study for the English class, I set goals for myself in order to direct my activities in each study period. | -.077 | **.473** | .247 | -.084 | .084 | .190 |
| I often find myself questioning things I hear or read in the English class to decide if I find them convincing. | .002 | **.448** | -.009 | -.016 | -.015 | .434 |
| If I get confused taking notes in class, I make sure I sort it out afterwards. | .004 | **.422** | .132 | -.030 | .152 | .326 |
| I make sure that I keep up with the weekly readings and assignments for the English class. | -.135 | -.052 | **.621** | .237 | .124 | -.075 |
| I often feel so lazy or bored when I study for the English class that I quit before I finish what I planned to do. | -.112 | .114 | **-.586** | .071 | .020 | -.098 |
| When course work is difficult, I either give up or only study the easy parts. | -.126 | .174 | **-.573** | .011 | .301 | .015 |
| Even when course materials are dull and uninteresting, I manage to keep working until I finish. | -.25 | .228 | **.557** | .049 | .291 | -.164 |
| During class time I often miss important points because I'm thinking of other things. | -.151 | -.124 | **-.404** | .330 | .025 | -.259 |
| When studying for the English class, I read my class notes and the course readings over and over again. | .040 | .056 | .034 | **.718** | .152 | -.239 |
| When I study for the English class, I go through the readings and my class notes and try to find the most important ideas. | .023 | .164 | .092 | **.689** | -.043 | -.114 |
| I try to work with other students from the English class to complete the course assignments. | .071 | .057 | -.337 | **.538** | .201 | .215 |
| I work hard to do well in the English class even if I don't like what we are doing. | .145 | -.026 | .373 | **.428** | .015 | -.001 |
| When I can't understand the material in the English class, I ask another student in the class for help. | .077 | -.069 | -.079 | .080 | **.841** | .102 |
| I try to identify students in the English class whom I can ask for help if necessary. | .066 | -.010 | .119 | .125 | **.717** | -.060 |
| I ask the instructor to clarify concepts I don't understand well. | -.003 | .153 | .146 | .084 | -.199 | **.651** |
| Even if I have trouble learning the material in the English class, I try to do the work on my own, without help from anyone. | .074 | .065 | .082 | .334 | -.192 | **-.603** |

α = .71), peer learning in classroom (PLIC, α = .75), and coping with problems (CP, α = .36). In fact, the reliability of CP seemed inadequate, but it contained only two items, and both of them clearly appeared important in Pintrich et. al. (1991)'s original factor *Help-Seeking*. Thus, CP was kept in this study. The factor analysis finally yielded 11 subscales—five for the motivation and six for the learning strategy sections. Hereafter, the statistical procedures were implemented using this factor structure.

Table 5. Factor Correlation of Learning Strategies

| Factor | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1 | — | | | | | |
| 2 | .390 | — | | | | |
| 3 | .273 | .299 | — | | | |
| 4 | .278 | .280 | .156 | — | | |
| 5 | -.137 | .142 | -.081 | -.047 | — | |
| 6 | .180 | .192 | .143 | .368 | .052 | — |

The factor analysis yielded 11 subscales: five for the motivation and six for the learning strategies sections. Table 6 shows the descriptive statistics of all learners; the mean TOEIC score of all learners was 471.80 (SD = 125.01, Range = 545). Among the means of all the factors, only cognitive strategies fell below 3.0 out of 7.0. On the other hand, the highest score among the 11 factors was obtained for intrinsic goal orientation (4.85). The following statistical procedures were implemented using this factor structure.

Table 6. The Descriptive Statistics of All Learners

| | *M* | *SD* | *N* |
|---|---|---|---|
| TOEIC | 471.80 | 125.01 | 97 |
| Self-efficacy | 3.12 | 1.04 | 97 |
| Intrinsic goal orientation | 4.85 | 1.05 | 97 |
| Extrinsic goal orientation | 4.05 | 1.21 | 97 |
| Test anxiety | 3.79 | 1.21 | 97 |
| Control of learning beliefs | 4.57 | 1.11 | 97 |
| Metacognitive strategies | 3.88 | 1.02 | 97 |
| Cognitive strategies | 2.98 | 0.99 | 97 |
| Effort regulation | 4.36 | 1.03 | 97 |
| Task approach | 3.66 | 1.10 | 97 |
| Peer learning in classroom | 4.41 | 1.47 | 97 |
| Coping with problems | 3.94 | 1.28 | 97 |

### 4.2 Motivation in SRL

Research Question 1 was posed to examine how SRL affects the proficiency of Japanese EFL learners. A multiple regression revealed that there were considerable correlations between SE ($r$ = .304, $p$ < .01), IGO ($r$ = .263, $p$ < .01), TANX ($r$ = -.193, $p$ < .05) and proficiency, as shown in Table 7.

Nevertheless, these five factors together explained only 9.1% of the variance in proficiency (Adj.$R^2$ = .091), and no significant predictors appeared. This result indicates that the higher self-efficacy and intrinsic goal orientation learners possess, the more proficient they are; meanwhile, the motivational aspects of self-regulated language learning seemed to have no direct influence on learners' English proficiency in the case of this study.

Table 7. Summary of Multiple Regressions for Motivation to TOEIC Scores

| Independent variables | β | *t* | *r* | |
|---|---|---|---|---|
| Self-efficacy | .210 | 1.625 | .304 | ** |
| Intrinsic goal orientation | .166 | 1.286 | .263 | ** |
| Extrinsic goal orientation | -.049 | -.423 | .037 | |
| Test anxiety | -.168 | -1.535 | -.193 | * |
| Control of learning beliefs | -.011 | -.100 | -.040 | |
| $R^2$ | .139 | | | |
| Adj.$R^2$ | .091 | | | |
| *N* = 97 | | | | |

*Note*: β = standardized partial regression coefficient, *r* = correlation,
* $p < .05$, ** $p < .01$

Independent sample t-tests between the L and H groups showed features corresponding to the results of a multiple regression (Table 8); thus, SE ($t$ (95) = -2.84, $p < .01$), IGO ($t$ (95) = -2.69, $p < .01$), and TANX ($t$ (95) = 2.48, $p < .05$) displayed significant differences between the L and H groups. First, SE had the most significant difference (L-H = -0.63). This result indicated that L-group students exhibited substantially lower self-confidence, less of a "can-do" attitude, and a less positive impression of learning English than did students of the H group. Also, IGO was significantly different between the two groups, which showed that learners in the H group had more intrinsic motivation, interest, and voluntary goals than did L-group learners. TANX, a score that was higher for the L group, was a significantly differential factor; the other two variables, EGO and CLB, were non-significant.

Table 8. Descriptive Statistics for the Motivation Section of the L and H Groups

| | L group (*N* = 67) | | | | H group (*N* = 30) | | | | Difference (L-H) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *Mean* | *Min* | *Max* | *SD* | *Mean* | *Min* | *Max* | *SD* | | |
| TOEIC | 394.3 | 195 | 483 | 49.50 | 644.9 | 560 | 740 | 35.74 | | |
| SE | 2.92 | 1.2 | 5.2 | 0.92 | 3.55 | 1.0 | 5.9 | 1.17 | -0.63 | ** |
| IGO | 4.66 | 2.3 | 7.0 | 0.94 | 5.26 | 1.4 | 7.0 | 1.17 | -0.60 | ** |
| EGO | 4.01 | 1.5 | 6.3 | 1.15 | 4.13 | 1.8 | 7.0 | 1.35 | -0.11 | |
| TANX | 3.99 | 1.8 | 6.5 | 1.11 | 3.35 | 1.0 | 6.5 | 1.33 | 0.64 | * |
| CLB | 4.61 | 1.0 | 6.7 | 1.08 | 4.49 | 2.0 | 7.0 | 1.21 | 0.12 | |

*Note*: SE = Self-efficacy, IGO = Intrinsic goal orientation, EGO = Extrinsic goal orientation, TANX = Test anxiety, CLB = Control of learning beliefs,
* $p < .05$, ** $p < .01$

### 4.3 Learning strategies in SRL

The results of a multiple regression for learning strategy factors showed a much stronger influence on proficiency than for motivational ones (Table 9). Three factors, MCS ($r$ = .307, $p$ < .01), ER ($r$ = .332, $p$ < .01), and CP ($r$ = .270, $p$ < .01), were significantly correlated with proficiency (TOEIC scores); these factors were also significant predictors of the variance of proficiency (MCS; β = .374, $p$ < .01, ER; β = .270, $p$ < .01, CP; β = .247, $p$ < .01). A 23% effect on learners' proficiency was accounted for by the six predictors together (Adj.$R^2$ = .232). It was found that using metacognitive strategies, regulating effort for learning, and learning English through seeking others' help positively affected learners' TOEIC scores. Incidentally, CS obtained a marginally significant p-value of .057, which can be regarded as a variable that affected proficiency in some way.

Table 9. Summary of Multiple Regressions for Learning Strategy to TOEIC Scores

| Independent variables | β | | *t* | *r* | |
|---|---|---|---|---|---|
| Metacognitive strategies | .374 | ** | 3.53 | .307 | ** |
| Cognitive strategies | -.206 | | -1.93 | .035 | |
| Effort regulation | .270 | ** | 2.86 | .332 | ** |
| Task approach | -.188 | | -1.84 | -.018 | |
| Peer learning in classroom | .132 | | -1.44 | .101 | |
| Coping with problems | .247 | ** | 2.67 | .270 | ** |
| $R^2$ | .280 | | | | |
| Adj.$R^2$ | .232 | | | | |
| *N* | 97 | | | | |

*Note*: β = standardized partial regression coefficient, *r* = correlation,
* $p$ < .05, ** $p$ < .01

The descriptive statistics for learning strategies of different proficient groups are shown in Table 10. CS was the factor that obtained the lowest score (M = 2.96) in the L group.

Independent sample t-tests also revealed significant differences between the L and H groups in MCS ($t$ (43) = -2.53, $p$ < .05), ER ($t$ (95) = -3.20, $p$ < .01), and CP ($t$ (95) = 3.00, $p$ < .01). H-group participants received higher scores in these factors than did L-group participants. That is, the high-proficiency learners tended to use more metacognitive strategies such as elaboration and critical thinking, better regulating effort for learning English, and overcoming problems while studying English.

Table 10. Descriptive Statistics for Learning Strategies of the L and H Groups

| | L group ($N$ = 67) | | | | H group ($N$ = 30) | | | | Difference (L-H) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *Mean* | *Min* | *Max* | *SD* | *Mean* | *Min* | *Max* | *SD* | | |
| MCS | 3.69 | 1.7 | 5.3 | .86 | 4.30 | 1.0 | 6.2 | 1.21 | -0.62 | * |
| CS | 2.96 | 1.0 | 5.4 | .87 | 3.01 | 1.0 | 5.8 | 1.24 | -0.04 | |
| ER | 4.14 | 1.0 | 6.2 | 1.02 | 4.83 | 3.2 | 6.4 | .88 | -0.69 | ** |
| TAP | 3.71 | 1.3 | 7.0 | 1.13 | 3.57 | 1.3 | 5.5 | 1.04 | 0.14 | |
| PLIC | 4.28 | 1.0 | 7.0 | 1.43 | 4.70 | 1.0 | 7.0 | 1.53 | -0.42 | |
| CP | 4.19 | 1.5 | 6.5 | 1.31 | 3.38 | 1.0 | 5.0 | 1.01 | -0.81 | ** |

*Note*: MCS = Metacognitive strategies, CS = Cognitive strategies, ER = Effort regulation, TAP = Task approach, PLIC = Peer learning in classroom, CP = Coping with problems, * $p < .05$, ** $p < .01$

## 5 Discussion

The aim of the present study was to explore the relationship between SRL and language proficiency and define the different characteristics of more- and less-proficient self-regulated learners. Following a review of the analysis procedure, motivational and learning strategy findings will be respectively presented. First, one of the most notable findings was that motivational factors did not significantly affect learners' proficiency. After multiple regression analyses, neither self-efficacy nor any motivational factors showed a significant influence on learners' proficiency. This yielded results from most previous studies, which claimed that motivational aspects of SRL are crucial elements for learner achievement (Zimmerman, 2000). However, Pintrich and De Groot (1990) examined the relationship between learners' academic achievement and certain components of SRL. They showed that the process of SRL is linked to academic achievement, not to mention the direct influence of motivation on achievement. In the present study, motivational factors—self-efficacy, intrinsic goal orientation, and test anxiety—were found to have significant correlations with proficiency. The results seem to strongly suggest that motivational factors had obvious relationships with English proficiency and might affect proficiency indirectly.

The above three factors displayed significant differences between the L and H groups. As hypothesized, the scores of SE and IGO were significantly lower for the L group compared to the H group. It has already been discussed that self-efficacy predicted that motivation to know (i.e., intrinsic motivation, a mediator between self-efficacy and academic adjustment) would differ from extrinsic motivation (Tomas et al., 2009). One of the key components of promoting self-efficacy and intrinsic goal orientation is goal-setting. This behavior corresponds to the forethought phase in Zimmerman's SRL model (2000). The content of goal-setting is decisive for the quality of learning. Lens and Vansteenkiste (2008) explored

how intrinsic goals were positively related to better learning, whereas extrinsic goals detracted learners' attention from learning activities. Latham (2004) also found that specific goals accelerated performance better than ambiguous goals. Pajares, Johnson, and Usher (2007) supported Latham (2004)'s results, in that students' *mastery experience*—for example, making efforts toward their goals and overcoming problems in learning—is a greatly influential source of self-efficacy regardless of gender and grade (in elementary, middle, or high school). In other words, higher proficiency in a subject makes learners more effective at setting achievable goals for SRL.

Learning strategies, on the other hand, were significantly influential on learner proficiency. Three strategies were found to be influential components of proficiency: metacognitive strategies, effort regulation, and coping with problems. Significant differences in these strategies between the L and H groups were evident on the t-tests. The low-proficiency learners neither used metacognitive strategies nor regulated their effort for English learning as did the high-proficiency learners. As seen in the items pertaining to coping with problems, they tended not to find someone to ask for help when encountering problems while learning English. These three factors are obviously pivotal for connecting with higher English proficiency, and they are teachable by instructors in educational settings (Pemberton & Cooker, 2012). That is, through appropriate teaching of these three strategies, the less-proficient learners might be able to overcome difficulties.

In terms of metacognitive strategies, Horiba (1996) explained that elaboration plays an important role in memorizing texts, which leads to better performance among L2 learners. This might be one of the reasons why the learners in the L group were unable to use as many strategies as were those in the H group. Furthermore, there is a possibility that the low-proficiency learners did not derive satisfaction from comprehending English or the advantages of understanding, both of which are needed to incorporate the materials metacognitively. These negative attitudes could be avoided by exposing learners to authentic language (Lassen-Freeman & Anderson, 2011), which might boost participants' enjoyment of English. In addition, critical thinking instruction assists L2 learners in processing authentic materials (Santos & Silva, 2008). The findings of the present study support previous studies that found that these metacognitive strategies positively affect learner proficiency.

Effort regulation also seems to be a key to success in L2 learning. This factor indicates how much effort learners invest in learning as well as how they control their concentration when they cannot focus attention on a task. T-tests showed that the mean score of the L group was lower than that of the H group. Effort regulation is described as "an aspect of volitional functioning" (Corno, 2001, p. 192); it seems to be related to motivational problems. The low-proficiency learners in this study obtained significantly lower motivational scores as well as lower regulation of effort scores

compared to the high-proficiency learners. One possible explanation is that self-monitoring, which is considered to be one of the sub-processes of SRL, plays an important role in effort regulation. As we have touched upon, the definition of SRL by Pintrich (2000) contains a monitoring phase that is linked to cognition, motivation, behavior, and context. In fact, Lan (1996) revealed the relationship between self-monitoring and learner performance: students who learned under self-monitoring conditions performed better than students who learned under non-self-monitoring conditions. The study did not examine the effect of instruction; however, a low level of effort regulation might be caused by a lack of self-monitoring with lower motivation. Appropriate self-monitoring can encourage learners to develop their English skills.

The results also indicated that the factor of coping with problems positively affected proficiency, which explained the significant difference between the L and H groups; that is, the less-proficient learners avoided asking another for help in learning English. This is defined as help-seeking in SRL theory (Zeidner, Boekaerts, & Pintrich, 2000). Help-seeking is an interpersonal strategy; accordingly, Newman (2009) pointed out that learners must cautiously consider the following three aspects when encountering learning failure: judging the necessity of help-seeking, considering the content of help-seeking, and seeking out individuals for help-seeking. This strategy makes learners reflect their learning in terms of whether they should ask for help or solve problems by themselves, what and how they should ask, and who they should ask for help. Learners' affect is related to help-seeking.

Overall, it was found that only the learning strategy factor influenced learners' English proficiency, but an obvious and significant difference appeared between the L and H groups in the motivation factor as well as in the learning strategy factor. Furthermore, three learning strategy factors, the significant predictors of proficiency, suggested a close relevance to motivation. Thus, less-proficient learners might change their cognitive habituation by removing their affective barriers.

As one suggestion to promote motivation in less-proficient learners, Pajares (2008) noted that the goal-setting training enhances self-efficacy. It works by letting learners face something challenging, then decides how much stress learners experience while learning, and finally leads learners to achieve learning goals. Eventually, self-efficacy strongly influences ultimate achievement. Margolis and MacCabe (2004) indicated that teachers should help less-proficient learners to create personally important goals, which should be specific, short-term, and achievable, thus allowing learners to decide what they *want* to achieve. This type of goal-setting plays a role in preventing less-proficient learners from losing their motivation, and it is conducive to achieving long-term goals as well. Teachers provide not only a chance to create goals for learners but also to provide relevant feedback about learners' progress toward their goals.

## 6 Conclusion

The present study focused on the relationship between SRL and English proficiency and the characteristics of less-proficient learners as compared to more-proficient learners. Most previous studies have focused on successful learners who can set a good example for every language learner; however, the present study raised new questions by including learners of lower proficiency levels.

There were some basic limitations of the study. The first concern is the number of participants. Generally, factor analyses require more than 100 samples to appropriately support the statistical processes (Frankel & Wallen, 2007). Also, this study tried to explore the characteristics of less-proficient learners, but it was nevertheless a fact that they had the ability to pass competitive exams at their university. The definition of less-proficient learners is difficult; the use of much-less-proficient learners could lead us to potentially different issues pertaining to SRL.

These limitations notwithstanding, the present study revealed the influence of self-regulated learning on proficiency and related similarities and differences between the less- and more-proficient learners. In future research, we need to confirm the role of motivational and learning strategic factors in self-regulated learning. In addition, self-regulated learning in a variety of school contexts differing from that of this research should be investigated. Self-regulated learning is a cyclical process, which means that repeated observation can yield more reliable and valid data to determine how learners are employing their learning. More qualitative research could also play an increasingly significant role in investigating self-regulated learning.

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**Appendix**

**Motivational Strategies for Learning Questionnaire (Pintrich et al., 1991)**

Motivation section

1. In the English class, I prefer course material that really challenges me so I can learn new things.
2. If I study in appropriate ways, then I will be able to learn the material in the English class.
3. When I take a test I think about how poorly I am doing compared with other students.
4. I think I will be able to use what I learn in the English class in other courses.
5. I believe I will receive an excellent grade in the English class.
6. I'm certain I can understand the most difficult material presented in the readings for the English class.
7. Getting a good grade in the English class is the most satisfying thing for me right now.
8. When I take a test I think about items on other parts of the test I can't answer.
9. It is my own fault if I don't learn the English class.
10. It is important for me to learn the course material in the English class.
11. The most important thing for me right now is improving my overall grade point average, so my main concern in the English class is getting a good grade.
12. I'm confident I can learn the basic concepts taught in the English class.
13. If I can, I want to get better grades in the English class than most of the other students.
14. When I take test I think of the consequences of failing.
15. I'm confident I can understand the most complex material presented by the instructor in the English class.
16. In the English class, I prefer course material that arouses my curiosity, even if it is difficult to learn.

17. I am very interested in the content are of the English class.
18. If I try hard enough, then I will understand the course material.
19. I have an uneasy, upset feeling when I take an exam.
20. I'm confident I can do an excellent job on the assignments and tests in the English class.
21. I expect to do well in the English class.
22. The most satisfying thing for me in the English class is trying to understand the content as thoroughly as possible. *
23. I think the course material in the English class is useful for me to learn.
24. When I have the opportunity in the English class, I choose course assignments that I can learn from even if they don't guarantee a good grade.
25. If I don't understand the course material, it is because I didn't try hard enough.
26. I like the subject matter of the English class.
27. Understanding the subject matter of the English class is very important to me.
28. I feel my heart beating fast when I take an exam.
29. I'm certain I can master the skills being taught in the English class.
30. I want to do well in the English class because it is important to show my ability to my family, friends, employer, and others.
31. Considering the difficulty of the English class, the teacher, and my skills, I think I will do well in the English class.

Learning strategy section

32. When I study the readings for the English class, I outline the material to help me organize my thoughts.
33. During class time I often miss important points because I'm thinking of other things.
34. When studying for the English class, I often try to explain the material to a classmate or friend. *
35. I usually study in a place where I can concentrate on my course work. *
36. When reading for the English class, I make up questions to help focus my reading.
37. I often feel so lazy or bored when I study for the English class that I quit before I finish what I planned to do.
38. I often find myself questioning things I hear or read in the English class to decide if I find them convincing.
39. When I study for the English class, I practice saying the material to myself over and over. *
40. Even if I have trouble learning the material in the English class, I try to do the work on my own, without help from anyone.
41. When I become confused about something I'm reading for the English class, I go back and try to figure it out. *

42. When I study for the English class, I go through the readings and my class notes and try to find the most important ideas.
43. I make good use of my study time for the English class. *
44. If course readings are difficult to understand, I change the way I read the material. *
45. I try to work with other students from the English class to complete the course assignments.
46. When studying for the English class, I read my class notes and the course readings over and over again.
46. When a theory, interpretation, or conclusion is presented in the English class or in the readings, I try to decide if there is good supporting evidence.
47. I work hard to do well in the English class even if I don't like what we are doing.
48. I make simple charts, diagrams, or tables to help me organize course material.
50. When studying for the English class, I often set aside time to discuss course material with a group of students from the class. *
51. I treat the course material as a starting point and try to develop my own ideas about it.
52. I find it hard to stick to a study schedule.
53. When I study for the English class, I pull together information from different sources, such as lectures, readings, and discussions. *
54. Before I study new course material thoroughly, I often skim it to see how it is organized.
55. I ask myself questions to make sure I understand the material I have been studying in the English class. *
56. I try to change the way I study in order to fit the course requirements and the instructor's teaching style. *
57. I often find that I have been reading for the English class, but don't know what it was all about. *
58. I ask the instructor to clarify concepts I don't understand well.
59. I memorize key words to remind me of important concepts in the English class. *
60. When course work is difficult, I either give up or only study the easy parts.
61. I try to think through a topic and decide what I am supposed to learn from it rather than just reading it over when studying for the English class. *
62. I try to relate ideas in the English class to those in other courses whenever possible.
63. When I study for the English class, I go over my class notes and make and outline of important concepts.
64. When reading for the English class, I try to relate the material to what I already know.

65. I have a regular place set aside for studying. *
66. I try to play around with ideas of my own related to what I am learning in the English class.
67. When I study for the English class, I write brief summaries of the main ideas from the readings and my class notes.
68. When I can't understand the material in the English class, I ask another student in this class for help.
69. I try to understand the material in the English class my making connections between the readings and the concepts from the lectures.
70. I make sure that I keep up with the weekly readings and assignments for the English class.
71. Whenever I read or hear an assertion or conclusion in the English class, think about possible alternatives.
72. I make lists of important items for the English class and memorize the lists.
73. I attend the English class regularly. *
74. Even when course materials are dull and uninteresting, I manage to keep working until I finish.
75. I try to identify students in the English class whom I can ask for help if necessary.
76. When studying for the English class I try to determine which concepts I don't understand well. *
77. I often find that I don't spend very much time on the English class because of other activities. *
78. When I study for the English class, I set goals for myself in order to direct my activities in each study period.
79. if I get confused taking notes in class, I make sure I sort it out afterwards.
80. I rarely find time to review my notes or readings before an exam. *
81. I try to apply ideas from course readings in other class activities such as lecture and discussion.

(* = deleted for exploratory factor analyses)

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