Relationships Between Goal Setting, Intrinsic Motivation, and Self-Efficacy in Extensive Reading

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Abstract
This study investigated the relationships between students' goal attributes, intrinsic motivation, and self-efficacy in extensive reading (ER). Two questionnaires (goal and motivational scales) were administered after 130 university students engaged in 12 weeks of ER activities. The goal scale included three important attributes, namely goal specificity, difficulty, and commitment as based on the goal-setting theory (Locke & Latham, 1990, 2002). Furthermore, the motivational scale included intrinsic motivation and self-efficacy. It was hypothesized that goal specificity, difficulty, and commitment affect students' intrinsic motivation and self-efficacy in ER. Structural equation modeling was used to clarify the relationships between the goal attributes and the motivational variables. The results showed that goal commitment directly influenced both intrinsic motivation and self-efficacy and that goal difficulty only directly influenced intrinsic motivation. However, goal specificity indirectly influenced both intrinsic motivation and self-efficacy. Furthermore, from the perspective of individual differences, cluster analysis was conducted to reveal more detailed relationships among the variables. The results indicated that four cluster groups were identified. Each group's characteristics were then compared and it turned out that one of the cluster groups set too difficult goals and hence lowered their self-efficacy. Finally, educational implications for ER integrating goal setting were discussed.

Keywords: goal setting, intrinsic motivation, self-efficacy, extensive reading, structural equation modeling

Introduction
Extensive reading (ER) has been recognized as an effective approach to second language (L2) reading instruction (Day & Bamford, 1998; Grabe, 2009). Day and Bamford state that it is essential to read prolifically so that students can benefit from ER. Students are therefore required to persistently read large quantities of texts in ER. Thus, researchers have attempted to understand students' motivation when engaging in ER, as well as to clarify any influential variables and the relationships among said variables (de Burgh-Hirabe & Feryok, 2013; Judge, 2011; Nishino, 2007; Ro, 2013; Rodrigo, Greenberg, & Segal, 2014; Takase, 2007). However, these studies have not examined goal attributes as related to goal setting, which influences students' motivation. The current study thus investigates how students' goal attributes affect other significant motivational variables in ER (e.g., intrinsic motivation, self-efficacy) and
discusses how goal setting can be used to encourage students to read extensively.

**Background**

**Goal Setting Theory and Three Important Goal Attributes**

The goal-setting theory (Locke & Latham, 1990, 2002) is a motivational theory originally developed in industrial-organizational psychology. Locke and Latham (2002) defined a goal as “the object or aim of an action, for example, to attain a specific standard of proficiency, usually within a specified time limit” (p.705). This theory assumed that when individuals set goals, they can perform better on certain tasks. Specifically, people with goals typically direct their attention toward goal-relevant activities, in addition to exerting effort and perseverance to attain their goals. Goal setting therefore appears to affect students’ motivation and improve their performance.

According to the goal-setting theory, there are three important attributes for goal setting: specificity, difficulty, and commitment. These goal attributes can enhance individual’s task performance, such that people highly committed to specific, challenging goals tend to perform better. This is because specific goals provide precise details for what is to be attained than vague goals. Goal difficulty also specifies the level of performance. People with specific and challenging goals tend to exert greater effort than those with vague or easy goals. In addition, goal commitment is the degree to which people wish to attain their goals. When people are highly committed to their goals, they enthusiastically pursue them. High commitment is thus crucial for goal attainment for specific and difficult goals. Therefore, the three goal attributes (i.e., specificity, difficulty, and commitment) should be taken into consideration for goal setting.

Moreover, the goal-setting theory acknowledges that goal setting is related to self-evaluation (Locke & Latham, 1994). More specifically, goal specificity and difficulty influence self-evaluation. Specific goals can provide standards for evaluating personal accomplishment; people can thus feel accomplished when they achieve these specific goals and subsequently enhance their self-efficacy. On the other hand, when goals are too difficult to achieve, people can be disappointed with their own performance and can thus weaken their self-efficacy. Accordingly, goal-setting theory suggests the importance of goal specificity and difficulty because these two attributes can activate self-evaluation.

In summary, as the goal-setting theory suggests, goal setting appears to affect motivation, performance, and self-evaluation. Furthermore, goal specificity, difficulty, and commitment are most influential when people attempt to benefit from goal setting.

**Extensive Reading and Goal Setting**

ER has attracted researchers and practitioners as an effective approach to L2 reading instruction. As Day and Bamford (1998) stated, students generally read enjoyable, easy materials and are required to read as much as possible in ER. However, the goal to read as prolifically as possible may not be sufficiently clear. According to the aforementioned goal-setting theory, a goal like “do your best” is considered vague and therefore does not seem helpful in promoting students to read extensively. If students can set appropriate goals based on the goal-setting theory, they can gain the benefits of goal setting more effectively in ER.
Furthermore, goal-setting theory states that staying highly committed to specific, difficult, and attainable goals is essential for achieving said goals. Teachers should thus provide students with opportunities to set effective goals based on the three goal attributes: specificity, difficulty, and commitment.

In addition to integrating goal setting into ER, students' motivation toward ER should be considered to ensure ER success. Many L2 researchers have investigated students' motivation (e.g., Hayashi, 2009; Hiromori, 2006; Noels, 2001) using the self-determination theory. Self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2002) suggests that intrinsic motivation and various extrinsic motivation types exist along a continuum in terms of whether motivation is self-determined. When people are intrinsically motivated, they engage in activities they find interesting and enjoyable. On the other hand, when people are extrinsically motivated, they engage in activities to obtain extrinsic rewards or to avoid punishment. As Brown (2001) states, when students are intrinsically motivated, they are more poised for academic success. Some ER studies also have found that intrinsic motivation is a significant variable for ER success. For example, Takase (2007) investigated the motivation of 219 Japanese high school students participating in an ER program, and found that intrinsic motivation was the most influential variable for ER success. Similarly, Judge (2011) explored motivation in nine Japanese high school students who were enthusiastic readers in an ER program, and showed that students' love for literacy and desire for autonomy are key factors for ER success. These studies showed the importance of intrinsic motivation in ER. Therefore, the current study focuses on intrinsic motivation.

Moreover, Bandura (1977) and Zimmerman (2000) note that self-efficacy is influential in both initiating and continuing a behavior. Bandura defined self-efficacy as “the conviction that one can successfully execute the behavior required to produce the outcomes” (p.193). It indicates that people need to be confident in attaining the goal in order to sustain their efforts. In ER, students tend to have choice about what and how much to read, so self-efficacy is essential so they can continue reading without giving up. Rodrigo, Greenberg, and Segal (2014) strongly suggested that accomplishment and enjoyment can motivate learners to continue reading and developing a reading routine. Since accomplishment is acknowledged as the source of self-efficacy, their study implies that self-efficacy as well as accomplishment is a crucial factor that promotes ER. In addition, Yamashita (2004) investigated the reading attitudes of 59 Japanese university students, and demonstrated that two attitude variables (i.e., comfort and self-perception) were associated with students' ER performance. According to her study, self-perception can be interpreted as self-confidence, thus demonstrating that self-efficacy is essential for students' ER success.

To sum up, establishing goals with appropriate specificity, difficulty, and commitment seems to be effective in promoting students to read extensively. Furthermore, self-efficacy as well as intrinsic motivation plays a vital role for ER success.

Relationships Between Goal Setting, Intrinsic Motivation, and Self-Efficacy

As mentioned above, in ER instruction integrating goal setting, three goal attributes (i.e., specificity, difficulty, and commitment) and two motivational variables (i.e., intrinsic motivation and self-efficacy) are important for ER success. Mikami (2012) investigated the
effects of goal setting on intrinsic motivation in ER. The results showed that students’ intrinsic motivation increased through setting specific, challenging ER goals. This implies that goal setting influences intrinsic motivation. In addition, Mikami (2015) investigated the relationships between intrinsic motivation, self-efficacy, and performance in ER (reading amount). The results showed that intrinsic motivation was related to self-efficacy, and that self-efficacy was associated with performance. As a result, Mikami (2012) confirmed the relationship between goal setting and intrinsic motivation; Mikami (2015) further demonstrated that self-efficacy was associated with intrinsic motivation and performance. However, these studies fail to examine the relationships between the three goal attributes, intrinsic motivation, and self-efficacy. According to the goal-setting theory and Mikami (2012, 2015), it can be inferred that goal specificity, difficulty, and commitment are strongly linked with intrinsic motivation and self-efficacy. In order to clarify the relationships among the five variables, the current study used structural equation modeling (SEM) analyses. SEM allows researchers to hypothesize a model based on theories, empirical research, or both and to test how well the data fits the hypothesized model (Byrne, 2010). In the current study, a hypothesized model was constructed, as shown in Figure 1. In the hypothesized model, the three goal attributes were expected to be interrelated and affect the two motivational variables based on the literature on goal-setting theory.

![Figure 1. The hypothesized model to be tested.](image)

Although the SEM results show the relationships among the variables, the relationships in the above figure are verified holistically. As Yamamori, Isoda, Hiromori, and Oxford (2003) state, there may be some learners who have similar characteristics within the group. If there are learner groups with similar characteristics, the relationships among the variables for each learner group can be different from those through SEM as a whole. It is thus necessary to examine whether there are some learners with similar characteristics within the whole group. Some L2 studies pointed out that cluster analysis is useful in identifying learner groups with similar characteristics (e.g. Csizér & Dörnyei, 2005; Yamamori et al., 2003). In the current study, cluster analysis is used to reveal individual differences on the three goal attributes and
the two motivational variables.

**Purpose of the Study**

The current study aims to identify the relationships among goal setting, intrinsic motivation, and self-efficacy in ER. The following research questions were addressed in this study.

RQ1: How do goal specificity, goal difficulty, and goal commitment affect students’ intrinsic motivation and self-efficacy in ER?

RQ2: Are there any individual differences on the three goal attributes and the two motivational variables? If so, what differences can be observed?

**Method**

**Participants**

The participants were 130 first-year undergraduates who registered in a compulsory English class (92 males and 38 females). They were Business Administration and Economics majors and had at least six years of formal English education prior to entering this university. In each semester, students took two 90-minute English classes per week: an intensive reading class and a grammar class. The author taught the latter and introduced an ER program during the classes. Data was collected from five classes: two classes in 2012 and 2013, and one class in 2014. Each class consisted of 23 to 32 students.

**Materials**

All the variables in this study were measured through two six-point Likert scale questionnaires (i.e., goal scale and motivational scale). The students were asked to rate how much they agreed with each proposed item by selecting a number from 1 (strongly disagree) to 6 (strongly agree). The description of each scale and sample items are summarized below.

**Goal scale.** The scale was developed with reference to prior research (Locke & Latham, 1990; Mikami, 2012; Tremblay & Gardner, 1995) and consists of three subscales: goal specificity, difficulty, and commitment. Goal specificity refers to the extent students have specific goals in ER (e.g., “I have a clear idea of what I want to achieve in ER”). Goal difficulty refers to the extent students have challenging goals in ER (e.g., “I want to be able to read generally difficult books in ER”). Goal commitment refers to the extent students are attached to their goals in ER (e.g., “I plan what I have to do in ER to reach my goals”).

**Motivational scale.** The scale consists of two subscales: intrinsic motivation and self-efficacy. The items for intrinsic motivation were developed with reference to Hayashi (2009) and Hiromori (2006), while the items for self-efficacy were based on Matsunuma (2006). Intrinsic motivation refers to the extent students think ER is interesting and enjoyable (e.g., “I enjoy ER”). On the other hand, self-efficacy refers to the extent students have confidence in ER (e.g., “I think I do well in ER”).
**Procedure**

The ER program consisted of 12 twenty-minute sessions. Before the first ER session, students were given guidance regarding ER and goal setting. The questionnaires were administered after the last ER session. About 170 books, including Leveled Readers (e.g., Oxford Reading Tree, Step into Reading) and Graded Readers (e.g., Penguin Readers Easystarts, Oxford Bookworms Library Starters) were used for class. Easier books were chosen because the participants were considered novice readers. Students selected reading materials independently and read at their own pace.

Students were required to complete ER record sheets and self-evaluation sheets. On the ER record sheet, learners wrote down the book title, the number of words read, and a brief comment about the content. Before each session, the participants set their own goals, which should be the number of words they aimed to read in 20 minutes. After each session, they estimated the total words read and wrote a brief comment about their attainment in self-set goals, progress, or obstacles on the self-evaluation sheet. These goal-setting and self-evaluation process were included to encourage students to set their own goals, monitor their own progress, and gain feedback. The teacher collected and checked students’ sheets after each class. These sheets counted as a part of the students’ grades.

**Analysis**

All data were screened as follows. First, a single item with possible ceiling effects was excluded. Second, z-scores for kurtosis and skewness were calculated to ensure the score distribution in the questionnaire items is normal. The values for four items exceeded the absolute value of 2.58. Subsequently, two items were deleted but the other items, whose values ($z = 2.67, 2.90$) only slightly exceeded the criterion, were included for further analysis. Third, the Cronbach alpha coefficient was estimated for each subscale, and the reliability of goal difficulty was found to improve by deleting one of the items, which was negatively worded. Thus, this item seemed somewhat questionable and was deleted. Table 1 presents the number of the remaining items and the Cronbach alpha coefficient for each subscale (See Appendix for the final versions of goal and motivational questionnaires).

<table>
<thead>
<tr>
<th>Scales</th>
<th>Subscales</th>
<th>Number of items</th>
<th>$\alpha$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>Goal specificity</td>
<td>4</td>
<td>.76</td>
</tr>
<tr>
<td></td>
<td>Goal difficulty</td>
<td>3</td>
<td>.84</td>
</tr>
<tr>
<td></td>
<td>Goal commitment</td>
<td>5</td>
<td>.80</td>
</tr>
<tr>
<td>Motivation</td>
<td>Intrinsic motivation</td>
<td>3</td>
<td>.82</td>
</tr>
<tr>
<td></td>
<td>Self-efficacy</td>
<td>5</td>
<td>.81</td>
</tr>
</tbody>
</table>

Table 1

*Cronbach Alpha Coefficients of the Variables*

To attempt answering the research questions, SEM and cluster analysis were performed using AMOS 18.0. and PASW Statistics 18.0. SEM was first used to examine whether goal
specificity, goal difficulty, and goal commitment would directly affect students’ intrinsic motivation and self-efficacy. In order to test how well the collected data fits the hypothesized model, the literature recommends using various fit indices (Byrne 2006, 2010): the chi square/degrees of freedom ratio (CMIN/DF), the standardized root mean square residual (SRMR), Comparative Fit Index (CFI), and the root mean square error of approximation (RMSEA).

Second, cluster analysis was used to examine individual differences on the five variables for all participants. This analytical technique has been used to identify distinctive learner profiles and as Csizér and Dörnyei (2005) pointed out, “the aim of cluster analysis is to identify homogenous subgroups within a sample” (p.625). The Ward method with the squared Euclidean distance technique was also used because “it is considered particularly effective in revealing the underlying structure of the data” (Yamamori, Isoda, Hiromori, & Oxford, 2003, p.388).

Before assessing the hypothesized model, the construct validity of each scale should be tested during preliminary analyses (Byrne, 2010). Therefore, the construct validity of goal scale and of motivational scale respectively was tested using confirmatory factor analysis. For the model of goal scale, the error covariance between goal commitment items 4 and 5 was added because there appears to be a high degree of overlap in the content of these items. As a result, the goal scale model was modified; the modified model showed adequate fit indices (CMIN/DF = 2.02, SRMR = .07, CFI = .92, RMSEA [90%CI] = .09 [.06, .11]). The model of motivational scale also provided adequate fit indices (CMIN/DF = 2.30, SRMR = .06, CFI = .93, RMSEA [90%CI] = .10 [.06, .14]), though the RMSEA value was a little high. Thus, these goal and motivational scale models were specified throughout analyses as related to the hypothesized model.

Results

Descriptive Statistics and Correlation Coefficients

Scores for the variables were calculated by averaging the assembled items’ scores. Table 2 summarizes the variables’ means, standard deviations, and Pearson correlation coefficients. The mean scores of goal difficulty (M = 4.64) and intrinsic motivation (M = 4.01) were relatively high, while the mean score of self-efficacy (M = 2.92) was the lowest. There was a relatively strong correlation between goal specificity and goal commitment (r = .56). As for the relationships between goal setting and motivation, intrinsic motivation has moderate correlations with goal specificity (r = .49), goal difficulty (r = .48), and goal commitment (r = .50). On the other hand, no correlation was found between goal difficulty and self-efficacy (r = .17).
Table 2
Means, Standard Deviations and Correlations Between the Variables

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Goal specificity</td>
<td>3.82</td>
<td>.79</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>2. Goal difficulty</td>
<td>4.64</td>
<td>.90</td>
<td>.43**</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>3. Goal commitment</td>
<td>3.72</td>
<td>.78</td>
<td>.56**</td>
<td>.40**</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>4. Intrinsic motivation</td>
<td>4.01</td>
<td>.96</td>
<td>.49**</td>
<td>.48**</td>
<td>.50**</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>5. Self-efficacy</td>
<td>2.92</td>
<td>.70</td>
<td>.29**</td>
<td>.17*</td>
<td>.30**</td>
<td>.43**</td>
<td>–</td>
</tr>
</tbody>
</table>

Note. N = 130. *p < .05, **p < .01.

Structural Equation Modeling

SEM analyses were performed using maximum likelihood estimation. Although the hypothesized model showed acceptable fit indices, there were three non-significant paths from goal specificity to intrinsic motivation, from goal specificity to self-efficacy, and from goal difficulty to self-efficacy. These paths were therefore removed and the model was re-estimated. The final model is in Figure 2 with standardized path coefficients; all the path coefficients are significant at the .01 level. The fit indices also indicate an adequate fit of the model to the data (CMIN/DF = 1.67, SRMR = .07, CFI = .90, RMSEA [90%CI] = .07 [.06, .09]). The results showed that goal difficulty and commitment had a direct effect on intrinsic motivation and explained 52% of the variance associated with intrinsic motivation. Goal commitment also had a direct effect on self-efficacy and accounted for 20% of the variance associated with self-efficacy.

Figure 2. Structural equation model with standardized estimates (all the path coefficients are significant at p < .01).
Cluster Analysis

The variables were transformed into z-scores and submitted for cluster analysis. As mentioned earlier, the Ward method with the squared Euclidean distance technique was used for the analysis. Based on the dendrogram (a visual representation of the clustering process) and the resulting clusters' characteristics, a four-cluster solution was selected. To examine the grouping’s validity, ANOVAs were performed. The results indicated significant differences in the cluster groups on goal specificity, $F(3, 126) = 25.19, p < .00, \eta^2 = .38$; goal difficulty, $F(3, 126) = 40.88, p < .00, \eta^2 = .49$; goal commitment, $F(3, 126) = 36.60, p < .00, \eta^2 = .47$; intrinsic motivation, $F(3, 126) = 86.55, p < .00, \eta^2 = .67$; and self-efficacy, $F(3, 126) = 34.41, p < .00, \eta^2 = .45$. Therefore, individuals in the four clusters were different in terms of the five variables. In addition, post hoc tests using Tukey’s multiple comparison technique were utilized for the four clusters. Table 3 summarizes each group’s variable means and standard deviations and the post hoc test results. Furthermore, Figure 3 graphically shows the cluster analysis results.

A description of each group is as follows. The students in Cluster 1 reported relatively high goal difficulty but the lowest self-efficacy. The students in Cluster 2 had the highest means on all the variables. Compared to the other clusters, the students in Cluster 3 reported relatively low goal difficulty and relatively high self-efficacy. The students in Cluster 4 had low means on all the variables.

Table 3

<table>
<thead>
<tr>
<th>Description</th>
<th>Cluster 1 (n = 17)</th>
<th>Cluster 2 (n = 51)</th>
<th>Cluster 3 (n = 43)</th>
<th>Cluster 4 (n = 19)</th>
<th>Post hoc tests (Clusters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal specificity</td>
<td>3.82 (0.71)</td>
<td>4.31 (0.67)</td>
<td>3.65 (0.56)</td>
<td>2.89 (0.59)</td>
<td>2 &gt; 1 = 3 &gt; 4</td>
</tr>
<tr>
<td>Goal difficulty</td>
<td>4.84 (0.52)</td>
<td>5.35 (0.59)</td>
<td>4.00 (0.67)</td>
<td>4.00 (0.85)</td>
<td>2 &gt; 1 &gt; 3 = 4</td>
</tr>
<tr>
<td>Goal commitment</td>
<td>3.71 (0.57)</td>
<td>4.29 (0.66)</td>
<td>3.48 (0.45)</td>
<td>2.76 (0.61)</td>
<td>2 &gt; 1 = 3 &gt; 4</td>
</tr>
<tr>
<td>Intrinsic motivation</td>
<td>3.59 (0.53)</td>
<td>4.89 (0.55)</td>
<td>3.71 (0.50)</td>
<td>2.67 (0.69)</td>
<td>2 &gt; 3 &gt; 1 &gt; 4</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>1.99 (0.42)</td>
<td>3.29 (0.64)</td>
<td>3.08 (0.38)</td>
<td>2.40 (0.52)</td>
<td>2 &gt; 3 &gt; 4 = 1</td>
</tr>
</tbody>
</table>

Note. Mean (Standard Deviation). Each difference in post hoc tests was significant at $p < .05$.

Figure 3. Cluster profiles of four groups.
Discussion
Relationships Between Goal Attributes, Intrinsic Motivation, and Self-Efficacy (RQ1)

This study investigated the relationships among three goal attributes (i.e., goal specificity, difficulty, and commitment), intrinsic motivation, and self-efficacy in ER. The SEM results showed that goal difficulty and commitment directly influenced intrinsic motivation. In addition, goal commitment directly influenced self-efficacy in the SEM analysis. These results show that only goal commitment had direct effects on both intrinsic motivation and self-efficacy. It indicates that goal commitment might be the most important factor among the three goal attributes. First, students who were highly committed to their goals were more intrinsically motivated. In each ER session, students were supposed to set their own goals and to assess their goal attainment. If students were highly committed to their goals, they were more likely to engage in achieving their goals through these processes. As a result, they enjoyed reading English itself or reading the content of English books and were more intrinsically motivated. Second, students with high commitment might have had more opportunities to achieve their goals because they had ER activities for 12 weeks and could repeatedly attempt to achieve their goals. Hence, they felt a sense of achievement and had high levels of self-efficacy. Therefore, it is considered that high commitment toward goals caused high levels of intrinsic motivation and self-efficacy in ER.

It is also noteworthy that goal difficulty had a direct impact on intrinsic motivation in the SEM analysis. The results show that difficult goals generated higher levels of intrinsic motivation. There are two explanations for this finding. The first reason is similar to the reason why goal commitment influenced intrinsic motivation. In other words, if students set difficult goals and engaged in achieving the goals, they enjoyed reading English itself or reading the content of English books. Furthermore, when students set difficult ER goals, they usually want to challenge themselves to read larger amounts or more advanced books. It can be inferred that students with difficult goals in this study had “intrinsic motivation toward accomplishments” (p.1005), as noted by Vallerand et al. (1992). This is because they pointed out that people who experience pleasure and satisfaction are more likely to be intrinsically motivated when they attempt to accomplish things. Thus, it is inferred that students were intrinsically motivated when they attempted to attain the challenges that difficult goals presented. On the other hand, goal difficulty had no direct effect on self-efficacy in the final model. This may be because students cannot always attain difficult goals. Even though they repeatedly attempted to achieve their goals in this study, students might have failed to attain their goals. They were consequently unable to enhance self-efficacy from successful goal attainment. Therefore, goal difficulty did not influence self-efficacy directly. In order to investigate the more intricate relationships between goal difficulty and self-efficacy, we need to examine them from the perspective of individual differences, which is done in the following section.

As for goal specificity, the two paths from goal specificity to intrinsic motivation and to self-efficacy in the hypothesized model were not statistically significant and were deleted from the final model. It may be because goal specificity indirectly influences intrinsic motivation and self-efficacy. The correlation analysis results in Table 2 demonstrate the indirect effects from
goal specificity to both intrinsic motivation and self-efficacy. More specifically, goal specificity had moderate or weak correlations with intrinsic motivation \((r = .49)\) and self-efficacy \((r = .29)\), but it had strong correlation with goal commitment \((r = .56)\). These correlations imply that when students set more specific goals, they were more likely to be more committed, which was directly linked with intrinsic motivation and self-efficacy. Goal specificity may therefore indirectly influence intrinsic motivation and self-efficacy through goal commitment.

To sum up, it is important to note that goal commitment is more significant than the other two goal attributes in enhancing students’ intrinsic motivation and self-efficacy. This finding would suggest that teachers should consider how they can help students commit themselves to their goals. For example, teachers can provide opportunities for students to make plans for attaining their goals or to evaluate their progress toward the goals. If students can be attached to their goals through these activities, they will become highly committed to their goals. Moreover, the SEM analysis shows that goal difficulty contributes to intrinsic motivation. It implies that teachers should encourage students to set difficult goals so that they can be more intrinsically motivated. However, teachers need to be careful not to lower students’ self-efficacy. The relationships between goal difficulty and self-efficacy will be discussed in the following section. Lastly, goal specificity seems to have indirect effects on intrinsic motivation and self-efficacy through goal commitment. It implies that teachers should consider goal specificity in order to promote students’ commitment toward goals.

### Identifying Learner Groups With Similar Characteristics on the Goal and Motivational Variables (RQ2)

The cluster analysis showed individual differences on the studied variables, and four cluster groups were identified. As seen in Figure 3, the students in Cluster 2 reported having the most specific and difficult goals and were most committed to them among all the clusters. They were also most intrinsically motivated and had the highest mean self-efficacy. These students could be considered more successful since they set appropriate goals to increase their motivation. On the contrary, the students in Cluster 4 reported having the least specific and difficult goals and were least committed to them among all the clusters. They were also least intrinsically motivated and had a relatively lower mean self-efficacy. Thus, they appeared to be less successful in setting ER goals. The students in Cluster 3 had the moderate means on all the variables. It can be said that these three clusters had a similar tendency on the relationships among the variables. In other words, as the mean scores of the three goal attributes increased, those of the two motivational variables also tended to increase.

The important point to note is that the mean goal difficulty for Cluster 1 was higher than those for Cluster 3 and Cluster 4, while the mean self-efficacy for Cluster 1 was the lowest among all the clusters. When comparing Cluster 1 with Cluster 3, the post hoc comparison differences can only be seen in two variables. Although these groups were similar on goal specificity, goal commitment, and intrinsic motivation, they were considerably different in terms of goal difficulty and self-efficacy. The students in Cluster 1 reported high goal difficulty and low self-efficacy, whereas the students in Cluster 3 reported low goal difficulty and high self-efficacy. This finding indicates that the students in Cluster 1 set challenging goals that were beyond their abilities, which lowered their self-efficacy. On the other hand, the students...
in Cluster 3 set less challenging goals and increased their self-efficacy. This is consistent with the goal-setting theory, as students with overly difficult goals tend to be dissatisfied with their own performance and lower their self-efficacy. The reason students set overly challenging goals is that they may have had difficulties in judging which book was suited for their proficiencies and how much they could read as novice readers. In addition, Day (2013) states that as "everyone has a desire to improve as quickly as possible, some learners might want to try to challenge themselves too much, too soon" (p. 17). Accordingly, some students may prefer to choose more advanced books or read increasingly more. However, if they set goals that are too difficult, students may fail to achieve them and lose confidence in continuing to read. Thus, it is assumed that the students in Cluster 1 tended to set too difficult goals and hence weaken their self-efficacy. This may explain why there was no direct effect from goal difficulty to self-efficacy in the SEM analysis.

To sum up, although the students participated in the same ER program, they perceived their goals, intrinsic motivation, and self-efficacy differently. Hence, it is important to consider individual differences in order to support students' learning effectively. Some students in this study did not appear to be successful in setting ER goals. They might not have understood why the teacher made them set their own ER goals. As a result, they were not engaged in goal setting and did not make use of it. Thus, for this group, teachers should more precisely explain the importance of goal setting and how students can set adequate goals during ER. On the other hand, other students set goals that were too high and weakened their self-efficacy. This indicates that it was hard for some students to set moderately difficult goals for themselves, particularly at the early stages of ER. Therefore, teachers need to help these students set moderately challenging goals, such as only aiming to read slightly more words than they currently do.

**Conclusion**

This study demonstrated that among the three goal attributes (i.e., goal specificity, difficulty, and commitment), goal commitment appears to play the most important role in enhancing both students' intrinsic motivation and self-efficacy. In addition, goal difficulty tends to influence intrinsic motivation, and goal specificity may indirectly influence intrinsic motivation and self-efficacy. Moreover, the analysis from the perspective of individual differences revealed that students perceived their goals, intrinsic motivation, and self-efficacy in different ways. Lastly, establishing too difficult goals may lower students' self-efficacy.

There are several limitations in this study. First, this study had a relatively small number of participants. Follow-up studies with more students are therefore necessary. Second, the selected population consisted of relatively low proficiency students, which may lower their self-efficacy, as previous studies have shown that there is a positive relationship between L2 reading self-efficacy and L2 reading proficiency (Kondo-Brown, 2006; Mills, Pajares, & Herron, 2006). Thus, studies with more proficient learners may find different results and relationships. Third, the ER program in this study was only conducted for 12 weeks. Future longitudinal studies could yield insight into the relationships between goal setting and motivation. Fourth, it would be valuable to investigate goal setting's effects on learners' performance (e.g., reading amount and proficiency) as well as perceived motivation. Fifth, this
study has employed only quantitative approach. A qualitative approach, which can examine closely how goal setting influences learners’ motivation in ER, may also be fruitful in future studies.

Despite these limitations, this study maintains that it is necessary to consider students’ goal attributes (e.g., goal specificity, difficulty, and commitment) when enhancing their intrinsic motivation and self-efficacy in ER. Thus, it may be possible that students’ intrinsic motivation and self-efficacy in ER are enhanced by allowing students to set appropriate goals and to commit themselves to achieving their goals. One of the ten principles for successful ER programs insists that learners should read as much as possible (Day & Bamford, 2002). However, it may not be sufficient to simply maintain and enhance learners’ intrinsic motivation and self-efficacy. In other words, goal setting should be proactively integrated in ER. Furthermore, it is essential to consider individual differences to support all students in setting ER goals.

**Notes**

1. The participants in the current study include the 107 participants in Mikami (2015), but the data on three goal attributes were collected only in the current study.

2. More specifically, the items both measure the same variable (goal commitment) but are negatively worded. Item 4 is “it is sufficient for me to only read the books prepared in ER,” while item 5 is “I am not concerned with my progress relative to my goals in ER.”

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Appendix
The Final Versions of Goal and Motivational Questionnaires (Originally in Japanese)

Goal questionnaire
Goal specificity
1. I have a clear idea of what I want to achieve in ER.
2. I have a clear idea of the level of English I want to reach in ER.
3. I know what is most important among the things I want to reach in ER.
4. I have a vague idea of what I want to achieve in ER. (R)
Goal difficulty
1. I want to be able to read generally difficult books in ER.
2. I want to try moderately challenging books in ER to reach my goals.
3. I want to try to read as much as possible to reach my goals.
Goal commitment
1. I think about what I have to do in ER to reach my goals.
2. I plan what I have to do in ER to reach my goals.
3. I evaluate my progress relative to my goals in ER.
4. It is sufficient for me to only read the books prepared in ER. (R)
5. I am not concerned with my progress relative to my goals in ER. (R)

Motivational questionnaire
Intrinsic motivation
1. I enjoy ER.
2. I feel excited when I see English books.
3. I experience pleasure when I find out new things in ER.
Self-efficacy
1. I think I can get a good grade in ER.
2. I think my reading ability is good.
3. I know a lot about English books.
4. I think I do well in ER.
5. I know how to read extensively.

Note. (R) indicates negatively worded items, and the scoring of these items was reversed.