English language learners' self-efficacy profiles and relationship with self-regulated learning strategies

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A B S T R A C T

This study used latent profile analysis (LPA) to examine different patterns of English as a Second Language (ESL) learners’ self-efficacy beliefs for learning English. The Questionnaire of English Self-Efficacy was completed by undergraduate students in Korea. The LPA results revealed three groups representing low, medium, and high self-efficacy profiles. The high and medium self-efficacy profiles represent students who spent more years of studying English and are disproportionately female compared to the low self-efficacy profile. The low self-efficacy profile was significantly different from the medium and high self-efficacy profiles with respect to its self-regulated learning strategies and language interpretation strategies. The ESL learners’ self-efficacy profiles identified in this study can be used to tailor instructions appropriately.

1. Introduction

Korea has been continuously ranked as one of the top countries that send students to study in U.S. universities (Institute of International Education, 2014), but there is a mismatch between what is taught in Korea and what is actually used in the United States with respect to English language skills (Kim, 2004; Seth, 2002). In Korea, most students learn English through a grammar-translation method, which focuses more on the grammar and syntax than on the communicative competence, and the instruction is examination-oriented (Kim, 2004). In the United States, however, students need to use all their English language skills in listening, speaking, reading, and writing to communicate in both social and academic settings. Many Korean students who scored high on standardized English language tests often struggle with listening and speaking when studying in U.S. universities. Standardized test scores alone do not reflect a student’s English language skills accurately. There is a need for a more comprehensive approach in serving English language learners.

In recent years, a large number of studies have been performed on the role of non-cognitive skills such as self-efficacy and self-regulation in various academic settings. Research has shown that self-efficacy and self-regulation play an important role in student learning and academic achievement (Pajares & Graham, 1999; Zimmerman & Martinez-Pons, 1988). However, research on self-efficacy and self-regulation in the context of second/foreign language acquisition is still limited. Understanding Korean students’ self-efficacy beliefs and their use of self-regulated learning (SRL) strategies while learning English will help researchers and educators in U.S. institutions better serve international students not only from Asian countries who share a similar emphasis on standardized examinations, but also from other countries. This understanding will also contribute to the field by confirming the relationships between the variables of self-efficacy and SRL strategies.

The purpose of this study was two-fold: (a) to identify subgroups of students who had similar profiles for their self-efficacy beliefs for learning English; and (b) to examine the relationship between the self-efficacy beliefs of these students and their use of SRL strategies. We will present this study with a review of literature on self-efficacy beliefs, SRL strategies, relationships between self-efficacy beliefs and SRL strategies, and measurement issues with self-efficacy before reporting our study design and results.

2. Literature review

2.1. Self-efficacy

Self-efficacy is defined as a person’s judgment of his/her capabilities to complete a specific task with the skills he/she possesses (Bandura, 1977) and is usually described as being task and context specific (Pintrich & Schunk, 1996). Highly efficacious students usually meet challenges and are more persistent while lowly efficacious students are more likely to avoid difficult tasks (Stevens, Olivarez, Lan, & Tallent-Runnels, 2004). Previous studies indicated that self-efficacy is predictive of students’ academic achievement (Pajares & Graham, 1999; Shih & Alexander, 2000). A path analysis revealed that self-
efficacy mediated the relationships between homework quality and academic grade point average (GPA) of high school girls (Zimmerman & Kitsantas, 2005). The study also found that perceived responsibility is highly correlated with self-efficacy beliefs and is also mediating the path between homework quality and academic GPA. A recent study with college students noted the mediating role of self-regulation for the relationship between self-efficacy and academic GPA (Komarrajju & Nadler, 2013). Efficacious students tended to take challenging tasks and to pursue mastery as well as performance goals whereas the less efficacious ones were associated with the beliefs of innate intelligence.

Students with high levels of self-efficacy beliefs take more responsibility of their own learning process and view themselves as proactive learners (Zimmerman & Kitsantas, 2005). Working with Botswana students, Magogwe and Oliver (2007) noted that an increase in self-efficacy beliefs was associated with an increase in the use of language learning strategies and an increase in their English proficiency. These same positive relationships were found with Norwegian undergraduate students (Diseth, 2011). With a nationally representative sample of Singapore secondary students studying English language, Liem, Lau, and Nie (2008) noted that self-efficacy had direct positive effects on the performance-approach goal but negative effects on the performance-avoidance goal. These authors also noted an indirect effect of self-efficacy beliefs on the English language test scores. Thus, enhancing English language learners’ self-efficacy beliefs is crucial to their language learning process and needs to be included in classroom teaching approaches (Wang, Schwab, Fenn, & Chang, 2013). This claim is supported by a study with college students who were provided instructions to promote self-efficacy beliefs. After the instruction, these students were observed to be more optimistic toward writing tasks, more persistent with difficult writing tasks, more committed to achieving challenging goals, and more likely to work harder to avoid failure (Lee, 2002).

2.2. Self-regulated learning strategies

Self-regulation consists of three phases: forethought, performance, and self-reflection (Zimmerman, 2000). Self-regulated students constantly set goals, apply strategies to achieve the goals, and self-evaluate the performance for further improvements or a more challenging task. Self-regulated students also implement multiple motivational strategies, including getting physically and mentally ready for an assignment, collecting relevant information, integrating various theories, monitoring comprehension, and assessing his/her own progress to achieve the goal (Boekaerts & Cascallar, 2006). A series of studies conducted by Zimmerman and his colleagues found consistent positive relationship between the use of SRL strategies and student performance on standardized tests (Zimmerman & Martinez-Pons, 1986, 1988).

In the field of language acquisition, four categories of SRL strategies were reported to be helpful in improving student English writing skills: (a) self-evaluation; (b) organizing and transforming; (c) seeking information; and (d) seeking social assistance (Lee, 2002). As for seeking social assistance, Mackey, Kanganas, and Oliver (2007) explained that students were more likely to perform better when they received positive feedback that they could use. The impact of positive and constructive feedback on the students’ achievement and performance in the classroom was also discussed in a study with adult English language learners in New Zealand (Bitchener, Young, & Cameron, 2005). With these adult language learners, only the combination of explicit written feedback and student–teacher conferences was found to be helpful to improve the students’ English writing proficiency. This finding reinforced the importance of feedback from instructors on the development of students’ self-efficacy beliefs and academic achievement (Oettingen, 1995). Researchers in language learning strategies also found a positive link between the use of strategies and student language learning outcomes (Chen, 2011; Chien, 2012; Zhang, Gu, & Hu, 2008). For example, students who used the SRL strategy of goal-setting and planning were mostly higher achievers in language learning (Chamot & El-Dinary, 1999; Roca de Larios, Manchon, Murphy, & Mann, 2008).

2.3. Relationships between self-efficacy beliefs and SRL strategies

Self-efficacy plays an important role in the process of self-regulation (Zimmerman, 2000). Students’ self-efficacy beliefs influence the choices they make and the effort they put in their performance (Boekaerts & Cascallar, 2006). This argument was supported by empirical studies which showed a positive link between self-efficacy beliefs and the use of SRL strategies (Diseth, 2011; Magogwe & Oliver, 2007; Yusuf, 2011; Zimmerman & Martinez-Pons, 1990). Previous studies also indicated that students with low self-efficacy beliefs were more likely to quit when they met difficulties and were more likely to procrastinate when working on assignments (Schunk, 1990). Self-efficacy was found to have direct positive effects on the performance-approach goal but negative effects on the performance-avoidance goal (Liem et al., 2008).

In a study of the English writing process of Malaysian college engineer-major students, Lee (2002) noted that students responded more positively to negative feedback after the implementation of SRL strategies, which is a sign of improved self-efficacy beliefs to write a better essay. A similar study was conducted with elementary school students in Singapore where the SRL strategies of planning, revising, self-evaluating, and seeking social assistance were found significantly related to the English language proficiency for students of all levels of English proficiency (Bai, Hu, & Gu, 2014). Bai and his colleagues also noted differences in the use of SRL strategies as well as English writing strategies. For example, students in the low English proficiency group were found to use more SRL strategies such as seeking social assistance and emotional control. However, students in the high English proficiency group were found to use more revising, self-evaluating, and information-seeking strategies (Bai et al., 2014). In a similar study with elementary school students, a stronger sense of reading-related self-efficacy was reported in the treatment groups where students were taught reading strategies with a great emphasis on goal setting and self-evaluation processes (Schnemann, Sporer, & Brunstein, 2013).

Significant relationships between self-efficacy beliefs and language learning strategies were found in elementary, secondary, and college students (Magogwe & Oliver, 2007). Both self-efficacy and learning strategies served as mediators between high school grade point average and final examination grades for college students in a Norwegian university (Diseth, 2011). In another study with college students, self-efficacy beliefs and SRL strategies were noted to be significantly related to each other with self-efficacy having a direct effect on academic performance and SRL strategies having a moderating effect on this relationship (Yusuf, 2011).

2.4. Measurement issues with self-efficacy

Self-efficacy is critical when students are self-evaluating the tasks and setting their academic goals in the forethought phase; however, the measurement of self-efficacy has been a challenging task due to the misinterpretation and confusion with similar tasks such as self-concept, self-esteem, self-confidence, and locus of control. Bandura (1997) claimed that self-efficacy and locus of control are different constructs and that locus of control is not empirically related to either self-efficacy or behavior. Another issue with the measurement of self-efficacy is item wording. Bandura (1986) suggested the use of “can” instead of “will” or “confident” to indicate a person’s subjective convictions to successfully learn or complete a specific task given the skills he/she processes instead of intention.

In response to the need for valid and reliable tools to assess ESL learners’ self-efficacy beliefs and to follow the recommendations of Bandura (1986), Questionnaire of English Self-Efficacy (QSEI) was developed with 32 items (Wang, Schwab, Fenn, & Chang, 2013). Each item asks students to make judgments about their capabilities to
accomplish certain tasks using English in the areas of listening, speaking, reading, and writing. The QSE is has been adapted to fit into the cultural context of language learning in China, Germany, Korea, and the United States. Recent studies on psychometric properties of the QSE provide evidence supporting the use of the QSE as a valid measure across different cultural contexts (Wang, Kim, Bai, & Hu, 2014; Wang, Schwab, Fenn, & Chang, 2013). These studies were based on variable-centered approaches such as factor analysis, which seek to describe the links between a given set of variables. Although these methods provide valuable information about the psychometric properties of the scale, they do not capture unobserved heterogeneity that may exist in the data. Different from the variable-centered approaches, person-centered approaches to data analysis consider unobserved heterogeneity within subsets of populations. Latent class analysis, a person-centered approach, can be used to identify latent groups in the population based on a set of categorical observed variables. Latent profile analysis, a variant of latent class analysis, allows the use of continuous observed variables. LCA has a number of advantages over ad hoc classification based on a numerical criterion and traditional cluster analysis methods. An important advantage of using a LCA is that it is a probability- and model-based approach that uses group membership probabilities estimated by maximum likelihood methods to classify cases into latent classes (Magidson & Vermunt, 2002). In contrast, traditional cluster analysis techniques use an arbitrary criterion and traditional clustering methods which is not possible with traditional cluster techniques. A simulation study conducted by Magidson and Vermunt (2002) demonstrated that in the case of continuous variables, LCA substantially outperformed the traditional K-means clustering techniques. Another advantage is that LCA can be used for data that violates the traditional modeling assumptions such as normality, linear relationship between variables, and homogeneity of variance.

There are different levels and dimensions of perceived self-efficacy identified in the literature (Bandura, 1982; Bandura, Reese, & Adams, 1982). It is therefore reasonable to hypothesize that there exist a number of different underlying latent dimensions to ESL learners’ self-efficacy beliefs, and that discrete self-efficacy profiles would be identifiable. To the best of our knowledge, however, there has been no research that directly examined the existence of unobserved heterogeneity in ESL learners’ self-efficacy beliefs using latent profile analysis. The research questions that guided this study are:

1. Are there underlying latent profiles of English language learners’ self-efficacy beliefs?
2. Are there any significant differences in the use of SRL strategies between the groups classified by their latent profiles of self-efficacy beliefs?

3. Methods

3.1. Participants

Convenience sampling was used to recruit participants, and the questionnaires were administered in the classrooms of a major university in Korea. Only the classrooms of “English-mediated courses” were selected, where all instruction and course materials are presented in English. Students at this university are required to complete at least five such courses as part of their graduation requirements. All English-mediated courses selected to take part in this research were taught by native Korean instructors who were fluent in English. Participants were 167 undergraduate students; 91 (55%) were females, 72 (43%) males, and 4 (2%) unknown. Their age ranged from 21 to 36 years ($M = 24.50$, $SD = 1.97$). The year of studying English ranged from 6 to 23 years ($M = 12.16$, $SD = 3.37$).

3.2. Instrument

The Questionnaire of English Self-Efficacy (QSE) scale was used (see the items in Appendix A). The scale consists of 32 items and is measured on a 7-point rating scale from 1 (“I cannot do it at all”) to 7 (“I can do it very well”). It was designed to measure the following four areas: (a) self-efficacy for listening (8 items); (b) self-efficacy for speaking (8 items); (c) self-efficacy for reading (8 items); and (d) self-efficacy for writing (8 items).

The Questionnaire of English Self-regulated Learning Strategies (QESRLS) includes 68 items (See Wang, Hu, Zhang, Chang, & Xu, 2012 for the items). Fifty items were grouped into the following 10 categories: (a) self-evaluation (4 items); (b) organization and transformation (16 items); (c) rehearsal and memorization (6 items); (d) seeking social assistance (2 items); (e) persistence when faced with challenges (4 items); (f) seeking opportunities to practice English (8 items); (g) keeping records and monitoring (2 items); (h) self-consequences (2 items); (i) goal setting and planning (4 items); and (j) review of records (2 items). Another category was named as “interpretation strategies” (14 items) because these items were language learning strategies not SRL strategies. Four items about reading behavior that were not designed to measure SRL strategies were removed from the data analyses.

Both questionnaires were translated into Korean using an iterative process of repeated independent translation and blind back-translation (Brilin, 1970). The minor discrepancies in choice of words and expressions were adjusted to ensure that the Korean items convey the original meaning. It took 15–20 min to complete the two questionnaires. High internal consistency reliability as indicated by Cronbach’s alpha ($\alpha = .97$ for QSE and $\alpha = .94$ for QESRLS) with Chinese college students ($n = 500$) was reported (Wang et al., 2012). Results of the single-group and multigroup CFA support factorial validity and factorial invariance of the higher order four-factor model of QSE identified in the samples of Chinese and German college students (Wang, Schwab, Fenn, & Chang, 2013). Data from Chinese and Korean college students were analyzed using item response theory to examine the psychometric properties of QSE (Wang, Kim, Bong, & Ahn, 2013; Wang et al., 2014). Results indicated that the rating scale of QSE functioned effectively and the item hierarchy was consistent with the expected item order, supporting the construct validity of QSE. For the current study, high internal consistency reliability as indicated by Cronbach’s alpha was found for both QSE ($\alpha = .99$) and QESRLS ($\alpha = .95$).

As a measure of English proficiency, the participating students were asked to report their scores on the Test of English for International Communication (TOEIC). TOEIC was developed by the Educational Testing Service (ETS) and designed to evaluate the ability of non-native English speaking learners to communicate and to use the language in daily life and in business situations. The test consists of two sections: listening comprehension (100 items) and reading comprehension (100 items). The total TOEIC score is calculated by adding up the scores in these two sections and can range between 10 and 990 points. Woodford (1982) reported excellent validity and reliability coefficients of this test. The validity coefficients for listening comprehension and reading comprehension were .90 and .79, respectively. In addition, the reliability coefficients for listening comprehension and reading comprehension were .92 and .93, respectively. Many Korean companies require job applicants to submit their TOEIC scores as evidence of their English proficiency. According to one source (Schwartzman, 2011, Dec. 24), Korean students believe that their TOEIC score is the most important qualification for their future employment. Many Korean universities also mandate that students achieve a minimum passing score on TOEIC before graduation. We chose TOEIC scores as a measure of English proficiency because a majority ($79\%$, $n = 132$) of the participating students were seniors at the time of this research and hence were presumed to have taken this test to become eligible for the upcoming graduation or employment.
Contrary to our expectation, we found that only 54% of the participants \((n = 90)\) reported their TOEIC test scores. Because it was critical that some form of proficiency in English as a foreign language be included in this study, we analyzed the available TOEIC scores to determine whether the English proficiency scores of the Korean college students differed as a function of their English efficacy beliefs.

3.3. Data analysis

A latent profile analysis (LPA) was used to identify the optimal number of latent profiles underlying the QESE data. Analyses were conducted using Mplus version 7.0 (Muthén & Muthén, 1998–2012). Analysis compared \(k-1\) and \(k\)-profile models until the successive model fit no longer showed better fit to the data. Statistical model fit was evaluated using multiple fit indices including the Bayesian Information Criteria (BIC), Adjusted BIC (ABIC), the Lo–Mendell–Rubin Likelihood Ratio Test (LMR-LRT), and the Bootstrap Likelihood Ratio Test (BLRT). Smaller values of the BIC and ABIC indicate a better fit. Significant LMR-LRT and BLRT results indicate a better fit. Entropy, a measure of classification uncertainty, was also used to determine the fit of the model. The entropy ranges from 0 to 1, with higher values indicating good classification of participants.

Analysis of variance (ANOVA) was used to compare subgroups (latent profiles) derived from LPA on its self-efficacy and English proficiency. ANOVA was also used to compare the subgroups on its self-reported SRL strategies to see if students with higher levels of self-efficacy beliefs also reported more frequent use of SRL strategies. The mean score of all 32 items from the QESE was used to represent each participant. The BLRT results indicate a better fit than the 2-probe model solution. The BLRT was chosen over the LMR-LRT solution provided a better fit to the data. The average years of studying English was highest for Pro-1, followed by Pro-2, and Pro-3. Students in Pro-1 had higher scores in all items compared to Pro-2 and Pro-3. No significant group differences were found across three self-efficacy profiles.

4. Results

4.1. Self-efficacy profiles

Table 1 presents the model fit information for the LPA models addressing the first research question. A 3-profile solution fitted the dataset and was interpretable. All models under the study exhibited high entropy values, indicating a good classification of students. The 3-profile model had lower BIC and ABIC values relative to the 2-profile model. The LMR-LRT was non-significant, indicating that the 2-profile model is sufficient. The BLRT, on the other hand, was significant, suggesting that the 3-profile solution provided a better fit to the data than the 2-profile solution. The BLRT was chosen over the LMR-LRT because of its consistency in detecting the correct number of classes within a population (Nylund, Asparouhov, & Muthén, 2007). The BIC, ABIC, BLRT results and substantive consideration all point toward the 3-profile model.

Of the 167 students included in the analysis, 57 (34%) were members of Profile 1, 58 (35%) were members of Profile 2, and 52 (31%) were members of Profile 3. The QESE total mean scores for three self-efficacy profiles are provided in Table 2. The total mean score was the highest for Profile 3, followed by Profile 2, and Profile 1. Students in Profile 1 had lower scores in all 32 items compared to Profile 2 and Profile 3. Students in Profile 3 had higher scores in all items. These profiles were labeled, “low self-efficacy profile” (Profile 1), “medium self-efficacy profile” (Profile 2), and “high self-efficacy profile” (Profile 3). ANOVA results revealed statistically significant group differences classified by LPA with respect to the self-efficacy mean scores, \(F(2, 164) = 153.86, p < .001\). Post-hoc multiple comparisons with Tukey's HSD adjustment confirmed that each of the three groups was statistically significantly different from each other (all \(p < .001\)). As shown in Table 2, there were more females than males in the high and medium self-efficacy profiles, and there were more males than females in the low self-efficacy profile. The average years of studying English was the highest for the high self-efficacy profile, followed by the medium self-efficacy profile and the low self-efficacy profile. The average age was similar across three self-efficacy profiles.

Additional analysis was conducted on the available TOEIC scores \((n = 90)\). As shown in Table 2, the mean TOEIC score was the highest for Profile 3, followed by Profile 2, and Profile 1. ANOVA results showed statistically significant group differences classified by LPA with respect to the TOEIC scores, \(F(2, 164) = 50.17, p < .001\), partial \(\eta^2 = .20\). Post-hoc multiple comparisons with Tukey's HSD adjustment confirmed that each of the three groups was statistically significantly different from each other (all \(p < .001\)).

4.2. Differences in SRL

Descriptive statistics of participants' use of SRL strategies and language interpretation strategies across the self-efficacy profiles are reported in Table 3. To address the second research question, a one-way ANOVA was conducted. Results revealed statistically significant group differences across three profiles with respect to the use of SRL strategies, \(F(2, 164) = 20.33, p < .001\), partial \(\eta^2 = .20\). Post-hoc multiple comparisons with Tukey's HSD adjustment suggested statistically significantly differences between the low and medium self-efficacy profiles as well as between the low and high self-efficacy profiles (all \(p < .001\)). However, the difference between the medium and high self-efficacy profiles was not statistically significantly different from zero (\(p = .15\)). ANOVA also revealed statistically significant group differences across three profiles with respect to the use of language interpretation strategies.
5. Discussion

It is important to recognize the heterogeneity of English language learners in terms of their self-efficacy beliefs. Self-efficacy is predictive of academic performance (Bandura, 1997) and provides “the foundation for human motivation, well-being, and personal accomplishment” (Paarajis, 2009, p. 113). If stable and interpretable subgroups can be identified, differential instructional programs can be designed to reflect the best instructional practice for teaching English language learners. Thus, identifying subgroups has theoretical as well as practical implications. The results of this study revealed three self-efficacy profiles, representing low, medium, and high self-efficacy. The high and medium self-efficacy profiles represent students who spent more years of studying English and are disproportionately female compared to the low self-efficacy profile. The greater number of female students in the medium and high English self-efficacy profiles is consistent with previous findings of gender differences in the areas of language arts. Girls typically report stronger self-efficacy in language arts such as writing than boys do (Pajares & Valantin, 1997, 2001). Previous studies in the language acquisition field also indicated that female students were more motivated to study a foreign language than male students (Bacon & Finnemann, 1992). Payne and Lynn (2011) found that U.S. female college students reported significantly better performance on the second language (i.e., Spanish) comprehension test compared to male students, despite the fact that the two genders did not differ in their second language experience or their performance on the first language comprehension test. However, a recent study suggested that German and Chinese male students had better performance on English language tests than female students but reported lower levels of self-efficacy beliefs (Wang, Schwab, Penn, & Chang, 2013). We believe that the stronger self-efficacy beliefs of Korean female college students toward learning English as a second language observed in this study is a reflection of their stronger ability and perceived competence toward second language acquisition.

These findings have significant implications in the language classroom practice. Studies about gender differences suggest that social persuasions and vicarious experiences are critical to women’s development of self-efficacy beliefs whereas mastery experience is critical to men’s development of self-efficacy beliefs (Zeldin, Britner, & Pajares, 2009). For example, interventions in the classroom practice were successful because gender differences in self-efficacy beliefs in mathematics were no longer noticed after receiving proper performance feedback for middle school students (Schunk & Lilly, 1984).

ANOVA revealed statistically significant differences between students with low efficacy beliefs and those with high/medium efficacy beliefs with respect to their use of SRL strategies and language interpretation strategies. However, the differences between the medially and highly efficacious students were not statistically significant in either the use of SRL strategies or the use of language interpretation strategies. Although the classification accuracy for the 3-profile model is very good from a statistical point of view, it is possible that the medium and high self-efficacy profiles would have some overlap. The medium and high self-efficacy profiles may not be distinct enough to show a statistically significant difference in the use of SRL strategies or language learning strategies. However, there was a statistically significant difference in the English proficiency (TOEIC) scores between the medium and high self-efficacy profiles. The results from our studies support Tragrant and Victorii’s (2012) argument that the use of language learning strategies is not linear across various English proficiency levels. That is to say, we cannot expect a gradual increase of the use of SRL strategies or language learning strategies from low-proficient to high-proficient English language learners.

Previous research has provided evidence that SRL strategies can be incorporated into classroom instruction (Lee, 2002). A teacher’s clarity and pace of instruction, degree of structure, autonomy granted, enthusiasm, humor, fairness, and expectations all have a strong influence on students’ choice of SRL strategies (Boekaerts & Cascallar, 2006). Therefore, understanding students’ self-efficacy beliefs and the development of SRL strategies is pivotal in the teaching and learning relationship and helps to make the learning process more enjoyable and fruitful.

5.1. Limitations and directions for future research

It is important to note that the study sample was limited to a select group of undergraduate students majoring in education-related field in one of Korea’s most prestigious universities. These students do not represent the large population of Korean undergraduate students, and the results cannot be generalized to other populations either. Future research should consider including students from diverse educational backgrounds. It should be noted that the comparison of three profiles on background variables included only those student characteristics that were available to the researchers (i.e., gender, years of study, age, and TOEIC scores). Future research may benefit from the inclusion of a richer set of student characteristics (e.g., motivation, socioeconomic status, and parental involvement). This study was unable to fully analyze student academic achievement in second/foreign language because only limited data were available on participants’ English proficiency. It will be important to supplement the findings from this study with future research that examines student second/foreign language proficiencies across self-efficacy profiles. Future studies should consider having all participants tested on their second/foreign language proficiencies after these participants have completed the surveys as self-efficacy beliefs operate in concert with outcome expectations or goals in the regulation of human behavior (Pajares, 2009). It is important to note that, although LPA identified the optimal number of profiles in the data under study, the results must remain tentative until it can be confirmed by further research. Future research should examine whether the three-profile solution is reproducible on different samples.

6. Conclusions

With the application of LPA, this study showed that there are three distinct profiles of English language learners’ self-efficacy beliefs. The distribution of high, medium, and low profiles of students self-efficacy beliefs is what we expected in our hypotheses and efficacious students also reported more frequent use of SRL strategies. The findings of this study further our understanding of the relationship between English language learners’ self-efficacy beliefs and their SRL strategies and language interpretation strategies.

This study is important in that it provided further evidence of psychometric properties and usefulness of the QESE scale by confirming a positive relationship between self-efficacy beliefs and the use of SRL strategies. As self-efficacy and SRL strategies are both predictors of academic achievement in general (e.g., Diseth, 2011) and language learning outcomes in particular (e.g., Liem et al., 2008; Magogwe & Oliver, 2007), classroom teachers are encouraged to help students develop higher levels of self-efficacy beliefs by providing them with appropriate feedback of their performance and help the students develop self-regulatory learning skills. Language teachers are also called upon to enhance the self-efficacy beliefs of male students and to encourage more male students to study second/foreign language as significantly more male students were identified in the low self-efficacy profile in this study although previous studies suggest that male student may do better than female students in language learning outcomes (e.g., Wang, Schwab, Penn, & Chang, 2013).
Appendix A. Questionnaire of English Self-Efficacy (QESE)

Important: Read the following questions through carefully, and try to assess your English language competence as accurately as possible, regardless of whether you have ever had to perform the actions described or not. The questions have been conceived in order to measure your self-perceived capabilities. There are no right or wrong answers. Please do not enter your name on the questionnaire. However, you should not forget your student registration number and you should answer all the questions.

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<td>I am totally unable to do this</td>
<td>I am unable to do this</td>
<td>I am possibly able to do this</td>
<td>I am basically and in principle able to do this</td>
<td>I am basically and in principle able to do this</td>
<td>I am able to do this</td>
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1. Can you understand stories told in English? 1 2 3 4 5 6 7
2. Can you do homework/home assignments alone when you are reading English texts? 1 2 3 4 5 6 7
3. Can you understand American TV programs (in English)? 1 2 3 4 5 6 7
4. Can you do homework/home assignments alone when you include reading English texts? 1 2 3 4 5 6 7

References


