



No Transfer Effect of English Language Learning Academic Self-Efficacy On Outcomes of Non-English-Language Learning

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Abstract

Previous research has shown that improved academic self-efficacy in English language learning has an impact on English language learning outcomes. The current study tested whether improved academic self-efficacy in English language learning can lead to improvements due to a positive transfer effect on learning outcomes that differ from English language learning. To this end, the current study used anonymized, English learning data from 155 students at a Japanese university. The MSLQ was used as the questionnaire on academic self-efficacy. The average GPA of all courses taken by the students was used as performance data outside of English language learning. The MSLQ and GPA were long-term, one-year data, as of February 2018 and February 2019, respectively. The results showed that increased academic self-efficacy in English language learning had no effect on the improvement in learning outcomes that differ from English language learning. The results of this study suggest that academic self-efficacy has an improvement in performance on content directly related to the content studied but does not have a positive transfer effect on improving performance on unrelated learning content.

Keywords: English learning, e-learning, self-efficacy, motivation, achievement, GPA

1. Introduction

In educational psychology, self-efficacy has been defined as one's belief in his/her own ability to meet challenges and successfully accomplish a task [1-3]. Recently, self-efficacy has been considered as one of key factors in academic success [4-6]. Thus, many studies have investigated what factor affects academic self-efficacy (ASE) and its enhancement on academic achievement.

One of important research questions on that research field is whether the ASE is domain-general or domain-specific, in other words, whether the ASE improvement for a certain learning domain enhances academic achievement for another learning domain. This kind of effect has been referred to "transfer" [7]. For example, transfer occurs when prior learning affects new learning. Transfer can be positive or negative. Regarding the ASE, this research question has not been resolved [8]. Jungert et al. (2014) suggested that normally achieving children's ASE may affect academic performance in another domain depending on whether children receive special instruction.

However, to my knowledge, there is a few previous studies in the environment of foreign language learning with ICT. In particular, it has been reported that distance learning including e-learning and traditional face-to-face learning show different influence of ASE on academic achievement [9]. Hence, it is necessary to investigate whether the ASE is domain-general or domain-specific, in other words, whether the ASE improvement for a certain learning domain enhances academic achievement for another learning domain not only in traditional education environment but also in distance learning environment.

A previous study has suggested that there is no transfer-like effect of ASE improvement on general self-efficacy in distance learning environment [10]. This study reported that general self-efficacy and ASE scales differed from each other in correlating academic achievement of foreign language learning with ICT in a higher education environment in Japan. However, this study did not directly determine whether the ASE improvement for foreign language learning with ICT enhances academic achievement for another learning domain.

To test the research question directly, the present study tested whether the ASE improvement for foreign language learning with ICT in higher education setting in Japan enhances academic achievement for another learning domain, such as GPAs in non-English education courses.



2. Methods

The current study used anonymized data of first-year students' questionnaire results (native language=Japanese, N=155) at a Japanese university. The motivational questionnaire was created based on Motivated Strategies for Learning Questionnaire (MSLQ [11]), which included items related to intrinsic motivation, extrinsic motivation, and academic self-efficacy, and whose items had 7-point likert scale. The MSLQ scores were collected in February 2018 and in July 2018. The average GPA of all courses taken by the students was used as performance data outside of English language learning. The GPA scores were collected in July 2018 and February 2019, respectively. The participants took regular 15-week blended English learning classes per a half year, where activities are being made to improve ASE for English language learning. These data make it possible to verify whether, after an increase in ASE during half a year of English education, the improvement in performance in other courses during the half year is affected by the increase in ASE.

3. Data analysis, Results, and Discussion

Firstly, to confirm that ASE increased for a year, t-test was conducted between ASE scores in February 2018 and those in February 2019. Participants' ASE scores significantly increased ($t=8.279$, $p<0.001$). The result indicated that the blended English learning classes participants took successfully improved ASE for English language learning.

Then, correlation was tested between the subtraction of GPA scores that differ from English language learning in February 2019 > those in July 2018 and subtraction of ASE in July 2018 > those in February 2018. In this result, the correlation was not statistically significant ($p=0.4$). Therefore, the current study showed that increased ASE in English language learning had no effect on the improvement in learning outcomes that differ from English language learning. The result of the current study suggests that ASE improvement in English learning through blended learning environment does not have a direct positive transfer effect on improving performance on unrelated learning content.

The current result is not in line with the previous study described in Introduction[8]. In that previous study, children in the fifth grade were given special instruction in mathematics to test whether ASE in mathematics affects ASE in other domains. In the current study, on the other hand, foreign language education was provided to university students through the blended learning method to test whether ASE in foreign language learning has an effect on the academic performance in other domains. There were differences between the two studies in terms of participant types, intervention methods, learning domains, and whether the influence was between ASEs or between ASE and the academic performance itself. Therefore, it would be necessary to clarify the mechanism that positive transfer is caused by which factors. If these factors can be identified, it may be possible to establish how improving learners' ASEs more effectively can produce broad learning outcomes.

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