The Relationship between Interest in Learning Materials and Learning Motivation and Self-efficacy in Higher Education Blended Foreign Language Learning Settings

Satoru Yokoyama[1]

Saitama University, Japan[1]

Abstract

Recently, considerable attention has been paid to learner motivation and academic self-efficacy. The current study tests whether the relationship between learners' majors and the content of learning materials influences their motivation and academic self-efficacy in blended foreign language learning settings in higher education. The current study used anonymized data of first-year students' questionnaire results at a Japanese university. A repeated measures ANOVA was used to analyze the motivation and academic self-efficacy scores (two factors: students' majors x measurement timing). The results showed that the intrinsic motivation scores were greater for the 2nd time than for the 1st time, while there was no difference among students' majors. The interaction between times and majors was marginally significant. The extrinsic motivation scores showed no difference in main effect of times, while the main effect of students' majors was marginally significant. The interaction between times and majors were not significant. The academic self-efficacy scores were greater for the 2nd time than for the 1st time, and there was a marginally significant difference among students' majors. The interaction between times and majors were not significant. The current study suggests that the intrinsic motivation and academic self-efficacy can be positively enhanced by intervention under blended foreign language learning environment, but the extrinsic motivation does not change by intervention. In addition, the content of the learning materials may affect the intrinsic motivation enhancement due to students' majors in higher education setting, while the academic self-efficacy differs among the students' majors, but the content of the learning materials may not affect the academic self-efficacy enhancement by intervention.

Keywords: *academic self-efficacy, motivation, higher education, learning materials, foreign language learning, blended learning*

1. Introduction

In several decades, considerable attention has been paid to the relationship between learner motivation, academic self-efficacy, and learning outcome. Self-efficacy is a learner's belief that the learner has an ability to learn something or to master some skill [1-3]. Recently, self-efficacy has been considered as one of important factors in academic success or academic achievement [4-6]. Thus, many studies have examined what factor affects academic self-efficacy (ASE) and its enhancement or improvement. In addition, recently, many researchers have focused on the ASE effect on academic achievement or learning outcome [7].

In contrast, in order to increase the motivational aspects of learning, earlier research focused on learning material content. Actually, several studies have reported that learning materials influences learner's motivation in learning [8-9]. For example, why and how learning materials help the learners in the future (e.g. finding a job, getting into a college, etc.) affect learner's motivation to learn. The recent review article suggested that the content to be learnt by learners is one of the most important factors particularly in the environment of online learning compared to in the traditional face-to-face classroom teaching environment [10]. While online learning has been considered an important learning method, there is a lack of research on the topic under the online learning environment.

The current study tests whether the relationship between learners' majors and the content of learning materials influences their motivation and academic self-efficacy in blended foreign language learning settings in higher education.

2. Methods

The current study used anonymized data of first-year students' questionnaire results (native language=Japanese, N=312, female=106, mean age=18.66) at a Japanese university. They had 7

kinds of majors, including pharmacy, nursing, animal care, piloting, law, and political science. They took 15-week blended English learning classes and answered a motivational questionnaire at two different times (measurement timing = before and after the classes). 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. Since the learning materials were based on a chemistry and biology textbook written in English, students' interests in the materials varied across their majors. Furthermore, the materials were designed to enhance academic self-efficacy. To this end, while the English passages were difficult to understand with many technical terms, learning supports such as glossaries and explanations of how to understand the texts were included, to enhance student learning and academic self-efficacy. A repeated measures ANOVA was used to analyse the motivation and academic self-efficacy scores (two factors: students' majors x measurement timing).

3. Results and discussion

The purpose of the current study was to test whether the relationship between learners' majors and the content of learning materials influences their motivation and academic self-efficacy in blended foreign language learning settings in higher education. To this end, we used an ANOVA to compare intrinsic motivation, extrinsic motivation, and academic self-efficacy scores based on MSLQ among different students' majors (7 majors) and measurement timing (1st = before the classes, 2nd = after the classes). The results of the intrinsic motivation, extrinsic motivation, and ASE are shown in Tables 1-3, and Figure 1.

In the ANOVA, the results showed that the intrinsic motivation scores were greater for the 2nd time than for the 1st time (F=42.278, p=0.003), while there was no difference among students' majors (F=2.125, p=0.219). The interaction between times and majors was marginally significant (F=5.078, p=0.087). Since the materials were designed to enhance academic self-efficacy, the 15-week classes indirectly enhanced the intrinsic motivation. In addition, the interaction may be able to be explained by the fact that the content of the materials affects students' motivation to learn differently among students' majors, because some majors were directly related to the content of the materials, but others not.

The extrinsic motivation scores showed no difference in main effect of times (F=0.109, p=0.758), while the main effect of students' majors was marginally significant (F=6.779, p=0.06). The interaction between times and majors were not significant (F=0.017, p=0.902). These results suggest that extrinsic motivation differs due to the relationship between learners' interests and the content of learning materials but does not change by intervention.

The ASE scores were greater for the 2nd time than for the 1st time (F=21.22, p=0.01), and there was a marginally significant difference among students' majors (F=7.233, p=0.055). The interaction between times and majors were not significant (F=1.081, p=0.357). Since the materials were designed to enhance academic self-efficacy, these results confirmed that the 15-week classes successfully enhanced the ASE. Also, the ASE differs among students' majors, but the enhancement by intervention did not differ among students' majors.

The current study suggests that the intrinsic motivation and ASE can be positively enhanced by intervention under blended foreign language learning environment, but the extrinsic motivation does not change by intervention. In addition, the content of the learning materials may affect the intrinsic motivation enhancement due to students' majors in higher education setting, while the ASE differs among the students' majors, but the content of the learning materials may not affect the ASE enhancement by intervention. In many cases, the intrinsic motivation and ASE show high correlation and similar behaviour. However, the current results suggest that at least the learner's interest in the content of the learning materials affect the intrinsic motivation and ASE differently.

Table 1. The results of the intrinsic motivation.

	int	SD
Group1, 1st	4.35	1.14018
Group2, 1st	4	1.14564
Gorup3, 1st	5.15	0.51841
Group4, 1st	4.5	0.55902

Group5, 1st	5.8	0.83666
Group6, 1st	5.15	0.82158
Group7, 1st	4.95	0.92534
Group1, 2nd	5.234	0.52085
Group2, 2nd	5.45	0.9083
Group3, 2nd	4.95	0.67082
Group4, 2nd	5.4	0.60208
Group5, 2nd	5.5	0.5863
Group6, 2nd	5.35	0.51841
Group7, 2nd	5.55	1.15109

*int denotes intrinsic motivation. SD denotes standard deviation.

Table 2. The results of the extrinsic motivation.

	ext	SD
Group1, 1st	4.9	1.24499
Group2, 1st	4.65	0.48734
Gorup3, 1st	3.25	1.29904
Group4, 1st	4.2	1.26738
Group5, 1st	5.65	1.00933
Group6, 1st	5.65	0.45415
Group7, 1st	5.5	0.90139
Group1, 2nd	5.7	0.89093
Group2, 2nd	5.65	1.03983
Group3, 2nd	4.55	1.15109
Group4, 2nd	5.6	1.00933
Group5, 2nd	5.6	0.57554
Group6, 2nd	4.75	0.90139
Group7, 2nd	5.45	0.75829

*ext denotes extrinsic motivation. SD denotes standard deviation.
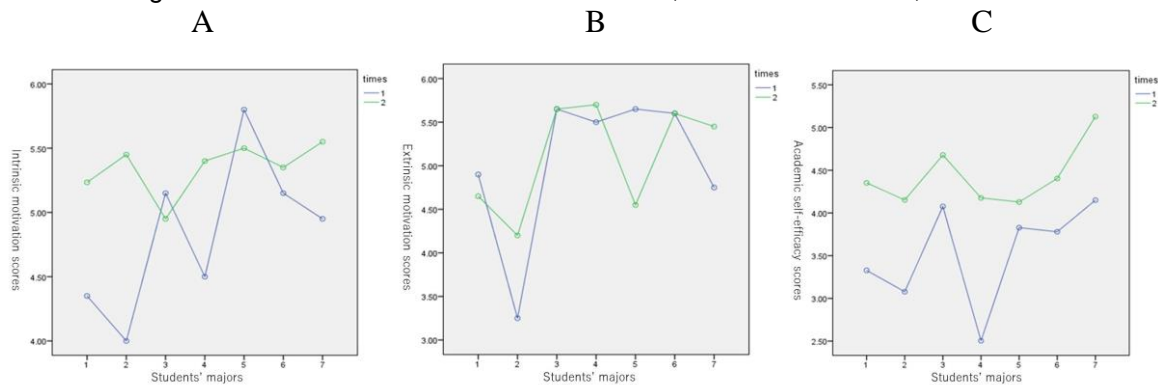
Table 3. The results of the extrinsic motivation.

	ase	SD
Group1, 1st	3.328	0.83968
Group2, 1st	4.352	0.34795
Gorup3, 1st	3.078	0.73148
Group4, 1st	4.152	0.64484
Group5, 1st	4.076	0.82923
Group6, 1st	4.678	0.72151

Group7, 1st	2.504	0.39608
Group1, 2nd	4.176	0.42852
Group2, 2nd	3.828	1.57324
Group3, 2nd	4.128	0.58015
Group4, 2nd	3.78	0.96177
Group5, 2nd	4.404	0.31085
Group6, 2nd	4.15	1.12639
Group7, 2nd	5.128	0.57907

* ase denotes academic self-efficacy. SE denotes standard error.

Figure 1. The results of the intrinsic motivation, extrinsic motivation, and ASE.

A, B, and C show the results of the intrinsic motivation, extrinsic motivation, and ASE, respectively.

References

[1] Bandura, A. "Self-efficacy", In V. S. Ramachaudran (Ed.), Encyclopedia of Human Behavior, New York, NY, US: Academic Press, 1994, 4, 71-81.

[2] Bandura, A. "Self-Efficacy: The Exercise of Control", New York, NY, US: Worth Publishers, 1997.

[3] Bandura, A. "Self-efficacy: Toward a unifying theory of behavioral change", In Roy F. Baumeister's (Ed.) The Self in Social Psychology . New York, NY, US: Psychology Press, 1999, 285-298.

[4] Honicke, T., & Broadbent, J. "The influence of academic self-efficacy on academic performance: A systematic review", Educational Research Review, 2016, 17, 63-84.

[5] Richardson, M., Abraham, C., & Bond, R. "Psychological correlates of university students' academic performance: A systematic review and meta-analysis", Psychological Bulletin, 2012, 138(2), 353-387.

[6] Robbins, S.B., Lauver, K., Le, H., David, D., & Langley, R. "Do psychosocial and study skill factors predict college outcomes? A meta-analysis", Psychological Bulletin, 2004, 130, 261-288.

[7] Broadbent, J., Poon, W.L. "Self-regulated learning strategies & academic achievement in online higher education learning environments: a systematic review", Internet Higher Education, 2015, 27, 1-13.

[8] Keller, J. M. "Motivational design for learning and performance: The ARCS model approach", Springer Science & Business Media, 2009.

[9] Keller, J. M. "Development and use of the ARCS model of instructional design." Journal of instructional development, 1987, 10(3), 2-10.

[10] Yokoyama, S. "Academic Self-Efficacy and Academic Performance in Online Learning: A Mini Review", Frontiers in Psychology, 2018, 9:2794.

[11] Pintrich, R.R., & DeGroot, E.V. "Motivational and self-regulated learning components of classroom academic performance", Journal of Educational Psychology, 1990, 82, 33-40.