The Society For Transdiciplinary Studies

JTS

The Journal of Transdisciplinary Studies

p-ISSN 2586-5439
e-ISSN 2713-7457

Original Article

A Comparative Study of Learning Motivation and Academic Self-Efficacy between College Students in Korea and China

Hee-Joo Im[1], Qian-Mei Zhang[2], Young-Lim Lee[3*]

[1] Professor, College of Liberal Arts, Dankook University, Korea (heejooim@dankook.ac.kr)
[2] Lecturer, School of Foreign Languages, Hefei University, China (zhangqm@hfuu.edu.cn)
[3] Professor, Department of Psychology & Psychotherapy, Dankook University, Korea
*Corresponding Author : younglee13@dankook.ac.kr

Received 20 Oct 2025
Revised 24 Nov 2025
Accepted 02 Dec 2025

Citation: Im HJ, Zhang Q-M, Lee YL. A Comparative Study of Learning Motivation and Academic Self-Efficacy between College Students in Korea and China. The Journal of Transdisciplinary Studies. 2025; 9(3): 175-184. https://doi.org/10.22685/jts.2025.9.3.175

ABSTRACT

Objectives: The purpose of this paper was to examine the effects of learning motivation and academic self-efficacy among college students in Korea and China, and to explore gender differences in these effects. **Methods:** A total of 345 college students from D University in Korea and H University China, completed the survey, which included measures of learning motivation and academic self-efficacy. Statistical analyses were conducted using Jamovi 2.3.28, including reliability tests, descriptive analysis, and Bayesian ANOVAs for group comparions. **Results:** The results are as follows. First, Korean students showed higher levels of amotivation, external motivation, and introjected motivation compared to Chinese students. Conversely, Chinese students indicated higher intrinsic motivation than Korean students. Also, female students presented greater identified and integrated motivation than male students. Second, Chinese students reported a greater preference for task difficulty, whereas Korean students demonstrated higher levels of self-regulatory efficacy and self-confidence. In particular, Korean male students showed slightly higher self-confidence than their female counterparts. **Conclusions:** Based on these findings, it is essential to promote intrinsic motivation and to establish an educational environment that enhances the development of self-determined learning motivation.

Keywords: Academic self-efficacy, College students, Cross-culture, Gender, Learning motivation

1. Introduction

Students' learning motivation has received attention in the field of education because it is strongly linked to their academic behavior and performance [1]. According to Self-Determination Theory (SDT) proposed by Deci and Ryan(1985a), motivation can be categorized into different types depending on the underlying reasons or goals that drive an individual's behavior [2]. SDT is described as "a broad framework for understanding factors that facilitate or undermine intrinsic motivation, autonomous extrinsic motivation, and psychological wellness," all of which are directly relevant to educational contexts [3]. There is a fundamental distinction between intrinsic motivation, which refers to engaging in an activity for its inherent interest or enjoyment, and extrinsic motivation, which involves performing an activity to attain a separate or external outcome [3]. Some studies found that intrinsic motivation is a powerful driver of learning. For example, Peng and Fu's (2021) study investigated how Chinese students learning English as a foreign language (EFL) are influenced by their motivation in a blended learning context [4]. The findings showed that both intrinsic and extrinsic types of motivation positively impact students' academic achievements in such an environment. These motivations not only enhance students' English language skills but also support their psychological engagement in learning. Notably, intrinsic motivation plays a more significant role than extrinsic motivation.

In addition, studies showed that males and females

may have differences in terms of student motivation. Feng, Fan, and Yang's (2013) study results indicate that there are notable gender differences in students' learning motivations [5]. Female students have higher learning motivation of EFL in task value and control beliefs about learning. Moreover, EFL learning achievement is influenced not only by learning motivation but also by students' prior learning experiences, with gender differences observed in both factors. Some of the differences may be attributed to gender role stereotypes. The meta-analysis of 68,429 participants found small gender differences in academic self-efficacy, favoring males overall. However, females showed higher self-efficacy in language arts, while males outperformed in math, computers, and social sciences. Gender gaps varied by age and were most prominent after age 23 [6].

Contemporary motivational theories, including self-determination theory, self-efficacy theory, achievement goal theory, and task value theory, have introduced a variety of motivational constructs that effectively explain multiple dimensions of the learning process [7]. Self-efficacy, one of the adaptive motivational factors in learning, may be defined as an individual's belief in his or her ability to succeed in a specific situation or accomplish a specific task. The concept of general self-efficacy was originally proposed by Bandura in his social cognitive theory [8,9]. The studies related to self-efficacy have been continuously conducted. A comparative study between Korea and China revealed noteworthy results. Yang's (2016) empirical results of this study indicate that both entrepreneurship education and self-efficacy significantly influence the entrepreneurial intentions of university students in Korea and China [10]. However, the hypothesized moderating role of self-efficacy was confirmed only in the Korean context, not in the Chinese one.

Korea and China are geographically close in the Asian region and share similar cultural and environmental backgrounds. However, differences in educational systems and learning environments between the two countries may lead to variations in students' learning motivation and academic self-efficacy. Despite the growing interest in motivation and self-efficacy, studies that examine these constructs based on SDT in both Korea and China remain relatively scarce. Therefore, this study aims to analyze the differences in learning motivation and academic self-efficacy between Korean and Chinese students, as well as gender-based differences, and to provide practical implications and concrete suggestions for educational application.

The purpose of this study is to examine differences in learning motivation and academic self-efficacy between Korea and China, as well as across genders. Based on this purpose, the following two research questions were addressed:

1) To what extent do Korean and Chinese groups differ regarding their learning motivation and academic self-efficacy?
2) To what extent does gender difference impact learning motivation and academic self-efficacy?

2. Literature review

Previous studies have identified some variables of individual factors as strong predictors of academic performance and language learners' overall educational experience [11,12], such as motivation and self-efficacy. It is noted that in educational contexts, these two factors are profoundly shaped by cultural values, educational systems, and societal expectations [13]. As two East Asian countries, China and South Korea have distinct yet overlapping cultural heritages. They are both deeply rooted in Confucian educational traditions and prioritize academic achievement and societal expectations. However, their distinct educational systems, sociocultural pressures, and policy interventions shape divergent patterns in students' learning motivation and academic self-efficacy. There is a scarcity of research that has compared the influence of the two variables between the two countries within the same study.

2.1. Learning motivation among college students in China and Korea

South Korea's education system is synonymous with intense competition. Students face relentless pressure to enter prestigious universities, driving high levels of extrinsic motivation. In Korea, college students' English learning motivation presents distinct characteristics, that is Korean students exhibit stronger motivation to learn English for global career opportunities. Park and Kim (2014) explored the impact of career decision level on Korean college students' motivation to learn English. The findings indicated that students who have a clear career goal are more motivated to learn English, as they perceive the language as a valuable tool for achieving their career aspirations [14]. This suggested that career-related factors play a significant role in shaping Korean students' motivation to learn English.

Comparative studies reveal distinct motivational profiles between Chinese and Korean college students. While both groups are motivated by future-oriented goals, the

nature of these goals and the underlying motivational processes differ. Chinese students are more influenced by their idealized future selves and the vivid imagery associated with these selves. In contrast, Korean students' motivation is more closely tied to their career aspirations and self-efficacy beliefs.

2.2. Previous studies of academic self-efficacy among Chinese and Korean college students

For the research of academic self-efficacy, most previous studies have predominantly emphasized its correlation with motivation or academic performance. In the context of Chinese college students, research has shown that academic self-efficacy plays a crucial role in their academic performance through mediating factors such as learners' cognition, emotion, and motivation. For instance, Chen (2019) employed a questionnaire survey method, positioning self-efficacy as a precursor variable, and found that self-efficacy affects the motivation and behavior of classroom oral participation through the ideal self, the ought self, and language anxiety [15]. Similarly, Huo and Rui (2020) used the same method to discover that self-efficacy impacts English proficiency through the ideal and ought selves in a second language [16]. Teng and Yang (2022), through longitudinal mediation modeling, identified that metacognition and motivation mediate the effect of self-efficacy on English academic performance [17].

Additionally, some scholars have used self-efficacy as a mediating variable to examine the impact of factors like cognition, emotion, and motivation on learning outcomes. For example, Xiong and Shen (2016) explored the impact of motivational burnout on academic achievement and the mediating role of self-efficacy using one-way analysis of variance, correlation analysis, and regression analysis [18]. Chang and Tsai (2022), with 404 Chinese English learners as subjects, constructed a research framework based on social cognitive theory and the social cognitive expectancy-value model, and validated the model using structural equation modeling, revealing that the relationship between their emotional intelligence and academic achievement is successively mediated by learning motivation and self-efficacy [19].

In recent years, Chinese scholars have tried to explore the predictive role of academic self-efficacy to learning motivation and autonomous learning ability and their relationships. You, Dörnyei and Csizér (2015) explored the relationship between academic self-efficacy and English language learning among Chinese college students. The findings indicated that academic self-efficacy significantly predicts students' intended effort and actual performance in English language learning. This suggests that fostering students' self-efficacy beliefs can enhance their motivation and performance in language learning [20]. Another study by Li (2016) examined the relationship between self-efficacy and English autonomous learning ability of 239 non-English major college students via quantitative analysis [21]. The results showed that students with greater English academic achievement had stronger self-efficacy and better English autonomous learning ability, and self-efficacy was significantly positively correlated to English autonomous learning ability.

Research on Korean college students' academic self-efficacy reveals similar patterns. That is, the crucial role of academic self-efficacy on English language learners' learning motivation and performance. A study by Kim and Kim (2012) found that academic self-efficacy is a strong predictor of Korean students' motivation and performance in English language learning [22]. The study also highlighted the importance of self-regulated learning strategies in enhancing students' self-efficacy. Students who effectively manage their learning process and set realistic goals tend to have higher self-efficacy beliefs.

Another study by Park and Kim (2014) explored the role of academic self-efficacy in Korean college students' career preparation [14]. The findings indicated that students with higher self-efficacy are more likely to engage in career-related activities and make informed career decisions. This suggests that academic self-efficacy not only influences academic performance but also extends to students' career development. In addition, Kim and Ra (2022) studied the mediating role of career decision level in the relationship between academic self-efficacy and career preparation behavior among 296 Korean college students [23]. They found that academic self-efficacy was positively associated with career decision level and career preparation behavior. Career decision level partially mediated the relationship between academic self-efficacy and career preparation behavior. The results suggested that interventions aimed at improving academic self-efficacy and career decision-making can enhance career preparation among college students.

Given the overview above, learning motivation and academic self-efficacy are critical factors influencing the academic success and career development of Chinese and Korean college students. Previous studies have found that while both China and South Korea students' share some commonalities in their motivational profiles, distinct patterns emerge due to cultural and educational differences. However, there is very little research that compares the two groups by focusing on college students' English learning motivation and academic self-efficacy.

3. Methods

3.1. Participants

A total of 345 first-year students took part in this study. The sample comprised 133 Korean students from D University located in Chungnam province, South Korea, and 212 Chinese students from H University located in Anhui Province, China. Participants' ages ranged from 18 to 25 years (M = 18.9, SD = 0.94). Additional demographic details, such as gender and major, are presented in Table 1.

3.2. Measures

3.2.1. Self-determination learning motivation

To measure self-determination learning motivation, we utilized a scale adapted by Jeon (2012) [24]. The original Self-determination learning motivation scale is derived from the Self-Regulation Questionnaire-Academic (SRQ-A)[1] developed by Ryan and Connell (1989) and the theoretical framework proposed by Ryan and Deci (2000b) [25, 26]. Park, Lee, and Hong (2005) later refined the scale for middle and high school Korean students, and Jeon (2012) further modified it for adult learners [27, 24]. The scale used in this study consists of 24 items, rated on a 5-point Likert scale ranging from 1 (not at all) to 5 (very much). It assesses the level of autonomy in human behavior, with higher scores indicating a stronger presence of the corresponding motivational characteristic. The scale is composed of six types of motivation: amotivation, external motivation, introjected motivation, identified motivation, integrated motivation, and intrinsic motivation, with four items allocated to each type. To evaluate the internal reliability of the scale, Cronbach's α was calculated for each motivation type, yielding the following reliability coefficient: .66 for amotivation, .66 for external motivation, .83 for introjected motivation, .64 for identified motivation, .75 for integrated motivation, and .82 for intrinsic motivation.

3.2.2. Academic self-efficacy

To assess academic self-efficacy in various academic contexts, this study employed the Academic Self-efficacy Scale, which was developed and validated by Kim and Park (2001) [28]. The scale consists of 28 items, rated on a 5-point Likert scale ranging from 1 (not at all) to 5 (very much), with higher scores indicating greater academic self-efficacy. The scale is composed of three sub-factors: confidence (10 items), self-regulatory efficacy (10 items), and preference for task difficulty (8 items). To evaluate the internal reliability of the scale, Cronbach's α was calculated for each sub-factor, resulting in reliability coefficients of .86 for confidence, .86 for self-regulatory efficacy, and .81 for preference for task difficulty. The overall reliability for the entire scale was .89.

3.3. Statistical analysis

Jamovi 2.3.28 (Jamovi, 2022; R, 2021) was used to perform statistical analyses [29, 30]. Reliability tests (Revelle, 2019) were conducted to assess the consistency of each measure, while descriptive analysis was used to summarize the demographic characteristics of participants [31]. To evaluate the assumptions of parametric statistics for Analysis of Variance (ANOVA), the Shapiro-Wilk normality test and Levene's test for homogeneity of variances (Fox & Weisberg, 2020) were performed [32]. Bayesian ANOVAs (JASP, 2018; Morey & Rouder, 2018; Rouder, Morey, Speckman & Province, 2012) were conducted for group comparisons [33-35].

3.4. Procedures and informed consent

This study was conducted in compliance with the Declaration of Helsinki and received approval from the Institutional Review Board and Research Ethics Committee of Dankook University (Identification Code: DKU 2022-10-049). The purpose and procedures of the study were clearly explained

Table 1. Demographic characteristics of participants

Major	China		Korea	
	male	female	male	female
Foreign Language	5 (7.7%)	38 (25.9%)	8 (16.7%)	16 (18.8%)
Engineer	26 (40.0%)	26 (17.7%)	17 (35.4%)	21 (24.7%)
Humanities/Social Science	32 (49.2%)	77 (52.4%)	11 (22.9%)	22 (25.9%)
Arts/Sports	2 (3.1%)	6 (4.1%)	12 (25.0%)	26 (30.5%)
Total	65 (100.0%)	147 (100.0%)	48 (100.0%)	85 (100.0%)

1) https://selfdeterminationtheory.org/wp-content/uploads/2022/02/SRQ-A_17item.pdf

to all participants, who were informed that they could withdraw their consent at any time during the survey if they chose not to continue. Participation was voluntary, and individuals were instructed to complete the survey only if they agreed to take part. The survey was conducted online between November and December 2022.

4. Results

To investigate whether group and gender had an effect on learning motivation and academic self-efficacy, we first tested the assumptions for ANOVA. Since both the homogeneity of variances and normality assumptions were violated, we conducted a Bayesian ANOVA to assess the effects of group (1=China, 2=Korea), gender (1=male, 2=female), and the interaction between group and gender on the sub-factors of each variable. Due to the limited diversity of participants' majors, we included major as a random factor in the analysis.

4.1. Learning motivation

A series of Bayesian ANOVAs examined the effects of group (Korean vs. Chinese) and gender on six types of learning motivation.

First, for amotivation, results indicated main effect of group, smaller effect of gender, and a nonsignificant interaction. Model comparisons favored the 'group+gender' model ($P(M|data) = 0.39$, $BF_{10} = 11.02$) suggesting that both variables contributed to explaining amotivation, though the group effect was stronger. The interaction demonstrated limited additional explanatory power ($P(M|data) = 0.15$, $BF_{10} = 4.22$). Consistent with this, effect analyses revealed strong evidence for group ($BF_{inclusion} = 7.95$) but weak evidence for gender ($BF_{inclusion} = 0.39$) and the interaction ($BF_{inclusion} = 0.7$). As shown in Fig. 1(a), Korean students showed higher amotivation scores than Chinese students, with slightly higher scores among Korean males.

Second, for external motivation, group again emerged as a significant predictor, with gender exerting a smaller influence and no significant interaction. The 'group+gender' model was most supported ($P(M|data) = 0.54$, $BF_{10} = 88.06$), indicating that both factors contributed but group effects were more substantial. Effect analyses showed strong evidence for group ($BF_{inclusion} = 47.99$) and weak evidence for gender ($BF_{inclusion} = 1.62$) and interaction ($BF_{inclusion} = 0.74$). As shown in Fig. 1(b), Korean students demonstrated higher external motivation, particularly among females.

Third, for introjected motivation, group effects were dominant, whereas gender and interaction effects were negligible. The 'group' model had the highest posterior

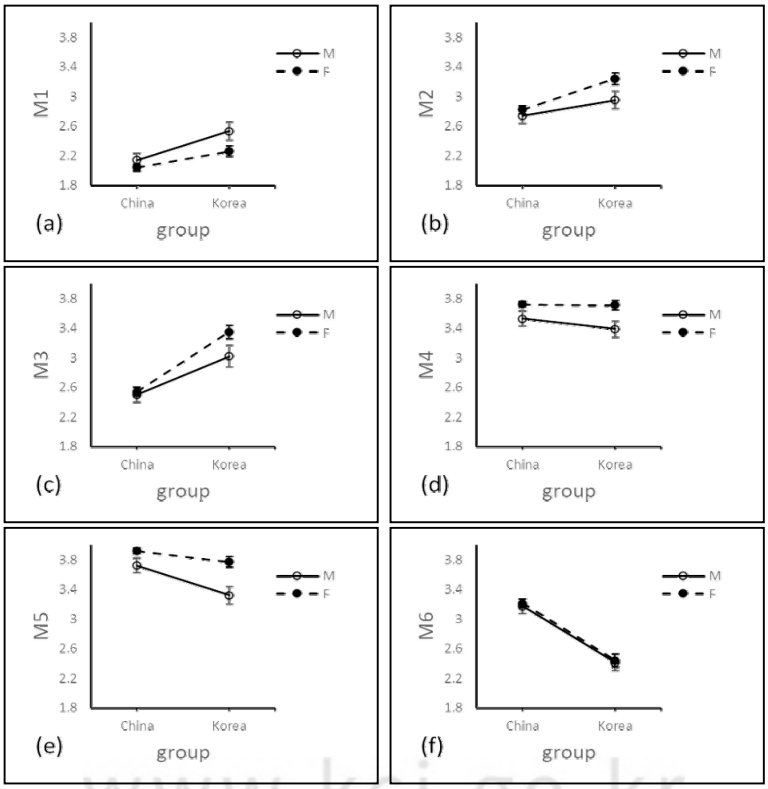

Fig. 1. Results of learning motivation

probability of 0.4 and a BF_{10} of $1.66x10^{10}$, with limited gains from including gender or the interaction. Effect analyses confirmed robust evidence for group ($BF_{inclusion}$ = $1.96x10^{10}$) but weak support for gender ($BF_{inclusion}$ = 0.99) and interaction ($BF_{inclusion}$ = 1.13). As depicted in Fig. 1(c), Korean students scored higher than Chinese students, with slightly higher scores for females.

Fourth, for identified motivation, gender significantly predicted outcomes, while group and the interaction were not significant. The 'gender' model had the strongest support (P(M|data) = 0.80, BF_{10} = 15.02), providing strong evidence that females reported higher identified motivation across groups. Group ($BF_{inclusion}$ = 0.11) and interaction ($BF_{inclusion}$ = 0.14) effects were negligible, as illustrated in Fig. 1(d).

Fifth, for integrated motivation, both group and gender were influential, with gender showing the stronger effect. The 'group + gender' model was best supported (P(M|data) = 0.56, BF_{10} = 496.94), whereas the interaction provided limited explanatory value (P(M|data) = 0.33, BF_{10} = 292.61) Effect analyses revealed robust evidence for gender ($BF_{inclusion}$ = 69.07) and moderate evidence for group ($BF_{inclusion}$ = 5.7). As shown in Fig. 1(e), females exhibited higher integrated motivation across groups, with slightly lower scores among Korean males.

Lastly, for intrinsic motivation, group significantly predicted outcomes, whereas gender and the interaction did not. The 'group' model showed the highest support (P(M|data) = 0.86, BF_{10} = $6.86x10^{11}$), indicating that group was the strongest predictor. Consistent with this, effect analyses demonstrated strong evidence for group ($BF_{inclusion}$ = $4.63x10^{11}$) but negligible evidence for gender ($BF_{inclusion}$ = 0.1) and interaction ($BF_{inclusion}$ = 0.08). As shown in Fig. 1(f), Chinese students reported higher intrinsic motivation scores than Korean students across genders.

4.2. Academic self-efficacy

A series of Bayesian ANOVAs examined the effects of group (Korean vs. Chinese) and gender on three types of academic self-efficacy.

First, for preference for task difficulty, group significantly predicted outcomes, whereas gender and the interaction did not. Model comparisons favored that the 'group' model (P(M|data) = 0.51, BF_{10} = 3.95), identifying group as a strong predictor of task difficulty preference. In contrast, the models including gender (P(M|data) = 0.26, BF_{10} = 1.99) or the interaction (P(M|data) = 0.06, BF_{10} = 0.43) provided little additional explanatory power. Effect analyses supported these findings: group showed a relatively strong inclusion BF of 3.02, whereas gender ($BF_{inclusion}$ = 0.38) and the interaction ($BF_{inclusion}$ = 0.24) showed weak evidence. As shown in Fig. 2(a), Chinese students reported higher preference for task difficulty than Korean students across genders.

Second, for self-regulatory efficacy, group significantly predicted outcomes while gender and the interaction were not significant. The 'group' model had the highest posterior probability of 0.81 and a BF_{10} of 23243.68, confirming group as a strong predictor. The models including gender (P(M|data) = 0.11, BF_{10} = 3157.63) or the interaction (P(M|data) = 0.08, BF_{10} = 2146.6) did not add explanatory value. Consistently, effect analyses showed strong evidence for group ($BF_{inclusion}$ = 16551.87) but minimal support for gender ($BF_{inclusion}$ = 0.15) and interaction ($BF_{inclusion}$ = 0.33). As shown in Fig. 2(b), Korean students scored higher in self-regulatory efficacy than Chinese students across genders.

Lastly, for self-confidence, gender significantly predicted outcomes, while group had a smaller effect and the interaction was not significant. The 'group + gender' model had the highest posterior probability of 0.5 and a BF_{10} of 12578.95, indicating that both factors contributed, with gender showing the stronger influence. The interaction offered limited explanatory power (P(M|data) = 0.17, BF_{10} = 4184.53). Effect analyses further supported these findings: gender demonstrated a high inclusion BF of 5394.16, whereas group showed a smaller effect ($BF_{inclusion}$ = 1.35) and the interaction weak support ($BF_{inclusion}$ = 0.79) As shown in Fig. 2(c), Korean students showed higher self-confidence than Chinese students, with a slight advantage for males among Korean group.

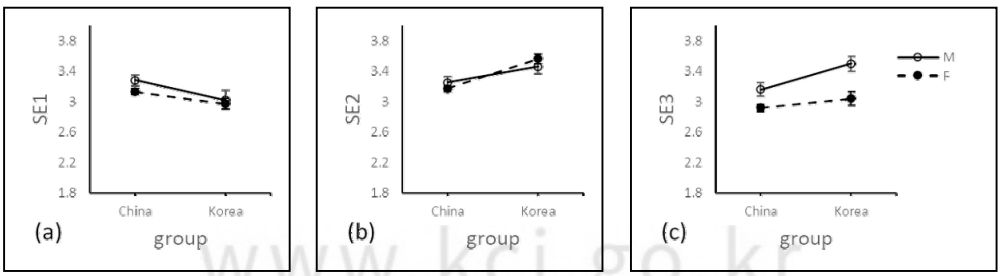

Fig. 2. Results of academic self-efficacy

5. Discussion and Conclusion

The present study examined cross-cultural and gender differences in both academic motivation (amotivation, external, introjected, identified, integrated, and intrinsic motivation) and academic self-efficacy (preference for task difficulty, self-regulatory efficacy, and self-confidence) using Bayesian ANOVAs. Overall, cultural group differences were prominent across most constructs, whereas gender effects were more selective, and interactions between group and gender were generally weak.

The results found in this study were as follows. First, in terms of learning motivation, Korean students demonstrated higher levels of amotivation, external motivation, and introjected motivation compared to their Chinese counterparts. Conversely, Chinese students showed higher intrinsic motivation than Korean students. Korean students showed higher amotivation, as well as external and introjected motivation, which are the least self-determined forms of extrinsic motivation. This finding contrasts with that of Gao (2012), who reported that Korean students exhibited higher intrinsic motivation than extrinsic motivation [36]. In this study targeting first-year university students, it is assumed that Korean students' intrinsic motivation may have been diminished by obligation and the pressure of university entrance, rather than by interest in or satisfaction with academic tasks themselves. In contrast, Chinese students showed higher levels of intrinsic motivation, which is characterized by self determined engagement in activities driven by curiosity, interest, satisfaction, and internal enjoyment. This highlights a clear difference in motivational orientation between Korean and Chinese students.

Female students regardless of nationality exhibited greater identified and integrated motivation than male students. They also tended to display more positive learning attitudes and higher engagement in academic activities, suggesting a stronger internalization of learning goals. Identified motivation and integrated motivation are closer to intrinsic motivation and represent more self-determined forms of regulation, which implies that female students are more likely to make decisions and act voluntarily based on their personal values.

Second, regarding academic self-efficacy, Chinese students reported a greater preference for task difficulty, whereas Korean students demonstrated higher levels of self-regulatory efficacy and self-confidence. In particular, Korean male students showed slightly higher self-confidence than their females counterparts. The higher preference for task difficulty among Chinese students can be interpreted as an indication that they perceive themselves as having greater control over and ability to manage their learning. This finding aligns with the results of Kim and Yang's (2009) study, which reported that Chinese high school students in Korean-Chinese schools pursued more challenging and difficult tasks compared to Korean students [37]. However, unlike the previous study, the present study revealed a different result in terms of efficacy expectations. Specifically, Chinese students demonstrated higher expectations of their ability to effectively utilize their skills in task performance than Korean students.

This study offers the following educational implications. First, it is essential to foster intrinsic motivation, a highly self-determined form of motivation. Jung (2013) suggested that cooperative learning can be an effective instructional strategy to enhance intrinsic motivation among Korean college students [38]. By promoting internal growth and engagement, such approaches may improve students' sense of autonomy, competence, and relatedness. According to Deci and Ryan (1985b), intrinsic motivation refers to a state in which learners are driven to engage in learning activities by feelings of accomplishment and a sense of challenge toward achieving goals [39]. Learners with high levels of intrinsic motivation are more likely to employ effective learning strategies [40], and intrinsic motivation plays a crucial role in sustaining long-term learning engagement [41]. In contrast to Chinese students, Korean students often exhibit lower levels of self-determined regulation. Therefore, instructors should support the development of intrinsic motivation among Korean students by employing diverse and engaging instructional designs.

Second, it is necessary to establish an educational environment that fosters the development of self-determined learning motivation among students [42]. Instructors must first recognize the importance of self-determined learning motivation in university students, as well as understand that such motivation can be shaped and enhanced by the learning environment. To encourage students to engage in learning with a sense of self-determination, multifaceted support is required. In this regard, instructors should create an autonomy-supportive environment that meets students' basic psychological needs for autonomy, competence, and relatedness. This includes providing students with greater autonomy during class, offering feedback that fosters a sense of competence, and building mutual trust between instructors and learners [43].

We suggest ideas for further research in light of this study's limitations. The participants of this study focused on the freshmen of college in Korea and China, so it cannot be generalized. Thus, future studies should compare and analyze various factors such as age, major, and region

between Korea and China. Second, due to the lack of test scores, we did not investigate the relationship between self-determination learning motivation, academic self-efficacy, and academic achievement. Thus, the relationship between academic achievement and other factors should be further investigated. Third, since the study uses a survey methodology, it was limited in its ability to control for personal characteristics and factors. Therefore, further study should include in-deep interviews and longitudinal research.

Author Contribution

Conceptualization: Hee-Joo Im and Young-Lim Lee
Data collection: Hee-Joo Im and Qian-Mei Zhang
Writing-original draft: Hee-Joo Im and Young-Lim Lee
Writing-review & editing: Hee-Joo Im and Young-Lim Lee

ORCID

Hee-Joo Im: https://orcid.org/0000-0002-3952-8190
Qian-Mei Zhang: https://orcid.org/0009-0006-3376
Young-Lim Lee: https://orcid.org/0000-0002-0672-6430

Conflicts of Interest

The authors declare no conflict of interest.

References

1. McInerney DM, Ali J. Multidimensional and hierarchical assessment of school motivation: Cross-cultural validation. Educational Psychology. 2006; 26(6): 717–734. https://doi.org/10.1080/01443410500342559
2. Deci EL, Ryan RM. Intrinsic motivation and self-determination in human behavior. New York: Plenum. 1985a: 3-40.
3. Ryan RM, Deci EL. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American Psychologist. 2000a; 55(1): 68. https://doi.org/10.1037/0003-066X.55.1.68
4. Peng R, Fu R. The effect of Chinese EFL students' learning motivation on learning outcomes within a blended learning environment. Australasian Journal of Educational Technology. 2021; 37(6): 61-74. https://doi.org/10.14742/ajet.6235
5. Feng HY, Fan JJ. Yang HZ. The relationship of learning motivation and achievement in EFL: Gender as an intermediated variable. Educational Research International. 2013; 2(2): 50-58.
6. Huang C. Gender differences in academic self-efficacy: A meta-analysis. European Journal of Psychology of Education. 2013; 28: 1-35. https://doi.org/10.1007/s10212-011-0097-y
7. Yeung, A. S., Lau, S., & Nie, Y. Primary and secondary students' motivation in learning English: Grade and gender differences. Contemporary Educational Psychology. 2011; 36(3): 246-256.
8. Bandura, A. Self-efficacy: toward a unifying theory of behavioral change. Psychological Review. 1977; 84(2): 191.
9. Bandura, A. Bandura (Vol. 2). Milan: Franco Angeli; 1997: 36-78.
10. Yang JH. Self-efficacy as moderator in entrepreneurship education and entrepreneurial intention: Comparison between Korean and Chinese university students. The Journal of Small Business Innovation. 2016; 19(1): 17-35.
11. Seker M. The use of self-regulation strategies by foreign language learners and its role in language achievement. Language Teaching Research. 2016; 20: 600-618. https://doi.org/10.1177/1362168815578555
12. Stubbs NS, Maynard D-MB. Academic self-efficacy, school engagement, and family functioning among postsecondary students in the Caribbean. Journal of Child and Family Studies. 2017; 26: 792-799.
13. Kim TY, Kim YK. EFL Learning Motivation in Korea: Historical Background and Current Situation [A]. In: Lamb M, Ryan S, Csizer K, Henry A. Palgrave Macmillan handbook of motivation for language learning[C]. London: Palgrave Macmillan; 2019: 1-23.
14. Park Y, Kim S. The role of job-search self-efficacy in the relationship of career decision level and career preparation behavior among college students. Journal of Vocational Education Research. 2014; 33: 85-101.
15. Chen, Y. L2 motivational self system, self-efficacy, language anxiety and motivated oral participation in class. Foreign Language Research. 2019; 1: 63-70.
16. Huo W, Rui YP. The mediating effect of the second language motivational self-system between self-efficacy and English proficiency. Journal of Xi'an International Studies University. 2020; 28(2): 54-58.
17. Teng MF, Yang Z. Metacognition, motivation, self-efficacy belief, and English learning achievement in online learning: Longitudinal mediation modeling approach. Innovation in Language Learning and Teaching. 2022; 17(4): 778-794. https://doi.org/10.1080/17501229.2022.2144327
18. Xiong WW, Shen HY. Relationship with academic

achievement and demotivation: Mesomeric effect of self-efficacy: Illustrate by English major students in open education. Xiandian Yuanjuli Jiaoyu. 2016; 5: 24-30.
19. Chang YC, Tsai,YT. The effect of university students' emotional intelligence, learning motivation and self-efficacy on their academic achievement: Online English courses. Frontiers in Psychology. 2022; 13: 1-11. https://doi.org/10.3389/fpsyg.2022.818929
20. You CJ, Dörnyei Z, Csizér K. Motivation, vision, and gender: A survey of learners of English in China. Language Learning. 2015; 66(1): 94-123. https://doi.org/10.1111/lang.12140
21. Li H. Empirical research on college students' English autonomous learning ability and self-efficacy. Modern Foreign Languages (Bimonthly). 2016; 39(2): 235-245.
22. Kim TY, Kim YK. The effect of Korean secondary school students' perceptual learning styles and ideal L2 self on motivated L2 behavior and English proficiency. Korean Journal of English Language and Linguistics. 2012; 11: 21-42.
23. Kim HM, Ra YA. Effect of academic self-efficacy and career decision level on career preparation behavior of South Korean college students. International Journal of Environmental Research and Public Health. 2022; 19(20): 13705.
24. Jeon YA. comparative study on the self-determination learning motivation and learning flow between adult continuing learner and college student in higher education institution [Master's Thesis]. Busan: Dong Eui University, 2012.
25. Ryan RM, Connell JP. Perceived locus of causality and internalization: Examining reasons for acting in two domains. Journal of Personality and Social Psychology. 1989; 57(5): 749-761. https://doi.org/10.1037/0022-3514.57.5.749
26. Ryan RM, Deci EI. Intrinsic and extrinsic motivations: Classic definitions and new directions. Contemporary Educational Psychology. 2000b; 25(1): 54-67. https://doi.org/10.1006/ceps.1999.1020
27 Park B, Lee JU, Hong S. Reconstructing the classificatory pattern of learning motivation proposed by self-determination theory. Korean Journal of Educational Psychology. 2005; 19(3): 699-717.
28. Kim A, Park I. Construction and validation of academic self-efficacy scale. The Journal of Educational Research. 2001; 39(1): 95-123.
29. The jamovi project; Jamovi. (Version 2.3) [Computer Software] [Internet]. 2022 [cited 2025 Feb 12]. Available from: https://www.jamovi.org
30. R core team. R: A language and environment for statistical computing. (Version 4.1) [Computer software] [Internet]. 2021. [Cited 2025 Feb 05]. Available from: https://cran.r-project.org. (R packages retrieved from MRAN snapshot 2022-01-01)
31. Revelle W. Psych: Procedures for psychological, psychometric, and personality research. [R package] [Internet]. 2019. [Cited 2025 Jan 03]. Available from: https://cran.r-project.org/package=psych
32. Fox J, Weisberg S. Car: Companion to applied regression. [R package] [Internet]. 2020. [Cited 2025 Feb 10]. Available from: https://cran.r-project.org/package=car
33. JASP Team. JASP. [Computer software] [Internet]. 2018. [Cited 2025 Feb 10]. Available from: https://jasp-stats.org
34. Morey R.D, Rouder JN. Bayes factor: Computation of bayes factors for common designs. [R package] [Internet]. 2018. [Cited 2025 Feb 10]. Available from: https://cran.r-project.org/package=BayesFactor
35. Rouder JN, Morey RD, Speckman PL, Province JM. Default Bayes factors for ANOVA designs. Journal of Mathematical Psychology. 2012; 56(5): 356-374. https://doi.org/10.1016/j.jmp.2012.08.001
36. Gao HY. The differences in academic burnout and academic failure tolerance between motivation types. Asian Journal of Education. 2012; 13(1): 125-147.
37. Kim DY, Yang SE. A comparative study on academic achievement motivation, parental expectation, teacher expectation, and self-efficacy of Korean and Chinese-Korean adolescents. Korean Journal of Human Ecology. 2009; 18(3): 41-656. https://doi.org/10.5934/KJHE.2009.18.3.641
38. Jung JE. The effects of structure-centered cooperative learning on basic psychological needs, self-determination motivation and self-regulated learning. [Master's Thesis]. Seoul: Seoul National University, 2013.
39. Deci EL, Ryan RM. Conceptualizations of intrinsic motivation and self-determination. In Intrinsic motivation and self-determination in human behavior (pp. 11-40). Springer, Boston, MA. 1985b: 11-40.
40. Park CK. The analysis of the cause-and-effect relation ship among college students' intrinsic motivation, metacognitive strategies, and academic achievement. Jungang English Language and Literature Association. 2022; 64(2): 151-171. https://doi.org/10.18853/jjell.2022.64.2.007
41. McEown MS, Noels KA, Chaffee KE. At the interface of the socio-educational model, self-determination theory and the L2 motivational self system models. The Impact of Self-concept on Language Learning. 2014; 79: 19-50.
42. Lee JH. Analysis of the structural relationships be-

tween mastery goals orientation, academic self-efficacy, self-determining motivation to learn and learning flow. The Journal of Korean Education. 2009; 36(3): 5-26.

43. Kim SJ, Jang HS. Conceptual view of using the self-determination theory in foreign language classrooms. Studies in Foreign Language Education. 2019; 33(2): 229-256. https://doi.org/10.16933/sfle.2019.33.2.229