

Chinese Undergraduate Students' Motivation to Learn L2 English and L3 Korean Simultaneously*

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Lin, Su; Shim, Jaewoo & Lee, Heechul. (2023). Chinese undergraduate students' motivation to learn L2 English and L3 Korean simultaneously. *The Linguistic Association of Korea Journal*, 31(3), 69-88. This study examined the motivation of undergraduate students in a Sino-Korean joint education programme to learn two foreign languages simultaneously, specially L2 English and L3 Korean. Using Dörnyei's L2 Motivational Self System (L2MSS), the relationship between participants' intended effort in L2 and L3 learning and other variables in L2 and L3 motivational systems was explored. A total of 222 subjects completed the 6-point Likert Scale questionnaire, and the collected data were processed using SPSS. Besides the descriptive statistics, canonical correlation analysis was conducted to examine the relationship between L2 and L3 intended effort and other constructs, including ideal L2/L3 self, ought-to L2/L3 self, L2/L3 positive learning experience, and L2/L3 negative learning experience. Research results showed an intermediate level of motivation for both L2 and L3. Canonical correlation analysis revealed that L2 together with L3 intended effort in the dependent variable set shared approximately 75.6% variance with the linear combination of the other constructs in the independent variable set, indicating that L2MSS is explanatory for simultaneous language learning. Moreover, the results also indicated that L3 negative learning experience had positive influence on L2 intend effort, suggesting an interaction between L2 and L3 motivational systems among the subjects. Based on the findings, activities that could stimulate learners' ideal multilingual self are proposed.

* This paper was supported by research funds of Jeonbuk National University in 2023(Jaewoo Shim). This research was supported by "Research Base Construction Fund Support Program" funded by Jeonbuk National University in 2023(Heechul Lee).

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Key Words: L2MSS, L2 motivation, Korean as a LOTE, simultaneous language learning motivation

1. Introduction

Along with the rise of economic globalization and population migration, Global English has become a lingua franca, leading to an increasing number of individuals learning more than one language (Boo et al., 2015; Douglas Fir Group, 2016; Mendoza & Phung, 2019). Traditionally, proficiency in additional language is identified as an advantage that could help learners earn an edge in the competitive globe job market (Graddol, 2006; Henry, 2017; Ushioda, 2017). However, recent research extends this instrumental view and emphasizes language learning as a process to explore and expand the accessible linguistic and cultural resources (Dörnyei & Al-Hoorie, 2017; Henry, 2017; Ushioda, 2017). In this vein, learning several languages simultaneously is a holistic human being cultivation process rather than the development of separate linguistic skills or competence of a single language (Henry, 2017; Ushioda, 2017).

Motivation is significant in predicting language learning success (Boo et al., 2015; Lanvers, 2016; MacIntyre, 2010; Ushioda, 2016). Dörnyei's L2 Motivational Self System (L2MSS) offers a self-based perspective on understanding language learners' motivation, providing comprehensive and deeper insights into second language (L2) learning motivation (Dörnyei, 2019; Dörnyei & Al-Hoorie, 2017; Henry, 2017; Ushioda, 2016). This theory, which supports that learners' mental imagery of a desired future as the threshold of learning behavior, consists of three prominent factors of motivation: the *ideal L2 self*, the *ought-to L2 self* and the *L2 learning experience* (Dörnyei, 2009). L2MSS has been used widely to explore motivation to learn English (Csizér & Kormos, 2009; Kormos et al., 2011; Papi, 2010; Taguchi et al., 2009; You & Dörnyei, 2016) and Languages Other Than English (LOTES) (Huang et al., 2019; Oakes, 2013; Sugita McEown et al., 2017; etc.). However, most studies focused on specific language learning separately. Regarding motivation to learn multiple languages simultaneously, empirical studies indicated the existence of separate motivational self systems for learning L2 and L3 (Dörnyei & Chan, 2013; Henry, 2010, 2011; Ushioda, 2017). Some studies suggest that English learning provides a reference yardstick for learning additional LOTES. And usually, it is considered that English learning will exert negative impact on motivation to learn LOTES (e.g.,

Henry, 2014, 2017; Siridetkoon & Dewaele, 2017; Wang & Zheng, 2019). Additionally, the influence of L3 learning on L2 learning has also been investigated (Huang et al., 2022). Some also argue that for simultaneous language learning, an independent multilingual motivational system will emerge when there is an interaction between Lx and Ly motivational systems (Henry, 2017; Wang & Zheng, 2019). Considering the scarcity of research on examining simultaneous language learners' intended effort and the considerable number of undergraduate students who are learning L2 English and L3 Korean, this study adopts a holistic view of language learning, using Canonical Correlation Analysis (CCA) to study the variables in L2MSS that could influence learning effort in L2 English and L3 Korean.

2. Literature Review

2.1. L2 Motivation and L2MSS

Motivation is widely recognized as a pivotal element in fostering successful L2 learning (Boo et al., 2015; Lanvers, 2016; MacIntyre, 2010; Ushioda, 2016). L2 motivation study has evolved through several stages over the past few decades. Initially, research in L2 motivation focused on the *integrativeness* and *instrumentality* (Gardner & Lambert, 1959). *Integrativeness* means language learners' intention to be integrated or accepted by the community of target language users, while *instrumentality* implies learning and using L2 for practical purposes such as job opportunities or career promotions. And this dichotomy model later expanded to a social-educational model in which other factors such as *attitude to learning L2* and *attitude toward community* are also incorporated (Dörnyei, 2009; Dörnyei & Ryan, 2015). Another trend of L2 motivation research explored the influence of situated and cognitive factors on L2 motivation. What is noteworthy is that macro social factors have been narrowed down and factors in "actual learning situations (such as language classrooms)" (Dörnyei & Ryan, 2015, p. 80) are highlighted.

Based on the development of psychology and the dissatisfaction with the previous theory, Dörnyei and his colleagues developed L2 Motivational Self System, which shifted the focus to a self-based perspective in studying L2 motivation (Dörnyei, 2009; Dörnyei & Ryan, 2015). Three prominent factors in L2MSS are *ideal L2 self*, *ought-to L2 self*, and *L2 learning experience*. While *ideal L2 self* refers to learners' wishes or hopes that they desire to

do with the use of L2, *ought-to L2 self* refers to what they feel obligatory to do with learning and using L2, that is, how they measure other people, such as their family members or peers' opinion on L2 learning. L2 learning experience measures learners' affective evaluation toward the learning situation into which "textbook, curriculum, teacher-student relationship, and peer pressure" are incorporated. In this model, *ideal L2 self* and *ought-to L2 self* are considered as future self guides that could stimulate learner motivation and cognitive planning. However, the effect of these two self guides is not equal (Henry, 2011, 2014; Siridetkoon & Dewaele, 2017; Wang & Zheng, 2019). While *ideal L2 self* serves a significant predictor of L2 intended effort (Csizér & Kormos, 2009; Kong et al., 2018; Kormos et al., 2011; Palmieri, 2017; Papi, 2010; Taguchi, et al., 2009), the effect of *ought-to L2 self* on L2 intended effort differs depending on the specific language investigated and the context in which studies are conducted (Csizér & Dörnyei, 2005; Huang et al., 2015; Kormos et al., 2011; Oakes, 2013). Recent study shows that *L2 learning experience*, among the three factors, is the most significant predictor of LOTE learning effort (Huang et al., 2019).

2.2. Motivation to Learn two Foreign Languages Simultaneously

While there is growing **interest in** motivation to learn LOTEs (Fukui & Yashima, 2021; Mendoza & Phung, 2019), simultaneous language learning, where learners engage in learning multiple foreign languages, has received limited research attention (Lasagabaster, 2017; Liu & Oga-Baldwin, 2022). In the field of motivation to learn multiple foreign languages, it is widely recognized that motivational systems associated with specific languages differ, and the motivation to learn multiple foreign languages is not evenly distributed among learners (Huang et al., 2019; Siridetkoon & Dewaele, 2017; Wang & Zheng, 2019). Also, the study of LOTE learning often exists in the shadow of L2 English learning, as L3 or LOTE learning is associated with precedent L2 English learning, which has been widely introduced earlier in academic curricula due to its status as a *lingua franca* (Ushioda, 2017; Wang & Zheng, 2019). Most studies tend to focus on separate motivation systems associated with a specific language and studies on motivation to learn multiple languages at the same time remain limited (Henry, 2011, 2014; Siridetkoon & Dewaele, 2017; Wang & Zheng, 2019).

Some studies have primarily examined the influence of L2 English motivation on L3 learning motivation. Findings suggest that L2 English learning motivation may interfere

with or exert negative impact on LOTE learning (Dörnyei & Csizer, 2006; Henry, 2010; Lasagabaster, 2017). In addition, studies conducted in Sweden reveal that L2 English self-concepts (e.g., *ideal L2 self*, *ought-to L2 self*) and L2 learning experience are still active in L3 German/French/Russian self-concept in simultaneous language learners' cognition, working as a yardstick or referential standard for learning LOTEs (Henry 2010, 2011).

Although existing research has emphasized the impact of L2 English motivation on L3 learning, the reverse relationship, the adverse effect of L3 motivation on L2 English learning, has also been investigated. For instance, Huang et al. (2022) conducted a study among language learners in a Chinese university, and found that in the first year of simultaneous language learning, there was no statistic significance in their English writing proficiency between learners who are learning L2 English and L3 Russian and learners of English majors, suggesting L3 learning doesn't impede L2 learning motivation during the initial phase.

The interplay of simultaneous language learners' self-concepts in separate language self-systems has been captured in some studies, showing that English could threaten and stimulate LOTE learning at the same time (as cited in Huang et al., 2022). For instance, a qualitative study conducted in a Thailand university by Siridetkoon and Dewaele (2017) found that these simultaneous language learners' *ideal L3 Chinese/Korean/Japanese self* is strongly associated with their feared L2 English self. In a longitudinal study conducted in Switzerland, by Costache et al. (2022), a higher initial value belief in L2 English was associated with a sharper decrease in their value belief in LOTE German and French; however, longitudinally, their stronger increase of value belief in English is connected with stronger increase in French and German. In a study of Tibetan-Chinese-English trilingual learners, Li et al. (2022) found that the intended effort to learn Chinese was predicted not only by constructs in L2 self system, but also negatively related with L3 English ought-to self and positively related with intended learning effort to learn L3 English. Therefore, the intended effort to learn L3 English was negatively related with L2 positive learning experience and positively related to L2 intended learning effort.

2.3. Korean Learning In Sino-Korean Joint Training Programs in China

Since the turn of the 21st century, Chinese universities have been implementing Sino-foreign joint education programs to introduce high-quality teaching resources from overseas. According to the Supervision Platform of Chinese-Foreign Cooperation in

Running Schools, established by the Ministry of Education (<https://www.crs.jsj.edu.cn/>), there are currently 81 active cooperative education programs between Chinese and Korean universities that are still accepting enrollments. The number of students enrolled in each program ranges from 30 to 160. To be admitted into these programs, students must successfully complete the National College Entrance Examination and meet the admission standards of the hosting Chinese university. Upon completion of all courses and meeting graduation requirements, students are awarded a graduation certificate and a bachelor's degree issued by the host Chinese university. Many of these cooperative programs offer core courses taught by professors from partner universities, which is why Korean language courses are offered starting from the first year of university. Moreover, in many regions of China, English language courses are offered from the third grade of primary school (Wang & Zheng, 2019), and English proficiency is an important criterion for undergraduate student selection. Therefore, English language instruction is a significant component of these joint education programs. Additionally, English is also a degree course in many of these Chinese-Korean joint education programs. As a result, undergraduate students in these programs typically engage in the study of two foreign languages, with English as the second language (L2) and Korean as the third language (L3).

Thus, based on complex relationship between L2 and L3 motivation among simultaneous multiple language learners, together with the paucity number of the studies in this field, this study aims to investigate Chinese undergraduate students' motivation to learn L2 English and L3 Korean simultaneously, and the research questions are:

1. What are the levels of the simultaneous language learners' motivation to learn L2 English and L3 Korean?
2. To what extent can L2 and L3 intended effort be explained by other factors in L2MSS?

3. Method

3.1. Participants

The subjects in this study are undergraduate students enrolled in a Sino-Korean joint education program offered by a comprehensive university in China. In this program, approximately one third of the core curriculum is taught by teachers from the partnering

university in South Korea. To facilitate their understanding of the courses, students in the first and second year are also provided with two Korean language courses. Also, as required by the Ministry of Education, all undergraduate students in this program have to learn English or another foreign language during the first two years of university. Thus, both English and Korean are considered as degree courses for students in this program. Furthermore, students in this program continue to learn English or Korean in the following two years in order to fulfill the requirements for further education, with the prospect to be enrolled into graduate schools in China, south Korea, or European and American countries. As a result, the learning of English and/or Korean remains a significant part of their university life spanning four years.

In this study, a total of 230 individuals answered and submitted the questionnaire. Among them, 222 (140 female, 80 male, 2 not mentioned their gender) provided complete and valid information. The sample consisted of students from different academic years, including 68 freshmen, 74 sophomores, 47 juniors, and 33 seniors. Of all the subjects, 201 of them (90.5%) reported having studied English for more than six years prior this study, while all subjects reported initiating their Korean language learning after they were enrolled into the joint program. Regarding their proficiency in Korean, 174 subjects identified themselves as beginner learners. Additionally, 19 subjects reported they had passed TOPIK 2, while 29 subjects had achieved a TOPIK level of 3 or higher.

3.2. Instrument

Employing a 6-point Likert scale, a self-reported questionnaire was adopted to answer the research questions of this study. The questionnaire consisted of three parts, each serving a specific purpose. The first part focused on the demographic information regarding the subjects' English and Korean learning backgrounds. The second and the third parts concentrated on the subjects' motivation to L2 English and L3 Korean, respectively, based on the theoretical framework of L2MSS. There are 29 items for the second and the third part of the questionnaire respectively. The main constructs in this questionnaire include L2/L3 Intended Effort(IE), Ideal L2/L3 Self(IS), Ought-to L2/L3 Self(OS), and L2/L3 Learning Experience. Items of L2/L3IE, L2/L3IS, L2/L3OS in this questionnaire were adapted primarily from Taguchi et al.'s (2009) study. The items concerning *L2/L3 learning experience* were mainly derived from Moskovsky et al.'s (2016) research and were further divided into L2/L3 positive learning experience(PLE) and

L2/L3 negative learning experience(NLE). This division aimed to gain a better understanding of subjects' evaluation on their language learning experience, particularly in relation to "the teacher, textbook, peer group and instant L2/L3 class experience" (Dörnyei, 2019; Li et al., 2022). In summary, constructs encompassed in the questionnaire are described briefly below:

- L2/L3IE (6 items): mainly measuring subjects' current and planned L2/L3 learning effort.
- L2/L3IS (5 items): mainly describing or addressing subjects' desires or aspiration to use L2/L3 in the future.
- L2/L3OS (6 items): what a language learner should do with respect to the current or future use of a language, usually associated with learners' social or family obligations, fear of failures in examinations or promotions (Dörnyei, 2009, 2019; Li et al., 2022).
- L2/L3LE (10 items): focusing on learners' evaluation of their overall L2/L3 experience, in which "the teacher, textbook, peer group and L2/L3 classroom anxiety" (Li et al., 2022, p. 2871) are included.

After the compilation of the questionnaire, it was translated into Chinese. The translation of items pertinent to constructs L2/L3 PLE and L2/L3NLE referred to items in Li et al. (2022). To ensure the accuracy, a back-translation was conducted by a bilingual background colleague. Through careful consideration and discussion about the discrepancies, the questionnaire was revised. Subsequently, the revised questionnaire was distributed to three college students who had a similar education background. Their feedback was also considered, which led to further refinements. The validity of all constructs in Chinese context has been proven in studies of Taguchi et al. (2009) and Li et al. (2022). Moreover, the internal reliability of the second and third parts of the questionnaire, as well as all constructs in this study, was tested separately. The results of these reliability tests are listed in the following Table 1.

Table 1. Internal reliability of constructs and the entire L2/L3 motivation questionnaire

Construct	Internal reliability					
	L2/L3IE	L2/L3IS	L2/L3OS	L2/L3PLE	L2/L3NLE	L2/L3 motivation
Cronbach's alpha	.859/.878	.848/.883	.707/.811	.856/.869	.747/.795	.903/.918

3.3. Data Collection and Analysis

The study was carried out during the class break at the beginning of the spring semester in 2023. Four teachers in this joint education program were invited to introduce the study to the students. During their break time, a brief introduction of the study was provided to the students, followed by the display of a QR code on the electronic screen in the classroom. Once scanned, the QR code directed potential subjects to the website where the questionnaire has been uploaded beforehand. It was expected that the subjects would complete the questionnaire within eight minutes during the class break. Once the questionnaires were collected, the data were sent for processing in SPSS for descriptive and inferential information.

3.4. Results

Table 2 demonstrates the descriptive statistics of the constructs, with the variables ranked based on their mean scores. Among these variables, L2IS stand out with the highest mean score of 3.9730. Following closely is L3PLE with a mean score of 3.9695. L2IE and L3IE come next with mean scores of 3.836 and 3.8078, respectively. On the other hand, L2NLE and L3NLE have the lowest mean scores of 3.3883 and 3.3486, respectively.

The Pearson correlation coefficients among these variables are also presented in Table 2. The highest score was observed between L3IE and L3PLE (0.802), followed by L2IE and L2PLE (0.796), L3PLE and L3IS (0.759), L2IE and L2IS (0.703). Since all the Pearson correlation coefficients are below 0.90, there is no consideration for collinearity.

To answer the second research question, CCA was performed to examine the extent to which L2 and L3 intended effort could be explained by other motivational variables, including *ideal L2/L3 self*, *ought-to L2/L3 self*, *L2/L3 positive language experience*, and *L2/L3 negative learning experience*. The results, as shown in Table 3 indicate that the canonical model is statistically significant (Wilks'=.06015, $p<0.001$). Furthermore, two canonical roots are statistically significant (Root 1: $R_c=.88672$, Wilks's (16) =0.06015, $p<0.001$; Root 2: $R_c=.84769$, Wilks's (7) =0.28141, $p<0.001$).

Table 2. Means, Standard Deviations, and Pearson Correlation Coefficients for L2/L3 Motivational Variables

	1	2	3	4	5	6	7	8	9	10
1 L2IE	1									
2 L2IS	.703**	1								
3 L2OS	.645**	.608**	1							
4 L2PLE	.796**	.640**	.605**	1						
5 L2NLE	-.210**	-.130	.009	-.235**	1					
6 L3IE	.251**	.194**	.240**	.297**	-.044	1				
7 L3IS	.243**	.311**	.232**	.319**	-.037	.831**	1			
8 L3OS	.243**	.119	.390**	.364**	.046	.662**	.631**	1		
9 L3PLE	.266**	.248**	.284**	.359**	-.033	.802**	.759**	.603*	1	
10 L3NLE	.216**	.116	.151*	.181**	.216**	-.257**	-.200**	.094	-.310**	1
M	3.836	3.9730	3.7874	3.7725	3.3883	3.8078	3.7910	3.5234	3.9695	3.3486
SD	.9232	.98550	.87697	.82800	.87398	.96043	1.01567	.94658	.82101	.92373

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 3. Canonical Correlations, Wilks's Lambda tests of significance, and Variance Explained by canonical variates

	R_c	Wilks's Test	df	p	R_c^2
1	.88672	.06015	16	.000	.78627
2	.84769	.28141	7	.000	.71859

Table 4 displays import indices of CCA. The redundancy of Root 1, which is the result of the squared correlation coefficient 0.786 multiplying the PV value 0.552, is 43.368%. This indicates that nearly 43.37% of the variance is shared by the two sets of variables; Similarly, the redundancy of Root 2 is 32.224%, showing that 32.22% of variance is shared by the two sets. The total redundancy 78.627% suggests that 78.6% shared variance can be explained by the two sets of variables. To be specific, 78.6% variance in the dependent set of L2IE and L3IE can be explained by the linear combination of L2IS, L2OS, L2PLE, L2NLE, L3IS, L3OS, L3PLE, and L3NLE.

Table 4. Structure coefficients, Standardized Coefficients, Percentages of Variance, and Redundancies Between L2 and L3 intended effort and Self-based motivational variables (structure coefficients higher than 0.30 are written in bold)

Construct	First Canonical Variate		Second Canonical Variate		Total
	Structure Coefficient	Standardized canonical coefficients	Structure Coefficient	Standardized canonical coefficients	
Dependent variable set: Language Learning Effort					
L2IE	.33225	.08798	.94319	1.02924	
L3IE	.99637	.97431	-.08517	-3.4322	
Percentage of variance	.55157		.44843		
Redundancy	43.368		32.224		75.592
Independent variable set: Self-based Motivational variables					
L2IS	.28240	-.04964	.77493	.31801	
L2OS	.32815	.04070	.68630	.23767	
L2PLE	.40473	.05276	.84688	.59568	
L2NLE	-.06731	-.02218	-.23639	-.09563	
L3IS	.94224	.53517	-.03944	-.21015	
L3OS	.75358	.18036	.02800	-.16463	
L3PLE	.90737	.35459	-.00214	-.05651	
L3NLE	-.25986	-.06117	.36898	.16149	
Canonical correlation	.88672		.84769		

Table 4 presents the structure coefficients and the standardized canonical coefficient for each canonical variate. In CCA, a structure coefficient cutoff of 0.30 is considered as meaningful to interpret the contribution to the canonical covariate (Knoeppel et al., 2007). The standardized canonical coefficient reveals the relative importance of the variables in the linear combination. Accordingly, for the first canonical variate, variables of L3IS (structure coefficient=0.942), L3PLE (0.907), L3OS (0.754), L2PLE (0.405), and L2OS (0.328) in the independent variable set are considered significantly correlated with L2IE and L3IE. Among these variables, L3IS and L3PLE are considered to be more significant contributor to predict the independent canonical variate, since their standardized canonical coefficients (0.532 and 0.355 respectively) indicating their relatively greater importance in predicting

power. On the dependent variable side, L2IE and L3IE have structure coefficients of 0.332 and 0.996, respectively, suggesting that both L2IE and L3IE contribute to the dependent canonical variate. In addition, a significant correlation is found between the independent variable set and the dependent variable set. Thus, variables of L3IS, L3PLE, L3OS, and L2PLE are considered as associated with L3IE and L2IE. The redundancy of this canonical variate is 0.43368, indicating that 43.37 % variance of the dependent variable set can be explained by the linear combination of L3IS, L3PLE, L3OS, and L2PLE in the independent variable set.

In the second canonical variate, the variables of L2PLE, L2IS, L2OS, and L3NLE with structure coefficients of 0.84688, 0.77493, 0.68630, and 0.369898, respectively, are regarded as predictors of the independent canonical variate. When sorted by their relative importance to the canonical variate, they are L2PLE (0.59568), L2IS (0.31801), L2OS (0.23767), and L3NLE (0.16149) in order. Accordingly, the second canonical variate mainly reflects the influence of variables related to L2 English learning together with L3NLE. Considering the structure coefficient of L3IE (-0.08517) in the dependent variable set is below 0.30, it is considered insignificant in predicting the dependent canonical variate. Thus, the second canonical function mainly indicates that the variable of L2IE in the dependent variate share variance with the linear combination of L2PLE, L2IS, L2OS, and L3NLE in the independent variate. The redundancy of this canonical variate is 0.32224, suggesting 32.22% variance is shared by L2IE in the independent variable set and the linear combination of L2PLE, L2IS, L2OS, and L3NLE in the independent variable set.

4. Discussion

To answer the first research question, the means and standard deviations of each variable was calculated. As presented in Table 2, the mean scores of all ten constructs ranged from 3.3 to 4 points out of 6, indicating a moderate level of motivation among learners of multiple foreign languages (e.g., L2 English and L3 Korean). Comparing the results with a previous study conducted in Taiwan (Huang, 2019), the mean scores for the two self-guides to learn English (L2IS, 3.97 out of 6 points; L2OS 3.79 out of 6 points) are comparatively lower than those of their counterparts in Taiwan (L2IS 4.09 out of 5 points; L2OS 4.23 out of 5 points). With regard to their motivation to learn L3 Korean, the scores of L3IE, L3IS, and L3OS were lower compared to the corresponding variables in the

motivation to learn LOTEs for university students in Taiwan (Huang, 2019), indicating the need to enhance motivation for both L2 and L3 among the subjects.

Among all the variables, L2IS, with the mean score of 3.973, ranked first. The highest mean score of L2IS reflected simultaneous language learners' desire or aspirations to utilize L2 English proficiently in their future. Following closely was L3PLE with a mean score of 3.970, suggestive of subjects' contentment with situational Korean learning context, which is encompassed factors such as the textbook, curriculum, teachers' lecturing style, and interaction with peers (Moskovsky et al., 2016; Dörnyei, 2019; Li et al., 2022). The higher mean score of L2IE implied that subjects tended to prioritize investing time and energy learning English despite the difficulty of simultaneously learning two foreign languages. The higher mean scores of L2IS and L2IE underscored the importance of L2 English learning held by the simultaneous language learners in Chinese universities. This preference may have stemmed from the instrumental value that undergraduate students in China often attribute to English learning, as they hope that mastery or high English proficiency will help them gain a competitive advantage in the future job market (Wang & Zheng, 2019).

To address the second question, canonical correlation analysis was performed, which yielded the following insights. Overall, the total redundancy of 75.59% shared by the two canonical variates demonstrates that the cumulative variance explained by the two canonical function was high. L3IS, L2OS, L3OS, L2PLE, L3PLE and L3NLE in the independent variate are significantly correlated with L2 and L3 intended effort in the dependent variable. This result suggests that learners' intended effort to learn multiple languages simultaneously is significantly correlated with the main constructs in L2MSS. This study, together with previous studies examining motivation for single language learning (Huang et al., 2019; Oakes, 2013; Sugita McEown et al., 2017; Taguchi et al., 2009 etc.), illustrates that L2MSS could be employed to explore learners' intended effort for either a single language or multiple languages.

Secondly, the first CCA root is 43.368%, showing that approximately 43.4% of the pooled variance exist between L2IE and L3IE in the dependent variate and the linear combination of L3IS, L3OS, L3PLE, L2IS, L2PLE, and L2OS in the independent variate. When considering the structure coefficients in descending order, they are L3IS, L3PLE, L3OS, L2PLE, L2OS, and L2IS. By far three variables in L3 motivational system emerge as important contributors to the canonical variate of the independent variable set, underscoring the high value placed on L3 Korean learning by the subjects. This result is

in agreement with the argument that the motivation to learn multiple languages simultaneously is not evenly distributed among learners (Liu & Oga-Baldwin, 2022). With regard to their comparative importance, the result implies that L3IS and L3PLE have greater contributors to the first canonical variate. While the importance of *ideal L2/L3 self* as a self-guide has been proved in many studies, the relationship between L2/L3 learning experience and L2/L3 intended effort has been understudied (Huang, 2019; Moskovsky et al., 2016). Notably, a study conducted in Taiwan reveals that the L2/L3 learning experience outweighs other motivational factors and serves as the most robust predictor of L2/LOTE motivation (Huang, 2019). However, in this study, L3IS emerges as the most important contributor to canonical variate, closely followed by L3PLE. Possible reason for this difference may lie in the fact that subjects in this study have already known the compulsory nature of L3 Korean learning prior to the enrollment and the plausibility of studying in South Korea as exchange students or pursuing graduate school in Korean universities. As a result, the subjects in this study developed a vivid vision of utilizing L3 Korean from the initial stages, thereby establishing L3IS as the most influential contributor to the canonical variate of the independent variable set.

Additionally, the second canonical root 32.224% indicates that the shared variance between L2IE in the dependent variable set and the linear combination of L2IS, L2OS, L2PLE and L3NLE in the independent variable set amount to 32.2%. Notably, L3NLE is emerging as a significant contributor to the independent canonical variate, indicating its association with L2IE in the dependent variate and thus suggesting an interaction between the constructs of the two separate language motivational systems. Furthermore, the positive correlation between L3NLE and L2IE, implies that L3 learning experience is interfering with L2IE, supporting the notion that L2 and L3 motivational systems are competing for the limited cognitive and affective resources (Ushioda, 2017). This finding complementing another argument that English learning, being L2 or L3, will exert negative impact on LOTE motivation, indicates that L2 and L3 learning motivation could be interfering with each other. The significance of L2PLE to L2IE in this study is in alignment with the result in studies conducted in Greater China, which shows among the three predominant variables in L2MSS, L2 learning experience ranks the robust indicator of intended effort for English (Huang, 2019; Li et al., 2022). L2 learning experience in this study mainly investigates learners' engagement in the "immediate or situated learning context", in which factors such as the textbook, curriculum, teachers and peers" are encapsulated. Thus, this result indicates that along with institutional factors, societal

factors such as teacher-student relationship may also influence L2 learning motivation. It also corroborates with what is illustrated in previous studies that establishing positive teacher-student relationship brings about advantageous impacts on L2 motivation (Busse, 2017; Henry & Thorsen, 2018).

It is notable that while L2PLE significantly influence the intended effort of simultaneous language learners, there is no statistical correlation between L2NLE and language learning effort. Possible reasons why L2NLE is neglected or counteracted by the learners may resort to English's presumably predominate position as a lingua franca and its pragmatic role in learners' desired future life (Busse, 2017). With the continuous advancement of globalization, English proficiency is considered a necessity for undergraduates to enhance competitiveness in the future job market. In addition, students in Chinese universities also have strong aspirations to pursue further education in graduate schools, both domestically and internationally, where English proficiency serves as a threshold or gatekeeper for further study. In this line, undergraduates could focus on the positive side of their L2 learning experience.

5. Implications

Based on the descriptive statistics, it is observed that the mean scores for the motivation variables are not high. This suggests that the motivation to learn two foreign languages among Chinese undergraduate students needs improvement. The mandatory nature of these two courses alone may not be sufficient to ensure high learner motivation. It is crucial to explore additional strategies to enhance learner motivation among multiple language learners. A potential one is to introduce a reachable desired future self, which learners believe they can be achieved through dedicated work and effort (Li, et al., 2022). Meanwhile, emphasizing the importance of vision as a strong motivator for long-time, even lifelong learning effort is crucial (Lasagabaster, 2017). Consequently, teachers are encouraged to incorporate more activities that could integrate learner visions of becoming proficient language users and language skills development into their teaching practices (Dörnyei & Chan, 2013; Safdari, 2021). In addition, canonical correlation analysis shows that L2 English and L3 Korean motivation held by these multiple language learners is beginning to interact, though at an early stage. According to Henry (2017), when constructs in separate motivational systems begin to interact, a multilingual ideal self

emerges, which serves as a higher rank motivator to sustain learners' learning effort. Thus, it is important to facilitate learners' vision of becoming proficient in multiple languages. Additionally, cooperation between English language teachers and Korean language teachers is encouraged, as they can collaborate to design learning content and instruction language that could foster motivation to learn multiple languages simultaneously.

6. Conclusion

This study aims to investigate motivation of Chinese undergraduate students in a joint education program for L2 English and L3 Korean using the theoretical framework of L2 Motivational Self System. The results demonstrate that the subjects' motivation to learn two foreign languages simultaneously remains intermediate and there is room to improve these multilingual learners' motivation. Also, the result of canonical correlation analysis shows that the dependent variable set of L2IE and L3IE shares nearly 75.6% variance with the independent variable set of L2IS/L3IS, L2OS/L3OS, L2LE/L3LE, indicating that L2IS/L3IS, L2OS/L3OS, L2LE/L3LE are still closely related with L2IE and L3IE when they are measured together. To be more specific, the results also show that compared with L2/L3PLE, L2/L3NLE are not statistically correlated with simultaneously intended language efforts, while L3NLE is positively correlated with L2IE. The result reveals that the L2 and L3 motivation system are beginning to interact among these multiple language learners. Based on these results, a vision of using multiple languages is hoped to be introduced to the multiple language learners with the purpose of lifting up their learning motivation; and a cooperation between teachers of these two languages are called for.

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Received on August 9, 2023

Revised version received on September 22, 2023

Accepted on September 30, 2023