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Study Abroad and Motivation to Learn a Second Language: Exploring the Possibility of the L2 Motivational Self System

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Abstract

The purpose of the present study is to investigate the impact of the study abroad (SA) experience in an English-speaking country on Japanese university students. This study focuses specifically on the interplay of affective variables and L2 proficiency, using the framework of the L2 Motivational Self System. The data obtained through the questionnaires were analysed by using a multiple structural equation modelling (SEM) approach. The proposed SEM model showed that the L2 Motivational Self System could be developed into an integrative framework that accounts for not only L2 motivation but also the interplay of various affective variables and L2 proficiency all in one system. More specifically, the study found that the influences of the ideal L2 self, self-efficacy, and L2 learning attitude on motivated learning behaviour became stronger after SA experience. Additionally, L2 anxiety decreased significantly after SA. The ought-to L2 self, which had had less influence on motivated learning behaviour, turned out to have a significant positive impact on it after SA. Based on these findings, the authors argue that SA experience consolidates the robustness of L2 learners' motivation, which in turn contributes to maintenance of their motivated learning behaviour and, consequently, improvement of their L2 proficiency.

Keywords: study abroad, ideal L2 self, ought-to L2 self, L2 Motivational Self System, robustness of motivation

1. Introduction

In this age of globalisation, studying abroad (SA) has been earning considerable attention not only from educators but also from government officials in Asian countries

(OECD, 2013). Especially, in Japan, the government believes it to be imperative for its younger generation to develop their second language (L2) abilities in order to compete and cooperate with people from other countries through the experience of living and studying abroad. Thus, the Japanese Ministry of Education, Culture, Sports, Science & Technology (MEXT) launched *the Global 30 Project* and *the Super Global University Project* to financially incentivise the internationalisation of universities, thereby 'dramatically boosting the number of Japanese students studying abroad as well as international students educated in Japan' (MEXT, 2009). Accordingly, an increasing number of Japanese universities now offer SA programmes to their students to promote the learning of English as a means of global communication and to help them gain much-needed international experience.[1]

However, for the past few years, Japan still has been struggling with serious repercussions stemming from its 'inward tendency of young people' (MEXT, 2013a). The number of Japanese students studying abroad has been steadily decreasing and has reached an alarmingly low level (Haze, 2012). The economic recession, Japanese insularity, and 'cultural tendencies toward introversion and risk aversion' have been suggested as the major culprits for this trend (Fukushima, 2010; Tanikawa, 2011). In an effort to counteract this trend, MEXT plans to establish a new financial support system for universities, encouraging students to study abroad and gain higher L2 proficiency and first-hand cultural experience (MEXT, 2013b, 2014). As Ohta (2011) points out, however, providing opportunities for financial support has not, thus far, prompted Japanese students to study abroad in greater numbers, which implies that their hesitance might be due more to internal issues among learners than external (social or financial) issues. To resolve this critical situation, it therefore is vital to demonstrate clearly to students the advantages of SA experience and to show them that the influences extend not only to students' linguistic and cultural-adaptation skills, but also to their affect, learning behaviour, and quality of life. The current study thus aims to explore the impacts of SA experience on Japanese university students and to provide empirical data that can help persuade them to take advantage of SA opportunities.

2. Literature Review

A large body of research has investigated the effects of SA on language learners (see DeKeyser, 2007 and Kinginger, 2013 for a summary). Researchers in second-language acquisition (SLA) have primarily studied the effects of SA programmes on L2 proficiency gains (e.g., Brecht, Davidson & Ginburg, 1995; DeKeyser, 1991; Freed,

1990, 1993, 1995; Ginberg, 1992; Huebner, 1991; Lapkin, Hart & Swain, 1995; Reynolds-Case, 2013; Spenader, 2011; Taguchi, 2013). Of these studies, many have focused on speaking or oral proficiency, showing that students' ability to speak an L2 had improved significantly because of SA experience (e.g., Mora & Valls-Ferrer, 2012). As DeKeyser (2007) notes, this 'probably reflect[s] the fact that improvement in this area is usually seen as the main goal of study abroad' (p. 208).

In contrast, only a limited number of studies have examined the effects of SA experience on the affective aspects of L2 learners such as motivation, anxiety, learning attitude, and self-efficacy (e.g., Allen, 2010, 2013; Ingram, 2005; Mills, Pajares, & Herron, 2007; Shedivy, 2004; Skyrme, 2007; Tanaka & Ellis; 2003; Yashima & Zenuk-Nishide, 2008). This lack of research is particularly worrisome in Japan's current L2 learning environment, where affective factors are thought to be responsible for the 'inward tendency' among college students. Certain findings offer important insights, however. Among the few studies addressing SA and affect, Shedivy (2004) qualitatively investigated the effects of study abroad on L2 motivation in five L2 learners of Spanish. She stated that her investigation did not reach a definitive conclusion on whether motivational orientations may lead to continued study in the foreign language. In another study, Ingram (2005) explored whether SA experiences motivated American students to continue the study of L2 French; he found that SA experience greatly contributed not only to intensity but also to maintenance of L2 motivation.

Mills, Pajares, and Herron (2007) examined the effects of self-efficacy and motivation on achievement in U.S. students who were studying French. A survey-based study was implemented to investigate learners' self-efficacy, L2 anxiety, learning-based self-concepts, and perceived value of 'the language and its associated culture.' The results indicated that students' self-efficacy level regarding self-regulation was the most powerful predictor of French-language fluency. Allen (2010) also conducted a study on L2 motivation of U.S. students who participated in a short-term SA programme in France. She found that the L2 motivation possessed by SA students can be categorised into linguistic motivation and career-oriented motivation. In her recent study, Allen (2013) longitudinally explored motivational self-regulated strategy use of three successful L2 French learners in an SA programme. She found that the use of motivational self-regulated strategy varied according to the learners' L2 learning goals in the SA programme and beyond.

Turning our eyes to the Japanese EFL environment, Tanaka and Ellis (2003) investigated the impact of SA experience on beliefs regarding L2 learning. Their participants showed significant changes during SA in beliefs related to analytic L2 learning, experimental L2 learning, and self-efficacy. Furthermore, Yashima and Zenuk-Nishide (2008) explored *international posture* (IP) and *willingness to communicate* (L2 WTC), two components related to L2 motivation, among high school students who had participated in an SA programme in an English-speaking country. They demonstrated that SA experience had significantly contributed to the development of younger students' IP and L2 WTC.

In addition to these, the notion of self-concept, which relates closely to such affective variables as motivation and anxiety, has been investigated in recent SA studies (Churchill & DuFon, 2006). Some studies imply that SA students experience daunting academic/linguistic/cultural challenges and these experiences have a great impact on students' self-concept, which in turn affects their L2 motivation and learning behaviours. For example, Pellegrino-Aveni's study (2005) showed that L2 learners' self-concept is deconstructed and reconstructed within the experience of SA and thus affects their emotions during the process. Also, Martin, Schnickel, and Maruyama (2010) argued that SA experience provides learners with many chances to obtain a more realistic or elaborated self-concept and enhance L2 learners' motivation as a result.

Regarding this relationship between learners' self-concept and motivation, Markus and Nurius (1986), in the field of psychology, proposed a promising theoretical framework. They argue that each person contains a collection of possible selves that guide his/her behaviour. Some are possible selves that the individual envisions as ideal and sets out to become; others are possible selves that one wishes not to become. According to Markus and Nurius, a desired possible self may motivate a person to move towards the actualisation of becoming such an individual, whereas a negative self may motivate avoidance behaviours. Desired possible selves thus allow for personal growth and provide a chance to experiment with and try on various potential futures (Oyserman & Fryberg, 2006).

Some hypothetical selves correspond to specific types of motivation. For example, *the ideal self*, which is the representation of all the attributes that a person would like to possess, corresponds to promotion-focused motivation, while *the ought-to self*, which concerns the attributes that one believes one should have to meet other's expectations, corresponds to prevention-focused motivation. Higgins (1987), who

proposed self-discrepancy theory, suggested that a structural comparison of self-guides (e.g., the ideal self and the ought-to self) to the actual self exerts a considerable influence on our emotions. According to Higgins (1987), when one's actual self is discrepant from an ideal self-guide, dejection-related emotions such as feeling disappointed and discouraged would be aroused. On the other hand, when one's actual self is discrepant from an ought-to self-guide, agitation related emotions such as feeling nervous, tense, and worried would be induced. Higgins then argued that people are motivated to reduce the gap in order to remove these disparities in self-guides.

Dörnyei (2005) introduced this notion of 'ideal self' and 'ought-to self' into SLA and proposed a new framework called *the L2 Motivational Self System*. In Dörnyei's framework, which is based on Csizér and Dörnyei's empirical study (2005), L2 motivation is conceptualised as a part of L2 learners' system of the self. This system consists of three components: (a) *the ideal L2 self,* which refers to the L2-specific facet of one's 'ideal self' and is the representation of all the attributes that a person would like to possess; (b) *the ought-to L2 self*, which centrally concerns the attributes that one believes one should possess to meet expectations and avoid possible negative outcomes; and (c) *L2 learning experience*, which concerns 'situated', 'executive' motives related to the immediate learning environment and experience (e.g., the impact of teachers and peer groups). In this system, learners' future possible selves are supposed to be the primary motivational force because learners may have a desire to bridge the gap between their actual selves and their projected goal states (i.e., ideal selves) (Dörnyei, 2005, 2009).

Since Dörnyei proposed the L2 Motivational Self System, it has been validated in many countries, such as Indonesia, China, Korea, and Japan (e.g., Ueki & Takeuchi, 2013a/b ; Kim, 2009; Lamb, 2012; Taguchi, Magid, & Papi, 2009). Recent studies (Ueki & Takeuchi, 2012; Kormos et al., 2011; Papi, 2010;) have also attempted to expand the L2 Motivational Self System into an integrative framework that accounts not only for L2 motivation but also for the interplay of other affective variables. For example, Kormos et al. (2011) proposed an extension of Dörnyei's L2 Motivational Self System that includes such interacting constructs as learning attitude, goals, self-guiding, and self-efficacy. In an English as a foreign language (EFL) context in Japan, Ueki and Takeuchi (2012) validated an extended framework for the L2 Motivational Self System that included motivated learning behaviour, L2 anxiety, self-efficacy, and the perceived amount of information related to learners' future self-guides. Other studies such as Kim (2012) and Lamb (2012) have incorporated learners' L2

proficiency in the framework of L2 Motivational Self System and investigated whether it has an explanatory power for improvement of L2 abilities in relation to affective variables.

The literature reviewed above suggests that (1) the effects of SA experiences on affective aspects of L2 learners are not yet fully explored; (2) the notion of self-concept, which relates closely to affective variables, is of particular interest in this area of research; (3) L2 proficiency needs to be discussed in relation to affective variables in SA research; and (4) the L2 Motivational Self System is a promising framework for addressing the issues raised above. Thus, the current study investigates the impact of SA experience in an English-speaking country on Japanese university students, focusing specifically on the interplay of affective variables (such as motivation, self-efficacy, and anxiety) and L2 proficiency, using the framework of Dörnyei's L2 Motivational Self System.

3. Method

3.1 Participants

A total of 151 Japanese university students participated in this study (69 males; 82 females). Each student had formally studied English in junior and senior high schools for a total of six years. None had stayed in English-speaking countries for longer than 6 months before embarking on the current SA programme. All were majoring in English, and, as a requirement for graduation, spent their second year of study participating in a one-year SA programme at an affiliated university in an English-speaking country. During the SA programme, to meet the language requirements for regular undergraduate study at their host university, they took English as a Second Language (ESL) courses (i.e., foundation courses) for the first 3 to 6 months. After passing the requirements at the end of their ESL courses, they were allowed to take part in basic content courses for regular undergraduate students.

3.2 Instruments

Two survey instruments were designed to assess students' affective variables and L2 proficiency. Each questionnaire was written in Japanese and was administered to consenting students twice: one month before and two months after the SA programme.

3.2.1 Questionnaire for assessing affective variables in L2 learning

The first questionnaire targeted affective dimensions of students' L2 learning and

consisted of 41 items.[2] Most were based on items used previously in the field (Al-Shehri, 2009; Ueki, 2013; Ueki & Takeuchi, 2012; Csizér & Kormos, 2009; Papi, 2010; Pintrich & De Groot, 1990; Ryan, 2009; Taguchi et al., 2009), and some were specially developed for this study. All the items were measured using a six-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The following are the concepts that the questionnaire was designed to measure. Cronbach's alpha value for each concept was satisfactorily high at around .80, assuring the reliability of the questionnaire.

1) *Ideal L2 self*

This concept refers to the attributes that learners feel that they should possess in order to fulfil their L2 goals. A previous study (Ueki & Takeuchi, 2012) revealed that in the Japanese EFL environment, the ideal L2 self could be divided into *macro* (long-term) and *micro* (short-term) levels. Following the findings of the study, we divided the ideal L2 self into macro- and micro-ideal selves in our questionnaire. The items designed to measure this concept were developed by Al-Shehri (2009) and Taguchi et al. (2009).

- *Macro ideal L2 self* (4 items) refers to how clearly learners are able to imagine their level of L2 attainment lasting long after they graduate from university.
  Example: Whenever I think of my future career, I imagine myself using English.
- *Micro ideal L2 self* (4 items) refers to how clearly learners can imagine their level of L2 attainment while at university.
  Example: I can imagine myself speaking English like a native on graduation.

2) *Ought-to L2 self* (4 items)

This concept refers to the attributes that learners believe they ought to possess to meet others' expectations in L2 learning. The items were originally developed by Taguchi et al. (2009).

Example: Learning English is necessary because the people around me expect me to do so.

3) *L2 learning experience*

This item concerns learners' attitudes toward L2 learning and can be affected by

situation-specific motives related to the immediate learning environment and experiences derived from it (e.g., the influence of teachers and peer groups). Dörnyei (2009) accordingly divided this concept into two sub-constructs: *attitude toward the immediate learning environment* surrounding the learner, and *others' influence*, comprising the influences of teachers, parents, and peers.

- *L2 learning attitude toward the immediate learning environment* (4 items) refers to the extent to which learners are satisfied with their immediate learning environment or how much they enjoy learning English in that environment. These items were originally developed by Taguchi et al. (2009) and Papi (2010).
  Example: I find that learning English is really interesting at the moment.
- *Others' influence* (9 items) describes the extent to which other people such as teachers, parents, and peers encourage or pressure learners to study the L2. Most of the items were originally developed by Al-Shehri (2009) and Taguchi et al. (2009); some were specially developed for this study.
  Example: My family/teachers/peers pressure(s) me to study English.

4) *Motivated learning behaviour* (5 items)
These items measure learners' perceptions of the level of effort they have invested in L2 learning. In the current study, the concept is used synonymously with L2 motivation, following Dörnyei (2010). The five items were originally developed by Papi (2010) and Ryan (2009).
Example: I have spent lots of time studying English.

5) *L2 anxiety* (6 items)
This concept refers to the level of anxiety that EFL learners experience with regard to L2 communication and learning. These items were originally developed by Ueki (2013) based on the work of Horwitz, Horwitz, and Cope (1986) and Tadokoro (2002).
Example: I worry about making mistakes during L2 conversation.

6) *Self-efficacy* (5 items)

These items measure the learner's level of confidence in performing a specific task. These items were originally developed by Pintrich and de Groot (1990).

Example: I am sure that I will be able to develop higher English proficiency.

3.2.2 Questionnaire for measuring perceived L2 (English) proficiency

To assess learners' perceived English competence, we employed the *Can-Do List for Grade Pre-1* (Eiken, 2012) from Eiken, the Society for Testing English Proficiency, Inc., which is the largest English proficiency testing service in Japan. The Can-Do List is composed of 24 items to assess the combination of receptive (i.e., reading and listening) and productive (i.e., speaking and writing) English skills. All the items were measured using a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). According to Eiken, *Grade Pre-1* is roughly equivalent to the B2 level in the Common European Framework of Reference for Languages (CEFR). To verify students' responses to the Can-do List, their self-reported TOEFL-PBT scores were also referred to. This questionnaire was also administered twice to our consenting participants, just before and after the SA programme.

> *Example:*
> *(Reading) (I) Can understand articles on current events in English newspapers (e.g., Japan Times, Daily Yomiuri, New York Times).*
> *(Listening) Can understand lengthy talks and monologues about topics in which he/she is interested (e.g., speeches, lectures).*
> *(Speaking) Can speak at length about a topic that he/she has researched (e.g., presenting the results of a research assignment, giving a presentation at work).*
> *(Writing) Can write a summary of formal content that he/she has heard or read and in which he/she is interested (e.g., the contents of a lecture, an article from a magazine or newspaper).*

3.3 Analysis

3.3.1 Multi-group structural equation modelling

Structural equation modelling (SEM) is a general term that has been used to describe a number of statistical models utilised to evaluate the validity of substantive theories by employing empirical data (Lei & Wu, 2007). It represents an extension of general linear modelling procedures such as analysis of variance and multiple regression analysis. An advantage of SEM is that it can be used to examine relationships among latent constructs indicated by multiple measures. In the present study, a multi-group structural equation analysis was adopted to determine whether the model was comparable before and after the SA experience. SEM can be used in group-comparisons when researchers are interested in comparing structural models in different groups. SEM is capable of simultaneously estimating a single solution across a number of samples according to a multi-group model, with some or all parameters constrained to be equal over groups. It allows researchers to discuss the comparability of casual relationships and levels in different participants' groups (Maruyama, 1998). Before comparing structural models, researchers need to ensure that the theoretical variables in the measurement model are identical in different samples; the establishment of measurement invariance across sample is therefore a logical prerequisite to conducting multi-group comparisons. Following Vandenberg and Lance's (2000) proposal for invariance tests, this study adopted three models (i.e., *configural invariance model*, *tau-equivalent model,* and *parallel model*), and tested which one the data best supports as the measurement invariance model.[3]

3.3.2 Measures of model fit

In SEM analysis, several statistical indices measure how well the proposed model fits the obtained data. Because these indices reflect different aspects of model fit, In'nami and Koizumi (2011) recommend reporting several fit tests. The most common, the chi-square (χ^2) model, has been used to test the hypothesis that the relationships suggested in the model can be tested to yield a plausible explanation of the data. The root mean square error of approximation (RMSEA) of less than .05 has also been reported in many studies, as well as a parsimony-adjusted fit index with 90% confidence intervals (CIs). These measures indicate the probability of achieving a close fit—that is, the likelihood of obtaining an RMSEA of less than .05 when repeating the model-fit procedure on an indefinite number of samples. Additionally, we reported Bentler's comparative fit index (CFI) and the standardised root mean square residual

(SRMR). We used the criterion of RMSEA of less than .05, as reported by Browne and Cudeck (1993), to determine close fit; values greater than .10 were interpreted as showing poor fit. We also used the rule of thumb proposed by Hu and Bentler (1999) that CFI of greater than .90 may indicate a reasonably good fit; for the evaluation of SRMR, the criterion proposed by In'nami and Koizumi (2011) has been adopted, treating values of less than .05 as favourable. We then compared the various paths within a multi-group framework with the help of critical ratios (CRs; Byrne, 2001). The CR is the ratio of the difference between two means and the standard error of that difference. CRs greater than 1.96 suggest group differences at $p < .05$, values greater than 2.33 suggest $p < .01$, and values greater than 2.58 indicate $p < .001$ (Oshio, 2005).

4. Results

4.1 Descriptive statistics and SEM models

Table 1 shows the descriptive statistics of each variance or concept. Because some relatively high correlation coefficients were observed among the concepts, we checked the variance inflation factor of each variable and confirmed the absence of multicollinearity among them.[4] The initial model was evaluated using maximum

Table 1

Descriptive Statistics of Each Variance or Concept

Variable		**Before**-SA group (n = 151)		**After**-SA group (n = 151)		*t*-value	Effect size (*r*) †
		M	*SD*	*M*	*SD*		
Ideal L2 self	Macro	13.7	3.5	12.4	3.6	6.08**	.44
	Micro	12.1	3.6	13.9	3.7	-7.91**	.54
Ought-to L2 self		13.4	3.7	14.3	5.0	-1.77	.14
L2 learning experience	Teacher influence	10.0	3.4	8.3	2.7	6.46**	.47
	Family influence	9.5	3.2	10.6	3.4	-3.14*	.25
	Peer influence	10.4	3.2	9.9	4.0	1.38	.11
	L2 learning attitude	12.6	3.5	13.8	4.2	-6.52**	.48
Self-efficacy		17.3	4.5	18.8	5.7	-3.63**	.28
Motivated learning behaviour		17.1	6.2	19.1	6.3	-7.07**	.51
L2 anxiety		21.0	6.9	17.2	5.6	6.56**	.60
Perceived L2 proficiency		73.7	17.4	85.1	13.1	-6.89**	.49

Note. $^{*}p < .05$, $^{**}p < .001$.

† The effect size *r* is generally classified into small, medium and large (.10 indicates small effect; .30, medium effect; and .50 above, large effect).

Table 2

Joint Selected Fit Measures for the Final Model

Index	Obtained value	Threshold value	Evaluation
χ^2/df	1.45	< 2.0	Very good
CFI	.90	>.90	Good
TLI	.89	>.90	Good
RMSEA	.039	≦.05	Very good
SRMR	.014	≦.05	Very good

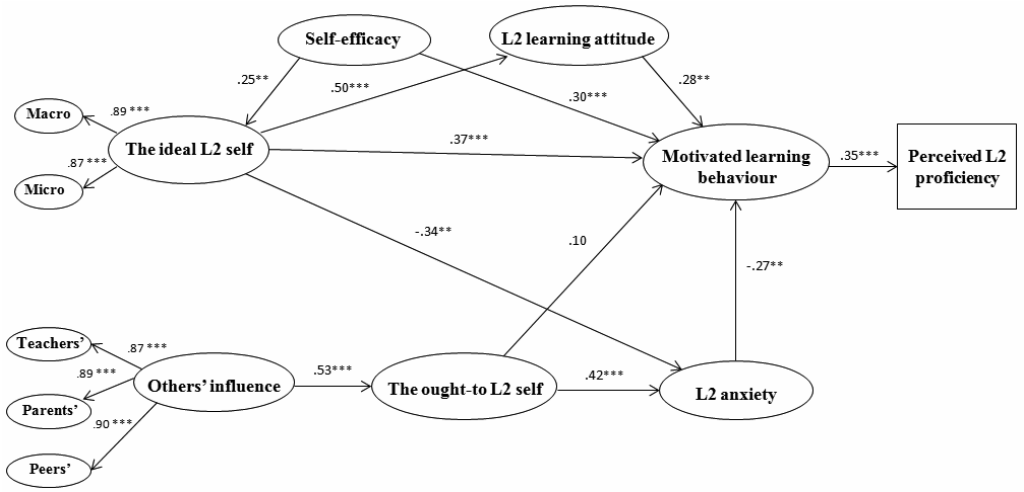

Figure 1. Final model for the before-SA group with standard estimates.

Note. n = 151. $^{**}p < .01$, $^{***}p < .001$. To simplify the presentation, correlations between exogenous variables, factor loadings and residual values are omitted. χ^2/df = 1.41, RMSEA = .050, SRMR = .013, CFI = .90, TLI = .90. Overall, the indices are acceptable in terms of model fit.

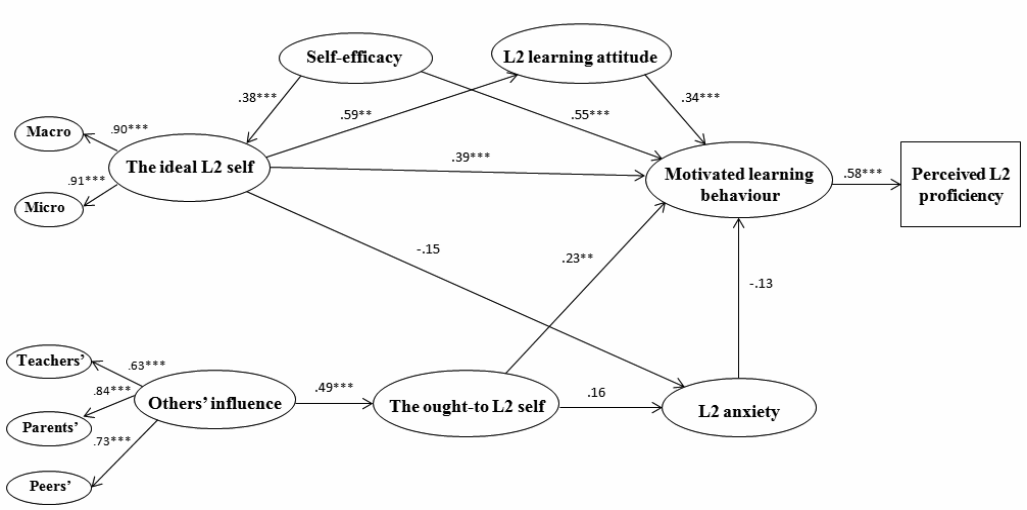

Figure 2. Final model for the after-SA group with standard estimates.
Note. n = 151. $^{**}p < .01$, $^{***}p < .001$. As in Figure 1, correlations between exogenous variables, factor loadings, and residual values are omitted for clarity. χ^2/df = 1.51, RMSEA = .049, SRMR = .015, CFI = .88, TLI = .87. Overall, the indices are acceptable in terms of model fit.

likelihood estimation (Byrne, 2001), which simultaneously tested the model's fit for data from groups before and after their SA experience (henceforth, the before-SA group and the after-SA group). As seen in Table 2, we found all the selected fit indices to be acceptable. It seems, then, that the hypothetical model provides acceptable joint model-to-data fit indices for the two samples. We combined the final models of the two sub-samples into a single multi-group model and carried out a subsequent multi-group procedure. Figures 1 and 2 contain schematic representations of the final SEM models, with standardised estimates for each sample investigated.

4.2 Overall findings

The results of the multi-group analysis indicated that the data best supports a *tau-equivalent model*, in which inter-factor correlations and factor loadings are invariant across the samples, whereas error variances are allowed to vary. In other words, the same constructs or variables can be applied to both groups. We then compared coefficient paths to locate significant differences between the structural models for the

two investigated samples. Figure 3 shows a comparison of coefficients across the models for the two sub-samples. The CRs showed six significant differences in paths between the before-SA and after-SA groups: motivated L2 learning behaviour → perceived competence in English (CR = 2.64); the ought-to L2 self → motivated learning behaviour (CR = 1.98); the ideal L2 self → L2 anxiety (CR = 2.38); others' influence → teachers' influence (CR = 2.69); the ought-to L2 self → L2 anxiety (CR =2.72), L2 anxiety → motivated learning behaviour (CR = 2.55); and self-efficacy → motivated learning behaviour (CR = 2.61).

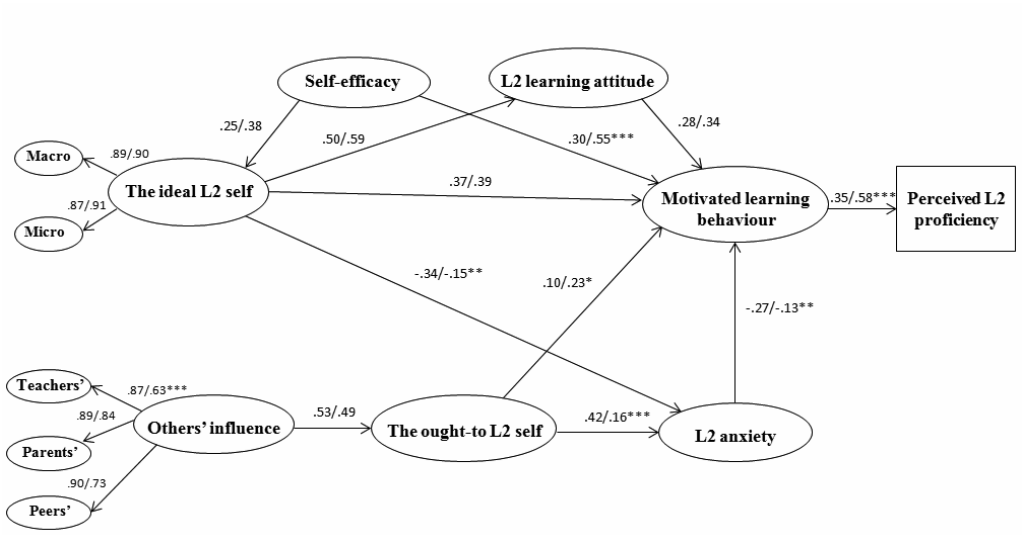

Figure 3. Comparison of coefficients in models for the before-SA and after-SA groups with standard estimates.

Note. N = 302. $^{*}p<.05$, $^{**}p < .01$, $^{***}p < .001$, Correlations between exogenous variables, factor loadings and residual values are omitted for clarity.

4.3 Specific findings: Before SA experience

As shown in Figure 1, before studying abroad, the ideal L2 self was a positive influential factor on motivated learning behaviour. This is in accordance with the findings of previous research (e.g., Al-Shehri, 2009; Taguchi et al., 2009; Taguchi, 2013). If learners possess clearer ideal L2 self-images, they are likely to have sufficient motivation for performing the intended actions. Meanwhile, our results also

demonstrate a negative relationship between the ideal L2 self and L2 anxiety, which indicates that less-vivid ideal L2 self-images arouse L2 anxiety. A possible reason behind this relation might be that learners with clearer ideal L2 self-images can better estimate how far the distance between the current L2 self and ideal L2 self is. This estimation could help learners identify the direction and amount of effort needed to reduce the gap between the two selves. Consequently, learners with clear L2 self-images could make the current L2 self match the ideal one as closely as possible. Similarly, less vivid ideal L2 self-image could impede learners' attempts to estimate the direction and amount of effort they need to reduce the gap. This inability to carry out the estimation above might arouse L2 anxiety.

In addition to the ideal L2 self, self-efficacy had a positive impact on motivated learning behaviour, a relationship that has been widely acknowledged by researchers in psychology (e.g., Bandura, 1997; Schunk, 1991; Zimmerman, 2000). It is therefore understood that the stronger the sense of self-efficacy envisioned by L2 learners, the more motivated they are to take action toward their L2 learning. Self-efficacy deals with personal judgments about one's control over one's own behaviour; hence, highly self-efficacious language learners will be more autonomous, as they are more confident about their ability to control their learning and to take action (Zhong, 2010). Being self-efficacious is thus considered to be an important factor for promoting L2 learning behaviour and learner autonomy.

As Figure 1 above illustrated, we also found that L2 learning attitude toward the immediate learning environment (labelled as *L2 learning attitude* in the figure) had a strong positive impact on motivated behaviour. This finding lends further support to previous studies that show learning attitude as an emotional precursor to learning behaviour (e.g., Csizér & Kormos, 2009; Gardner, 1985; Taguchi et al., 2009). Among the three factors that positively contributed to motivated learning behaviour in the before-SA group (i.e., the ideal L2 self, self-efficacy and learning attitude), the ideal L2 self was found to be the most influential (total effect = .58) in this study.

Another noteworthy finding in the before-SA group is that the influence of others, such as teachers, parents, and peers, strongly affected the formation of the ought-to L2 self. As Csizér and Kormos (2009) claim, learners' ought-to L2 self—that is, learners' views of the attributes they should possess to meet the expectations of others—is socially constructed. Other social members, in this sense, can influence the constitution of the ought-to self. In this connection, the ought-to-L2 self significantly influenced L2 anxiety in our SEM model. As Ueki (2013) shows, the perceived discrepancy between

the actual and ought-to L2 selves can be a source of L2 anxiety. Gregersen and Horwitz (2002) also argue that high levels of concern over the expectations of others can arouse learners' L2 anxiety. These claims explain why the ought-to-L2 self significantly influenced L2 anxiety in this study.

Lastly, in the before-SA group, the SEM analysis reveals that motivated learning behaviour positively impacted perceived L2 proficiency. Kim (2012) maintains that motivated behaviour, which is affected by the ideal L2 self, is a strong predictor of Korean learners' L2 proficiency, and our findings give further support to this claim.

4.4 Specific findings: After SA experience

A comparison between the before-SA and after-SA groups shows that there was a significant difference regarding L2 anxiety (before > after; $p < .001$, effect size = .60 [large]) as shown in Table 1. This confirms that SA experience, which provides meaningful, authentic, and sometimes successful opportunities for students to communicate in L2, no doubt contributes to the reduction of L2 anxiety. Because of this drastic decrease in L2 anxiety, such concepts as the ideal L2 self, the ought-to L2 self, and motivated learning behaviour, each of which had showed a statistically significant relationship with L2 anxiety before SA experience, resulted in showing a non-significant relationship after SA experience.

Furthermore, the SEM model for the after-SA group (Figure 2) indicates that the ideal L2 self, self-efficacy, and L2 learning attitude were significant influential factors on motivated learning behaviour. Just as for the before-SA group, these three constructs individually showed a positive influence on motivated learning behaviour. Among these, self-efficacy had the greatest impact (total effect = .64).[5] As Cubillos and Ilvento (2013) explain, SA participants are expected to deal with everything that happens during their stay by using L2. Accumulation of these direct experiences and successful interactions in L2 during SA could help learners enhance their sense of self-efficacy (before < after; $t = 3.63$, $p < .001$; effect size = .28 [medium]), which in turn contributes to the promotion of motivated learning behaviour (path coefficient = .30 for the before-SA group vs. .55 for the after-SA group).

Another noteworthy finding for the after-SA group is the addition of the ought-to L2 self to the factors that influenced L2 motivation (path coefficient = .10 for the before-SA group vs. .23 for the after-SA group; total effect = .40). Dörnyei (2009) argues that the ought-to L2 self does not lend itself to obvious motivational practice (p. 32). However, the present study demonstrated otherwise. A possible explanation might

be that our learners' SA experiences have helped them realise the importance of achieving the L2 images prescribed by parents, most of which are related to future career success. In other words, learners had internalised the L2 images imposed by others and had roughly equated them to their own ideal L2 self-images. We thus argue that the ought-to L2 self can function as a 'promotion-focused instrumentality' (Chen, 2013) as well as a prevention-focused one depending on the situations learners are in.

The results reported above suggest that, because of SA experience, learners' L2 motivation has been supported or influenced by a wider variety of affective factors and self-related concepts, and thus has become more robust (before < after; $t = 7.07$, $p < .001$; effect size = .51 [large]). This *robustness of L2 motivation* made learners less susceptible to a host of factors that might reduce their willingness to learn L2 and, consequently, provided more chances to improve their L2 proficiency. This may explain why, in the after-SA group, motivated learning behaviour contributed significantly more to improvement of perceived L2 proficiency. In other words, securing the robustness of L2 learning motivation is a major advantage of SA experience for our participants.

5. Conclusion

The present study explored the impact of SA experience on Japanese university students under the framework of the L2 Motivational Self System. We draw four major conclusions from this study: First, the results confirmed the possibility that the L2 Motivational Self System could be developed into an integrative framework to account for not only L2 motivation but also the interplay of various affective variables and L2 proficiency all in one system. Second, this study showed that L2 anxiety decreased significantly after SA experience. As Allen and Herron (2003) asserted, SA experience seems to be a great way to cope with L2 anxiety. Third, our findings support the claims made by Kim (2012) and Lamb (2012) that the concept of motivated learning behaviour within the L2 Motivational Self System appear to be a reliable predictor of L2 proficiency: the system can explain improvement in L2 abilities. Fourth, this study revealed that the SA experience greatly helped L2 learners consolidate the robustness of their L2 motivation: The ideal L2 self, self-efficacy, and L2 learning attitude were the driving forces for motivated learning behaviour before learners' SA experience. After their SA experience, the influence of each variable became stronger. On top of that, we noted that the ought-to L2 self was added as an influential factor after the SA experience. These factors together consolidated the robustness of motivation, which

contributed to the maintenance of motivated L2 learning behaviour and, consequently, improvement of learners' L2 proficiency in the after-SA group. The concept of *robustness* thus seems to reinforce the notion that learner motivation should be viewed as being supported or influenced by a variety of affective and self-related variables; it should not be viewed as being supported by a single variable as is found in a simple causal relationship.

On a practical note, the findings reported above are considered to be important for educational institutions, particularly in Japan, which are now fighting against the 'inward tendency of students' and encouraging them to study abroad. Educational institutions have long relied on students' anecdotal reports as evidence of the affective benefits of SA experience, but empirical data could be more convincing to students. This study thus provided much-needed empirical data for educators and programme administrators, as well as for students who are hesitant about studying abroad.

Lastly, to further confirm the findings reported above, more research must be conducted, while paying due attention to the following limitations of the current study. First, although the results of our research clarified the relationship between motivated learning behaviour and L2 proficiency, L2 proficiency was measured only by self-report statements concerning what participants think they can do in L2. To more clearly delineate the relationship between these factors, future research needs to use objective measures of L2 proficiency such as TOEFL iBT. Second, a larger number of participants will yield greater accountability for future SEM analysis. Similarly, incorporating a wider variety and range of participants will ensure generalizability of the results in future studies. Third, although our study reported on changes among participants before and after SA experience, it did not directly examine the specific processes and reasons behind the changes. Thus, future research needs to investigate them through qualitative methods such as narrative inquiry, paying special attention to learners' voices and perceptions.[6]

Notes

1. Note that some researchers have pointed out the problems of equating learning English with a global or international understanding. See, for example, Kubota (2002) for the discussion.
2. The questionnaire is available upon request.
3. In the *configural invariance model*, each individual item measures the same latent variable, with possibly different scales, possibly different degrees of precision, and

possibly different amounts of error across the groups. In the *tau-equivalent model*, individual items measure the same latent variable on the same scale with the same degree of precision but with possibly different amounts of error across the groups. In the *parallel model*, all items must measure the same latent variable, on the same scale, with the same degree of precision, and with the same amount of error across the groups (Vandenberg & Lance, 2000).

4. The variance and the covariance matrices are available upon request.
5. The total effect of the ideal L2 self was .42 and that of L2 learning attitude was .29.
6. See Kinginger (2013) for some examples.

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