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Readiness, Language Contact and L2 Oral Proficiency Development During a One-Semester Study-Abroad Program

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Abstract

This study investigates the relationship among initial readiness, language contact and development of second language (L2) oral proficiency during a one-semester study-abroad (SA) program. This study samples 46 Japanese college students studying English as a foreign language. The participants' readiness (declarative knowledge and international posture prior to participating in the SA program) are measured using a questionnaire and TOEFL® ITP. The participants' L2 contact during the SA program is documented using two types of the language contact profiles and interviews. The participants' gains in L2 oral proficiency are measured utilizing TOEFL iBT® (pre- and post-SA). A paired sample *t*-test, cluster analysis, Mann-Whitney U test, interview analysis, descriptive statistics and regression analyses are used in this study. The results of the analyses highlighted two major points: (1) the two different types of readiness jointly affect SA participants' learning resource use during the SA program; and (2) the difference in the amount of spontaneous learning resource use influences SA participants' development of L2 oral proficiency.

Keywords: study-abroad, international posture, declarative knowledge, language contact, oral proficiency

Introduction

Enhancement in target language competence is one of the main goals, among others, which encourage second language (L2) learners to participate in study-abroad (SA) programs[1]. This is because, for most learners of a foreign language (FL), their domestic learning context does not provide them with sufficient opportunities for L2 practice, especially in the domain of oral practice. Hence, it is natural that L2 learners (and sometimes even pedagogues; cf., Magnan & Back, 2007) might think that they can dramatically improve their L2 oral performance once they participate in a SA program. Indeed, it is not open to question that a SA learning context provides L2 learners with sufficient opportunities for practicing L2 in the form of language contact (L2 contact). L2 contact in this context represents a broad range of L2 activities from which SA participants can learn L2 knowledge and skills (i.e., written and spoken L2 inputs, including feedback for one's L2 production), and where SA participants can practice their newly learned L2 knowledge and skills for more proficient oral performance (Allen & Herron, 2003; DeKeyser, 2007, 2010; Hernández, 2010; Magnan & Back, 2007; Segalowitz & Freed, 2004; Yashima & Zenuk-Nishide, 2008). Nevertheless, as a

number of SA investigations revealed, to exploit the above advantage of the SA learning context, SA participants must equip themselves with, at least, the threshold level of readiness. Without this, their SA experience does not lead to considerable progress in L2 oral performance or may even contribute close to nothing to L2 oral development (cf., Davidson, 2010; DeKeyser, 2010; Golonka, 2006; Magnan & Back, 2007).

This study seeks to broaden this research agenda. In particular, this study focuses on the relationship among SA participants' grammatical and motivational readiness prior to participating in a SA program, learning resource use and development of L2 oral proficiency during the SA program. The aim of this study is to contribute to the better understanding of the prerequisites for the development of L2 oral performance during SA participation, and to bridge the application of the findings of this study to pre-departure training for productive L2 learning abroad.

Background

Particularly owing to the findings of recent investigations, it became clear that the readiness of SA participants affects the development of L2 oral performance during a SA program. The readiness reflects L2 learners' initial condition prior to participating in a SA program. Among others, initial grammatical knowledge (Davidson, 2010; DeKeyser, 2010; Golonka, 2006; Segalowitz & Freed, 2004), and initial learning orientation, such as motivation and attitude (Hernández, 2010; Tanaka & Ellis, 2003; Yashima & Zenuk-Nishide, 2008) are increasingly regarded as strong factors that lead SA participants' L2 learning/practice to dissimilar outcomes.

First, initial grammatical knowledge is an important factor for L2 learning/practice during a SA program. From the novice to even some advanced stages, L2 leaners cannot comprehend nor produce L2 spontaneously without reflecting on their "consciously known, verbalizable grammar rules (a form of declarative knowledge)"; (DeKeyser, 2010, p.84). This means that an initial adequate level of declarative knowledge first allows SA participants to comprehend forms and meanings included in written and spoken L2 inputs; this comprehension leads SA participants to learn from L2 inputs. As their learning competence progresses, SA participants will be able to practice their newly learned L2 knowledge and skills within their speech productions more effectively. Through sufficient domain-specific practice, SA participants can transfer their declarative knowledge to behavioral routine (also referred to as procedural knowledge), and are going to have leeway to pay extra attention to the contents of their speech production (DeKeyser, 2010; Kormos, 2000; Segalowitz, 2003; Skehan, 2002). Considering this premise, therefore, constructing a practice/proceduralization cycle is one of the most essential bases for L2 oral development abroad.

In addition, initial mental orientation toward L2 learning/practice is also an important aspect to understand the reason for success or failure of L2 oral development during a SA program. Because of intense time pressure and complexity of knowledge application, paying (extra) attention to one's own L2 oral performance is a highly demanding cognitive process for learners (Ellis, 2009; Krashen, 1985). Hence, SA participants need to maintain a positive orientation toward their learning behavior in order to realize knowledge proceduralization and development of L2 oral proficiency. Without proper motivational support, SA participants can

easily lose their sense of control over their learning process when they are exposed to negative learning experiences, and may distance themselves from further investments in L2 learning/practice (cf., Dörnyei, 2001; MacIntyre, Noels, & Clément, 1997). In this circumstance, spontaneous learning behavior will be disrupted, and therefore neither knowledge proceduralization nor L2 oral development will be achievable, even if SA participants are surrounded by golden opportunities for L2 contact.

Two recent papers reported informative findings about the above subjects. First, DeKeyser (2010) conducted intensive observation among 16 American Spanish learners who participated in a six-week SA program. In this study, it was shown that from the first stage of their sojourn, grammatically less prepared participants were overwhelmed by L2 input provided by native speakers (NS). This difficulty in L2 comprehension prevented these participants from learning from inputs. Subsequently, inadequacy in L2 comprehension demotivated these participants to pursue further L2 oral practice, and therefore knowledge proceduralization was not achievable. Although the experience of these learners prompted them to reevaluate the importance of grammatical knowledge (see also Tanaka & Ellis, 2003), they ended their six-week SA program with disappointing learning results with regard to L2 oral performance.

Second, sampling 20 American Spanish learners, Hernández (2010) revealed that a specific type of initial motivation promoted the SA participants' spontaneous L2 contact during a one-semester SA program. In his study, integrative motivation positively predicted the amount of participants' spontaneous L2 contact, whereas instrumental motivation did not. In addition, the amount of L2 contact also showed a positive relationship with the participants' gains in L2 oral proficiency. The above findings suggested that a certain type of initial motivation can also be a predictor of L2 oral development in SA learning contexts. In this study, integrative motivation, defined as an interest in communicating with the L2 group as well as positive attitudes toward NS and their culture (p.601; see also Gardner, 1985), showed a strong connection with the amount of language contacts and eventual gains in L2 oral proficiency.

The above-mentioned studies paved the way for this study. First, although DeKeyser (2010) conducted exhaustive observation for his study, the six-week SA program may be too short in duration to realize a practice/proceduralization cycle and development of L2 oral performance. With regard to this, several SA investigations suggested a one-semester (i.e., six months) SA program as a possible benchmark for L2 oral proficiency improvement if the participant's readiness is over the threshold level (cf., Golonka, 2006; Hernández, 2010; Magnan & Back, 2007; Segalowitz & Freed, 2004). Moreover, although SA literature has proven the individual impact of initial grammatical knowledge and motivation on the development of L2 oral proficiency, thus far little is known about the combined effect of these aspects on the development of L2 oral proficiency during a SA program. Hence, in this study I decided to investigate the relationship among the integrated impact of two types of readiness; learning resources use (i.e., L2 contact) and development of L2 oral proficiency, setting a one-semester SA program as an observation period.

To this end, this study replaced integrative and instrumental motivation as the motivational index with international posture (Yashima, 2002). As a large amount of L2 motivational literature points out, it is difficult for FL learners to picture a solid and tangible image of

specific L2 groups or cultures, especially if learners are physically distanced from L2-speaking countries and/or their target language is one spoken worldwide such as English (Dörnyei, Csizér, & Németh, 2006). Similarly, FL learners' motivational orientation is not clearly separable as integrative or instrumental (Yashima, 2000). For FL learners, the objective of L2 learning/practice is inevitably affected by scholastic requirements, as well as enjoyment and self-values included in the L2 learning process. For these reasons, more and more recent L2 motivational studies consider L2 motivation as a learner's self-related cognitive system which continuously interacts with one's learning environment (Dörnyei & Ushioda, 2009). International posture is one reflection of the above self-related motivation, in that it represents "a tendency to see oneself as connected to the international community, to have concerns for international affairs and a readiness to interact with people other than Japanese" (Yashima & Zenuk-Nishide, 2008, p. 567). Under this conceptualization, language learning is considered a window to access a world in which learners want to participate for communicational and practical reasons, and therefore stronger international posture represents greater orientation toward L2 learning/practice (Kormos & Csizér, 2008; Yashima, 2002). Hence, when we think particularly about the required mental readiness for fruitful outcomes in the case of FL learners' SA, it is worth investigating whether international posture shows a positive relationship with motivated learning resource use as integrative motivation did in Hernández (2010). Based on the above, this study tackles the following three research questions, sampling 46 Japanese English as FL college students:

1. Do SA participants improve their L2 oral proficiency during a one-semester SA program?
2. Do initial declarative knowledge and international posture impact on learning resources use during a SA program jointly? If so, how do the two different aspects of readiness affect SA participants' L2 contact, and to what extent do they do this?
3. Is there a positive relationship between SA participants' L2 contact and their gains in L2 oral proficiency?

Method

Participants

This study used the snowball sampling method for its recruitment (Robson, 1993). First, nine participants were recruited through the author's personal contacts. Next, these nine became the informants to identify other participants. As a result, a total of 57 Japanese college students at six universities were initially recruited for this study. Criteria for including students in the study were as follows: (1) Japanese had to be their first language; (2) they had to have started their English learning as a school subject at junior high school and continued their learning under the Japanese schooling system[2]; (3) they had to never have studied English abroad before this survey; (4) they could not be English majors; (5) there could not be anyone who spoke English in their home; and (6) they had to complete all components of the study described in the following section. Of the original sample, 46 met the all criteria, and therefore this study was undertaken with 46 JEFL college students (M = 19.23 years old, median = 19.16, SD = 2.01, 32 females and 14 males). All participants experienced a one-semester SA program somewhere between April 2012 and April 2013. The participants' SA

destinations were diverse: the United States (n = 16), the United Kingdom (n = 12), Australia (n = 9), Canada (n = 8) and Ireland (n = 1).

Design of the SA Program

Each SA program was primarily designed to improve the participants' overall L2 ability. For this purpose, the participants were strongly recommended to take at least three ESL classes a week during the SA program. The class level of each participant was optimized by his/her score on a language test (e.g., TOEFL iBT®) prior to participating in the SA program. All participants attended intermediate-level ESL classes during the SA program (intermediate-low: n = 38, intermediate: n = 8). In addition, the participants were able to take liberal arts classes based on their academic interest at the host universities.

General Procedures and Description of Materials

Prior to participating in the SA program, the participants first took the TOEFL iBT® to measure their pre-SA L2 oral proficiency. Subsequently, they completed a grammatical task and a questionnaire. The questionnaire consisted of two parts: (a) personal information, and (b) motivational indexes. The first part of the questionnaire asked about participants' gender, age, years of schooling, academic majors, prior language experience and overseas experience. The participants' initial international posture was documented in the second part of the questionnaire. During their sojourn, the participants were interviewed twice. The second interview was followed by the completion of the language contact profile (LCP). Interviews and completion of the LCP were conducted over the Internet. Finally, participants took TOEFL iBT® within six weeks of their homecoming to record their post-SA L2 oral proficiency. The instruments used in this study will be described in the following section.

L2 oral proficiency indexes. The participants' scores in the speaking section of TOEFL iBT® were applied to pre- and post-SA L2 oral proficiency indexes. This test consists of six tasks: two familiar topics; two campus situations; and two academic course topics (ETS®, 2008, p. 18). Responses to all six tasks are scored by three to six different raters. The response for each task is rated on a scale of 0 to 4 based on delivery, language use and topic development (ETS®, 2008, pp. 44–45). The average of all six ratings is converted to a scaled score of 0 to 30 (ETS®, 2008, p. 26). The reliability of this test is documented in ETS® (2011). The participants' gains in L2 oral proficiency were calculated by subtracting their pre-test scores from the post-test scores.

Declarative knowledge index. 40 grammatical questions extracted from the past test of TOEFL® ITP were applied for an initial declarative knowledge index (α = .95) (Kanamaru & ETS®, 2012, pp. 96–102). This index consisted of two sections: the structure section and the written expression section. In the structure section, participants were given 15 fill-in-the-blank tasks. They were required to choose from four alternatives the most proper word or phrase which would complete each sentence. In the written expression part, the participants were given 25 error recognition tasks. They were required to identify one underlined word or phrase that included a grammatical mistake from four alternatives. The time limit was set at 25 minutes for 40 questions as with the actual TOEFL® ITP. No participants had ever encountered the same questions elsewhere before this investigation. Each correct answer was

given 1 point and the total score of two tasks was converted into a scaled score of 0 to 40. This score reflects each participant's capability to refer to functional knowledge of L2 grammar (i.e., declarative knowledge; cf., Davidson, 2010; DeKeyser, 2010; Golonka, 2006).

International posture. International posture consisted of 15 items with three subscales (α = .86)[3]. Question items were excerpted from Yashima (2002) and translated into Japanese. Intergroup approach-avoidance tendency assessed participants' tendency to approach or avoid non-Japanese in the domestic context (seven items). Interest in international vocation/activities measured participants' intensity of interest in an international career and living overseas (six items). Interest in foreign affairs reflected participants' interest in international issues (two items). Each item was answered on a 7-point Likert scale. Each participant's total score was converted into a scaled score of 15 to 105.

Language contact profiles. First, in order to record the participants' extramural L2 contact, nine out of ten items were excerpted from the LCP in Hernández (2010). These items asked the participants to report the number of hours per week that they engaged in the following L2 activities outside the classroom: speaking with NS or fluent L2 speakers; reading e-mail and the Internet/web-based content (i.e., results of net searching and social network service), newspapers, novels and magazines; listening to TV and radio, movie/video, and music with or without English subtitles or lyrics; and writing e-mail including short messages. Because they had broad discretion regarding their actions in these activities (Dörnyei et al., 2006; Hyland, 2004), the sum of these responses provides an estimate of each participant's spontaneous learning resource use abroad. In addition, to document the amount of the participants' intramural L2 contact, this study employed two original sections (see Appendix C) and the remaining one item in Hernández (2010). The first two extra sections examined the amount and the content of the classroom instruction in which each individual participated during the SA program. In addition, because writing homework assignments can be regarded as an extension of classroom education, the remaining one item in Hernández (2010) was added to the intramural L2 contact. Question items were written in Japanese.

Interviews. Semi-structured interviews were conducted twice (3/6 of the SA: M = 12.93 min., median = 12.01, SD = 3.36; 5/6 of the SA: M = 15.27 min., median = 15.11, SD = 2.73). In both investigations, the author asked the participants to explain details of and reasons for their current L2 contact using the above LCPs. The purpose of this investigation was to document the combined impact of two different types of readiness on the participants' learning behavior during the SA program. This study particularly concentrated upon the participants' self-assessed changes in L2 competence and orientation toward L2 contact inside and outside the classroom during the SA program (DeKeyser, 2010; Allen & Herron, 2003; Yashima & Zenuk-Nishide, 2008). Investigations were carried out in Japanese.

Data Analysis

To address the research questions, this study employed a pared sample t-test, cluster analysis, Mann-Whitney U tests, interview analysis, descriptive statistics and regression analyses. For parametric tests, normal distribution of variables was confirmed by the Kolmogorov-Smirnov test. SPSS version 17.0 was employed for statistical analyses. Alpha was set at .05, and the adaptive False Discovery Rate (FDR) procedure was applied to protect

against Type I errors with multiple tests (Benjamini & Hochberg, 2000). All significances reported below were corrected for FDR. For quantitative confirmations, adequate power ($1 - \beta > .80$) was confirmed utilizing G*Power 3 (Faul, Erdfelder, Lang, & Buchner, 2007). Unless otherwise stated, the sample size of each analysis is 46.

Results

Summary of Participants' Information

First, the participants' overall score in the declarative knowledge index ranged from 12 to 37 on a 40 point scale (M = 25.71, SD = 5.51); and the participants' score in international posture ranged from 50 to 99 on a scale of 15 to 105 (M = 79.02, SD = 9.65). The detailed information of each index is cited in Appendix A.

Second, as Figure 1 shows, the participants' L2 oral proficiency ranged from 13 to 21 on a 30 point scale (M =15.87, SD = 1.74) in pre-SA condition. At this stage, 39 out of 46 participants received a rating of limited level for their L2 oral proficiency, and the remaining seven were judged at a fair level based on TOEFL iBT® criteria[4]. In the post-SA context, the participants' L2 oral proficiency ranged from 16 to 24 on the same scale (M = 19.57, SD = 2.12). This time, 38 out of 46 participants attained a fair level, while eight remained at the limited level.

Third, the total hours of participants' weekly extramural L2 contact ranged from 14.00 to 72.00 hours (M = 46.83 hours, SD = 14.07, see Table 1 for the breakdown).

Fourth, the total hours of participants' weekly intramural L2 contact ranged from 15.00 to 39.00 hours (M = 25.54 hours, SD = 5.31). Table 2 shows that, on average, the participants took almost seven ESL classes (M = 10.35 hours, SD = 1.54) and two liberal arts classes (M = 3.12 hours, SD = 1.54), and conducted homework assignment over 10 hours a week (M = 11.28 hours, SD = 2.10) during the SA program.

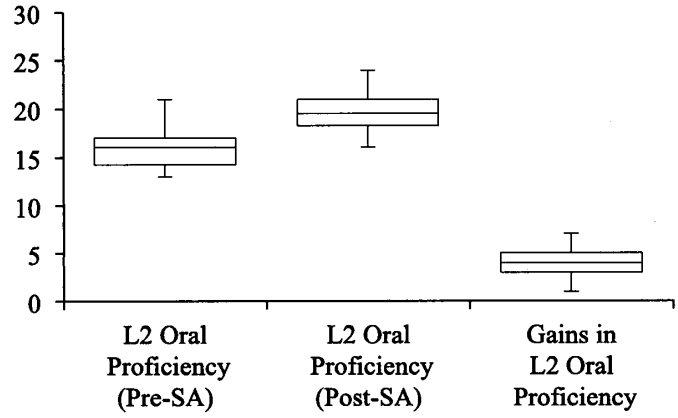

Figure 1. Summary of L2 oral proficiency indexes, where the vertical axis indicates scores, the top and bottom of the box are the 75th and 25th percentiles, the line inside the box is the median, and the ends of the whiskers represent the minimum and maximum.

Table 1
Means and Standard Deviations on the Extramural L2 Contact

Item No.	Description of item	*M*	*SD*
1	Speaking English with NS and fluent L2 speakers	13.85	7.98
5	Reading email or Internet content in English	8.34	3.43
6	Listening to English TV and radio	5.47	3.39
7	Listening to English movies or videos	5.21	3.61
8	Listening to English music	3.49	2.01
2	Reading English newspapers	3.16	1.88
4	Reading novels in English	2.66	2.14
10	Writing email in English	2.61	1.97
3	Reading English language magazines	2.04	1.50

Table 2
Means and Standard Deviations on the Intramural L2 Contact

Item No.	Description of item	*M*	*SD*
9	Writing homework assignments in English	11.28	2.10
12	ESL class participation	10.35	1.54
11	Liberal arts class participation	3.12	1.54

L2 Oral Proficiency Development during a One-Semester SA Program

All participants improved their L2 oral proficiency from one to seven points compared to the pretest scores (M = 3.70, SD = 1.63, see also Figure 1). Thus, a paired- samples t-test was conducted to determine whether the participants statistically improved their L2 oral proficiency compared to the pretest results. The result of the t-test showed significance with a large effect size (t = 15.24, df = 45, p <. 001, r = .66). This result indicates that the participants positively developed their L2 oral proficiency during the SA.

Initial Readiness and Learning Resource Use

To improve the interpretability of interview analysis, this study first divided the participants into two groups using a hierarchical cluster analysis (Ward's method). The participants were classified into the low readiness group (LRG, n = 25) and the high readiness group (HRG, n = 21) based on their scores in declarative knowledge index and international posture. As shown in Table 3, there were considerable differences in both aspects of readiness between the two groups prior to participating in the SA program.

According to the first interview data, the participants' most serious problem in L2 oral performance, particularly during the first stage of their sojourn, was that they could not perform speech production instantaneously and spontaneously. Likewise, at this stage, all the participants also made special mention that they felt difficulty in communicating with the experts (i.e., NS and fluent L2 speakers) when they did not use simplified English with the participants. Under this circumstance, participants could not comprehend the experts' utterances immediately, and therefore they neither responded to an interlocutor in a proper

Table 3

Descriptive Statistics of Two Groups on Initial Readiness and Results of Mann-Whitney U test

Index	Low Readiness Group			High Readiness Group			Mann-Whitney U test		
	M	Median	*SD*	*M*	Median	*SD*	*z*	Exact *p*	*r*
Declarative knowledge	23.68	24.00	5.39	28.00	29.00	4.66	2.71	.006	.40
International posture	71.84	74.00	5.77	87.57	88.00	5.47	5.80	< .001	.86

Note. Low Readiness Group (n = 25), High Readiness Group (n = 21).

way nor had leeway to pay extra attention to their oral performance.

At the same stage, however, 76.19% (16 out of 21) of highly ready participants first mentioned that, although they had to pay more attention, they were able to understand the general ideas and structures of the experts' utterances. In addition, those 16 participants also asserted that their problem in communicating with the experts did not harm their learning orientation. They gave two reasons for this: they felt enjoyment rather than difficulty in using L2 for communication, and they were convinced that their current problem in L2 comprehension and speech production was improvable through their own effort. These 16 participants stated that they increased the amount of extramural L2 contact on top of classroom participation after they realized their problem in L2 ability. Throughout their extra learning attempts, these 16 participants not only oriented themselves to speaking activities, but also tried to learn practical and new L2 knowledge through more self-paced L2 activities (i.e., reading and listening). At the second interview, these 16 participants reflected that, as they kept learning from written and spoken L2 inputs, they became able to try L2 expressions which they had learned from intra/extramural L2 contact within their speech productions, as well as improving their L2 comprehension ability.

In contrast, at the first interview, 48.00% (12 out of 25) less-prepared participants stated that they could not capture even the general meaning of the experts' utterances during the first stage of their sojourn. Moreover, 60.00 % of less-prepared participants (the above 12 plus three of the remaining 13 participants) asserted that, as they repeatedly failed to understand the experts' utterances and convey their opinions in L2, they gradually lost their willingness to communicate with the experts until halfway through their sojourn. The first interview further revealed that, even though they realized their problem in L2 ability, the above 12 less-prepared participants were not encouraged to conduct the extra self-paced L2 activities. This is because, in these activities, those 12 participants could not decode the contents of L2 inputs without consulting the Internet constantly.

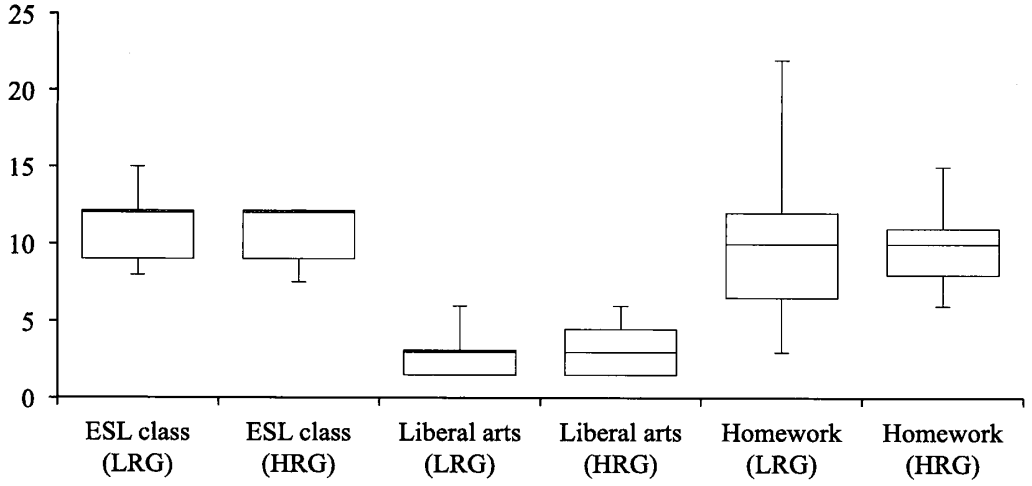

Figure 2. Comparison of two groups' intramural L2 contact, LRG = low readiness group (n = 25), HRG = high readiness group (n = 21), where the vertical axis indicates hours, the top and bottom of the box are the 75th and 25th percentiles, the line inside the box is the median, and the ends of the whiskers represent the minimum and maximum.

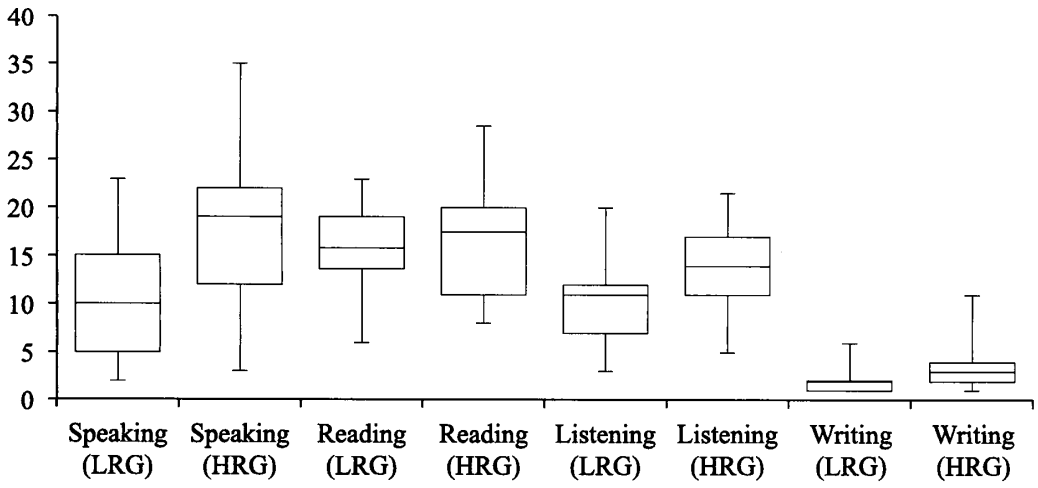

Figure 3. Comparison of two groups' extramural L2 contact, LRG = low readiness group (n = 25), HRG = high readiness group (n = 21), where the vertical axis indicates hours, the top and bottom of the box are the 75th and 25th percentiles, the line inside the box is the median, and the ends of the whiskers represent the minimum and maximum.

Nevertheless, at the time of the second interview, even those 12 participants asserted that they gradually increased the number of self-paced L2 activities in comparison to the midpoint of their sojourn. They reflected that participation in ESL classes gave them good opportunities to improve their comprehension ability, so that they became able to learn L2 knowledge even outside the classroom. On the other hand, although the above-mentioned 60.00% (15 out of 25) of participants also felt gradual growth in their L2 oral performance compared to that of the first stage of their SA, they did not overcome their unwillingness to speak with the experts outside the classroom even at the 5/6 stage of their SA program.

Figures 2 and 3 show descriptive statistics of the LRG's and HRG's L2 contacts inside and

outside the classroom (see also Appendix B)[5]. As shown in Figure 2, with regard to the intramural L2 contacts, there was no remarkable distributional difference between the two groups (also refer to Appendix B). In Figure 3, there were two distinct distributional differences between the two groups (see also Appendix B). First, in speaking activity, the LRG's 75th percentile (15.00 hours) was close to the 25th percentile of the HRG (12.00 hours), and the LRG's weekly action time (M = 10.70, CV = 0.59) was roughly seven hours shorter than that of the HRG (M = 17.60, CV = 0.46). Next, in listening activity, the LRG's 75th percentile (12.00 hours) was similar to the 25th percentile of the HRG (11.00 hours), and the LRG's weekly action time (M = 9.88, CV = 0.41) was about four hours shorter than that of the HRG (M = 14.22, CV = 0.35).

Initial Readiness and Extramural L2 Contact

As we have seen above, with regard to the intramural L2 contact, the participants showed no distinct distributional difference in any item. In other words, the participants of this study shared a fairly similar amount of opportunity for L2 learning/practice inside the classroom. This result also indicates that the amount of intramural L2 contact will not be predicted by the participants' readiness, nor this is going to predict gains in L2 oral proficiency in all likelihood. Thus, it is more productive to concentrate on the logical link among the two types of readiness, the amount of extramural L2 contact and gains in L2 oral proficiency, than to compare the predicting power of intramural and extramural L2 contact using this data set (we will come back to this issue later).

Given this premise, simultaneous multiple regression analysis was performed to determine whether the participants' initial motivational and grammatical readiness predict the amount of spontaneous L2 contact during the SA program. The participants' raw scores on the declarative knowledge index and international posture were entered as independent variables. Next, the participants' raw scores on the extramural L2 contact were entered as the dependent variable. Table 4 shows the correlations among the variables. The regression model was significant: adjusted R^2 = .58, F (2, 43) = 31.56, p < .001. Declarative knowledge ($ß$ = .48, t = 4.22, p < .001) and international posture ($ß$ = .40, t = 3.45, p = .001) emerged as significant predictors of the amount of participants' extramural L2 contact. Variance inflation factors (VIF) was 1.40 in this model. A VIF of 10.00 or less is considered the adequate range for a lack of multi-collinearity (cf., Hair, Anderson, Tatham, & Black, 1998). This result indicates that two different types of initial readiness jointly account for 58% of the variance of the participants' extramural L2 contact.

Extramural L2 Contact and Gains in Oral Proficiency

The participants of this study did not start their SA program with uniform L2 oral proficiency. As Magnan and Back (2007) pointed out, participants who start their SA program with lower proficiency often show more obvious gains in L2 ability than more proficient participants. This means that the credibility of using gains in L2 oral proficiency for statistical analysis must be assured. To deal with this problem, this study first portioned out 37 participants from the sample group and then divided them into two groups based on their gains in L2 oral proficiency: the null gainers and the gainers (cf., Golonka, 2006). The null

Table 4
Correlation Matrix (Observed Variables)

Variables	2	3	4
1. Declarative knowledge index	.53 **	.70 **	.52 **
2. International posture	-	.65 **	.39 **
3. Exrramural L2 contact		-	.71 **
4. Gains in L2 oral proficiency			-

**$p < .01$, 2-tailed tests.

gainers consist of the participants who increased L2 oral proficiency less than the average level (i.e., less than 3 points; $n = 12$), and the gainers who developed their L2 oral proficiency more than 3 points (i.e., 4 to 7; $n = 25$). This study confirmed that there was no problematic difference between null gainers' ($M = 16.00$, median = 15.00, $SD = 1.68$) and gainers' ($M = 15.64$, median = 16.00; $SD = 1.60$) initial L2 oral proficiency.

After confirming the credibility of the index, regression analysis was conducted to investigate the relationship between the amount of spontaneous L2 contact and gains in L2 oral proficiency. The participants' raw scores on the extramural L2 contact were entered as the independent variable and their gains in L2 oral proficiency were entered as the dependent variable. Table 4 shows the correlation between the variables. The regression model was significant: $R^2 = .51$, F (1, 44) = 45.76, $p < .001$. This result indicated that the amount of extramural L2 contact plays a significant role in the participants' improvement in L2 oral proficiency ($ß = .71$, $t = 6.77$, $p < .001$) and explains 51% of the variance of pretest to posttest gains in L2 oral proficiency.

Discussion

First, the result of the *t*-test showed consistency with the findings of prior studies, in that a one-semester SA program can be a benchmark for L2 oral development (Hernández, 2010; Magnan & Back, 2007; Segalowitz & Freed, 2004).

Next, this study tackled the second research question. As touched on above, the SA literature hitherto have investigated the individual impact of grammatical and motivational readiness on the development in L2 oral performance. For example, grammatical readiness was often considered a factor that affects the efficiency of L2 learning/practice (Davidson, 2010; Golonka, 2006), and motivational readiness was regarded as a factor related to persistence in L2 learning/practice (Hernández, 2010; Yashima & Zenuk-Nishide, 2008). The results of this study, however, demonstrated the combined impact of two different types of readiness on SA participants' learning resources use during the SA program.

This study first conducted interview analysis focusing on the participants' self-assessed changes in L2 competence and orientation toward L2 contact inside and outside the classroom. In the case of the HRG, 76.19% of them were able to comprehend the general contents and structure of the experts' utterances from the first stage of their sojourn. This means that to a greater or lesser degree they could utilize functional knowledge of the grammar within listening activities (cf., Davidson, 2010; DeKeyser, 2007, 2010; Golonka,

2006). In addition, even though these participants could not smoothly communicate with the experts during the first stage of their sojourn, this experience did not diminish their positive orientation toward L2 oral practice. Instead, they enjoyed using L2 for actual communication, attributed their problems in L2 ability to a lack of learning/practice and were oriented toward extra learning in addition to classroom participation. It is correct to say that these participants' reaction to their shortcomings in L2 abilities is a reflection of their mental readiness to toil through the L2 learning process in order to be a member of English speaking communities (Yashima & Zenuk-Nishide, 2008) and their linguistic readiness to retain a certain sense of control over their L2 learning process (DeKeyser, 2010; Dörnyei, 2001). Within their learning behavior, because they were capable of using their declarative knowledge particularly in self-paced/pressure-free L2 activities (i.e., reading, listening and writing) (cf., Ellis, 2009), those participants first succeeded in learning from L2 inputs (including feedback) provided in both classroom education and independent learning. Simultaneously, owing to their high aspiration to use L2 for communication and desire to improve oral competence, these participants expanded their opportunities to conduct L2 oral practice outside the classroom.

On the other hand, in the case of the LRG, in total 60% of them lost their positive orientation toward extramural speaking activity by the midpoint of their sojourn. In addition, the majority of these participants were not oriented toward self-paced extramural L2 activities either, even at the halfway stage of their sojourn. The reason for their unwillingness to communicate and learn L2 outside the classroom was their lack of linguistic and mental backup needed for problem-solving. That is, they were not ready to decode L2 inputs using functional knowledge of grammar or manage their fear of speaking L2 without a scaffold (Krashen, 1985), which they have in classroom learning contexts.

Although even the above participants in the LRG asserted that they increased the amount of their self-paced L2 activities along with their self-perceived growth in L2 comprehension ability, descriptive statistics indicated that a half-year SA program was probably not long enough for less-prepared participants to increase their extramural L2 contact to the level of the HRG.

With regard to the amount of L2 input, the distinct difference between the HRG and the LRG was found in listening activities. This disparity most likely reflected the intensity of international posture of each group. The participants in the HRG were better motivated to learn conversation-applicable L2 expressions for greater oral competence from the initial point. Further, in a series of studies, Robison reported that grammatically well-prepared L2 learners try to detect structural regularities of L2 input even in the explicit learning condition (cf., Robinson, 2007, p.261). Taking this finding and the two groups' initial grammatical knowledge level into account, the disparity in the amount of listening activities is largely responsible for the different amounts of newly learned L2 knowledge between the HRG and the LRG. Next, in speaking activities, the LRG's weekly action time was on average seven hours shorter than that of the HRG. Considering that declarative knowledge can be transferred to behavioral routine through domain specific practice, the dissimilarity in opportunities for practicing newly learned L2 knowledge within speech production is a strong factor leading to the different learning outcomes in L2 oral proficiency[6]. Although the

participants of this study also had chances for oral practice inside the classroom, as DeKeyser (2007) aptly summarized, the amount of L2 oral practice that SA participants attain mainly relying on classroom attendance within a limited SA duration is probably insufficient owing to its passive nature. Finally, the LRG caught up with the HRG only in reading activities. The reason for this probably lies in the nature of reading as the most private and the least anxiety-inducing activity. Unlike other more public activities, L2 learners can reread and interpret written input entirely at their own pace with minimal risk of input misuse and embarrassment (MacIntyre et al., 1997, pp. 279–280), and this is likely to be the reason that the LRG succeeded in attaining positive motivation toward this activity earlier than the other L2 activities. In short, it appears that lack of readiness will be particularly problematic for SA participants in learning from spoken L2 inputs and conducting sufficient oral practice needed for L2 oral development.

Simultaneous multiple regression analysis was conducted to confirm the above assumption and, if there was any considerable result, the extent of the combined impact of grammatical and motivational readiness on the extramural L2 contact. The analysis revealed that two different types of readiness jointly explain 58% of the variance of the participants' spontaneous learning resources use during the SA program. The result first gave statistical support to the results of the above analyses, and second demonstrated the considerable impact of both initial declarative knowledge ($ß$ = .48) and international posture ($ß$ = .40) on the amount of extramural L2 contact during the SA program.

The above findings provided a good reason to accept the assumption that two different types of readiness jointly affect spontaneous learning resource use during an SA program. Hence, the next logical step which this study has to take is to determine whether the amount of extramural L2 contact shows a positive connection with gains in L2 oral proficiency. The result of regression analysis revealed that the amount of extramural L2 contact was indeed linked to gains in L2 oral proficiency, and yielded a similar effect size (R^2 =. 51) to that of Hernández (2010). Furthermore, the result of the series of regression analyses revealed that grammatical and motivational readiness facilitated knowledge proceduralization through increasing the amount of spontaneous L2 contact. According to DeKeyser (2007), knowledge proceduralization typically results in faster and more accurate L2 speech even under multi-task conditions (see also Skehan, 2002). As we have seen in the methodology section, those are also the key factors for increasing the score in the speaking section of the TOEFL iBT® rating.

Educational Implications

As this study demonstrated, if SA participants equip themselves with the capability to refer to functional knowledge of the grammar rules in L2 comprehension, and even production to some extent, it not only increases the efficiency of independent L2 learning/practice outside of classroom education, but also reinforces SA participants' sense of control over their learning process. In addition, provided that SA participants had strong aspiration for L2 communication as a part of a high level of international posture, it also protects SA participants' positive orientation toward L2 learning/practice and expands the grounds for knowledge proceduralization. Moreover, with readiness, SA participants can broaden their

point of view though the amount of L2 communication, and also avoid merely improving limited aspects of oral performance, such as politeness formulas, routine request and routine inquiries (DeKeyser, 2007, p.213). Taking these results, this study suggests the following recommendations for pre-departure training for future SA programs.

First, in Yashima and Zenuk-Nishide (2008), Japanese high school students taught a content-based L2 program developed their international posture along with their TOEFL® ITP score and frequency of L2 communication inside and outside the classroom. This result indicated that if prospective SA participants receive the opportunities to be taught international content in their target language or chances to convey their ideas in L2 within pre-departure training, they will realize what they can/want to do using L2 and become aware of the gap between their objective and their actual L2 level (cf., Keck, Iberri-Shea, Tracy-Ventura, & Wa-Mbaleka, 2006). For instance, imagine that a lecturer who uses the same L1 as prospective SA participants and has a good command of L2 conducts content-based pre-departure SA classes. If this lecturer uses international content such as TV shows, news, music and cultural programs as teaching materials and conversation topics, prospective SA participants can feel like international affairs and issues are close to them, and will be able to have a tangible image of their ideal L2 level through practice and interaction with the lecturer. As Dörnyei (2001) suggested, communicating with achievers who share similar learning backgrounds with L2 learners can foster their positive belief in the L2 learning process (i.e., observation and modeling).

In addition, after prospective SA participants have realized the gap between their objective level and their actual L2 level, it is also important to nurture their ability to use functional knowledge of grammar within L2 activities. For this, it would be worth trying to record the L2 speech production of prospective SA participants and giving them explicit feedback on their outputs. By being given correct forms of the L2 expressions they wanted to convey, they will be able to increase their referable functional knowledge of grammar in a relevant domain. Similarly, it may also be productive to listen to L2 broadcasts and write down the form of those inputs using fill-in-the-blank tasks, for example (cf., DeKeyser, 2010). Experiencing this type of training first contributes to accustoming prospective SA participants to spoken input, and can increase the usable grammar rules within their listening activities (cf., Davidson, 2010).

Conclusion

To sum up, this study first illustrates that grammatical and motivational readiness promote effective learning resource use during the SA program, and are connected to L2 oral development. A further important finding of this study was knowledge proceduralization is achieved within a relatively short period of SA in the case of FL learners.

On the other hand, the results of this study leave several intriguing questions unanswered. First of all, because it was not the intention of this study to undermine the value of classroom education, this study focused on the relationship among initial readiness, spontaneous learning resource use and development of L2 oral proficiency statistically. However, the fairly similar amount of classroom participation measured in this study also implied the need for documentation which can project further the subtle individual differences within intramural L2 contact in order to illustrate the interaction between initial readiness and classroom

education. Although relying mostly on sheltered education has limitations for L2 oral development within a limited SA duration, it is also plausible that initial readiness also affects the effectiveness of L2 learning/practice inside the classroom, and explains the remaining variance in gains in L2 oral development (cf., Keck et al., 2006; Robison, 2007). In addition, it should also be investigated whether or not grammatical and mental readiness contribute to the construction of the practice/proceduralization cycle even when SA duration is shorter than six months (cf., Allen & Herron, 2003; Davidson, 2010). Considering that not all FL learners can afford to spend time on a long-term SA program, the benefit of shedding light on this issue is indisputable.

Thus, future studies need to answer the remaining questions and provide reliable guidelines for future SA participants and administrators.

Notes

[1] The present study uses the term "study abroad" as follows: learning one's target language as a main subject in a host country speaking it as their first language.

[2] Two to three 50-minute classes per week taught by Japanese English teachers.

[3] In the subscale, this study yielded almost the same level of tolerable alpha values in comparison to the prior investigations (display order: the present study; Yashima, 2002): interest in foreign affairs (α = .64, .67), interest in international vocation/activities (α = .75, .73) and intergroup approach-avoidance tendency (α = .76, .79).

[4] This criteria is available at http://www.ets.org/toefl/ibt/scores/understand.

[5] In Figure 3, four reading activities and three listening activities in extramural L2 contact (see Table 1) were combined as one L2 activity.

[6] The amount of speaking activity affects the amount of writing activity. According to interview data, the HRG's frequent use of short messages to conduct speaking activity (i.e., coordinating plans to see friends) broadened difference in action time between the HRG and the LRG in Figure 3.

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Appendix A: Descriptive statistics on initial readiness (n = 46 each)

Declarative knowledge index

Section	*M*	*SD*	min	max
1. Structure	9.87	2.35	5.00	15.00
2. Written expression	15.78	5.09	4.00	25.00
Overall score	25.65	5.51	12.00	37.00

International posture

Item No.	Subscale	Description of item	*M*	*SD*
1	IiIV/A	I want to live in a foreign country.	5.74	1.10
9	IiIV/A+	I don't think what's happening overseas has much to do with my daily life.	5.65	0.80
4	IiIV/A	I want to work in an international organization such as the United Nations.	5.61	0.89
10	IA-AT	I would talk to an international student if there were one at school.	5.54	0.87
6	IA-AT+	I try to avoid talking with foreigners if I can.	5.43	0.87
11	IA-AT	I want to make friends with international students studying in Japan.	5.37	1.09
13	IiFA	I often read and watch news about foreign countries.	5.33	0.96
15	IiV/A+	I would rather stay in my hometown.	5.26	1.06
3	IA-AT	I would help a foreigner having trouble communicating in a restaurant or at a station.	5.22	1.24
14	IA-AT+	I would feel somewhat uncomfortable if a foreigner moved in next door.	5.22	1.24
5	IiV/A+	I'd rather avoid the kind of work that sends me overseas frequently.	5.22	0.99
8	IA-AT	I wouldn't mind sharing an apartment or room with an international student.	5.20	0.84
2	IiFA	I often talk about situations and events in foreign countries with my family and/or friends.	5.04	0.92
12	IiIV/A	I'm interested in volunteer activities in developing countries such as participating in Youth International Development Assistance.	4.96	1.11
7	IA-AT	I want to participate in a volunteer activity to help foreigners living in the surrounding community.	4.72	1.32

Note. IiIV/A= Interest in International Vocation/Activities; IA-AT = Intergroup Approach-Avoidance Tendency; IiFA = Interest in Foreign Affairs; + = Reverse-scored items.

Appendix B
Descriptive statistics on two groups' L2 contact

Low Readiness Group					High Readiness Group				
Item	*M*	*CV*	min	max	Item	*M*	*CV*	min	max
Speaking	10.70	0.59	2.00	23.00	Speaking	17.60	0.46	3.00	35.00
Reading	16.12	0.23	6.00	23.00	Reading	16.31	0.35	8.00	28.50
Listening	9.88	0.41	3.00	20.00	Listening	14.22	0.35	5.00	21.50
Writing	2.12	0.67	1.00	6.00	Writing	3.17	0.74	1.00	11.00
ESL Class	11.36	0.19	8.00	15.00	ESL Class	10.74	0.14	7.50	12.00
Liberal arts	2.78	0.49	1.50	6.00	Liberal arts	3.19	0.45	1.50	6.00
Homework	10.30	0.43	3.00	22.00	Homework	9.67	0.25	6.00	15.00

Note. Low Readiness Group (n = 25), High Readiness Group (n = 21).

Appendix C
Example of original question items in the language contact profile

Q1. During the SA program, how many classes did you participate?

1. English as Second Language Class [ ] class(es)
2. Regular Subjects/Liberal Arts [ ] class(es)

Q2. Please describe contents, hours of instructions and levels of the classese that you have answered in Q1.

[1] English as Second Language Class

1. Contents of the class [ ]

   Hours of instruction [ ] hours

   Class level (Please check the box which represents your class level)

   ☐ Elementary or equivalent
   ☐ Intermediate-Low or equivalent
   ☐ Intermediate or equivalent
   ☐ Intermediate-High or equivalent
   ☐ Advanced-Low or equivalent
   ☐ Advanced or equivalent

Note. In an actual questioner, 14 identical questions followed this quesion.

[2] Regular Subjects/Liberal Arts

1. Contents of the class [ ]

   Hours of instruction [ ] hours

Note. In an actual questioner, 4 identical questions followed this quesion.