



Faculty Publications

2014

Variables affecting L2 gains during study abroad

Wendy Baker-Smemoe
Brigham Young University, wendy_baker@byu.edu

Dan P. Dewey
Brigham Young University

Jennifer Brown
Brigham Young University

Rob A. Martinsen
Brigham Young University

Follow this and additional works at: <https://scholarsarchive.byu.edu/facpub>



Part of the [Arts and Humanities Commons](#)

Original Publication Citation

Baker-Smemoe, W., Dewey, D., Bown, J. & Martinsen, R. (2014). Variables affecting L2 gains during study abroad. *Foreign Language Annals*, 47, 464-486.

BYU ScholarsArchive Citation

Baker-Smemoe, Wendy; Dewey, Dan P.; Brown, Jennifer; and Martinsen, Rob A., "Variables affecting L2 gains during study abroad" (2014). *Faculty Publications*. 5893.
<https://scholarsarchive.byu.edu/facpub/5893>

This Peer-Reviewed Article is brought to you for free and open access by BYU ScholarsArchive. It has been accepted for inclusion in Faculty Publications by an authorized administrator of BYU ScholarsArchive. For more information, please contact ellen_amatangelo@byu.edu.



Variables Affecting L2 Gains During Study Abroad

Wendy Baker-Smemoe
Brigham Young University

Dan P. Dewey
Brigham Young University

Jennifer Bown
Brigham Young University

Rob A. Martinsen
Brigham Young University

Abstract: *Second language (L2) gains during study abroad have been related to several variables including length of stay (Llanes, 2011), language use (Martinsen, Baker, Dewey, Bown, & Johnson, 2010), and social network development (Isabelli-García, 2006), among others. However, most studies have investigated only a few predictors in single study abroad programs. While these findings are helpful, larger scale studies are needed to better understand the variables that contribute to L2 gains across several different cultures and learner groups. The current study examines predictors of L2 gain of more than 100 native English speakers who participated in study abroad in Mexico, Spain, France, Egypt, Russia, and China. Participants were asked to complete an ACTFL Oral Proficiency Interview at the beginning and end of their study abroad program. Participants were then divided into “gainers” and “non-gainers,” or those who did or did not make significant language gains from pre- to posttest. Their language gains from pre to posttest were compared to several predictors: personality (measured by the NEO Five-Factor Inventory), social networks (size, dispersion, density, etc.), intercultural sensitivity (measured by the Intercultural Development Inventory), amount of second language use, gender, and age. Results suggest that many students were*

Wendy Baker-Smemoe (PhD, University of Illinois) is Associate Professor in the Department of Linguistics and English Language, Brigham Young University, Provo, Utah.

Dan P. Dewey (PhD, Carnegie Mellon University) is Associate Professor in the Department of Linguistics and English Language, Brigham Young University, Provo, Utah.

Jennifer Bown (PhD, The Ohio State University) is Associate Professor of Russian, Brigham Young University, Provo, Utah.

Rob A. Martinsen (PhD, University of Texas at Austin) is Assistant Professor of Spanish Pedagogy at Brigham Young University, Provo, Utah.

Foreign Language Annals, Vol. 47, Iss. 3, pp. 464–486. © 2014 by American Council on the Teaching of Foreign Languages.

DOI: 10.1111/flan.12093

able to make gains in language, in each of the programs, and that the strongest predictors of L2 gains were cultural sensitivity and social network variables.

Key words: *IDI, OPI, proficiency, social networks, study abroad*

The number of U.S. students participating in study abroad has increased steadily in recent years, nearly doubling since 2000 and exceeding 300,000 in 2012 (Institute of International Education, 2013, n.p.). Both prior to and throughout this same time period, the need for strong proficiency in a second language (L2) has become even more prevalent in business, health care, and foreign relations and across a range of other professions (O'Connell & Norwood, 2007). Thus, understanding how learners acquire an L2, particularly during study abroad, is perhaps more important than ever.

Two primary goals of many study abroad programs are typically to help students develop and improve their proficiency in an L2 and to enhance their cultural understanding.¹ A large number of studies have investigated the variables that facilitate or impede L2 learning in the context of study abroad, focusing on such questions as “What is the ideal amount of time to spend on study abroad?” (Llanes & Serrano, 2011); “When is the ideal time in L2 development to participate in an immersion program?” (Davidson, 2010); “How much L2 use is needed in order to improve in L2 learning?” (Hernández, 2010); and “Do variables such as the students’ personalities, number of friends acquired in the target culture, or cultural sensitivity affect their L2 use on a study abroad program?” (Dewey, Belnap, & Hillstrom, 2013); however, many questions still remain (see Llanes, 2011, for a discussion of these issues).

Most of these studies examined only one variable or one aspect of L2 acquisition during study abroad; moreover, these studies often lacked sufficiently robust numbers of participants for many conclusions to be

drawn. Consequently, it is difficult to determine which of the previously examined variables has the most important influence on L2 acquisition during study abroad or how all those variables interact. As Kinginger (2009) has noted, “In the case of proficiency ... whereas work with small groups of participants typically does not generate robust effects, large-scale studies ... have linked proficiency with study abroad throughout the history of the research” (p. 209),² but much can still be learned about which variables influence proficiency development during study abroad. The purpose of this study, therefore, was to examine a larger number of participants from multiple programs abroad and to consider simultaneously several variables that might influence students’ linguistic development while abroad. This study also evaluated the characteristics and experiences of gainers (those who improved in L2 proficiency during study abroad) compared with those of non-gainers (students who did not).

Literature Review

This study addressed seven variables representing three main themes: preprogram competence (preprogram proficiency and intercultural sensitivity), learner attributes (age, gender, personality), and social/contextual variables (amount of L2 use and social network development). All of these variables have been studied previously, but their relative importance has not been examined. What follows is a discussion of previous research regarding each of these variables.

Preprogram Competency Variables

Preprogram Proficiency

One of the earliest findings in study abroad research was that preprogram proficiency plays an important role in whether or not participants achieve L2 gains (i.e., Brecht, Davidson, & Ginsberg, 1993). Most research has demonstrated that participants need to reach a certain level of proficiency before studying abroad in order to benefit from

interaction with native speakers, but that level must be low enough that measurable L2 proficiency gains are attainable during the short period of time of a study abroad program.³ For example, Vande Berg, Connor-Linton, and Paige (2009) found that learners at an Advanced Low level or higher on the ACTFL Oral Proficiency Interview (OPI) appeared to benefit less linguistically than those starting at Intermediate levels. Similarly, Muñoz (2010) demonstrated through a case study of two siblings that the younger and less proficient sibling improved significantly more than did the older and more proficient sibling. However, recent research has suggested that even advanced students can make L2 gains if they are sufficiently able to monitor feedback that they receive from native speakers (Davidson, 2010).

Intercultural Sensitivity

Previous research has shown that cultural differences may impede students' interactions with native speakers as well as students' motivation to improve in the second language.⁴ Twombly (1995) and Wilkinson (1998) both demonstrated that students who are troubled or confused by differences between their own culture and the target culture have more difficulty integrating into the target culture and thus have fewer opportunities to use the language and develop their skills. Allen and Herron (2003) found that students who were troubled by cultural differences across their own and the target culture had increased anxiety when interacting with native speakers and also had fewer L2 gains during their study abroad program. Likewise, Martinsen (2010) investigated 45 students' preprogram proficiency levels, their intra-program interactions with native speakers while abroad in Argentina, and their motivation, relationships with host families, and level of cultural sensitivity to determine which of these variables were most related to improvements in oral L2 skills (a measure of oral production similar to the Simulated Oral Proficiency Interview or SOPI). He found that the preprogram level of intercultural sensitivity (using the

Inventory of Cross-Cultural Sensitivity designed by Cushner, 1986) was the only predictor of L2 improvement. Similarly, in a study with 830 study abroad participants, Vande Berg et al. (2009) found that a predeparture orientation with a cultural component was a significant predictor of language improvement (measured using the SOPI) during study abroad. Aware of Vande Berg et al.'s (2009) findings, Jackson (2006, 2013) successfully sought to increase learners' predeparture intercultural sensitivity in an effort to enhance their ability to associate and communicate with locals while abroad.

Learner Attributes

Age and Gender

A participant's gender and age and the impact of those variables on language gains during study abroad have been investigated. Studies of the role of a participant's gender in language learning during study abroad have shown mixed results (Davidson, 2010; Haneda & Monobe, 2009; Vande Berg et al., 2009). Some studies have reported that males and females may develop social networks differently and that these differences play a role in how they learn the L2 and how much they can improve (Matthews, 2000). Others have demonstrated that in some cultures, female students may have more difficulty interacting with native speakers and integrating into social networks than male students (Trentman, 2013; Walsh, 2012). How learners perceive themselves and how they are perceived by host culture members can affect L2 exposure and use. For example, Siegal (1995) found that some female learners of Japanese refused to use polite forms associated with Japanese stereotypes of Japanese femininity. On the other hand, Brown (2013) found that Korean females tended to not use the appropriate honorific forms when speaking with male learners of Korean in Korea, perceiving them as "little brothers" rather than as adults capable of understanding and using appropriate honorific forms. In short, research has suggested that gender may

play a substantial role in understanding the variability among students' study abroad experiences.

Although the effects of gender on L2 gains during study abroad have been studied, very little research has examined the effects of age on learning in a study abroad context. However, the question of age and L2 acquisition has been extensively researched in other areas. For example, many studies have demonstrated that in naturalistic contexts, younger learners often, if not always, outstrip older learners in L2 acquisition and in nearly all areas of L2 learning (DeKeyser, 2000; Johnson & Newport, 1989). Conversely, other research suggested that older learners may have an advantage over younger learners in non-study abroad classroom settings (Muñoz, 2006). The effects of age on L2 learning in study abroad contexts have received far less attention. The few existing studies have primarily focused on differences between children and adults (Llanes & Muñoz, 2013) or between older and younger children (Muñoz, 2010), finding an advantage for younger learners in both cases. No known studies have examined whether age may influence the degree of linguistic gains that can be acquired by adult L2 learners in study abroad settings, although such age effects have been found in other contexts (Baker, 2010).

Personality

Several studies have demonstrated that aspects of a learner's personality can affect how well a learner acquires an L2 in a variety of language learning contexts. Personality variables that have been investigated include extroversion and introversion (Busch, 1982; van Daele, Housen, Pierrard, & Debruyne, 2006), openness to experience and conscientiousness (Verhoeven & Vermeer, 2002), and risk taking (Zafar & Meenakshi, 2012), among many others. These studies emphasized that personality characteristics are more likely to determine *how* a learner acquires an L2 rather than *how well* the learner is able to do so (i.e., Ehrman, 1996). For example, an extroverted

person may be more likely to acquire the language through fruitful interaction with native speakers, while an introverted person may devote more time to studying the language with a book than interacting with others. Both types of personalities may acquire important grammatical knowledge, for example, but they acquire it in different ways. However, other research has addressed the relationship between personality traits and students' L2 proficiency development during study abroad. Findings indicate that some personality traits may indeed influence how well an L2 is learned in the study abroad context. Ożańska-Ponikwia and Dewaele (2012), using the Neuroticism-Extraversion-Openness (NEO) measure called the NEO-Five Factor Inventory (FFI) personality test, found that openness and extroversion were predictors of heightened L2 use and that openness was the best predictor of perceived language proficiency. The researchers speculated that extroversion and openness facilitate seeking out opportunities to talk and to cooperate in social situations, which lead to more L2 use and, perhaps, to greater L2 gains. In this case, a certain personality trait may help enhance how well students are able to benefit from study abroad.

Dewey (2012) and Dewey et al. (2014) also observed that a learner's openness to new experiences was a predictor of L2 use but that program requirements could push even less extroverted and less open students to use the target language. In particular, learners who were highly conscientious could be motivated to use the L2 on a regular basis when instructors gave learners speaking assignments, graded those assignments, and followed up on the learners' speaking assignments during regular interviews. In short, the learners' conscientious natures seemed to compel them to leave their comfort zones to utilize the L2 because they were uncomfortable falling short of instructors' expectations and getting poor grades. Notably, these three studies of personality and language learning focused primarily on L2 use, not gains. No known study has

specifically examined whether personality factors such as openness and extroversion are predictors of L2 gains during a study abroad program.

Social/Context Variables

Second Language Use

It has been posited that there is a positive relationship between the amount of language use by participants during study abroad and their language gains while abroad. However, previous research has been inconsistent, both supporting (Fraser, 2002; Freed, 1990) and refuting (Mendelson, 2004; Miller & Ginsberg, 1995) this assertion. A growing body of research has suggested that this discrepancy in findings exists because the amount of time spent using the L2 is not sufficiently sensitive to capture the nature and quality of the linguistic interactions, which seem to be more important than the mere quantity of interactions. For example, study abroad participants who actively engaged with L2 native speakers who used the language at the participants' level and at higher levels made greater L2 gains than participants who did not (Segalowitz & Freed, 2004; Wang, 2010). Furthermore, Martinsen, Baker, Dewey, Bown, and Johnson (2010) discovered that participants in a study abroad program that included a service component spent more time outside of formal class time using the L2 than did students in a traditional study abroad program. Although participants in both the service-oriented program and the traditional study abroad program achieved the same degree of improvement in language skills, the service-oriented program participants reported that the service component provided more frequent and higher quality interactions with native speakers than the traditional study abroad experience. In contrast, several studies confirmed that the type of L2 use and even the type of program affects whether, and to what extent, use of the L2 has an impact on students' acquisition of that language (i.e., Badstubner & Ecke, 2009; Magnan & Back, 2006; Rivers, 1998). For

example, both Cadd (2012) and Dewey (2012) found that programs that require participants to use the L2 with native speakers of that language in linguistically rich ways seem to help students improve their L2 proficiency.

Social Networks

Social networks refers to social circles and the strength of the ties between members of these social circles (Milroy, 1980). People typically belong to several social networks—their family, their work, their friends, and so on. First examined in the linguistic field in terms of dialect and sociolinguistic analyses, social network theory has only recently been applied to L2 acquisition (Kurata, 2004, 2007; Xu, Wang, & Wei, 2008) and to study abroad (Dewey, Bown, & Eggett, 2012; Isabelli-García, 2006).

This recent approach to study abroad research has emphasized that the development of social networks may be a key to whether or not students are able to improve their L2 proficiency while studying abroad (Dewey et al., 2012; Isabelli-García, 2006; Trentman, 2013). This research has demonstrated that study abroad participants who seek out and befriend native speakers will use the L2 more and engage in more complex, extended discourse than those who do not (Dewey, Belnap, et al., 2013; Lybeck, 2002). Whether or not these benefits occur depends not only on the number of people in one's social network but also on what kind of social networks one develops (Dewey, et al., 2012; Isabelli-García, 2006). In particular, social networks can be examined in terms of their size (number of people), dispersion (number of groups one associates with), intensity (how close one is with the members in the social network), durability (how often one interacts with the people in one's network), and other features. Many of these social network features may facilitate interactions in the L2 and thereby promote L2 development.

Researchers have also used the term *community of practice* to refer to the social

networks learners associate with while abroad. The concept of a community of practice was proposed by Lave and Wenger (1991), who asserted that learning occurs through participation in communities and that one typically begins participation in a community at a peripheral level and gradually, through negotiating and being accepted by the community, works his or her way into the center, where the individual can engage in more meaningful learning experiences. Using this framework, Trentman (2013) found that learners in Egypt struggled to meet their own expectations in terms of engagement with Egyptian communities of practice. Similarly, Goldoni (2013) found that learners “did not become part of the Spanish-speaking community of practice” during their time abroad in Spain (p. 365). Although the Goldoni (2013) and Trentman (2013) studies did not attempt to connect the degree of engagement with communities of practice with language proficiency gains, both authors noted important connections between engagement and proficiency—the more proficient learners are, the more capable they will be of engaging, and the more they engage, they more likely they will be to develop their proficiency.

Current Study

Kinginger (2009), Wang (2010), and Llanes (2011) have recently analyzed previous research on L2 acquisition during study abroad. From their analyses, the following observations can be made. First, what happens linguistically during the study abroad experience, such as how often and with whom the learners use the L2, has been understudied. Second, the extent to which individual variables, such as personality, intercultural sensitivity, language use, gender, age, and other features, relate to achieving L2 gains in an study abroad context remains unclear. In addition, while recognizing the need for more case studies and qualitative research on L2 gains during study abroad programs, Kinginger (2009) also called for larger quantitative analyses

with more variables and participants. Thus, this study differs from earlier research in that it examined seven variables (amount of L2 use, preprogram proficiency, personality, social network development, cultural sensitivity, age, and gender) for 100 participants across six different study abroad programs that differed from each other in terms of L2 learned, program length, and program requirements in an attempt to determine what specific variables might influence students’ progress toward proficiency during study abroad. The authors were especially interested in how gainers (those whose L2 proficiency improved during their study abroad experience) might differ from non-gainers (those whose L2 proficiency did not improve during their study abroad experience). In doing so, this study asked the following research questions:

1. To what extent do L2 learners differ in terms of L2 gains across the six study abroad programs under consideration?
2. In what ways do L2 gainers differ from non-gainers in terms of preprogram L2 proficiency, social networks, personality, cultural sensitivity, amount of L2 use, age, and gender?
3. Which of these seven variables best predicts L2 gains across the six study abroad programs?

Methods

Participants

One hundred and two students (52 males, 50 females) participated in this study. All were native speakers of English from the same university; were learning Spanish, French, Russian, Arabic, or Chinese; and were students in one of six study abroad programs in Madrid, Spain; Merida, Mexico; Paris, France; Moscow, Russia; Cairo, Egypt; or Shanghai, China. The students’ preprogram proficiency was determined by scores on an ACTFL OPI² conducted prior to studying abroad. Table 1 presents the

participants' demographic and L2 proficiency information.

Procedures and Analyses

The study examined one dependent variable, L2 gain, and five independent variables: intercultural sensitivity, L2 use, personality, preprogram proficiency, and social network development. What follows are explanations for how each of these variables was measured.

Proficiency and L2 Gains

Participants' proficiency and L2 gains, the dependent variable in this study, were measured by comparing participants' scores on official in-person or telephone ACTFL OPIs that were conducted by certified testers prior to departure and within one month after their return. The OPI scores range on a scale from Novice Low (1) to Superior (10) and contain three sublevels (Low, Mid, and High) for all but the last level (Superior). Although the scores do not reflect linear gains in proficiency, the scores were converted to numerical values for comparison and statistical analysis.

Intercultural Sensitivity

To examine participants' cultural sensitivity, participants completed the Intercultural Development Inventory (IDI) approximate-

ly one month prior to departure and during the program's final week. This inventory, developed by Hammer (Hammer, Bennett, & Wiseman, 2003), ranks participants' cultural sensitivity (i.e., "intercultural competence—the capability to shift cultural perspective and appropriately adapt behavior to cultural differences and commonalities"; see <http://idiinventory.com/products/the-intercultural-development-inventory-idi/>) on a five-point scale based on answers to 50 questions and includes the following stages: denial, polarization (defense/reversal), minimization, acceptance, and adaptation. The IDI Developmental Orientation (DO) Score was used because this score is thought to best represent participants' actual level of intercultural sensitivity, in particular as it relates to their behavior during study abroad (Hammer, 2012).

Personality

The NEO-FFI personality test (Costa & McCrae, 1992), administered prior to departure, was used to assess personality variables. This inventory consists of 60 statements to which participants respond using a five-point scale ranging from "strongly disagree" to "strongly agree." The statements were designed to measure the following traits for which descriptors are included in parentheses: extroversion

TABLE 1

Demographics for Each Study Abroad Program

Group	No. of Students	Gender		Average Age	Weeks Abroad	Preprogram Proficiency			
		Male	Female			Nv	Int	Ad	Sp
China	5	3	2	22.20	12	0	3	2	0
Egypt	44	31	13	24.7	16	0	38	6	0
France	9	0	9	21.94	14	1	8	0	0
Mexico	17	6	11	22.18	8	0	8	9	0
Russia	17	12	5	24.45	16	1	9	7	0
Spain	10	0	10	22.23	8	0	9	1	0

Note: Nv = Novice, Int = Intermediate, Ad = Advanced, and Sp = Superior.

(active, assertive, energetic, enthusiastic, outgoing, talkative), agreeableness (appreciative, forgiving, generous, kind, sympathetic, trusting), conscientiousness (efficient, organized, reliable, responsible, thorough), neuroticism (anxious, self-pitying, tense, touchy, unstable, worrying), and openness (artistic, curious, imaginative, insightful, original, wide interests). The survey contains 12 items for each of the five traits, or a total of 60 items. For this study, the scores for the 12 items for each trait were added up, yielding a separate score for each of the five traits.

NEO-FFI scores are recorded by researchers in different ways. Sometimes they are recorded as raw scores, which are obtained by adding up all the responses for each of the questions associated with the five factors. Many times they are turned into T scores based on responses from thousands who have participated in validation studies of these traits (Costa & McCrae, 1992). Others use these scores to create a NEO summary, which explains in prose the typical characteristics of each test taker. In this study, raw scores were analyzed.

L2 Use

L2 use was measured via a language log from Martinsen et al. (2010) that was administered midway through each program. On the log, students listed how often and in what activities they used the L2 during a one-week period. Sample activities included “talking with friends/roommates,” “talking with the host family,” “talking in classes,” and “listening to music in the L2.” To include all possible activities or situations, the log was adapted to include an “other” category so that participants could specify other activities in which they used their L2.

To analyze L2 use, the amount of time using the L2 was averaged into four categories: total language use, total in-class language use, total receptive language use, and total interactive language use. Receptive language use included listening or reading tasks in which the speaker used the L2 with no interaction with an interlocutor (e.g.,

listening to the radio or watching a movie). Interactive language use included writing or speaking tasks, such as talking with a friend on the phone or reading and answering e-mail messages. The tasks were divided among the four categories to determine whether a specific type of language use was especially important for language learning.

Social Networks

Data on social networks were collected by having participants complete the Study Abroad Social Interaction Questionnaire (SASIQ) developed by Dewey and his colleagues (Dewey et al., 2012; Dewey, Belnap, et al., 2013; Dewey, Ring, Gardner, & Belnap, 2013) one to two weeks before the end of the study abroad program. The SASIQ is a 13-item questionnaire that measures students’ social networks during study abroad; it is based on the Montreal Index of Linguistic Integration (Segalowitz & Ryder, 2006) and the General Social Survey (Burt, 1985). In particular, the questionnaire can be used to determine the size, durability, density, and dispersion of the learners’ social networks. This study examined the following features of social networks:

1. Size: The number of native L2 speakers in the participant’s social network. A change in this size was also estimated by comparing a list of friends or social network members that was provided two weeks into the program with another list generated one to two weeks prior to the program’s end.
2. Durability: The participant’s frequency of interaction with another individual, measured in the average total time spent with each individual.
3. Intensity: The degree of closeness that the participant felt toward the members of his or her social network, rated on a scale from 1 to 10.
4. Density: How centralized or closely connected the network members were, measured as the average size of each

social group—the more people in each social group, the more dense or connected the network.⁶

- 5. Dispersion: The average number of groups an individual participated in—the more groups, the more dispersed the network.
- 6. English-speaking proficiency: The English-speaking proficiency of members in the participant’s social network, which was measured with a five-point scale ranging from “not at all” to “very well.”⁷

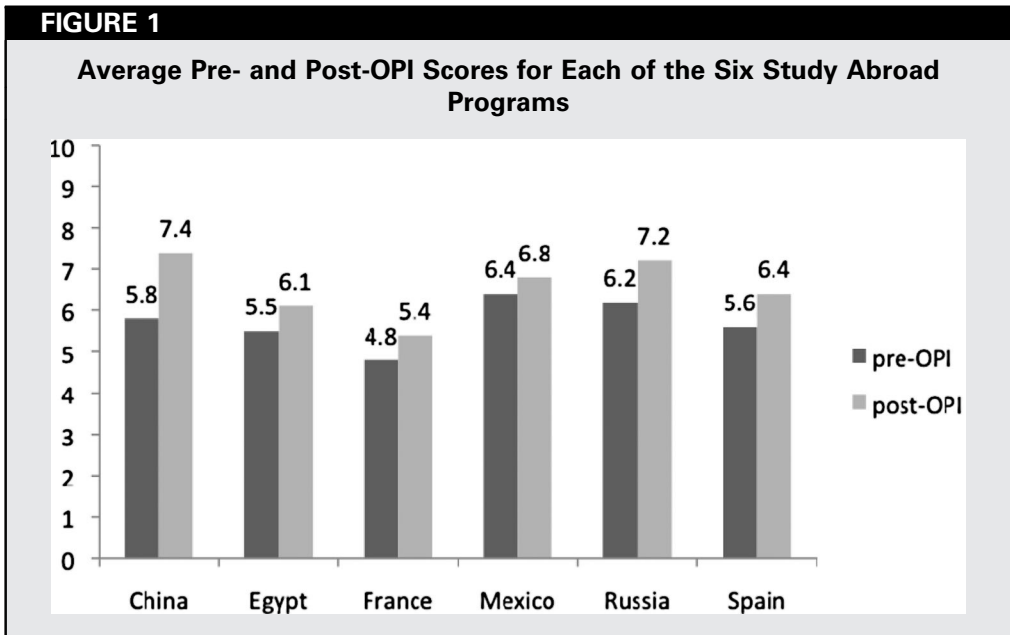
Results

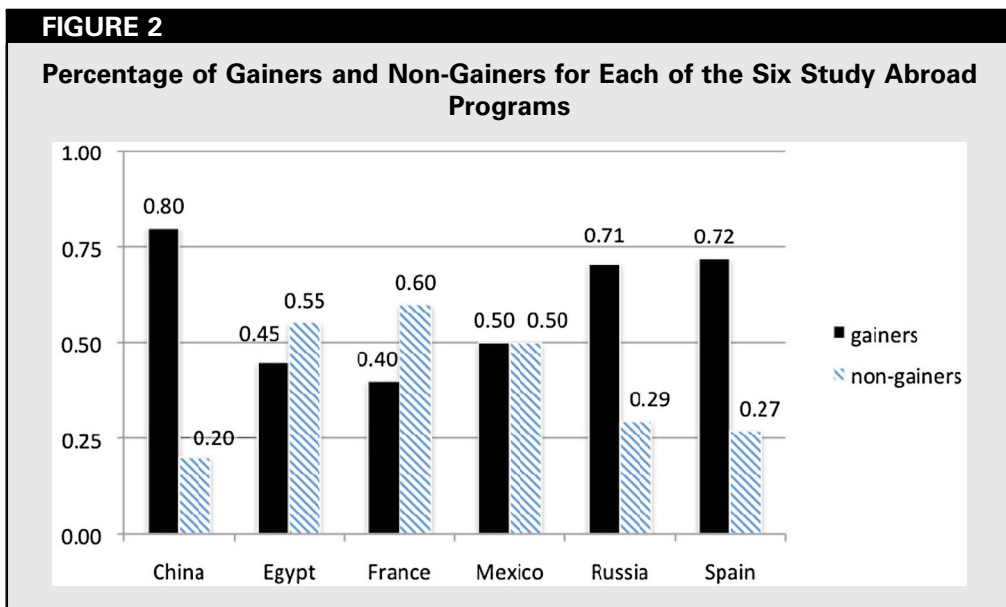
Gains in Proficiency

The first research question examined the extent to which groups of participants in each of the six study abroad programs differed in terms of L2 gains. Across the programs, the average pre-OPI score was 5.71 (approximately an Intermediate Mid on the ACTFL OPI scale), and the average post-OPI score was 6.55 (between about an Intermediate High and Advanced Low). A repeated-measures ANOVA was then conducted with the pre- and posttest OPI scores as the dependent variables and the study abroad

program (China, Egypt, France, Mexico, Russia, Spain) as the independent variable. The results of this analysis, as shown in Figure 1, demonstrated that all groups as a whole improved significantly from pre- to posttest ($F[5,102] = 27.62, p = 0.0001, \eta_p^2 = 0.225$) and that no significant difference in amount of language gain occurred across groups ($F[5,102] = 1.91, p = 0.086, \eta_p^2 = 0.108$).

Given a special interest in participants who made gains from pretest to posttest vs. those who did not, the researchers calculated the percentage of participants from each program who made significant gains from pre- to posttest, with a significant gain defined as one sublevel gain or more on the OPI—e.g., from Intermediate Mid to Intermediate High. These groups were, as noted earlier, referred to as the gainers ($n = 57$) versus the non-gainers ($n = 45$). These results are reported in Figure 2. Across the six programs, the average percentage of participants who were gainers was 60%. The China program had the highest number of people who achieved significant gains, with 80% of the students making significant gains; the France program had the lowest





number of people making gains, with 40% making significant gains.

Comparison of Gainers and Non-Gainers

The next research question investigated the extent to which gainers might differ from non-gainers in terms of cultural sensitivity, preprogram proficiency, L2 use, personality, and social networks.

Preprogram Competence Variables

Preprogram Proficiency

Table 2 indicates the preprogram percentage of participants at each proficiency sublevel for gainers and non-gainers. For example, of the 11 participants who scored in the Intermediate Low category in preprogram proficiency, nine (81%) were gainers and two (19%) were non-gainers. A one-way ANOVA with the dependent variable being the predeparture OPI scores and the independent variable being the two groups (gainers and non-gainers) showed a significant difference between the preprogram proficiency of the gainers vs. the non-gainers ($F[1,104] = 5.71, p = 0.019, \eta_p^2 = 0.054$).

The gainers scored significantly lower on the predeparture OPI test than did the non-gainers, with gainers averaging Intermediate Mid and the non-gainers averaging Intermediate High at the beginning of the program.

Intercultural Sensitivity

Differences in predeparture cultural sensitivity between gainers and non-gainers were calculated through a one-way ANOVA that compared the IDI scores of the gainers (average: 91.51, SD: 15.34) to the non-gainers (average score: 84.29, SD: 11.50). Statistically significant differences were found between the two groups ($F[1,93] = 6.45, p = 0.01, \eta_p^2 = 0.06$), with gainers scoring higher on the preprogram developmental orientation portion of the IDI test than non-gainers.

Learner Attributes

Age and Gender

Table 3 provides the average ages and the number of males and females in the gainer and non-gainer groups. A one-way ANOVA comparing the two groups by age revealed no significant difference between the two

TABLE 2

Number of Non-Gainers and Gainers for Each Proficiency Level as Described on the ACTFL Proficiency Scale

Group	Preprogram Proficiency Level						Total		
	NM	NH	IL	IM	IH	AL		AM	AH
Non-Gainers	1/1 (100%)	1/2 (50%)	2/11 (19%)	13/37 (35%)	12/26 (46%)	9/15 (60%)	6/9 (66%)	1/1 (100%)	45/102 (44%)
Gainers	0/1	1/2 (50%)	9/11 (81%)	24/37 (65%)	14/26 (54%)	6/15 (40%)	3/9 (33%)	0	57/102 (56%)
Average Gain	1	0.5 0 (SD: 0.50)	1.18 (SD: 0.83)	0.81 (SD: 0.66)	0.65 (SD: 0.83)	0.53 (SD: 0.72)	0.3 0 (SD: 0.78)	0(SD: 0)	

Note: NM = Novice Mid, NH = Novice High, IL = Intermediate Low, IM = Intermediate Mid, IH = Intermediate High, AL = Advanced Low, AM = Advanced Mid, and AH = Advanced High.

groups ($F[1,102] = 1.68, p = 0.198, \eta_p^2 = 0.017$). A chi-square analysis of the number of males and females in each group produced the same results: ($\chi^2 = 1.588, p = 0.2076$).

Personality

As shown in Table 4, a series of one-way ANOVAs comparing the two groups on each of the personality traits (neuroticism, extroversion, openness, agreeableness, and conscientiousness) revealed that the two groups did not differ in their scores on any of these measures (all F 's $[1,102] < 3.11, p > 0.08, \eta_p^2 < 0.032$).

Program/Context Variables

L2 Use

The average number of hours each group spent using the L2 each week, including the overall total hours, total in-class hours, total interactive hours, and total receptive hours, is shown in Table 5. For each of these measures of language use, a one-way ANOVA was run with the amount of language use as the dependent variable and the group (gainers or non-gainers) as the independent variable. In each case, no significant difference was found between the two groups (all F 's $[1,102] < 0.843$, all p 's > 0.361 , all η_p^2 's < 0.008).

Social Networks

The final analysis examined the two groups' social networks, specifically addressing the size, change in size, durability, intensity, density, dispersion, and English proficiency of native speakers in participants' social networks during study abroad. The averages for each of these measures for gainers and non-gainers are displayed in Table 6.

A series of one-way ANOVAs revealed that the two groups differed significantly on two of the six measures: dispersion ($F[1,49] = 5.09, p = 0.03, \eta_p^2 = 0.096$) and intensity ($F[1,49] = 5.16, p = 0.02$, all $\eta_p^2 = 0.092$); gainers reported greater dispersion (they belonged to more groups) and greater intensity (closer relationships). No

TABLE 3

Age and Gender for Gainers and Non-Gainers

Group (No. of Participants)	Average Age (and SD)	No. of Males (and %)	No. of Females (and %)
Non-Gainers (45)	23.97 (SD: 2.40)	21 (47%)	24 (53%)
Gainers (57)	23.59 (SD: 2.14)	31 (54%)	26 (46%)

statistically significant differences were found for the other four measures (all $F[1,49]s < 3.84$, all $p's > 0.05$, all $\eta_p^2s < 0.06$).

Predicting L2 Gains

The final analysis addressed the extent to which the variables discussed above predicted L2 gains across the participants in all six study abroad programs. A stepwise linear multidimensional analysis was conducted with L2 gains as the dependent variable and the following eight variables as independent (or predictor) variables: cultural sensitivity (pre- and post-IDI and L2 gains), personality (neuroticism, extroversion, openness, agreeableness, conscientiousness), preprogram proficiency (pre-OPI test), social network composition (divided into the several measures discussed above), program location, gender, age, and type of L2 use (total, in-class, receptive, interactive). Results are given in Table 7.

Data showed that the best combination of predictors was the friends' English proficiency, change in size of the social networks, and the predeparture IDI scores. Friends' English proficiency was the best predictor, indicating that the greater the friends' English proficiency, the more L2 proficiency the learners were likely to gain on the post-OPI test. The second best predictor was change in network size, which was negatively correlated. This suggested that, as learners decreased their network size over time, their proficiency tended to increase. The third strongest predictor was the predeparture IDI score; hence, the more intercultural sensitivity participants demonstrated on the IDI prior to departure, the more likely they were to make significant L2 gains in proficiency.

Discussion

This study's purpose was to explore L2 proficiency gains across six different program locations and five different languages and to determine variables that may be related to

TABLE 4

Raw NEO-FFI Scores on Each Personality Measure for Gainers and Non-Gainers

Group	Neuroticism		Extroversion		Openness		Agreeableness		Conscientiousness	
	Avg. Score	SD	Avg. Score	SD	Avg. Score	SD	Avg. Score	SD	Avg. Score	SD
Non-Gainers	19.55	8.00	31.09	4.90	29.44	5.23	34.33	5.85	33.18	6.15
Gainers	19.05	8.71	31.81	7.39	31.32	6.02	34.00	6.91	33.25	5.39

Note: These are raw scores on the NEO-FFI and therefore are all on a range from 0 to 60.

TABLE 5

Amount of Total, Out-of-Class, Interactive, and Receptive L2 Use in Hours by Non-Gainers and Gainers During Study Abroad

Group	Overall Total L2 Use		Total In-Class L2 Use		Total Interactive L2 Use		Total Receptive L2 Use	
	Avg. Hours	SD	Avg. Hours	SD	Avg. Hours	SD	Avg. Hours	SD
	Non-Gainers	35.54	6.49	27.14	5.17	8.65	1.89	3.82
Gainers	36.81	7.25	27.60	5.89	10.37	2.42	5.08	1.70

significant L2 gains during a study abroad experience, including the three types of variables: learner attributes (age, gender, personality), preprogram competency (preprogram proficiency, intercultural sensitivity), and social/contextual (language use, social networks). What follows is a discussion of gains across programs, differences between learners who gained and learners who did not gain on the OPI, and variables not associated with gains on the OPI.

Gains Across Programs

Perhaps one of the most significant results of this study is that so many participants (56%) achieved measurable L2 gains in proficiency during study abroad, with the average gain being one sublevel on the OPI (e.g., from Intermediate Mid to Intermediate High). More participants made L2 gains on the OPI from pre- to posttest than those who did not (57 vs. 45). Earlier studies also found that a majority of participants make significant gains during study abroad even when using the OPI as a measurement (i.e., Magnan & Back, 2006). Such findings may seem mundane, but, unlike other studies, these participants' initial level of language and learning experiences abroad differed greatly from each other. Some participants scored at very low levels of L2 abilities, and some scored at relatively high levels. Some

were learning L2s that varied greatly from their native languages in terms of grammar, lexicon, intonation, and writing systems (such as Mandarin), and some were learning L2s more similar to their native English. Some were in programs that required interaction with native speakers on a very consistent basis and required students to speak the L2 regularly, while others were in programs where English was spoken more often, even in the classroom. In addition, certain participants were visiting cultures that share very similar cultural norms with America, while other participants were visiting cultures that are very different. A number of learners were in semester-long programs, while others were in shorter, six-week programs. In all of these cases, however, students attained significant L2 improvements.

Variables Affecting L2 Gains

Data showed that participants who made significant L2 gains during study abroad, gainers, differed from non-gainers in their social networks, preprogram proficiency, and predeparture intercultural sensitivity. In fact, when the relative importance of the variables for predicting L2 gains was analyzed, results showed that the development and makeup of social networks as well as predeparture cultural sensitivity were the variables that predicted most of the variance

TABLE 6

Average Scores for Gainers and Non-Gainers on Several Measures for Social Networks

Group	Size (no. of friends)	Change in Size	Durability (hours of contact)	Intensity* (degree of closeness)	Density (average size of social groups)	Dispersion* (number of social groups)	English Proficiency of Members**
Non-Gainers	10.96 (SD: 5.18)	2.41 (SD: 4.60)	5.19 (SD: 4.82)	4.69 (SD: .85)	4.64 (SD: 1.92)	1.50 (SD: 0.96)	2.41 (SD: 1.06)
Gainers	13.89 (SD: 6.46)	1.1 (SD: 2.99)	7.08 (SD: 11.05)	5.27 (SD: 1.01)	5.06 (SD: 3.78)	2.27 (SD: 1.45)	2.86 (SD: 0.81)

* significant differences across the two groups; ** item measured on a scale from 1 (low proficiency) to 5 (high proficiency).

between gainers and non-gainers. In addition, preprogram proficiency played a small role. Although the social/contextual variable social networks played the greatest role, it is interesting that two of the three variables that set gainers apart from non-gainers (initial proficiency and cultural sensitivity) are related to preprogram competence. The implications of these results are discussed below.

Preprogram Proficiency

Gainers in this study scored lower on the preprogram proficiency measure than did the non-gainers: The gainers’ pre-program proficiency ratings on the ACTFL OPI ranged from Novice High to Advanced Mid, and as a group, they typically were rated Intermediate Mid, while the range in non-gainers’ preprogram proficiency ratings was slighter greater, from Novice Mid to Advanced High, with a typical score of Intermediate High. It is interesting that the lower the proficiency level, the more likely the learner would be in the gainer group rather than the non-gainer group, particularly for the levels between Intermediate Low and Advanced High. As noted earlier, Vande Berg and his colleagues (2009) obtained similar results using the SOPI with more than 800 learners abroad. These results are likely in part because it is often more difficult to move up one proficiency sublevel as one progresses up the proficiency scale.

Intercultural Sensitivity

Intercultural development prior to students’ departure for their experiences abroad also predicted gains in their L2 skills. This finding corroborates evidence from other recent studies that have also uncovered a relationship between L2 acquisition and culture learning while abroad (Martinsen, 2010; Martinsen & Alvord, 2012; Vande Berg et al., 2009). This suggests that students’ abilities to deal effectively with other cultures affects their L2 learning, at least in the

TABLE 7**Results of Multiple Regression Analysis on Predictor Variables for L2 Gains**

	B	Std. Error	Beta	t	Sig.
(Constant)	-2.566	0.785		-3.269	0.003
Friends' English Proficiency	0.586	0.15	0.595	3.911	0.001
Change in Size (NS)	-0.105	0.039	-0.391	-2.659	0.013
Predeparture IDI (DO)	0.021	0.009	0.315	2.296	0.029

Note: Adjusted $R^2 = 0.471$, $p = 0.029$.

study abroad context. The present study's finding that predeparture cultural sensitivity predicts L2 learning lends yet further support to the notion that cultural instruction and interactions should play a meaningful role in all L2 teaching. For many years, scholars in linguistics and applied linguistics have discussed the relationship between language and culture and have encouraged language instructors to combine the two (Lange & Paige, 2003), particularly when such instruction emphasizes the type of culture learning that fosters successful interactions between L2 learners and members of the target culture. Such instruction fits nicely with the emphasis of the World-Readiness Standards for Learning Languages (formerly the National Standards for Foreign Language Learning), which encourage weaving together the teaching and learning of culture and communication (ACTFL, 2014). Recent research (Jackson, 2006, 2013) also advocates teaching students how to interact with their culture predeparture for a better experience abroad.

Social Networks

Of all the variables examined in this study, social network variables were the greatest predictors of language gains. Four primary social network variables stood out in the current analysis: the English proficiency of learners' friends, the change in the size of students' networks over time, the intensity of their friendships, and dispersion (the number of social groups they participated

in). The first two were significant predictors of L2 increases in the regression model, and the latter two predicted some differences between gainers and non-gainers.

The importance of English proficiency in social network development may seem counterintuitive, but its importance has been confirmed in previous studies as well. Similar to the current study, Dewey, Belnap, and Hillstrom (2013) observed that learners of Arabic in Jordan and Morocco were more likely to improve their proficiency in the target language when they reported that their native Arab friends had high levels of English proficiency. It appears that the learners in that study did not speak much English with their foreign friends (contrary to learners of Japanese in Dewey et al., 2012). In fact, these scholars noted that English-proficient native Arabic interlocutors facilitated L2 learners' entry into local social groups (i.e., communities of practice). Moreover, according to participant reports, these highly proficient speakers of English had typically lived abroad in English-speaking countries and were therefore sympathetic and wanted to provide support for the Arabic L2 learners. The students in the current study likely benefitted in similar ways socially and linguistically.

Regarding change in network size, past research (e.g., Hillstrom, 2011) suggested that those who make significant L2 gains abroad may start off with relatively large social networks but fairly weak ties (Granovetter, 1982), then gradually decrease the size of their networks while increasing the

intensity of their relationships (i.e., they become emotionally closer to a smaller number of individuals). A similar pattern was apparent in the current study. To better understand this relationship, more focused qualitative studies could investigate what types of relationships learners develop, which relationships are fostered most and how, the nature of language used with close vs. less close friends, and the linguistic abilities learners develop as they interact with individuals within their social networks.

As for dispersion—the number of social groups that a learner participates in—Dewey et al., (2012) also observed that for their group of 204 learners of Japanese, dispersion was a notable predictor of changes in self-perceived proficiency during study abroad in Japan. The current study's data support the notion of a connection between social network dispersion and L2 proficiency gains, this time objectively measured (i.e., using OPI data rather than self-assessment). Presumably, then, the greater the number of native-speaking social groups that learners engage in, the more likely it is that learners' L2 proficiency will develop over time. This relationship may be because dispersed networks afford greater opportunities for varied types of interaction. Dispersion may also indicate that learners are better integrated into the target culture. Again, further mixed-methods studies are needed to determine connections between dispersion and L2 proficiency gain.

Variables That Did Not Affect L2 Gains

It is important to note that while social network and intercultural sensitivity variables accounted for an impressive 47% of the variance when a multiple regression analysis was run, the results of this analysis suggest that other variables must also play an important role in determining whether or not L2 gains are achieved on a study abroad. While the other variables that were examined, including the three learner attributes (age, gender, and personality) as well as amount

of L2 use, were not predictors, it is interesting to speculate on why this might be the case.

Age

Previous research has suggested that age may play an important role in determining the degree to which a learner can benefit linguistically from study abroad (Llanes & Muñoz, 2013; Muñoz, 2006). However, these previous studies examined either two groups of children or one group each of children and adults. The idea that “younger is better” when learning an L2 has been demonstrated with adult learners ages 20–30 (Baker, 2010), but this study did not find that age affected whether learners improved in L2 learning in a study abroad context. Earlier research discovered that older learners actually were more likely to use the L2 on study abroad programs than younger learners (Dewey et al., 2014). However, as shown in this study, increases in general L2 use did not seem to guarantee concomitant increases in L2 gains. Perhaps the range of ages (from 19 to 27) was not expansive enough to identify age-related differences in L2 gains in so short a time.

Gender

While some previous studies found that a learner's gender does affect L2 learning on a study abroad program (i.e., Brecht et al., 1993; Haneda & Monobe, 2009; Walsh, 2012), the current study did not find this to be the case. Perhaps this study's results differed from previous studies because gender roles have changed in the cultures where the students were studying since those earlier studies were conducted. For example, Brecht et al. (1993) learned that male students had greater access to native speakers than did female students due to cultural norms in Russia. However, in a follow-up study several years later, Davidson (2010) did not find that gender played a significant role in L2 gains. Davidson hypothesized that gender roles had changed in Russian society, making access to native speakers easier for both genders. In

the current research, this may also be true for other cultures where students were studying (Mexico, Spain, France), although no known studies have demonstrated that this is the case. Regardless, changes in cultures over time would not explain why this study identified no differences across gender for the students who studied in Egypt, as Trentman (2013) and Walsh (2012) very recently demonstrated that gender played a vital role in the study abroad experience for students who studied there. In particular, males and females in those two studies were limited in their interactions with people of the opposite gender, and females were sometimes constrained socially in terms of the topics they could speak about with other females.

Furthermore, the lack of differences across gender in this study for the Egypt study abroad students in terms of L2 proficiency development may be associated with the Egypt program's requirement for all students to interact with native speakers a certain number of hours a day and then to account for the L2 speaking time in journal entries and weekly interviews with instructors. The emphasis on speaking was accompanied by a focus on helping participants to find and maximize opportunities for interaction. Hence, gender did not have an impact on the experiences of students in the Egypt study abroad program. Regarding the larger picture of L2 gains and gender on study abroad in general, Davidson (2010) argued that, when programs provide training to help students maneuver through cultural differences, gender may not affect L2 learning on a study abroad program. This is an interesting suggestion and may relate to why levels of cultural sensitivity played such an important role in whether or not the current study's participants achieved L2 gains during study abroad. As research by Brown (2013), Kinginger (2008), and Trentman (2012) indicated, gender can be both positively and negatively negotiated, contributing to or inhibiting learner interactions—how learners respond to gender stereotypes

and to gender-related societal norms can largely shape their experience.

Personality Factors

Finally, some previous studies have found that personality factors, such as extroversion or openness to new experiences, affect L2 learning, in study abroad and in other immigrant contexts (Ożańska-Ponikwaia & Dewaele, 2012). That these two personality factors are predictors of L2 gains during study abroad is understandable, especially if social network development is at stake: Having an outgoing personality and a willingness to engage in new experiences seem necessary prerequisites for making friendships in a foreign country. However, this study did not find any difference in personality characteristics between gainers and non-gainers, nor did it find that personality was a predictor for language gains.

The lack of relationship between personality and L2 gains contrasts findings from the Ożańska-Ponikwaia and Dewaele (2012) study and may be explained in several ways. First, Ożańska-Ponikwaia and Dewaele (2012) used self-assessments of proficiency to examine connections between students' reported L2 use and proficiency gains during study abroad while the current study used OPI scores, which are more objective data and are based on actual language production. Second, personality factors may be more likely to affect *how* learners make significant L2 gains instead of whether or not they do so (Ehrman, 1996). That is, while extroverted students may find it easier to seek out new experiences and friends among native speakers, they also may have more difficulty disregarding their compatriots in the program in order to befriend native speakers.

In addition, learners may use different strategies to learn the L2 depending on their personalities. Interestingly, similar results were found when a previous study examined whether personality factors affected learners' use of the L2 during study abroad (Dewey et al., 2014). That study found, e.g., that one learner who was shy and

introverted scored high on conscientiousness and used this personality strength to learn the L2. Perhaps future research would benefit from examining how learners play to their strengths in terms of personality in addition to other individual variables such as gender and age, rather than determining which personality factors might predict L2 gains. These results are in some ways heartening; they suggest that learner attributes may not affect whether or not learners are able to make significant gains on a study abroad program.

L2 Use

One of this study's most surprising findings was that the amount of L2 use did not play a role in predicting significant language gains during study abroad. However, these results are consistent with several earlier studies (Mendelson, 2004; Segalowitz & Freed, 2004). These earlier studies suggested that L2 use generally accounts for quantity of interaction rather than quality. To avoid measuring only the quantity of L2 interaction, this study attempted to gauge the quality of L2 interaction by dividing L2 use into receptive, interactive, in-class, and overall L2 use.⁸ Despite dividing L2 use into different types, this study found no differences in L2 use between gainers and non-gainers in any of these analyses. Intensity of friendships and changes of size in social networks did help explain some differences between gainers and non-gainers, suggesting that having deeper conversations with close friends is more important than the amount of time spent speaking the L2. Given that social network variables were better predictors of L2 gains than self-reported L2 use, learners' social networks may, in fact, be a better measure of the L2 use than mere quantity, because they could be a better indicator for *quality* of L2 use as well.

These results have important pedagogical implications. They suggest that language educators can help learners obtain better L2 acquisition by systematically teaching students about the culture and helping them to

develop increased levels of cultural sensitivity before departure. In addition, program directors should overtly encourage study abroad students to develop social networks, or perhaps even introduce them to locals and provide structured opportunities to develop friendships with these native speakers. For example, Jackson (2006, 2013) described a program where native Chinese students used ethnographic methods both before leaving and while on study abroad in England to help them better understand and to immerse themselves in the host culture. Jackson's findings showed that the students felt that by conducting ethnographic research, they had developed better interpersonal and communication skills in English, had a greater awareness of culture and its importance, and learned important coping and problem-solving skills. Coupled with the findings reported here—that intercultural sensitivity and social network development seem to be the most important variables in making significant L2 gains on study abroad, these results suggest the critical role played by the predeparture program: It is clear that preparing students for their study abroad experience, including teaching them how to develop friendships and interact with cultural differences, may be one of the most important methods for ensuring success on a study abroad program. Indeed, all three of the variables that predicted language gains in this study point to the need for students to learn to interact successfully with native speakers during study abroad, including the initial level of both proficiency and understanding of differences across cultures.

Conclusion

This study examined several variables and their influence on L2 gains during a variety of study abroad program locations and in five different languages to determine which variables might affect learners' progress toward greater proficiency. The results demonstrated that preprogram competence variables (preprogram proficiency and

intercultural sensitivity) and social/contextual variables (social network development) were greater predictors of language gains than were learner attribute variables (age, gender, personality). In particular, those who made significant language gains during study abroad engaged with native speakers of the L2 who had a higher English proficiency and decreased their network size over time, resulting in the development of stronger and deeper relationships with fewer speakers and thus opportunities for more in-depth and sustained interpersonal exchanges. In addition, because the study examined learners across several programs, these results demonstrate that these two variables seemed to transcend differences among study abroad program locations, languages, experiences, requirements, circumstances, and cultures.

Acknowledgments

The authors wish to thank Anne Nerenz and the anonymous *Foreign Language Annals* reviewers for their valuable feedback on this article. We also wish to acknowledge funding for portions of this project from a Brigham Young University Office of Research and Creative Activities Mentoring (MEG) Grant, a U.S. Department of Education International Research and Studies Grant (P017A080087), and the National Middle East Language Resource Center (NMELRC).

Notes

1. There are many other possible goals and outcomes for study abroad, including the development of awareness and tolerance of diversity (Gray, Murdock, & Stebbins, 2002), personal development (understanding one's strengths and weaknesses, overcoming fears, etc.; see Bakalis & Joiner, 2004, for discussion), global citizenship (Wynveen, Kyle, & Tarrant, 2012), and the development of content knowledge relevant to one's academic pursuits (Spring, 2012). Furthermore, as Bennett (2009) pointed out, there is often opposition between the goals of intercultural sensitivity and language development. Kinginger (2009) noted a trend toward marginalization of language learning in study abroad programs in favor of other objectives.
2. It should be noted that Kinginger (2013) and Coleman (2013) asserted that large-scale predictor studies can obscure the individuality of the study abroad experience. Each person's experience is unique, and it is therefore important to capture many individual stories in order to better understand what happens while abroad and to help learners achieve their individual goals during study abroad.
3. The authors acknowledge the possibility that learners at higher levels made linguistic gains that might not be captured via proficiency assessments. Researchers (e.g., Freed, 1990; Lapkin, Hart, & Swain, 1995) have suggested that other measures may be necessary to capture linguistic gains achieved at higher levels that do not show up on proficiency tests due to a possible ceiling effect.
4. We use Hammer et al.'s (2003) constructs and the IDI to define and measure cultural sensitivity (i.e., intercultural competence) in this article.
5. The ACTFL OPI is a standard assessment that Language Testing International administers. It is based on the proficiency guidelines of the ACTFL. For the guidelines, go to http://www.actfl.org/sites/default/files/pdfs/public/ACTFLProficiencyGuidelines2012_FINAL.pdf. The OPI is often used to gauge speaking gains of students from the United States during study abroad. OPI scoring is based on a holistic rating encompassing accuracy, content, tasks, and functions that learners are capable of. For more on this test, go to <http://www.languagetesting.com>.
6. Social groups were counted only if they contained two or more members. In other words, if a student was friends with one individual but that individual was not connected in any way with others in the student's social network, that

individual connection was not counted as a social group. However, if that individual was, e.g., a roommate to another local native speaker in the student's social network, then both of the roommates were included in one social group, which was included in the total number of groups (dispersion).

7. L2 English proficiency of social network members is related to durability, because it can influence the amount and type of contact that occurs among these speakers. This study separates it out from the measure of durability (time spent speaking the L2 with the social network members) to avoid the confusion of having two measures of durability.
8. In retrospect, given the nature of the OPI and the ACTFL standards upon which it is based, it would be appropriate to assess the degree to which learners engaged in the specific functions associated with the various ACTFL levels (see <http://www.actfl.org/sites/default/files/pdfs/public/Guidelinespeak.pdf>) and to examine the degree to which learners engaged in presentational, interpretive, and interpersonal communication (see <http://www.actfl.org/publications/guidelines-and-manuals/actfl-performance-descriptors-language-learners>).

References

- ACTFL. (2014). World-Readiness Standards for Learning Languages. Retrieved June 11, 2014, from <http://www.actfl.org/publications/all/world-readiness-standards-learning-languages>
- Allen, H. W., & Herron, C. (2003). A mixed-methodology investigation of the linguistic and affective outcomes of summer study abroad. *Foreign Language Annals*, 36, 370–385.
- Badstubner, T., & Ecke, P. (2009). Student expectations, motivations, target language use, and perceived learning progress in a summer study abroad program in Germany. *Teaching German*, 42, 41–49.
- Bakalis, S., & Joiner, T. A. (2004). Participation in tertiary study abroad programs: The role of personality. *International Journal of Educational Management*, 18, 286–291.
- Baker, W. (2010). Effects of age and experience on the production of English word-final stops by Korean speakers. *Bilingualism: Language and Cognition*, 13, 263–278.
- Bennett, M. J. (2009). Defining, measuring, and facilitating intercultural learning: A conceptual introduction to the Intercultural Education double supplement. *Intercultural Education*, 20, (Suppl.), 1–13.
- Brecht, R. D., Davidson, D. E., & Ginsberg, R. B. (1993). *Predictors of foreign language gain during study abroad*. NFLC Occasional Papers. Washington, DC: Occasional Papers of the National Foreign Language Center.
- Brown, L. (2013). Identity and honorifics use in Korean study abroad. In C. Kinginger (Ed.), *Social and cultural aspects of language learning in study abroad* (pp. 269–298). Philadelphia: John Benjamins.
- Burt, R. S. (1985). Network items and the general social survey. *Social Networks*, 6, 293–339.
- Busch, D. (1982). Introversion-extroversion and the EFL proficiency of Japanese students. *Language Learning*, 32, 109–132.
- Cadd, M. (2012). Encouraging students to engage with native speakers during study abroad. *Foreign Language Annals*, 45, 229–245.
- Coleman, J. A. (2013). Researching whole people and whole lives. In C. Kinginger (Ed.), *Social and cultural aspects of language learning in study abroad* (pp. 17–46). Philadelphia: John Benjamins.
- Costa, P. T., Jr., & McCrae, R. R. (1992). *NEO PI-R professional manual*. Odessa, FL: Psychological Assessment Resources.
- Cushner, K. (1986). *The inventory of cross-cultural sensitivity*. Kent, OH: Kent State University School of Education.
- Davidson, D. E. (2010). Language learning and study abroad. *Foreign Language Annals*, 43, 6–26.
- DeKeyser, R. M. (2000). The robustness of critical period effects in second language acquisition. *Studies in Second Language Acquisition*, 22, 499–533.
- Dewey, D. P., (2012, November). *Social networks, language use, and language acquisition during study abroad*. Presentation from “Making the Most of Intensive In-Country Language Study” panel, proceedings of annual meeting, Middle East Studies Association, Denver, CO.

- Dewey, D. P., Belnap, R. K., & Hillstrom, R. (2013). Social network development, language use, and language acquisition during study abroad: Arabic language learners' perspectives. *Frontiers: The Interdisciplinary Journal of Study Abroad*, XXII, 84–110. Retrieved June 26, 2014, from <http://frontiersjournal.com/documents/Dewey-Belnap-Hillstrom-FRONTIERS2012-13.pdf>
- Dewey, D. P., Bown, J., Baker-Smemoe, W., Martinsen, R. A., Gold, C., & Eggett, D. (2014). Language use in six study abroad programs: An exploratory analysis of possible predictors. *Language Learning*, 64, 36–71.
- Dewey, D. P., Bown, J., & Eggett, D. (2012). Japanese language proficiency, social networking, and language use during study abroad: Learners' perspectives. *Canadian Modern Language Review*, 68, 111–137.
- Dewey, D. P., Ring, S., Gardner, D., & Belnap, R. K. (2013). Social network formation and development during study abroad in the Middle East. *System: An International Journal of Educational Technology and Applied Linguistics*, 41, 269–282.
- Ehrman, M. E. (1996). *Understanding second language learning difficulties*. Thousand Oaks, CA: Sage.
- Fraser, C. C. (2002). Study abroad: An attempt to measure the gains. *German as a Foreign Language*, 1, 45–46. Retrieved June 26, 2014, from <http://www.gfl-journal.de/1-2002/fraser.html>
- Freed, B. F. (1990). Language learning in a study abroad context: The effects of interactive and non-interactive out-of-class contact on grammatical achievement and oral proficiency. In J. Altas (Ed.), *Linguistics, language teaching and language acquisition: The interdependence of theory, practice and research* (pp. 459–477). Washington, DC: Georgetown University Press.
- Goldoni, F. (2013). Students' immersion experiences in study abroad. *Foreign Language Annals*, 46, 359–376.
- Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology*, 78, 1360–1380.
- Gray, K. S., Murdock, G. K., & Stebbins, C. D. (2002). Assessing study abroad's effect on an international mission. *Change: The Magazine of Higher Learning*, 34, 44–51.
- Hammer, M. (2012). The Intercultural Development Inventory: A new frontier in assessment and development of intercultural competence. In M. Vande Berg, R. M. Paige, & K. H. Lou, (Eds.), *Student learning abroad* (pp. 115–136). Sterling, VA: Stylus Publishing.
- Hammer, M. R., Bennett, M. J., & Wiseman, R. (2003). Measuring intercultural sensitivity: The Intercultural Development Inventory. *International Journal of Intercultural Relations*, 27, 421–443.
- Haneda, M., & Monobe, G. (2009). Bilingual and biliterary practices: Japanese adolescents living in the United States. *Journal of the Asian Pacific Communication*, 19, 7–20.
- Hernández, T. A. (2010). The relationship among motivation, interaction, and the development of second language oral proficiency in a study-abroad context. *Modern Language Journal*, 94, 600–617.
- Hillstrom, R. (2011). *Social networks, language acquisition, and time on task while studying abroad in Jordan* (Unpublished master's thesis). Brigham Young University, Provo, UT.
- Institute of International Education (2013). *Report on international educational exchange online* (Open Doors report). Retrieved November 11, 2013, from <http://www.iie.org/Research-and-Publications/Open-Doors>
- Isabelli-García, C. L. (2006). Study abroad social networks, motivation, and attitudes: Implications for SLA. In M. DuFon & E. Churchill (Eds.), *Language learners in study abroad contexts* (pp. 231–258). Clevedon, UK: Multilingual Matters.
- Jackson, J. (2006). Ethnographic preparation for short-term study and residence in the target culture. *International Journal of Intercultural Relations*, 30, 77–98.
- Jackson, J. (2013). The transformation of “a frog in the well”: A path to a more intercultural, global mindset. In C. Kinginger (Ed.), *Social and cultural aspects of language learning in study abroad* (pp. 179–206). Philadelphia: John Benjamins.
- Johnson, J. S., & Newport, E. L. (1989). Critical period effects in second language learning: The influence of maturational state on the acquisition of English as a second language. *Cognitive Psychology*, 21, 60–99.
- Kinginger, C. (2008). Language learning in study abroad: Case studies of Americans in France. *Modern Language Journal (Supplement)*, 92, 1–124.
- Kinginger, C. (2009). *Language learning and study abroad: A critical reading of research*. London: Palgrave Macmillan.

- Kinginger, C. (2013). Introduction. In C. Kinginger (Ed.), *Social and cultural aspects of language learning in study abroad* (pp. 3–15). Philadelphia: John Benjamins.
- Kurata, N. (2004). Communication networks of Japanese language learners in their home country. *Journal of Asian Pacific Communication*, 14, 153–178.
- Kurata, N. (2007). Language choice and second language learning opportunities in learners' social networks: A case study of an Australian learner of Japanese. *Australian Review of Applied Linguistics*, 30, 1–18.
- Lange, D. L., & Paige, R. M. (Eds.). (2003). *Culture as the core: Perspectives on culture in second language learning*. Charlotte, NC: Information Age Publishing.
- Lapkin, S., Hart, D., & Swain, M. (1995). A Canadian interprovincial exchange: Evaluating the linguistic impact of a three-month stay in Quebec. In B. F. Freed (Ed.), *Second language acquisition in a study abroad context* (pp. 67–94). Amsterdam: John Benjamins.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge UK: Cambridge University Press.
- Llanes, À. (2011). The many faces of study abroad: An update on the research on L2 gains emerged during a study abroad experience. *International Journal of Multilingualism*, 8, 189–215.
- Llanes, À., & Muñoz, C. (2013). Age effects in a study abroad context: Children and adults studying abroad and at home. *Language Learning*, 63, 63–90.
- Llanes, À., & Serrano, R. (2011). Length of stay and study abroad: Language gains in two versus three months. *RESLA*, 24, 95–110.
- Lybeck, K. (2002). Cultural identification and second language pronunciation of Americans in Norway. *Modern Language Journal*, 8, 174–191.
- Magnan, S. S., & Back, M. (2006). Social interaction and linguistic gain during study abroad. *Foreign Language Annals*, 40, 43–61.
- Martinsen, R. A. (2010). Short-term study abroad: Predicting changes in oral skills. *Foreign Language Annals*, 43, 504–530.
- Martinsen, R. A., & Alvord, S. M. (2012). On the relationship between L2 pronunciation and culture. *Spanish in Context*, 9, 443–465.
- Martinsen, R. A., Baker, W., Dewey, D. P., Bown, J., & Johnson, C. (2010). Exploring diverse settings for language acquisition and use: Comparing study abroad, service learning abroad, and foreign language housing. *Applied Language Learning*, 20, 45–66.
- Matthews, S. A. (2000). *Russian second language acquisition during study abroad: Gender differences in student behavior* (Unpublished doctoral dissertation). Bryn Mawr College, Bryn Mawr, PA.
- Mendelson, V. G. (2004). *Spain or bust? Assessment and student perceptions of out-of-class contact and oral proficiency in a study abroad context*. Amherst, MA: University of Massachusetts, Amherst.
- Miller, L., & Ginsberg, R. B. (1995). Folklinguistic theories of language learning. In B. F. Freed (Ed.), *Second language acquisition in a study abroad context* (pp. 293–315). Amsterdam: John Benjamins.
- Milroy, L. (1980). *Language and social networks*. Oxford: Basil Blackwell.
- Muñoz, C. (2006). The BAF project: Research on the effects of age on foreign language acquisition. *Linguistics Insights—Studies in Language and Communication*, 22, 81–92.
- Muñoz, C. (2010). Staying abroad with the family: A case study of two siblings' second language development during a year's immersion. *ITL International Journal of Applied Linguistics*, 160, 24–48.
- O'Connell, M. E., Norwood, J. L. (Eds.), (2007). *International education and foreign languages: Keys to securing America's future*. Washington, DC: National Academies Press.
- Ożańska-Ponikwia, K., & Dewaele, J. M. (2012). Personality and L2 use: The advantage of being open-minded and self-confident in an immigration context. *EUROSLA Yearbook*, 12, 112–134.
- Rivers, W. P. (1998). Is being there enough? The effects of homestay placements on language gain during study abroad. *Foreign Language Annals*, 31, 492–500.
- Segalowitz, N., & Freed, B. F. (2004). Context, contact, and cognition in oral fluency acquisition: Learning Spanish at home and study abroad contexts. *Studies in Second Language Acquisition*, 26, 173–199.
- Segalowitz, N., & Ryder, A. (2006). *Montreal Index of Linguistic Integration* (Unpublished questionnaire). Concordia University, Montreal, Quebec, Canada.
- Siegal, M. (1995). Individual differences and study abroad: Women learning Japanese in

- Japan. In B. F. Freed (Ed.), *Second language acquisition in a study abroad context* (pp. 225–244). Amsterdam: John Benjamins.
- Spring, M. K. (2012). Languages for specific purposes curriculum in the context of Chinese-language Flagship programs. *Modern Language Journal*, 96 (Suppl.), 140–157.
- Trentman, E. (2012). *Study abroad in Egypt: Identity, access, and Arabic language learning* (Unpublished doctoral dissertation). Available from ProQuest Dissertations and Theses database (UMI No. 3517251).
- Trentman, E. (2013). Imagined communities and language learning during study abroad: Arabic learners in Egypt. *Foreign Language Annals*, 46, 545–564.
- Twombly, S. B. (1995). “Pippos” and friendships: Gender and culture clash in study abroad. *Frontiers: The Interdisciplinary Journal of Study Abroad*, 1, 1–27. Retrieved May 8, 2014, from http://www.frontiersjournal.com/issues/vol1/vol1-01_Twombly.htm
- van Daele, S., Housen, A., Pierrard, M., & Debruyne, L. (2006). The effect of extraversion on oral L2 proficiency. *EUROSLA Yearbook*, 6, 213–236.
- Vande Berg, M., Connor-Linton, J., & Paige, R. M. (2009). The Georgetown Consortium study: Intervening in student learning abroad. *Frontiers: The Interdisciplinary Journal of Study Abroad*, XVIII, 1–75. Retrieved May 8, 2014, from http://www.frontiersjournal.com/documents/FrontiersXVIII-Fall09-VandeBerg-ConnorLinton-Paige_000.pdf
- Verhoeven, L., & Vermeer, A. (2002). Communicative competence and personality dimensions in first and second language learners. *Applied Psycholinguistics*, 23, 361–374.
- Walsh, H. R. (2012). *The female experience: Study abroad students in Egypt* (Unpublished master's thesis). Brigham Young University, Provo, UT.
- Wang, C. (2010). Toward a second language socialization perspective: Issues in study abroad research. *Foreign Language Annals*, 43, 50–63.
- Wilkinson, S. (1998). Study abroad from the participants' perspective: A challenge to common beliefs. *Foreign Language Annals*, 31, 23–39.
- Wynveen, C. J., Kyle, G. T., & Tarrant, M. A. (2012). Study abroad experiences and global citizenship fostering proenvironmental behavior. *Journal of Studies in International Education*, 16, 334–352.
- Xu, D., Wang, X., & Wei, L. (2008). Social network analysis. In L. Wei & M. G. Moyer (Eds.), *The Blackwell guide to research methods in bilingualism and multilingualism* (pp. 263–274). Malden, MA: Blackwell Publishing.
- Zafar, S., & Meenakshi, K. (2012). A study on the relationship between extroversion-introversion and risk-taking in the context of second language acquisition. *International Journal of Research Studies in Language Learning*, 1, 33–40.

Submitted May 8, 2014

Accepted June 12, 2014