

# An exploratory study of the role of age and language learning aptitude in a short stay abroad

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## Abstract

The purpose of this study is to analyze the effect of age and aptitude on the second language (L2) gains made in English by a group of Catalan/Spanish bilinguals who spent three weeks in the United Kingdom. The participants included 39 learners aged between 12 and 17 years old. Aptitude was measured through a vocabulary test (LLAMA B, Meara, 2005), which examines rote memory. Participants' L2 skills were analyzed through a grammaticality judgment test (GJT) and a formulaic sequences test (FST). The results indicate that the L2 learners made significant gains in the two tests after a three-week stay abroad. Additionally, both age and aptitude had a significant impact on the type of language gains the learners made: older learners outperformed younger learners in the two tasks, and high aptitude learners outperformed low aptitude learners in the FST. Nevertheless, no interactions were observed between L2 gains and age or aptitude.

**Keywords:** stay abroad, young learners, aptitude, grammar, formulaic sequences

## Resumen

El objetivo de este estudio es analizar el efecto de la edad y la aptitud en el aprendizaje de inglés como lengua extranjera por un grupo de estudiantes bilingües castellano/catalán que pasaron tres semanas en el Reino Unido. Los participantes incluyen 39 aprendientes de edades comprendidas entre los 12 y los 17 años. Para medir la aptitud se adoptó un test de vocabulario que examina el aprendizaje memorístico (LLAMA B, Meara, 2005). El progreso lingüístico se examinó a través de un test de gramática y otro de fórmulas hechas en inglés. Los resultados indican que los participantes progresaron significativamente después de una estancia de tres

semanas en el extranjero. Además, tanto la edad como la aptitud tuvieron un impacto significativo en el progreso lingüístico: los aprendientes más mayores obtuvieron mejor resultado que los más jóvenes en las dos tareas, y los participantes con un mayor grado de aptitud obtuvieron mejores puntuaciones que los que tenían menos aptitud en el test de fórmulas. Sin embargo, no se observaron interacciones entre progreso lingüístico y edad o aptitud.

**Palabras clave:** estancia en el extranjero, aprendientes jóvenes, aptitud, gramática, lenguaje formulaico.

## 1. Introduction

Research on the effect of learning context (mainly concentrated on Stay Abroad, SA vs. a classroom setting At Home, AH) has become quite popular in the last few years (Collentine, 2009; Freed, 1995; Llanes, 2011). Most of this research has focused on undergraduate students who take part in a university exchange program and study for one or two semesters in a university overseas (Brecht, Davidson, and Ginsberg, 1993; Freed, 1995; Freed, Segalowitz and Dewey, 2004; Howard, 2001; Serrano, Tragant, Llanes, 2012). The results reported in the literature suggest that the second language (L2) areas in which most improvement is consistently registered after spending time abroad are oral fluency (Freed, 1995; Lennon, 1990; Llanes and Muñoz, 2009; Llanes and Muñoz, 2013; Martinsen, 2010) and vocabulary (Dewey, 2008; Foster, 2009; Ife, Vives and Meara, 2000).

There is an abundant amount of past research on the effect of language contact on language development in a SA context (Segalowitz and Freed, 2004; Taguchi, 2008; Yager, 1998) when compared to that on individual differences. However, the amount of input and type of interactions that learners are exposed to during SA are likely to be mediated by personal and interpersonal factors. Research on individual differences suggests that L2 learners' experiences abroad as well as factors such as motivation, attitudes, identity, learning strategies, beliefs or L2 proficiency at the start of the program are aspects that can certainly have an impact on the type of L2 development that takes place after a stay abroad (Allen, 2010; Amuzie and Winke, 2009; Gao, 2006; Kinginger, 2009; Llanes, Tragant and Serrano, 2011; Mendelson, 2004; Tragant, 2012). In the present study, the individual differences we are interested in are age and aptitude.

Regarding the age factor, as we have already suggested, most research on the SA context examines adult participants. However, some studies have already analyzed L2 development for learners other than college students. Evans and Fisher (2005),

for example, explored the L2 proficiency of a group of teenagers on a short exchange program. The authors claimed that the exchange was particularly positive for the participants' oral comprehension and writing skills. Another study that also included teenagers was that of Llanes and Muñoz (2009), who looked at the L2 oral and listening development of a group of SA participants who were mostly adolescents, and concluded that a short SA experience (3-4 weeks) was beneficial for the development of oral fluency and listening skills. In a more recent study, Llanes and Muñoz (2013) examined the effects of age and learning context on L2 development. The authors compared the L2 language gains of four groups of participants at different ages (children vs. adults) who were learning English in two different settings (AH vs. SA). The results showed that participants in the SA context experienced greater gains than their AH counterparts, and that the SA context was especially beneficial for children.

Language learning aptitude is an individual variable that has been claimed to influence L2 learning in different contexts and learning conditions (de Graaf, 1997; Robinson, 1995; Ross, Yoshinaga, and Sasaki, 2002). L2 learning aptitude is conceptualized as “a specialized form of intelligence for language”, or a set of “cognitive factors that make somebody ‘ready to learn a language’” (DeKeyser, 2012). Aptitude is far from being a monolithic construct, as it is assumed to consist of multiple components related to short-term memory capacity (semantic, phonological, etc.), long-term memory capacity (rote memory), working memory capacity, or processing speed among others (Doughty et al., 2010; Robinson, 2005). Carroll (1962) considered the following components: phonetic coding ability, grammatical sensitivity, rote memory and inductive language learning. Skehan (1998) proposed three factors: phonemic coding ability, language analytic ability (including Carroll's grammatical sensitivity and inductive learning) and memory. The different components included within the general construct of language learning aptitude can be expected to have a stronger impact on the acquisition of different aspects of the L2: good rote memory would be especially useful for learning vocabulary, collocations, etc. (Skehan, 1998; 2002), whereas good analytic abilities can be assumed to be helpful for learning grammar (Ross et al., 2002; Wesche, 1981). Additionally, some learners might show higher skills regarding some components of aptitude but not others (e.g., good memory capacity, but average analytic abilities), which means that they will be more successful if they are learning the L2 in a context/through an approach that best fits their aptitude (Stenberg, 2002). Aptitude components are also related to age, suggesting that children rely more on memory abilities, and adolescents or adults on analytic abilities (Harley and Hart, 1997; 2002; Ross et al., 2002).

In terms of learning conditions, there are two opposing trends in the literature: while some researchers suggest that L2 learning aptitude (especially analytic skills) are mostly (or only) relevant for L2 explicit learning in classroom settings (Krashen, 1981;

Zobl, 1992) others suggest that aptitude also plays a significant role in implicit learning conditions (de Graaf, 1997; Robinson, 1995). Regarding immersion or naturalistic settings, it has been claimed that L2 learning aptitude has an effect that is at least as important as (if not more than) in classroom settings (Reves, 1983; Skehan, 1989). In fact, in naturalistic settings, it is more challenging for learners to process the input they receive (through their phonemic coding ability), to figure out the structure of the language that they have to learn (analytic capacities), and to memorize new material (memory), since the language they are exposed to in such contexts is less structured than in a classroom setting (Skehan, 1989).

Currently, there are not many studies in the SA context regarding the role of aptitude in L2 learning, and those that exist focus on adult L2 learners. O'Brien et al. (2007) examined the role of phonological memory on L2 fluency gains in the SA and AH contexts. The authors found that phonological memory predicted L2 fluency scores regardless of learning context. That is, those learners with better phonological memory made more fluency gains across the board and not just in one context. Sunderman and Kroll (2009) analyzed the relationship between working memory and language gains in the SA context and suggest that a certain threshold in working memory capacity is necessary for participants to benefit from the SA experience.

The present study intends to be an exploratory study on the role of age and aptitude in L2 development during a three-week stay abroad. Although summer SA programs in the UK and Ireland are highly popular in Europe, especially for preteens or teenagers, not many studies exist that examine how much English these participants actually learn. As mentioned before, the studies by Llanes (Llanes, 2010; Llanes and Muñoz, 2013; Muñoz and Llanes, 2014) suggest that age is an important factor to consider when analyzing the effects of stays abroad. Therefore, in order to fill these research gaps, we designed a study that includes a short summer SA with two age groups: preteens/young teens (12-13 years old) and teenagers (15-17 years old). It was not possible to include younger learners since young children do not usually participate in SA programs.

More specifically, the research questions that guide our study are the following:

RQ1: do young L2 learners develop their English L2 skills (as reflected in their knowledge of grammar and formulaic sequences) after a three-week stay abroad?  
RQ2: If L2 development occurs, is such development influenced by participants' age or aptitude (as reflected in vocabulary learning skills)?

## 2. Method

### 2.1. Participants

The participants considered for this study included 39 Catalan/Spanish bilinguals, 16 of whom were 12-13 years old (mean age 12.56) and 23 were 15-17 years old (mean age 15.68). The two groups were labeled preteens and teenagers respectively. We are aware that the line between pre-teenagers and teenagers is not totally clear, and, although technically, 13 could be included in the teenage years, we do not believe there is a clear-cut difference between 12 and 13 year olds. We have left a “year gap”, excluding the 14 year-olds in our original sample, to mark a clearer difference between the two age groups. It was not possible to include younger learners as few parents send their young kids abroad to learn English.

There were 13 boys and 26 girls. All learners spent three weeks in the south of England, where they participated in a SA program that included L2 classes for three hours a day Monday through Friday, afternoon activities, and weekend trips. The students stayed in residence halls, together with other international students.

Regarding the L2 classes, the participants were grouped according to their proficiency level and were mixed with students whose native language was not Catalan or Spanish. After their lessons, the students had lunch together at the cafeteria, where other international students also ate. Even though the students were free and encouraged to interact and mix with international students to practice their English skills, practically everyone sat with their Catalan friends. The program also offered organised activities in the afternoon, where native English-speaking professionals were in charge, such as hockey, basketball, arts and crafts, etc. Then, the students had dinner again at the cafeteria. Afterwards, they had free time and could go to their rooms to rest. In the evenings, there were also activities the students could join, such as quizzes, disco, karaoke, more sports, etc. On Saturdays, there were trips to different cities such as Oxford, London, etc. during the day (in this case they were only organised for the Catalan students), and in the evening there were movie nights, an activity where they could also join other international students. On Sundays there were no planned activities and the students were free to decide how to spend their day. All in all, considering all the opportunities these learners had to use English, it can be said that their exposure to the language consisted of at least five hours a day during the week (three hours of L2 instruction plus two hours of monitored activities) in addition to however many hours they were willing to use the language in their free time, which is different for each participant.

## 2.2. Instruments

Two instruments were designed to examine the two language areas under study (grammar and formulaic sequences): a grammaticality judgment test (GJT) and a formulaic sequences test (FST). Although the two tasks had the same format, they targeted different L2 aspects, one which is more often dealt with in instructional contexts (grammar) and another which can be expected to improve more through authentic exposure and interaction with native speakers (formulas). Regarding the context under study, we can expect the two areas to improve, as the SA experience included instruction and naturalistic exposure to the L2. However, what makes this context unique (as opposed to the typical AH context the participants had previously experienced) is the possibility to use the L2 in authentic situations and the easier access to large amounts of input.

The two instruments had the same format: the students had to classify a number of sentences as “correct” or “incorrect”. The option “I don’t know” was also included to help prevent participants’ guessing. The students were asked to provide the correct version for the sentences they considered incorrect.

The GJT included 14 items and examined the typical aspects of English grammar that are targeted in textbooks in Spain for the age groups under consideration. These aspects included irregular plurals (*foot-feet; child-children*), irregular past (*swim-swam*), word order adverb-verb (*they always drink water*), noun-verb agreement (*George doesn’t like water*), prepositions (*interested in*), comparatives (*more dangerous*), and verb tenses. The test consisted of 14 sentences, 11 of which were incorrect and 3 correct (see the Appendix for the sentences included in the test).

The FST targeted some common formulas that are used in everyday English, some of them taken from Nattinger and DeCarrico (1992). Some examples of the formulas included in the test are *Good luck! What’s the weather like? Nice to meet you! Is everything OK? Take care! Do you need a hand?* The test consisted of 16 different sentences: 13 were incorrect and 3 correct (see the Appendix for the sentences included in the test).

Vocabulary learning skills (a component of language learning aptitude, as suggested before) were examined through one of the LLAMA tests developed by Meara (2005). LLAMA\_B examines rote memory, in particular vocabulary learning. This is how the test is presented:

**Llama\_B** is a simple vocabulary learning task, which measures your ability to learn relatively large amounts of vocabulary in a relatively short space of time. The programme is loosely based on the original vocabulary learning subtask of Carroll and Sapon (1959), but uses a completely new interface. This version no longer requires any L1 input, so the test is suitable for use with testees of

any L1. The words to be learned are real words taken from a Central American language, and they are arbitrarily assigned to the target images (Meara, 2005: 5).

The original LLAMA\_B test is computer-based. In the learning phase (which normally lasts for two minutes), participants see the pictures of 20 different objects for which they have to learn their names. As they click on a particular image, its name appears on the screen. The participants can click on the different icons as many times as they want within the allotted time. In the testing phase, the participants see the words in the centre of the screen and they have to associate them with their corresponding image. Because of logistics, we could not use computers in this study, and that is why we designed an article-and-pencil version of this test (the administration will be explained in the next section).

The choice of this aspect of aptitude is not arbitrary. In fact, memory plays an important role in language learning, which is especially significant according to some views which characterize language development/use, such as memorization and retrieval of linguistic “chunks” of different degrees of complexity (Pawley and Syder, 1983), and not as a rule-based system. Whether we support the former or the latter view, it is undeniable that rote memory is a key aspect of language learning aptitude, which manifests itself in the learning of vocabulary (or arguably the whole language system).

### *2.3. Procedure*

Before the data collection, a pilot test was performed with learners that were comparable to the ones included here. The objective of piloting the instruments was, first of all, to make sure they were valid and reliable, and second, to find ideal administration conditions (especially in relation to the time that should be allowed). After the pilot study, some changes were made to the original GJT and FST which included 20 sentences (some items that were too easy or difficult were eliminated), and decisions were made about the time allotted for each test. Cronbach’s alpha for the final version of the GJT was .700 and for the FST .808. Both the pilot and the final test included more ungrammatical sentences than grammatical sentences. The motivation for that choice was to create a challenging test and to avoid an overestimation of participants’ knowledge, as learners tend to mark “correct” when they are unsure of the accuracy of a sentence or when they do not want to spend time looking for errors. This was corroborated in the results of the pilot test, in which some participants just marked “correct” for most sentences.

The procedure for administering the tests in the present study was as follows. All the students took the tests in a classroom the day after the program started. First, the learners did the vocabulary learning task. In our article-and-pencil version, the

students received a sheet with the pictures of the objects and their names next to them. They had two minutes to learn the words. During the testing phase, we removed the *learning sheet* and we gave them another one in which they had to match the pictures with their names. The students had three minutes to do this. The instructions were given in Catalan, to ensure all participants understood them.

Next, the students took the GJT test. The administrator read the instructions and examples aloud in Catalan and made sure all the students understood what they were supposed to do. After the instructions, the participants had seven minutes to complete the task. When the students finished the GJT, they did the FST. The same procedure was followed as for the GJT, the only difference being that the time allowed for this test was five minutes (the pilot study showed that the students needed less time for the FST than for the GJT).

The present study has a pre-test/post-test design; with the exception of the vocabulary learning task, which was only administered once. Although there is some controversy about this issue, it is generally believed that language learning aptitude (of which vocabulary learning skills are claimed to be a component) is quite stable across time (Carroll, 1967; 1993). The two language tests (GJT and FST) were administered twice, one time at the beginning of the program (second day in the UK) and another time at the end (two days before leaving the UK).

### 3. Analyses

The GJT and the FST were analyzed as follows: the students were given one point for identifying correct sentences and one point for identifying incorrect sentences and providing the right correction. The maximum possible score was 14 for the GJT and 16 for the FST. We decided not to give credit for accurate identification of incorrect sentences without correction because it does not give an indication of knowledge of the target structure.

For the vocabulary learning task, the students were given one point for each correct word-meaning association (20 points was the maximum possible score). Then, we established two groups considering the scores obtained in this task. We classified them as either “low aptitude” (0-8 points) and “high aptitude” (9-20 points). The mean for the whole group was 8.9. It must be pointed out that we are using the terms “high” and “low aptitude” to simplify the categorization, but we insist that aptitude consists of multiple components and we are just focusing on a specific one (rote memory) as measured in one specific test.

### 3.1 Statistical analyses

As explained above, the learners took the tests twice, and for that reason a Repeated Measures (RM) ANOVA analysis was considered most appropriate to answer the research questions, which aim to investigate the effect of time, age and aptitude on the scores of the GJT and the FST. *Time* (differences between pre- and posttest scores on the GJT and FST) was considered the within-subject variable. Age and aptitude were the between-subject variables. The participants were divided into two groups according to their *age*: preteens (12-13 years old) and teenagers (15-17). In terms of *aptitude*, we divided the participants into two groups, as previously stated: high aptitude (higher than the mean; that is, 9 points or more on the LLAMA\_B test) and low aptitude (8 points or less on that test). Through RM ANOVAs it is possible to know the effect of both, within- and between-subject variables and, additionally, their interaction. For each test we thus analyzed the effect of time, age, and the interaction (x) between time and age on the one hand; and time x aptitude on the other. Note that, although it would have been interesting to analyze the interaction of the within-subject variable and the two between-subject variables at the same time (time x age x aptitude), the low number of participants did not allow for that analysis; hence, age and aptitude were analyzed in separate tests.

## 4. Results

### 4.1 Age

#### 4.1.1 Grammaticality Judgment Test

Table 1 shows the means and standard deviations (SD) for the GJT scores obtained by the two groups of learners on the pretest (Pre) and on the posttest (Post). The descriptive statistics show that the older learners had higher scores than the younger learners at both time points (Table 1). Additionally, it can be observed that both groups obtained higher scores in the posttest than in the pretest.

**Table 1** Age groups and GJT

	Preteens (n=16)		Teenagers (n=23)	
	Mean	SD	Mean	SD
Pre GJT /14	5.31	2.44	8.25	2.52
Post GJT /14	6.25	3.08	9.06	2.79

The results of the RM ANOVA show a significant effect of time (the scores in the posttest were significantly higher than in the pretest):  $F(1, 38) = 8.29, p = .007$ , partial eta squared = .179. Similarly, the effect of age was significant:  $F(1, 38) = 12.27, p = .001$ , partial eta squared = .244 in favor of the older learners. However, no interaction effects were registered between time of test and age [ $F(1, 38) = .042, p = .838$ , partial eta squared = .001], indicating that progress in the tests under consideration were not significantly different for younger and older learners.

#### 4.1.2 Formulaic Sequences Test

The results of this task are highly similar to the previous test. As Table 2 shows, both groups of learners show higher scores in the posttest than in the pretest and older learners always outperform younger learners.

**Table 2** Age groups FST

	Preteens (n=16)		Teenagers (n=23)	
	Mean	SD	Mean	SD
Pre FST /16	6.43	3.71	10.08	3.44
Post FST /16	8.18	4.38	11.47	3.52

The results of the RM ANOVA show that the effect of time is significant, with posttest scores being significantly higher than pretest scores:  $F(1, 38) = 32.97, p < .001$ , partial eta squared = .465. These results are similar to the ones reported for the GJT; however, if we look at the effect size of the differences (higher for the FST), we can observe that the difference between the knowledge of formulas at the beginning and end of the stay is more significant than the knowledge of grammar.

Between-subject analyses of the FST show that the effect of age is significant [ $F(1, 38) = 8.77, p = .005$ , partial eta squared = .188] in favor of the older learners. In comparison with the GJT, this effect is less significant if we consider the partial eta squared value. As was the case with the GJT, there were no interaction effects between time and age:  $F(1, 38) = .418, p = .522$ , partial eta squared = .011, suggesting that both age groups developed their knowledge of English formulas in a comparable way.

## 4.2. Aptitude

### 4.2.1. Grammaticality Judgment Test

As explained previously, the participants were divided into two groups, depending on whether their scores in the vocabulary learning test were higher or lower than the mean (i.e., 9). Table 3 shows the scores the learners in the two groups obtained in the pre- and posttest in the GJT. There was one participant who did not perform this task.

Table 3 Aptitude groups GJT

	High aptitude (n=22)		Low aptitude (n=16)	
	Mean	SD	Mean	SD
Pre GJT /14	7.72	2.47	6.37	2.91
Post GJT /14	8.68	2.71	7.17	3.49

The results of the RM ANOVA show a significant effect of time (the scores of the posttest were significantly higher than those of the pretest):  $F(1, 36) = 7.50, p = .010$ , partial eta squared = .172. The effect of aptitude was not significant:  $F(1, 36) = 2.62, p = .114$ , partial eta squared = .068. Similarly, there were no interaction effects suggesting that one group of learners made more gains in the GJT than the other:  $F(1, 36) = 0.75, p = .786$ , partial eta squared = .002.

### 4.2.2. Formulaic Sequences Test

As reflected in Table 4, the two groups of learners made gains from pre- to posttest. In terms of aptitude, it seems that the students with higher aptitude always outperform those with lower aptitude.

Table 4 Aptitude groups FST

	High aptitude (n=22)		Low aptitude (n=16)	
	Mean	SD	Mean	SD
Pre FST /16	9.90	3.40	7.25	3.99
Post FST /16	11.43	3.72	8.81	4.10

The results of the RM ANOVA indicate that the effect of time is significant  $F(1, 36) = 28.81, p < .001$ , partial eta squared = .445 with the scores of the posttest being

higher than those of the pretest, and so is the effect of aptitude [ $F(1, 36) = 4.79, p = .035$ , partial eta squared = .117], showing that those learners with higher aptitude in general obtain higher scores in the FST than those with lower aptitude. However, no significant interaction effect was obtained between time and aptitude [ $F(1, 36) = .005, p = .945$ , partial eta squared = .000]; indicating that aptitude as measured by vocabulary learning skills did not predict L2 gains in terms of knowledge of formulas.

## 5. Discussion and conclusion

The aim of this study was to analyze the type of L2 development that occurred for a group of young learners (12-17 years old) after a short summer SA, and whether age and aptitude had any impact on such development. Given the popularity of short summer stays abroad in the UK and Ireland for Europeans, it is surprising that so little research exists that accounts for the kind of learning that takes place after such a short period abroad.

The results of the present study suggest that L2 learners significantly develop their knowledge of grammar and formulaic sequences, considering the scores of the tests under consideration. It is interesting that the two areas improved; however, our results also indicate that the development of the knowledge of formulas is slightly more significant than the knowledge of grammar. As was previously suggested, the SA program the learners were enrolled in (as in most SA programs) provided both L2 instruction and naturalistic exposure. We expected classroom instruction to have a clearer impact on the learning of grammar and naturalistic exposure on the acquisition of formulaic sequences. Nevertheless, we did not have any hypotheses as to which area would show more development after a three-week stay abroad. The results of the statistical analyses provide evidence for the positive effect of such a short stay, especially for formulaic sequences. One of the most unique characteristics of the SA context as opposed to the “at home” context in which these learners had received their previous exposure to English, is the fact that they can actually use the L2 knowledge in real situations, and the use of the L2 becomes meaningful and thus, enhanced (cfr. DeKeyser, 1991).

Another objective of this study was to examine whether age and aptitude had an effect on L2 development in a short stay abroad. The results of the analyses indicate that both have an effect on learners’ performance but not on development. The effect of age was always significant and older learners always outperformed younger learners (both at pre- and posttest). This superiority is probably the result of more years of classroom instruction and, in many cases, in after-school programs. Usually more instruction time means more advanced L2 knowledge (Carroll, 1967).

Regarding aptitude, its effect was not significant on the GJT, but it was on the FST, which could be the result of the test used to measure aptitude. A vocabulary learning task probably taps aspects that are more related to the acquisition of vocabulary than to the acquisition of grammar. This could be one reason for the lack of differences between high and low aptitude groups in the GJT and for the superiority of the high aptitude learners in the FST.

Finally, we will discuss the results of the lack of interaction between time x age and time x aptitude. The results of our analyses indicate that there is no interaction between age or aptitude and the acquisition of grammar and formulaic sequences in a short SA. This means that younger and older teenagers made comparable progress in the two tasks and that both high and low aptitude learners also experienced a comparable development of grammar and formulaic sequences after a short stay abroad.

The fact that younger learners did not make more L2 gains in the SA context than older learners (as reported in Llanes and Muñoz, 2013) could be due to the age ranges considered here and the ages analyzed in the study by Llanes and Muñoz (2013), which included children and adults. Although differences between our two age groups certainly exist (as evidenced by the significant effect of age alone), such differences might not be large enough to give a group of learners an advantage with respect to the other group in a short SA. Younger learners have been reported to have better qualities for implicit learning (DeKeyser, 2003), which they can take advantage of in a naturalistic setting in “picking up” the language from the input they receive (which in a SA context is significantly larger than “at home”). These implicit learning qualities would be especially useful for the acquisition of formulas of everyday English. Older learners, on the other hand, have been said to be better equipped for explicit learning in classroom settings (DeKeyser, 2003), and in this case should outperform younger learners in the explicit learning of grammar. Nevertheless, the differences between the two groups of participants considered for this study might lie, as suggested before, on the amount of L2 input they have received throughout the school years (which is less in the case of preteens than in the case of teenagers), but not because of some cognitive differences that would make one group better prepared to benefit from L2 exposure in the SA context. Cognitively speaking, preteens might be more similar to teenagers than to children, and this lack of cognitive differences might be the reason for the lack of significant differences between the gains experienced by preteens and teenagers abroad. Apart from cognitive differences between age groups, another reason that has been proposed in the literature to account for the advantage of a particular age group over the other is the type of experience abroad (Llanes and Muñoz, 2013). These authors, in their study, explained that one possible reason for the advantage they found for children over adults in the SA context is related to the fact

that children, because of the nature of the program they were enrolled in, used the L2 significantly more than adults. In the case of the current study, such differential use did not occur, as both preteens and teenagers had the same type of SA experience that allowed both groups to use English to the same extent.

In the case of learning aptitude, the aspect under consideration here (vocabulary learning skills) did not have any effect on the acquisition of grammar of formulaic sequences in English. It has been previously suggested that, while children tend to rely more on memory skills for L2 learning, teenagers use their analytical abilities more (Harley and Hart, 2002). These authors analyzed the role of both memory and analytical skills on L2 learning in a three-month SA for 15-17 year-olds. The results of the study suggest that analytic skills had a significant effect on L2 acquisition for these learners, but not memory skills. We can thus hypothesize that the learners considered in the present study might already be “too old” to rely on memory skills (which is what our test measured) and they might have been prominently using their analytic skills, which could be the reason why higher memory skills did not lead to more language gains. More research should be conducted in the future using aptitude tests that target several components of this construct to examine whether the findings reported by Harley and Hart can be replicated.

In conclusion, our exploratory study has provided some evidence for the beneficial effect of a short SA on L2 development. Additionally, we can also conclude that age and aptitude as defined in this study do not seem to predict language gains in a short SA program. An implication of this finding is that a short stay in the L2 country is favorable for all, younger and older learners, and L2 learners with different degrees of language learning aptitude. Nevertheless, this would be an overstatement and more research is needed before that conclusion can be reached. First, more language areas should be examined, as age or aptitude groups could differ in L2 areas that were not examined here. Second, more participants should be included in future studies (this is certainly one of the limitations of the present study), and especially, learners who are younger than 12 (although this is certainly a challenge). And third, tests that examine other components of language learning aptitude should also be considered. After such research is performed we would be in a position to advise both parents and SA program coordinators and explain the kind of progress that could be expected after a short summer SA for different kinds of L2 learners.

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## Appendix

### *Sentences in the GJT*

1. I need warm socks for my feets.
2. He swimmmed in the lake yesterday.
3. They drink always water after running.
4. George don't like living in big cities like New York.
5. She's interested in maths and science.
6. Snakes are more dangerous than dogs.
7. Thanks for help me with my homework.
8. The childrens are in the playground.
9. The price of the petrol is very high.
10. The train leaves tomorrow at 5pm.
11. I'm always early for school.
12. Madonna is more rich than many other singers.
13. This is a good book for to learn Italian.
14. When Peter had the accident he hurt his back.

### *Sentences in the FST*

1. Thanks you!
2. Nice luck!
3. What's the weather like?

4. Pretty to meet you!
5. Are you very alright?
6. What's for dinner?
7. Look you later!
8. Is anything OK?
9. Give care!
10. Don't worry of it!
11. Do you require a hand?
12. Wait some moment!
13. Take care!
14. How are you going today?
15. Calm up!
16. I need to do a call.