



THE DEVELOPMENT OF L2 READING SKILLS: A CASE STUDY FROM AN EIGHT-WEEK INTENSIVE ENGLISH PROGRAM COURSE

Rachel Elizabeth Kraut

Rice University

ABSTRACT

The present study explores the development of L2 reading skills over the course of an immersive eight-week session in an intensive English program. Data was collected from an intermediate-level reading skills class (N=16) at multiple points throughout the course to measure growth in vocabulary knowledge, lexical inferencing abilities, reading speed, reading comprehension, and attitudes towards reading. Subjects also submitted a weekly log of minutes read at home. During the short two-month period, significant growth was observed in a number of reading skills. Moreover, total number of minutes read independently by each student was associated with growth across several reading skills, as tested by Pearson correlations. Results are discussed in terms of their implications for language teaching and language program curriculum.

KEYWORDS

Intensive English Programs, Program development and administration, Curriculum

There seems to be a common assumption among universities that 7-16 weeks is enough time for adult second language learners to progress in their linguistic abilities. However, we know from decades of L2 acquisition research that becoming proficient in another language takes a substantial amount of time (e.g. Cummins, 1981; Demie, 2011), with academic language proficiency taking between four to seven years to develop (Hakuta et al., 2000). Therefore, it is not surprising that evidence has come to light showing that the length of typical at-home, university foreign language courses does not afford sufficient time for a language learner to truly advance (e.g. Jochum, 2014). When language learning or foreign language courses take place in an immersive study

abroad context, however, students often experience greater L2 proficiency gains (e.g. Chieffo & Fan, 2008; Hernandez, 2010; Jochum, 2014; Llanes & Munoz, 2009), whether the experience lasts three months or a year.

The present study examines second language (L2) proficiency gains in a much less studied immersive language-learning context: an intensive English program (IEP). The following section provides a foundation for the current study by reviewing a number of recent works exploring gains in oral proficiency, listening skills, writing skills, and reading skills as a result of immersive language study. Importantly, it should be noted that these studies examine language proficiency gains among groups of

American students while studying abroad, as little to no literature exists on language development as the result of studying in an intensive English program.

PREVIOUS LITERATURE

Oral Proficiency

Jochum (2014) conducted a study measuring oral proficiency gains after a one-semester Spanish course taken either at students' home university in the U.S. or abroad in a country speaking the target language; proficiency gains were measured using the Oral Proficiency Interview by Computer (OPIc) exam. No significant differences were noted at the beginning of the semester between the study-abroad group and the at-home group in terms of their oral proficiency in the L2—each student in both groups fell into the intermediate-low group. The results of the post-OPIc exam at the end of the semester revealed a statistically significant difference in oral proficiency between the study-abroad and at-home groups, with the study-abroad students falling into the intermediate-mid proficiency level (on average) and the at-home students remaining at the intermediate-low level. Moreover, the percentage of students who improved one or more proficiency levels during the semester was greater in the study-abroad group (78%) than the at-home group (44%). Similar results were found by Hernandez (2010), Segalowitz & Freed (2004), and Freed, So and Lazar (2003) as well.

Listening

Compared to oral proficiency, the effects of an immersive language-learning context on listening skills have been studied comparatively less. Among the most recent is a study by Llanes and Muñoz (2009). Part of a larger experiment exploring how study abroad impacts oral and aural skills, the researchers asked 22 L2 English students to listen to a series of pre-recorded native English speech samples. These speech samples were accompanied by three

images, and the participants were asked to select the image that best corresponded with the content of the recording. When the participants left the home country to study abroad in an English-speaking country for three to four weeks, they were also asked to keep a journal of how much time they spent on each of the four language skills. The same listening comprehension task was administered again upon returning home. Results of the pre-and post-tests revealed that being immersed in the target language—even for a short period of time—had a positive impact on listening comprehension. Moreover, these gains showed a positive correlation with the amount of listening practice time students reported in their journals. The findings of Dyson (1988) and Cublillos, Chieffo and Fan (2008) are very similar.

Writing Skills

According to Llanes and Muñoz (2013), the current literature remains divided on the relationship between language immersion and writing skills development: “While authors such as Freed et al. (2003) have found that the immersion context was not particularly beneficial for the improvement of writing skills, other researchers have observed clear gains (Perez-Vidal & Juan-Garau, 2009; Sasaki, 2004, 2009)” (p. 65).

In their own study, Llanes and Muñoz investigate the possible influence of age on language immersion and improvement in writing skills. The researchers compared the writing abilities of four groups: children who studied English abroad for two-three months; children who studied English at home for the same time period; college-aged adults who studied English abroad for two to three months; and college-aged adults who studied English at home for the same time period. Before learning began, the L2 writing abilities of all participants was measured by their response to an essay prompt, “My life: past, present and future expectations”—a familiar topic for both children and adults. This task was given again at the completion of the two-to-three month learning

period. The researchers scored the pre- and post-writing samples in terms of fluency, lexical and syntactic complexity, and accuracy. They observed statistically significant improvement among the children in the study-abroad group in written lexical complexity and written accuracy. However, they noted little effect of L2 immersion on writing skills improvement on the aforementioned measures for the adult groups. For the study abroad adult group, the researchers observed significant improvement only in lexical complexity. Llanes and Muñoz attribute these findings to the possibility of limited L2 writing practice time for the study-abroad group, as the students' self-reports of how their time was spent indicated a larger portion of practice being devoted to speaking and listening.

Reading Skills

In terms of the effects of short-term immersion on language skills development, reading skills are the least studied. In the few studies that do exist, researchers have not observed clearly positive effects. Two of the most recent include Dewey's (2004) and Davidson's (2010) studies. The former explored differences in L2 reading development among a group of L2 learners of Japanese who either studied abroad in Japan for 11 weeks, or took a Japanese class in the U.S. for nine weeks. The two groups showed almost no significant differences in the results of a battery of reading assessments—including think-aloud protocols, vocabulary knowledge tests, and self-reports of their abilities. The only area in which the two groups differed was in their self-reports of reading confidence, which increased more for the study-abroad group.

Davidson (2010) investigated the role of study-abroad length using data from more than one thousand American college students who had studied abroad in Russia from 1994 through 2009. Data from participants was categorized into three groups based on duration of study abroad: two months, four months, or nine months. L2 reading proficiency in

Russian was measured using assessments created by either the Educational Testing Service (ETS) or the American Councils' Assessment and Curriculum Development Division (A-CLASS) and "ranged from short passages designed to assess extraction of factual information to larger passages designed to measure comprehension, analytic, and inferential skills" (p. 10). Analysis of the data showed that, generally, L2 reading skills did not improve significantly during study abroad, regardless of study length. Davidson argues that this may be because the students had been well-prepared for reading in Russian by their own American university foreign language programs before they studied abroad in Russia.

THE PRESENT STUDY

The focus of this study centers on the most under-studied language skill in immersive language-learning contexts: reading. To increase our field's collective knowledge of the relationship between immersive language learning and reading skills development, I turn to a growing yet also under-explored type of university-based language: intensive English programs (IEPs).

IEPs are unique language programs which serve thousands of international students across the country and around the world every year, preparing them for study in American universities by teaching academic English. Like foreign language university courses, term lengths generally range from seven, eight, or sixteen weeks. IEPs differ from foreign language university courses in several ways, however. Perhaps most importantly, IEPs construct their curricula in accordance with the number of hours of instruction required by the U.S. F-1 immigration status regulation for language training (Szasz, 2010), since students arrive from abroad on F-1 visas. International students enrolled in an American IEP must therefore take at least 18 clock hours of English classes per week (Nonimmigrant Classes, 2010). Thus, IEPs provide an opportunity to study language learn-

ing not only in a study-abroad context, but also in an immersive one.

In the IEP studied here, students attend classes for 22 hours each week. These classroom hours are dispersed across four courses: Oral Communication, Written Communication, Grammar, and Reading. The Oral and Written Communication courses each last 7.5 hours per week, while the Grammar and Reading courses each last 4 hours per week. Although language skills are artificially separated by course, some natural integration of language skills occurs in each one. For example, students must apply their reading skills while studying grammar, writing, and speaking in order to respond to written prompts.

In the present study, I explore the development of L2 reading skills and attitudes towards L2 reading over the course of an immersive eight-week session in an IEP. More specifically, the following research questions are addressed:

1. How much, if at all, do intermediate L2 English learners improve in their reading skills (e.g. vocabulary breadth, lexical inferencing, reading speed, reading comprehension) during one IEP session?
2. How much, if at all, do intermediate L2 English learners change in their attitudes towards reading in English during one IEP session?
3. What is the relationship between improvement in the aforementioned reading skills and attitudes toward reading, and the number of minutes read extensively outside of the classroom during one IEP session?

METHODS

Participants

The two largest first language (L1) groups represented in this program at the time of study were Ara-

bic and Chinese. Student enrollment approximated 550, with an average of 16 students per class.

The participants in this study were 16 intermediate-level students enrolled in a university-based IEP in Arizona. The study group included 13 males and three females; the students' mean age was 20 years. Their proficiency level was determined by a score ranging from 2.5-3.0 on the International Test for English Proficiency (iTEP), which was administered two weeks before the beginning of the session. In this group, 15 students were native speakers of Arabic and one student was a native speaker of Korean. Subjects were offered extra credit in their IEP reading course in exchange for participation in the study. All students gave consent to participate prior to data collection.

Materials and Design: Reading Speed and Comprehension

The reading passages used for the reading speed and comprehension instruments were taken from the *National Geographic Reading Explorer (2015)* textbook series assessment package. This textbook series, and book two specifically, is used as a part of the reading curriculum for intermediate English learners at the particular IEP where the students were recruited. Before selecting passages for data collection instruments, I communicated with the students' instructors to be sure that this material had not been and would not be used in class during that IEP session. After receiving clarification from the instructors, four passages were selected: two for administering in form A and the other two for form B. All reading passages were matched for length (mean word count = 343.25) and reading difficulty using the McAlpine EFLAW Readability Score (McAlpine, 2005). This score reflects the difficulty of any given text for non-native speakers through the following procedure: (1) counting the number of mini-words (short, common words of one, two or three letters); (2) counting the number of sentences; and (3) adding the total number of words in the passage to the total

of mini-words, then dividing by the number of sentences. The resulting score can fall into one of four categories: very easy to understand (1-20), quite easy to understand (21-25), a little difficult to understand (26-29), and very confusing (30+). The four selected texts fell into the 'quite easy to understand' category. The EFLAW value and total number of words for each passage can be found in Table 1. The *National Geographic Reading Explorer* assessment package provides comprehension questions along with each reading passage. So that the participants' task would not be too lengthy, five of the ten available questions were randomly selected to accompany each of the four passages for data collection. A sample reading passage and its corresponding comprehension questions can be found in Appendix A.

The reading passages and corresponding comprehension questions were administered on a computer using Qualtrics. This survey platform includes a built-in time recorder, enabling a researcher to ascertain how long a participant spends reading a particular item. Using this feature for the reading passages, I was able to record reading time for each text, in seconds. The two values recorded for each passage were averaged to arrive at a pre-session reading speed and again for a post-session reading speed.

throughout the passage. These items were bolded and underlined so that participants would easily notice them. After each short paragraph, a multiple choice question presented the participants with four choices as to what they thought the new pseudo word might mean; participants were instructed to choose the best answer. Five narrative paragraph items comprised the lexical inferencing assessment form A, and five new narrative paragraphs were used for form B, resulting in a total of 10 items. Two sample items from the lexical inferencing assessments can be found in Appendix B.

Nation's (1990) vocabulary size assessment (ranging from 2,000-10,000 levels) was used to assess vocabulary breadth. Version 1 (Nation, 1990) was used for form A, and Version 2 (Schmitt et al., 2001) was used for form B. These instruments assess passive vocabulary knowledge based on words from five word-frequency levels: level one contains 2,000 words; level two 3,000 words; level three 5,000 words; level four, or the university word level, beyond 5,000 words; and level five 10,000 words (Mokhtar et al., 2010). To measure vocabulary size, the participant is presented with six possible words to be matched with only three possible definitions. Guessing thereby becomes a little more challenging,

Table 1. EFLAW readability scores and total number of words for each reading comprehension passage

<i>Form A – Passage 1</i>	<i>Form B – Passage 1</i>	<i>Form A - Passage 2</i>	<i>Form B – Passage 2</i>
Words = 342	Words = 344	Words = 345	Words = 342
EFLAW: 21.33	EFLAW: 23.77	EFLAW = 24.29	EFLAW = 23

Materials and Design: Vocabulary and Lexical Inferencing

The items for the assessment of lexical inferencing abilities were inspired by and adapted from Cain et al. (2009) and Prior et al. (2014). Each question consisted of a short narrative paragraph containing a new pseudo word (e.g. "wut") that was repeated

as there is not a 1-to-1 relationship between possible vocabulary items and possible answer choices. These tests are known to be highly reliable, with an estimation for Cronbach's alpha above .9 for each section (mean α for version 1=.929; mean α for version 2=.932). Sample items from form A can be found in Appendix C.

Materials and Design: Reading Attitudes Questionnaire

Lastly, the reading attitudes questionnaire was constructed based on items from Braten et al. (2013) and Logan et al. (2011). Braten et al.'s items, which were used to measure readers' self-efficacy and perceived value of reading skills in natural science texts, were modified to measure the same constructs for L2 learners of English when reading English texts. The items measuring a reader's willingness to take on challenging texts, as well as those measuring a reader's curiosity to learn new things through text, were those used by Logan et al. (2011). These constructs—self-efficacy, value, challenge, and curiosity—were chosen for having been shown to form an integral part of a reader's intrinsic motivation (Wang & Guth-

rie 2004), as well as for their ability to help predict academic performance (Bandura, 1997). Each of the four constructs was measured with five questions in which participants had to choose an answer on a Likert scale from 1 ("Disagree a lot") to 4 ("Agree a lot"). This 20 item questionnaire was found to be internally reliable ($\alpha=.79$). To construct version B for post-testing, the language of the items on form A were worded negatively. For example, "I like it when the teacher gives us a difficult book to read" was changed to read "I don't like it when the teacher gives us a difficult book to read" for form B. The full reading attitudes questionnaire (form A) can be found in Appendix D.

Procedure

Table 2. Total minutes read and pre- and post-session data for each participant on the vocabulary breadth, lexical inferencing, reading comprehension and reading speed assessments

Participant	Minutes Read	Vocabulary Breadth	Lexical Inferencing	Reading Speed (in seconds)	Reading Comprehension
		<i>Pre / Post</i>			
P1	215	23% / 38%	40% / 0%	472 / 241	30% / 30%
P2	193	37% / 49%	60% / 60%	371 / 309	50% / 60%
P3	130	37% / 47%	0% / 40%	550 / 509	90% / 80%
P4	340	44% / 62%	0% / 100%	667 / 385	70% / 60%
P5	455	26% / 49%	60% / 20%	486 / 156	50% / 40%
P6	750	40% / 39%	80% / 80%	492 / 173	80% / 80%
P7	260	21% / 39%	80% / 60%	416 / 242	40% / 40%
P8	510	27% / 37%	20% / 60%	523 / 231	70% / 70%
P9	690	39% / 49%	0% / 60%	456 / 272	70% / 80%
P10	428	47% / 54%	60% / 60%	285 / 228	40% / 80%
P11	270	11% / 11%	40% / 0%	521 / 279	30% / 40%
P12	105	18% / 21%	20% / 40%	385 / 331	50% / 60%
P13	200	18% / 32%	20% / 80%	591 / 462	40% / 80%
P14	315	24% / 41%	80% / 60%	346 / 154	60% / 60%
P15	230	39% / 49%	0% / 40%	412 / 300	30% / 40%
P16	425	57% / 78%	0% / 80%	400 / 309	60% / 80%

During the first week of the IEP session, participants completed all parts of the study across two days. On the first day, participants completed the reading speed and comprehension assessment, with half of the participants taking form A and half taking form B. This assessment was taken in a nearby computer lab on the university campus, where the participants sat at their own desktop computer. Participants were told that they would be taking a reading comprehension assessment, and that it would consist of two passages, each with five comprehension questions. They were instructed to read carefully, as they would not be able to return to the passage after they had finished reading. Note-taking was not allowed, and participants were given 45 minutes to complete the task. On the second day, participants completed

the vocabulary breadth, lexical inferencing, and attitudes about reading assessments; all participants took form A. Participants completed these assessments on paper in their classroom, and were given 45 minutes to complete the instruments. The vocabulary breadth and lexical inferencing assessments were scored in terms of the total percentage of correct answers.

To collect post-session data, the same procedures were followed across a two-day span in the last week of the session. Participants who took form B of the reading speed and comprehension assessment were administered form A in the post-session assessment, and vice versa. Similarly, all participants took form B of the tests for vocabulary breadth, lexical inferencing, and attitudes about reading.

Table 3. Pre- and post-session data for each participant on reading attitudes questionnaire, by construct

<i>Participant</i>	<i>Challenge Ratings</i>	<i>Curiosity Ratings</i>	<i>Self-Efficacy Ratings</i>	<i>Value Ratings</i>
	<i>Pre / Post (Out of 4)</i>			
P1	2.2 / 2.0	2.0 / 2.6	2.4 / 2.3	3.2 / 2.4
P2	2.8 / 3.2	3.6 / 3.4	3.2 / 3.6	3.8 / 3.6
P3	2.2 / 2.2	3.4 / 3.4	2.75 / 3.0	3.8 / 3.6
P4	2.8 / 2.8	2.8 / 3.8	3.0 / 3.0	4.0 / 4.0
P5	1.0 / 2.2	2.6 / 3.4	3.0 / 3.4	3.0 / 3.2
P6	3.2 / 3.4	3.8 / 3.6	3.0 / 3.8	4.0 / 4.0
P7	2.6 / 2.2	3.4 / 3.8	3.25 / 3.6	3.8 / 3.8
P8	1.8 / 2.4	2.6 / 3.2	2.6 / 3.0	3.6 / 3.6
P9	3 / 3.2	3.4 / 3.8	3.2 / 3.4	3.4 / 3.4
P10	3.6 / 3.2	3.8 / 3.6	2.6 / 2.8	3.8 / 3.25
P11	3.4 / 3.2	3.6 / 3.2	2.8 / 2.8	3.4 / 3.6
P12	1.0 / 2.0	3.4 / 3.6	3.4 / 3.6	3.6 / 3.6
P13	2.4 / 2.8	2.8 / 3.4	2.8 / 3.0	3.8 / 3.2
P14	2.6 / 3.2	3.8 / 3.4	2.6 / 3.0	3.8 / 4.0
P15	3.4 / 3.0	2.8 / 3.4	2.0 / 3.0	3.0 / 3.8
P16	3.2 / 2.8	3.4 / 3.6	2.6 / 3.25	3.8 / 3.6

Additionally, participants were asked to submit a weekly reading log of total minutes read independently at home. This variable was of interest, as amount of extensive reading has been shown to have a positive impact on L2 vocabulary acquisition (e.g. Krashen, 1993; Kweon & Kim, 2008), reading comprehension (e.g. Chen et al., 2013), and reading attitude (e.g. Yamashita, 2013). This was collected at the beginning of each week to obtain data for the previous week. At the end of the IEP session, the self-reported numbers were compiled for the total number of minutes read independently during the session.

RESULTS

Table 2 displays the total number of minutes read by each participant, along with his/her pre- and post-session score on the reading speed and comprehension assessment, and on the vocabulary breadth and lexical inferencing assessment. Table 3 presents the pre- and post-session self-ratings for all areas of the reading attitudes questionnaire, by category. For the reading attitudes questionnaire, the ratings for each category's four questions were averaged to obtain a mean score per category. Table 4 shows the average pre- and post- scores in each of the measured reading skills and reading attitude categories for the whole group.

The pre- and post-session data collected in the first and last weeks of the course were analyzed with a series of paired *t*-tests, one for each area of interest. Overall, a trend of growth across a number of the reading skills and reading attitude categories was noted, as borne out through the results of the *t*-tests: vocabulary breadth ($t=4.98$, $p<.001$); willingness to read out of curiosity ($t=2.39$; $p<.05$); perceived self-efficacy as an English reader ($t=3.53$, $p<.01$); and reading speed ($t=4.98$, $p<.001$). Moreover, improvement in a number of other areas was noted, as seen in *t*-test results that approached statistical significance: lexical inferencing abilities ($t=1.84$,

$p=.08$); willingness to take on challenging texts ($t=1.85$, $p=.08$); and reading comprehension ($t=1.96$; $p=.06$). Analysis of the data collected for students' perceived value of reading skills did not show a statistically significant change from the first to the last week of the course. This result is likely because the mean rating for the perceived value of reading items was already quite high, at 3.5 out of 4.

In order to determine any possible relationship between growth in reading skills and attitudes towards reading, a series of Pearson correlations (see Table 5) were conducted among the variables of interest: total number of minutes read independently during the session, change in vocabulary breadth, lexical inferencing abilities, willingness to take on challenging texts, willingness to read out of curiosity, perceived self-efficacy, perceived value of reading skills, reading speed, and reading comprehension. Several significant correlations were found between the parameters of the model: total minutes read and change in reading speed ($r=.472$, $p<.05$); total minutes read and change in reading comprehension ($r=.453$, $p<.05$); change in vocabulary breadth and change in curiosity ($r=.523$, $p<.05$); change in curiosity and change in reading speed ($r=.484$, $p<.05$). Correlations between change in challenge and change in curiosity ($r=.383$, $p=.071$), and between change in self-efficacy and change in perceived value of reading ($r=.345$, $p=.096$), also approached statistical significance.

DISCUSSION

Overall, these results offer a positive picture for L2 reading skills development even during a short eight-week period of immersive language study. We notice statistically significant improvement across the group in vocabulary breadth (11.68% overall improvement), reading speed (36.93% overall improvement), willingness to read out of curiosity (12.4% overall improvement), and the students' perceived self-efficacy as English readers (12.96% over-

all improvement). We also see development in lexical inferencing abilities (23.75%), willingness to take on challenging texts (24%), and reading comprehension (13.75%), although not with statistical significance.

The relationship between the number of minutes read extensively outside of the classroom during the session and improvement in L2 reading skills and attitudes was significant in terms of reading comprehension and reading speed. Positive correlations were also noted between a student's increased desire to read out of curiosity and both growth in perceived value of reading and reading speed. Moreover, increased motivation to read (in the form of willingness to read out of curiosity) can also lead to tangible improvements in important reading skills. Instructors should therefore encourage students to read extensively outside of the classroom to support the development of their L2 reading skills.

Taken together, the results of the pre-and post-session assessments, along with the statistical analyses, support the findings of Dewey (2004) in that the participants showed significant improvement in their perceived self-efficacy as readers in their L2. However, the findings of the present study are quite different from those reported by Davidson (2010), who observed no significant improvement among participants in his study—a point he attributes to the fact that participants were already well-prepared for reading in the L2 before they left to study abroad. This line of reasoning may explain the discrepancy between his results and those of this study.

Moreover, the majority of Davidson's participants were Russian majors earning their degrees from American universities where Russian literature courses are a common part of the curriculum. Thus, as he suggests, those students had substantial practice reading in Russian before studying abroad. The participants in the present study, on the other hand, are not majoring in the target language; rather, most of them seek majors in engineering, pharmacy and business but must improve their English first as a mean to these ends. Therefore, we might conclude that participants in the present study may not have

been as well-prepared to read in their L2 upon arrival (as compared to Davidson's groups), resulting in more dramatic improvement.

Lastly, it should be noted that the improvement in reading skills and attitudes could also be a by-product of improvement in general language abilities. For instance, studies of L2 learners consistently find strong correlations between oral language proficiency and reading comprehension (Beech & Keys, 1997; Carlisle et al., 1999; Dufva & Voeten, 1999) and word reading abilities (Arab-Moghaddam & Sénéchal, 2001; Gottardo, 2002). Because this study did not measure development in the other language skills, the nature of the relationship between growth in L2 reading abilities and general L2 proficiency is not accounted for.

LIMITATIONS

Given that this study was conducted with a limited number of students in one unique language-learning context, a number of limitations should be noted. First, the convenience sampling method used to select participants resulted in a group of mostly L1 Arabic speakers, as students from the Middle East are currently one of the largest student groups in American IEPs (Institute of International Education, 2015). The relative linguistic homogeneity of the participant pool may have affected the results, in that there was limited variety in L1 background. The patterns revealed in the data may or may not be applicable to English learners of different L1s.

Second, data was not collected on the students' progression in other language skills such as speaking, listening, or writing. Thus, it is difficult to ascertain whether simply participating in the IEP would produce similar gains as those seen in reading skills over the 8-week period. It is also unclear how much of the gains seen in reading skills were the result of immersive language study across all skills or from specific instruction in the reading class. Further work investigating and comparing proficiency gains across

reading, writing, speaking, and listening among a single group of participants in an intensive English environment would need to be done to untangle these effects.

Next, several participant's scores decreased from the pre- to post-session assessment in lexical inferencing and reading comprehension. There are a number of reasons as to why this may have happened. Before participating in the pre- and post-assessment batteries, the participants were informed that these assessments served both a diagnostic and empirical function and would not be counted towards their final grade in the course. Thus, motivation to perform at their best may not have been terribly strong. This could also have been the result of the particular measures used: although all data collection instruments were found to have high reliability and content validity, they may have been weak in temporal stability (Huber, 1985), and therefore not strong enough to accurately measure change over such a short period of time. A replication of this study should investigate test-retest reliability of the instruments to determine if alterations to the assessments or the data collection timeline would be necessary.

Finally, a large portion of the data is comprised of self-reports and self-ratings. It is possible that the high social desirability of becoming proficient in academic English could have skewed ratings in that participants may have over- or under-reported their abilities. Similarly, ratings under the 'Value' construct on the reading attitudes questionnaire were quite high across the board. These ratings could have been inflated due to the fact that participants were

IMPLICATIONS AND FUTURE WORK

Implications for this study lie in language pedagogy and program administration contexts. For instance, because growth was noted in a number of areas, eight weeks may be enough time for improvement in the L2—provided that the student is learning in an immersive or study abroad context. To investigate this claim further, a similar pre- and post-assessment design could be implemented using a standardized test of English proficiency, such as the TOEFL test. Comparing the results from the pre- and post-assessments, in addition to those from the final assessment with the university's proficiency score entrance requirements, would shed light on learning gains in terms of proficiency bands per session as well as overall gains at the end of the program. Such results would give language program administrators a better idea of their programs' ability to adequately prepare their international students with the level of academic English necessary to enter the university.

Additionally, these results could speak to curriculum development for intensive English reading courses and other language pedagogy contexts. While significant development was seen across several skills and constructs of reading attitudes during the eight-week period, notable growth was not seen in a handful of other areas, such as reading comprehension and lexical inferencing abilities. Based on the present evidence, it could be argued that these skills appear to take longer to develop and thus may require more practice and more presence in the curriculum for an intensive ESL reading course.

Table 4. Average amount of improvement in each reading skill and reading attitude category for the group

<i>Vocabulary Breadth</i>	<i>Lexical Inferencing</i>	<i>Reading Speed</i>	<i>Reading Comprehension</i>	<i>Reading Challenge</i>	<i>Reading Curiosity</i>	<i>Reading Self-Efficacy</i>	<i>Reading Value</i>
13.9%	17.5%	37.8%	7.5%	11.4%	7.8%	12%	-1.9%

asked about the perceived value of learning to read in English by their English reading instructor.

Future work in this line of inquiry could include studies of English attainment in IEPs across all lan-

guage skills, rather than just reading. Such studies could further explore relationships among developing linguistic skills in immersive language learning environments. Additionally, replication studies with

a more heterogeneous participant group in terms of L1 would further this study's applicability to broader contexts.

Table 5. Correlations between growth in reading skills and reading attitudes, * $p < .05$

<i>Variables</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>
1 Total number of minutes read	-								
2 Change in vocabulary breadth	.143	-							
3 Change in lexical inferencing	.007	.319	-						
4 Change in willingness to take on challenging texts	.112	.168	.117	-					
5 Change in willingness to read out of curiosity	.157	.313	.180	.383	-				
6 Change in perceived self-efficacy	.133	.313	.113	.047	.147	-			
7 Change in perceived value of reading	.142	.09	.207	.146	.523*	.345	-		
8 Change in reading speed	.472*	.041	.155	.161	.484*	.021	.185	-	
9 Change in reading comprehension	.453*	.276	.087	.095	.097	.157	.155	.05	-

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APPENDIX A

*Sample Reading Passage with Comprehension Questions***Puerto Rican Cuisine**

Puerto Rican cooks are experts in preparing a wide range of unusual and wonderful dishes. This remarkable style of cooking comes from a combination of influences imported from several different civilizations. These include the Taino Indians who were native to the island, the Spanish who invaded Puerto Rico in the 1500s, and the Africans who first came to the island as slaves. All three have left their mark on the development of Puerto Rican cuisine. Here are two dishes often associated with this country that you might like to try. In fact, you might even want to make them for yourself.

Leche Costrada

This is a sweet treat that people usually eat right after a meal. You need the following things to make it: four cups milk, one-half cup sugar, one-half teaspoon salt, four eggs, and some vanilla to give it a nice taste. Start the cooking process by combining the milk, sugar, and salt. Then heat the mixture until it reaches the boiling point (100 °C). Allow this liquid to cool a little. Then mix the eggs together and combine them with the milk and sugar base. Make sure the eggs and milk mix together completely. Add the vanilla. Then put the mixture into a glass dish. Put it in the oven and bake it for approximately 30 minutes at 180 °C, until it is brown on top. Allow it to cool before serving.

Platanos

Platanos look a lot like very large bananas. Although initially they are hard and green, if you keep them for a few days, they will begin to turn yellow and become a little sweeter. Green or yellow, they are usually served as a side dish, and they add a lot to a meal. However, it's important to know that platanos must be cooked before eating. The usual way to prepare them is to boil them with the skin on for 15 to 20 minutes. When done, they should be slightly hard at the center. They are often served with olive oil along with the rest of the meal.

What is the passage mainly about?

- the history of Puerto Rican cuisine
- the importance of bananas in Puerto Rican cooking
- the Spanish influence on Puerto Rican cuisine
- two special Puerto Rican dishes

The writer of this story _____.

- is from Spain
- is a Taino Indian
- likes Puerto Rican food
- doesn't know how to cook

What is the main idea of paragraph 1?

- Several civilizations helped shape Puerto Rican cuisine.
- Puerto Rican cuisine is very special.
- The Spanish invasion changed the cuisine of Puerto Rico.
- More people should try making Puerto Rican dishes.

True / False

- It takes two eggs to make leche costrada.
Platanos are cooked for about 30 minutes.

APPENDIX B

Sample Items from the Lexical Inferencing Assessment

Lucy was taking her dog, Ben, to the park. First she had to find Ben's **wut**. Her dad suggested taking a football, but that was not quite right. Their football was far too big to play catch with, and it had lost its bounce. She searched all the rooms in the house, even the kitchen. She never found her dog's **wut**! Lucy decided that she had to be more organized in the future. (adapted from Cain et al., 2004)

What do you think the word **wut** might mean?

- (a) Food
- (b) Ball
- (c) House
- (d) Leash

Everyone says that 13-year-old Alan is a "born actor." When a theater department was opened at the performing arts school, it was clear that Alan would be the first to sign up for it. For the first role he played, Alan had to find a **shofter**. Alan asked friends and neighbors if any of them had a **shofter** and explained that he needed one because he was playing the role of an old man who has trouble keeping stable while walking. When he did not find what he was looking for, Alan went to the retirement home near his house and asked if they could help him out. The retirement home staff was happy to help him and promised to come see the play. (adapted from Prior et al., 2014)

What do you think the word **shofter** might mean?

- (a) Medicine
- (b) Chair
- (c) Cane
- (d) Glasses

APPENDIX C

*Sample Items from Form A of the Vocabulary Breadth Assessment***Vocabulary Post-Test: 2000 level**

1. original	
2. private	<input type="checkbox"/> complete
3. royal	<input type="checkbox"/> first
4. slow	<input type="checkbox"/> not public
5. sorry	
6. total	

1. apply	
2. elect	<input type="checkbox"/> choose by voting
3. jump	<input type="checkbox"/> become like water
4. manufacture	<input type="checkbox"/> make
5. melt	
6. threaten	

1. blame	
2. hide	<input type="checkbox"/> keep away from sight
3. hit	<input type="checkbox"/> have a bad effect on something
4. invite	<input type="checkbox"/> ask
5. pour	
6. spoil	

1. accident	
2. choice	<input type="checkbox"/> something you must pay
3. debt	<input type="checkbox"/> loud, deep sound
4. fortune	<input type="checkbox"/> having a high opinion of yourself
5. pride	
6. roar	

1. basket	
2. crop	<input type="checkbox"/> money paid regularly for doing a job
3. flesh	<input type="checkbox"/> heat
4. salary	<input type="checkbox"/> meat
5. temperature	
6. thread	

1. birth	
2. dust	<input type="checkbox"/> being born
3. operation	<input type="checkbox"/> game
4. row	<input type="checkbox"/> winning
5. sport	
6. victory	

Appendix D

Full Reading Attitudes Questionnaire (Form A)

Name:

How Do You Feel about Reading?

Challenge

If a book is interesting, I don't care how difficult it is to read.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

I like it when the teacher gives us a difficult book to read.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

I usually learn difficult things by reading.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

I like it when I have to work out the difficult words in books.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

I don't like having an easy book to read rather than a difficult one.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

Curiosity

I like reading so that I can learn more about things.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

If the teacher discusses something interesting, I might read more about it.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

I read about my hobbies to learn more about them.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

There are many topics that I am interested in reading about.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

I am interested in learning new things from books.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

Self-Efficacy

It is easy for me to understand the content of my English reading textbook.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

I probably won't have problems understanding much of what's in the textbooks for this class.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

I know that I will receive good grades in reading class because I understand what I read.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

I understand what I read in English well.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

I don't easily lose interest when English texts are difficult to understand.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

Value

Even though it can be difficult to understand the content of the textbooks, I think it is important to understand it.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

Good reading comprehension is useful for university studies in English.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

I really like to understand the texts that I read in English.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

Good comprehension of English texts is useful to get a good job.

Disagree a lot

Disagree a little

Agree a little

Agree a lot

It is particularly fun to read texts when I understand them well.

Disagree a lot

Disagree a little

Agree a little

Agree a lot