The authors report on an exploratory pilot project implemented in a large city on the U.S.-Mexico border. The project focuses on a curricular design in a secondary school where beginning-level English as a second language students are taught English language arts in Spanish. The researchers sought to determine whether these students made greater gains on the Standard English Language Proficiency (SELP) exam than those students taught the same class primarily in English. Four classrooms participated in the study; the intervention class and three different control classes. A one-way analysis of variance was conducted with SELP gain scores as the dependent variable and the schools as the between-subjects factor. Follow-up t-tests and a multiple regression analysis suggest that less Spanish used in the classroom accounts for higher SELP gain scores. The authors discuss the challenges that were faced in implementing the project and caution that the study has several limitations.

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The *Daily Herald*, an electronic information source for suburban Chicago, published a brief commentary titled “Path to English Can
Start with Writing Spanish” (Byers, 2006). The article told the story of Isabel Trinidad, who worked for 15 years at McDonald’s and who decided to begin a 10-week program in order to learn how to read and write in her native language and to develop English language skills. The director of the program emphasized the need for adults such as Isabel to develop literacy skills in the native language before embarking on English. She stated that “trying to learn English without a foundation in Spanish for native speakers is like trying to ride a bike without using training wheels first” (Byers, 2006, n.p.). This statement aptly describes the philosophy behind the sheltered instruction program described in this article, where recent immigrant students are taught content about English in Spanish, their native and stronger language.

This article describes a pilot research project that focused on a sheltered English program at a secondary high school in a large Texas city on the U.S.-Mexico border. The effectiveness of the design of this particular program, which used the students’ native language to teach them English language arts, was the focus of this study. We begin by providing an overview and some background information on the pilot project, including the schools, the program, and the student population. This is followed by a description of the research methodology, an analysis of the data, and a summary of the outcomes of the research. We conclude with a reflection on the project and directions for future research.

SHELTERED INSTRUCTION AT THE SECONDARY LEVEL
Sheltered instruction is an approach used to provide language support to English language learners (EL learners) who are learning academic content in English. The term sheltered refers to the refuge the approach provides to students with diverse linguistic backgrounds from English-only mainstream instruction. The primary aim of this type of instruction is to make the core

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1The terms ESL (English as a second language), EL (English language) learner, and ELL (English language learner) are often used interchangeably in the literature. We have opted to use EL learner throughout the study because it includes students for whom English is a third or additional language. However, we retained ESL whenever referring to the specific school population that was the subject of this study because ESL was the official term designated by the district for students whose native language was other than English.
curriculum accessible to students who do not have grade-appropriate English language skills by integrating the teaching of subject matter, English language development, and study skills. Features of sheltered instruction include language development objectives, adapted content, the use of supplementary materials, explicit connections to student background and experiences, a focus on key vocabulary, and clarification in the native language (Echevarria & Graves, 2007). EL learners face the challenge of increasingly difficult and abstract academic language as they progress through the grades; sheltered instruction helps them make that connection as they develop the grade-appropriate English language proficiencies that allow them to read and write texts for the purpose of learning academic content. The theoretical design of the pathway is that students exit the English as a second language (ESL) program and move into the sheltered English program and then to mainstream English-only instruction (see an example in Short, 1999). As Echevarria and Graves (2007) indicate, sheltered instruction “serves as a support until the student is ready for mainstream classes” (p. 8). As will be discussed later, the focus school in this study implemented an innovative pathway that allows students to progress through the curriculum and prepare for the state exit exam on a more timely basis.

The issue of appropriate literacy instruction for EL learners has been at the forefront of educational debates for the past several decades. At the core of this debate is whether the native language should be used and to what extent. Cortez and Villarreal (2009) comment on the use of Spanish among Latino nonimmigrant students and on the failure of schools to capitalize on this linguistic strength:

The persistence of the native language among secondary third-generation students reflects the resiliency and valuing of native language in many Latino communities. But it also reflects the long-standing failure of U.S. schools to educate and thus build upon that native language fluency in their ELL [English language learner] populations while at the same time developing their English language proficiency. (p. 8)

The research in the area of English literacy development for EL learners (including K–12) underscores the need to build on...
students’ language and cultural proficiencies and background knowledge in order to help them be successful as students (Diaz-Rico, 2004; Echevarria & Graves, 2007). However, as Cortez and Villarreal (2009) note, this has not been done well. Echevarria and Graves (2007) write that “respect for and utilization of a student’s native language and culture are integral to responsive teaching” (p. 87). They go on to provide examples of how this can be successfully implemented. For instance, they describe beginning writers using their native language for journal entries and a limited-Spanish-speaking science teacher using Spanish (with the help of the students) to enhance the learning of science jargon. Additionally, Huerta-Macias and Kephart (2009) discuss the use of the native language in adult ESL classes. However, whereas discussions on English literacy development for EL learners frequently focus on the importance of the native language in terms of support, building on student strengths, and validating their first language, there is little discussion (short of bilingual education) of how the native language might be more fully integrated into secondary programs for EL learners who do not have grade-appropriate proficiency in English. This study describes an innovative sheltered instruction program at the secondary level that was designed to use the students’ linguistic and cultural strengths to the maximum in the teaching of English language arts; this was done by teaching English language arts in Spanish.

**STUDY FOCUS**

This study focused on a large public high school in an urban setting on the U.S.-Mexico border. We became interested in the program for EL learners at this school upon learning that newcomer immigrant and beginning-level EL learners were taught through a program design that included the teaching of the first-year English curriculum using Spanish as the language of instruction. The first-year English curriculum focused on English literary elements, and the class was required for all students. The students were placed in this English class (taught in Spanish) according to their English language proficiency. However, students who tested at the beginner level in English were usually the newcomers, and the students who tested at the intermediate level in English were
mostly the students from the feeder middle schools. As a result, students were essentially grouped according to Spanish literacy levels, because the students from the middle schools generally had lower levels of Spanish literacy. The philosophy underlying the program design was that of making sure the newcomer and beginning-level EL learners were working on the content elements of the curriculum and preparing for the high school exit exam from their first semester at the school. The theoretical rationale for the program rested on notions of transfer of knowledge gained in the first language to the second language (Baker, 2006; Chin & Wigglesworth, 2007; Collier & Thomas, 2009)—essentially, the same rationale underlying the design of bilingual education programs in U.S. schools.

At the start of the project, we had five research questions centered around the notion of teaching English language arts in Spanish, on teacher perspectives regarding the teaching of English literary elements in Spanish, and on program design and predictor variables as based on the outcomes of standardized assessments. However, as the project progressed, several major challenges were encountered (see the Challenges to the Research section) and some questions were modified or eliminated. The study responded to the following research questions:

1. Do beginning-level ESL students who are taught the first-year English curriculum in Spanish, their native language, perform differently from a comparable group of ESL students who are taught the same content in English-only on a mandated language measure?
2. What are students’ perspectives regarding instruction in first-year English using Spanish as the language of instruction?
3. What are the perspectives and/or beliefs of the teacher in the experimental class regarding the teaching of the first-year English curriculum in Spanish to beginning-level ESL students?

**BACKGROUND AND METHODOLOGY**

Our research was designed around four classrooms: one experimental class (taught in Spanish), from Desert Mountain School, and three control classes, two from Ensenada School and one from Desert Mountain. Both schools are in the same school

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2 Pseudonyms are used for the schools for purposes of privacy.
district, and both had a majority Hispanic enrollment. The Hispanic, White, and limited-English-proficient (LEP)\(^3\) enrollment for each school is described in this section.

The statistics compiled by the school district for the year in which the research took place (2008–2009) provided the following enrollment figures. Desert Mountain reported an enrollment of 2,565. Its Hispanic population was 89.4% (2,293 students), and the White population was 8.9% (228 students). The LEP enrollment at Desert Mountain was 6.5% (167 students).

Ensenada School reported an enrollment of 2,749 students during that same year. The Hispanic population was 89.5% (2,459 students), and the White population was 5.7% (158 students). The total LEP enrollment for Ensenada was 7.2% (199 students).

Ensenada was selected for two control classes because of its similarity to Desert Mountain in terms of size and student population. Additionally, the program at Ensenada included two classrooms with ESL students who, like the students in the two classrooms at Desert Mountain, were following the English I curriculum. Whereas in the experimental class at Desert Mountain the content was taught entirely in Spanish, in the three control classes (one at Desert Mountain and two at Ensenada), instruction was primarily in English. Thus, the two schools seemed to offer a good match for the quasiexperimental pilot project.

Table 1 summarizes the research design. Note that the classes at Ensenada were controls for the curriculum taught, but the language of instruction was not clearly distinguished for those classes; thus the language of instruction for those two classes was not factored into the research design.

**RESEARCH TOOLS**

This section provides a brief description of each of the research tools used in the study.

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\(^3\) LEP is a term used by the federal government and school districts to refer to students lacking grade-appropriate English language skills. We prefer to use the term *EL learners* to refer to this same group because it does not imply a deficit, as does LEP.
TABLE 1. Research Design

<table>
<thead>
<tr>
<th>Class</th>
<th>Desert Mountain School</th>
<th>Ensenada School</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class A</td>
<td>English I (taught in Spanish), experimental class</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Class B</td>
<td>English I (taught in English, with some Spanish when necessary for clarification), content control class</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Class C</td>
<td>English I, proficiency control class</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Class D</td>
<td>English I (with some Spanish for clarification), control class</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td></td>
<td>36</td>
</tr>
</tbody>
</table>

Language History Questionnaire
We gave the students a language history questionnaire (see Appendix A). It was administered to every student in the four classrooms who had a consent form signed by a parent or guardian. Students filled out this questionnaire individually during class time. This instrument consisted of 20 questions, which included basic demographic information (such as gender, age, and native country) as well as self-rating scales for English and Spanish reading, writing, speaking, and comprehension skills. Proficiencies in each language and skill were assessed using a 10-point scale. Other questions asked about the contexts in which students communicate in either language and about the frequency of use. Students were free to select the English or Spanish version of the questionnaire. Only the questions and responses that were relevant to the research questions were reported in the study.

Stanford English Language Proficiency (SELP) Scores
The SELP test (Harcourt Assessment, 2003) is an instrument used in the school district to obtain a baseline assessment of students’ English language reading, writing, speaking, and listening skills. All newcomers and all students in the district who are classified as ESL students take this test, which is not timed. Except for the speaking part, the test is administered to students as a group. The
raw scores in each domain are converted into a scaled score at the high school level. The baseline assessment score was compared to the score at the end of the year in order to determine gains for the students in this study.

Student Interviews
Students in the experimental Class A were interviewed individually to obtain their perceptions regarding the teaching of English language arts in Spanish. They were asked five questions (see Appendix B), including a question that asked for a self-rating of their learning in English language arts as compared to that of their peers who were taking it in English in Class B.

Teacher Interviews
An interview protocol was designed for the teachers participating in the pilot study. The interview consisted of six questions (see Appendix C). The first question included a self-rating on a scale of 1 to 10 of the teachers’ English and Spanish language proficiency. The remaining five questions focused on the percentage of time that they each used English and Spanish in the classroom and the guidelines they followed in terms of language distribution. The research plan included an interview with all four teachers. However, the teacher in Class C (a control) was assigned to work with another class for an extended period of time, and we were unable to reach her for the interview portion of the study. Thus, only three teachers were interviewed. Five additional questions, 7–11, were included only for the interview with the teacher in the experimental Class A. This last group of questions focused on the teaching of English language arts in Spanish. The interviews were individually conducted with each teacher and were audiotaped and transcribed. Table 2 summarizes the resource tools used for the study.

DISCUSSION OF OUTCOMES
In this section, we first provide some descriptive statistics on the student population for each of the four classrooms in the study. Table 3 provides the mean ratings in each classroom for the age of acquisition of English and Spanish; the frequency of language use
All of the students in the experimental Class A were native Spanish speakers, as was true for the control classes as well. When asked when they had acquired Spanish, they gave an approximate age of acquisition related to the moment they believed they had started talking. Most students had begun to acquire English in their teenage years. As expected, they rated their Spanish proficiency much higher than their English proficiency, and they attested to a much higher use of Spanish than English in the English language arts class.

In Class B, our control group at Desert Mountain School, ages of acquisition and frequency of language use in general were comparable to those of Class A. However, students reported using slightly more Spanish than English in a class that was primarily taught in English. Their self-ratings in English and Spanish were still higher for Spanish, but closer than those of Class A because they rated their Spanish a little lower than Class A and their English a little higher than Class A.

In Class C, our first control group at Ensenada School, ages of acquisition and frequency of language use in general were comparable to that of Classes A and B. Again, students...
<table>
<thead>
<tr>
<th>Language History Background Information and Self-Assessed Proficiency Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Class A</strong></td>
</tr>
<tr>
<td>(experimental)</td>
</tr>
<tr>
<td>Language history background information</td>
</tr>
<tr>
<td>Age of acquisition</td>
</tr>
<tr>
<td>Frequency of language use</td>
</tr>
<tr>
<td>Percentage of language use in classroom</td>
</tr>
<tr>
<td>Language proficiency self-assessment</td>
</tr>
<tr>
<td>Reading</td>
</tr>
<tr>
<td>Writing</td>
</tr>
<tr>
<td>Speaking</td>
</tr>
<tr>
<td>Listening</td>
</tr>
<tr>
<td>Mean rating</td>
</tr>
</tbody>
</table>

**Note.** Frequency is based on 1–8 scale (1 = rarely using the language, 8 = using it every day); language proficiency self-assessments are on a scale of 1–10 (1 = not proficient, 10 = highly proficient).
reported using slightly more Spanish than English in a class that was primarily taught in English. Their self-ratings in English and Spanish were closer to those of Class A than to those of Class B.

In Class D, our second control group at Ensenada, ages of acquisition and frequency of language use in general were comparable to those of Classes A, B, and C. Again, students reported higher use of Spanish than English in a class that was primarily taught in English, and their levels of Spanish use were higher than for the other two control classes, although not as high as in Class A. Their self-ratings of proficiency in English and Spanish were closer to those of Classes A and C than to those of Class B.

A univariate analysis of variance was conducted with class type (A, B, C, or D) as the between-subjects factor and SELP gain score as the dependent variable. There was a main effect of class type, \( F(1,31) = 2.93, \text{MS} = 2822.8, p < .05 \), suggesting that there was a difference in SELP gain scores between the classes. Follow-up \( t \)-tests were conducted to investigate the nature of the main effect. Three independent sample \( t \)-tests compared the experimental class (A) to each of the control classes (B, C, and D). The \( t \)-tests revealed a significant difference between Classes A \( (M = 37.3, SD = 14.1) \) and B \( (M = 69.5, SD = 25.0) \), \( t(16) = -3.46, p < .05 \), suggesting that students receiving English language arts instruction in English had higher SELP gain scores than students receiving English language arts instruction in Spanish.

Class A also differed from Class D \( (M = 20.8, SD = 11.4), t(13) = 2.26, p < .05 \). In this case, however, students receiving English language arts instruction in Spanish had higher SELP gain scores than students receiving English language arts instruction in English. It is important to note here that the sample size for Class D was only half of the size of Class A, and therefore these results need to be interpreted with caution. It is also noteworthy that according to their self-report, students’ use of Spanish in the classroom in Class D was higher than in Classes B and C. There was no difference between Classes A and C \( (M = 49.2, SD = 45.9), p = .442 \).

Additional analyses were conducted to investigate factors that might have contributed to Class B’s better performance on the
These analyses suggest why, at least in the present study, teaching English language arts in the native language does not appear to have been beneficial to students. A multiple regression analysis was conducted to predict the SELP gain scores from Class B using English self-assessed proficiency measures, percentage of Spanish used in the classroom, and percentage of time the teacher used Spanish in the classroom as predictors.

Therefore, in the first model we entered self-assessed English ratings in reading, writing, speaking, and comprehension, which did not account for significant variance ($R^2 = 1\%$) in SELP gain scores, $F(1,28) = 0.106, p = .980$. By adding percentage of Spanish used in the classroom and percentage of time the teacher used Spanish in the classroom to the second model, the percentage of variance explained significantly increased, by 21\%, $F(1,26) = 1.26, p < .05$. An analysis of each individual predictor revealed that percentage of Spanish used in class was a significant predictor ($t(26) = -2.64, p < .05$) of SELP gain scores. This result suggests that less Spanish used in the classroom accounts for higher SELP gain scores. Contrary to our initial predictions, it seems that greater percentages of Spanish used in the classroom affects students’ performance in a negative way. Evidence for this comes from mean SELP gain scores: The second lowest mean was in the classroom where the most Spanish was used. Further evidence comes from the negative correlation found in the regression analysis, which shows that higher SELP gain scores were obtained in the classroom in which Spanish was used least frequently.

Given the data analysis, the responses to the research questions posed earlier follow.

Question 1 asked if there was a difference in outcomes on the mandated and standardized English language measure between the experimental group (taught in Spanish) and the control groups (taught in English). The response to this is yes. The data indicate that students receiving English language arts instruction in English had higher SELP gain scores than students receiving English language arts instruction in Spanish. Further investigation reveals that the amount of Spanish used in class by the teacher was a significant predictor of SELP gain scores: Less Spanish used in the classroom accounted for higher SELP gain scores.
Question 2 asked about student perspectives regarding instruction in English I using Spanish as the medium of instruction. Students generally perceived that the main benefit of taking English I in Spanish was that it made communication easier and more comfortable, so that they could focus on the content of the class without struggling with the language. One student simply said, “I understand better in Spanish.” They were generally satisfied with the class, yet several said that given the choice, they would take the class in English rather than in Spanish. This may have had to do with perceptions that being “forced” to learn in English might help them learn the language faster. A few students said that they thought their peers in Class B might be developing their English language skills faster due to the fact that they were taking English I in English rather than Spanish. However, in the interviews, most students expressed ambivalence about the language of instruction for English language arts. They seemed to lack sufficient perspective on the topic of the language of instruction to be able to state an opinion or take a stance.

Question 3 asked about teacher perspectives regarding the language of instruction in the English I class for beginning-level ESL students. The teacher in the experimental class felt strongly that teaching the students in Spanish had multiple benefits for the students in terms of their learning the content needed to pass the state high school exit exam and in terms of strengthening their native language skills and ultimately their English language skills. She clearly believed this was the best decision for the students. She also believed that given the students’ English proficiency, they would not have been able to pass English language arts or the Texas Assessment of Knowledge and Skills (TAKS) test had it been taught to them in English. In talking about the policy to teach English language arts in Spanish, one teacher indicated,

We teach the Spanish class and also reinforce the skills they need to pass the TAKS [high school exit exam]. . . . Their level in English is very very low [when they come in]. . . . We are helping them by the use of the Spanish language. . . . The requirements for the TAKS are demanding. . . . We bring them up to par . . . to prepare them for the TAKS and it’s all literature based . . . and they become even stronger in their own language.
In brief, the findings are that students taking English language arts in English had higher scores on the SELP than students taking the class in Spanish. Additionally, the students were generally ambivalent about the language of instruction in the English language arts class, whereas the teachers felt that the delivery of the class in Spanish better prepared the students for the high school exit exam.

**LIMITATIONS OF STUDY**

This pilot study had several limitations. First and foremost, we were unable to fulfill our original research plan, which included observation and audio-recording in each of the classrooms to collect samples of classroom talk in order to analyze the actual amount and purposes for which Spanish and English were being used. This was because we did not have informed consent from 100% of the students in the participating classrooms (see Challenge 4 in the next section). Therefore, we had to rely on the teacher and student reports on amount and purpose of language use in the classroom. Such reports may not be reliable, given that language use is fluid and changes, moment to moment, and many bilingual people are not fully conscious of which language they use, how often, and for what purposes.

A second limitation of the study is related to students’ self-ratings of their language proficiencies. As with all forms of self-ratings, these may not be reliable. Self-perceptions of proficiency may be inaccurate. Moreover, in this case, students were asked to rate their proficiencies on an abstract scale, with 1 as low proficiency and 10 as high proficiency. Without firm benchmarks of what constitutes high or low proficiency, it is not clear on what basis students made their self-ratings. Nevertheless, if we assume that as a group these students might apply similar criteria to make their self-ratings, the mean self-ratings provide an indication of how proficient in each language students in each class perceived themselves to be.

Our original research plan also involved collecting additional test data to provide further insights into, and/or corroborate, outcomes of the SELP scores. Although development of language proficiency is an important and desired outcome of schooling for
EL learners, another important measure is how well students learn the subject matter. Thus, we had planned to collect scores on TAKS, the state-mandated achievement test. However, because students in the control classes at Ensenada were not required to take this test, we were left with only language proficiency scores as an outcome that might be correlated with the language of instruction.

Finally, we had a small population for the quantitative measures reported earlier. We proceeded with the pilot project despite the small numbers of participants because we believed that the study could provide initial insights into issues of language of instruction in sheltered instruction programs. Nevertheless, due to the small size of the study, the findings should be interpreted as preliminary and suggestive, rather than definitive, especially with regard to the effects of language of instruction on language proficiency development (see Challenge 1.)

CHALLENGES TO THE RESEARCH
As mentioned earlier, we faced several challenges as the study progressed. The issues that surfaced dealt primarily with the difficulty of implementing a quasiexperimental study in the schools where instructional contexts are fluid and dynamic. The following includes some excerpts from our reflection notes, as relevant to the issues that surfaced during the implementation of the project.

1. Group size: We expected our experimental class to be much bigger. When we first began discussions on this project and made the initial visits to Desert Mountain, the newcomer class had approximately 25 students. Other schools, we were told, had classes of about the same size. By the time we received funding and were ready to initiate the project, the students in our experimental class had dwindled to 7. We discovered that student enrollment had also dwindled in the other schools, including Ensenada, where we were looking for a control group. Thus, we decided to do a pilot study, which allows for a smaller $N$.

2. Test comparison: Another challenge was deciding which tests we would use to obtain our dependent variable. We considered using either the TAKS or the SELP. We decided to use the SELP as a control measure for language proficiency only and the TAKS for our main dependent variable. However, we then found out that our control groups were not required to take the TAKS and that this was a school-based decision. Therefore, we were left with only the SELP scores, which we used as the dependent variable.
3. Scheduling of audiotaping visits: We had to find dates that were good for all four groups, and the recordings had to be done around the same time for each classroom. Because of the scheduling of state-mandated assessments, we had to coordinate with the district school schedule to check which dates were not possible. This was not an easy task; we discovered that there are multiple testing dates at each school, A and B schedules at each school, and other days that are blocked off at individual schools because of other school-based activities. We finally managed to arrange one visit a month for each of the classrooms, starting in October.

4. Obtaining consent forms: We personally spoke to the students in each class, explaining what the project was about, that there would be no risks involved, and that it was solely for research into finding better ways to teach students such as themselves. We distributed the consent forms in English and Spanish to the students and asked the teachers to get back to us as soon as these were returned. This turned out to be the biggest delay in the study. By December, when we went on our break, we did not have any of the consent forms back. The forms were returned to us early in the spring semester; however, some parents did not authorize their children’s participation in the study. Therefore, we were not able to audiotape classroom interactions at all given that it is our institution’s policy to obtain consent for any study-related procedures pertaining to children. Even though audiotaping would have provided important insights into actual amounts and purposes for use of each language, we were only able to administer the questionnaires and the interviews with the teachers and with those students who had returned signed consent forms.

5. Other problems at Ensenada: One of the teachers went on maternity leave. Moreover, the teacher was reassigned to another group of students, and we thus had to find out who was now the teacher of record for that control group of students.

In brief, although challenges to a research plan are generally expected, the types of challenges that we faced were unforeseen and unpredictable. The issue of the small student numbers seemed to stem from current immigration policies, which are hostile to these students and their families. Newcomer immigrant students are no longer registering at the schools in large numbers. The lack of signatures for the consent forms also seemed to stem from this; the parents may not have wanted to take any risks that might endanger their status. The reassignment of teachers was another factor that was unpredictable.

CONCLUSIONS
The outcomes of the pilot study were surprising, given the emphasis in the research literature (Baker, 2006; Collier & Thomas,
2009) on the use of the native language and on bilingual education to help students acquire English language skills and content area knowledge. The underlying principle in the research literature on instruction for EL learners is that students will make greater gains in achievement over the long term when they are initially taught in their native language and allowed to gradually transfer to all English instruction. This is the fundamental principle that underlies bilingual education programs. Note, however, that this study was not longitudinal and that data collected over several years might have resulted in different outcomes. Although the majority of studies in this area focus on young students (K–6), one would nonetheless expect that the underlying principles would apply to older students as well. To our knowledge, however, there is a gap in the research literature on the impact of instruction on English language skills when instruction is provided entirely in Spanish in a class in which content focuses on language arts in English; that is, instruction in a given language is more often provided using the same language under study as the vehicle of instruction, or a combination of the native language and the language under study, resulting in a bilingual class.

On the other hand, the outcomes were not surprising given the limitations of the study and the challenges we faced as we tried to implement the project as originally conceptualized. To reiterate, students receiving English language arts instruction in English had higher SELP gain scores than students receiving English language arts instruction in Spanish. With larger numbers of students in each class, with control groups for content and language use in the classroom, and with additional data (such as classroom observations, audio-recordings, and student scores on the high school exit standardized exam), the results might have been different. Nevertheless, we felt that this pilot project was useful in providing some initial insights into an innovative program design for secondary EL learners. One might say the program provides an immersion experience in the native language for the teaching of English language arts—certainly a new concept.

However, the outcomes of this pilot project must be interpreted cautiously, given the limitations of the study outlined earlier. A long-term study with a greater number of students, additional
quantitative and qualitative data (such as another dependent variable for measuring achievement and more background information on each student) might very well have led to different results. Another aspect the project highlights is the complexity of implementing quasi-experimental research in the schools. Additionally, we wish to emphasize that this study is, in no way, counterevidence against bilingual instruction. In sum, the pilot project was fruitful in confirming the need for longitudinal data with research studies of this type, in providing insights on the complexity of conducting quasi-experimental research in classroom settings, and in providing implications for future research.

FUTURE RESEARCH
Suggestions for future research include in-depth exploration into alternate program designs for secondary EL learners in homogeneous language groups. The idea is to determine how students’ native language may be used in different configurations to accelerate learning of content and English language skills for EL learners. Future research might focus on diverse configurations of content area teaching in the native language and the relationships between this instruction and student achievement and English language and literacy development. The broader issue in this research would be that of enhancing existing research on the relationship between bilingualism and cognition (Chin & Wigglesworth, 2007; Diaz, 1985; Paradis, 2000) and on issues of biliteracy and cross-linguistic relationships among second language learners (August & Shanahan, 2006; Koda & Zehler, 2008).

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REFERENCES


**APPENDIX A**

**LANGUAGE EXPERIENCE QUESTIONNAIRE**

Participant # ____________ Date ___________

This questionnaire is designed to give us a better understanding of your experience with languages. We ask that you be as accurate and thorough as possible when answering the following questions.

1. Gender
   - □ Female
   - □ Male

2. Age: ______ years

3. Do you have any known visual or hearing problems (corrected or uncorrected)?
   - □ No
   - □ Yes [Please explain.]

4. Native Country
   - □ United States
   - □ Other ___________________

5. What language(s) do you consider your native language(s)?

6. Did you learn two or more languages at the same time?
   - □ Yes
   - □ No
   (If “yes” go to question 8; if “no” go to question 7.)

7. What language did you learn first?

8. What language is your dominant language now? (In which one do you think you are more proficient? In which do you feel more at ease?)

9. What language(s) are spoken at home? (Please check all that apply.)
   - □ English
   - □ Spanish
   - □ Other ___________________
10. At what age did you start learning English? _____

11. In what context(s) did you learn English? (Check all that apply.)
   □ Home/family  □ Work
   □ School  □ Media (TV/radio/Internet/newspaper)
   □ Friends

12. In what contexts do you currently use English? (Check all that apply.)
   □ Home/family  □ Work
   □ School  □ Media (TV/radio/Internet/newspaper)
   □ Friends

13. Estimate how often you communicate in English:
   □ Daily  □ Monthly
   □ Several days a week  □ Once or twice a year
   □ Weekly  □ More than once or twice a year
   □ Biweekly

14. Please rate:
   a. English reading proficiency (1 = not literate, 10 = very literate)
      1 2 3 4 5 6 7 8 9 10
   b. English writing proficiency (1 = not literate, 10 = very literate)
      1 2 3 4 5 6 7 8 9 10
   c. English speaking ability (1 = not fluent, 10 = very fluent)
      1 2 3 4 5 6 7 8 9 10
   d. English speech comprehension ability (1 = unable to understand
      conversation, 10 = perfectly able to understand)
      1 2 3 4 5 6 7 8 9 10

15. At what age did you start learning Spanish? _____

16. In what context(s) did you learn Spanish? (Check all that apply.)
   □ Home/family  □ Work
   □ School  □ Media (TV/radio/Internet/newspaper)
   □ Friends

17. In what context(s) do you currently use Spanish? (Check all that apply.)
   □ Home/family  □ Work
   □ School  □ Media (TV/radio/Internet/newspaper)
   □ Friends

18. Estimate how often you communicate in Spanish:
   □ Daily  □ Monthly
   □ Several days a week  □ Once or twice a year
   □ Weekly  □ More than once or twice a year
   □ Biweekly

18. Please rate:
   a. Spanish reading proficiency (1 = not literate, 10 = very literate)
      1 2 3 4 5 6 7 8 9 10
   b. Spanish writing proficiency (1 = not literate, 10 = very literate)
      1 2 3 4 5 6 7 8 9 10
c. Spanish speaking ability (1 = not fluent, 10 = very fluent)
   1 2 3 4 5 6 7 8 9 10

d. Spanish speech comprehension ability (1 = unable to understand conversation, 10 = perfectly able to understand)
   1 2 3 4 5 6 7 8 9 10

20. Have you ever lived in/visited a Spanish-speaking country?
   □ Yes
   □ No
   If yes, which one? ________________________________
   For how many months?

21. For how long have you lived in El Paso?

22. Had you lived in any other English-speaking area before? If so, where and for how long?

23. Have you ever taken any English language courses?
   □ Yes
   □ No
   If yes, for how long?

24. Have you ever taken any Spanish language courses?
   □ Yes
   □ No
   If yes, for how long?

25. Prior to entering high school, where did you complete your middle school education?
   □ U.S.
   □ Mexico
   □ Other____________________________________

26. If you studied in a country other than the U.S., please list where and for how many years.

27. What is highest education level your parents completed (e.g., middle school, high school, college)?
   Mother _____________________________
   Father ______________________________

APPENDIX B

PILOT PROJECT: STUDENT INTERVIEW PROTOCOL FOR EXPERIMENTAL CLASS

1. What are some of the positive aspects of taking English language arts in Spanish?
2. What are some of the negative aspects?
3. Do you like/dislike taking English language arts in Spanish? Please explain.
4. What would be your preference if you had the option of taking the class in English? Please explain.

5. How would you rate, on a scale of 1 to 10, your learning of English language arts as compared to other students/friends who are taking the class in English? Please explain.

APPENDIX C

PILOT PROJECT: INSTRUCTOR INTERVIEW PROTOCOL

Questions 1–6 were administered to teachers in all four classrooms.

1. On a scale of 1 to 10 (with 10 indicating highest levels), how do you rate your English language proficiency? Your Spanish language proficiency?

2. Are you conscious of when you use Spanish versus English in the classroom?

3. What percentage of time do you use Spanish?

4. What percentage of time do you use English?

5. What guidelines, if any, are you following for use of either English or Spanish?

6. If you are not following any guidelines, how do you make the decision to use either English or Spanish at any given time during the lesson? (That is, what are some indicators that signal a need for English? For Spanish?)

Questions 7–11 were administered only to teachers in Classroom A (the experimental group).

7. What comments have you received from students regarding use of Spanish for English language arts classes?

8. On a scale of 1 to 10 (with 10 being most prepared), how prepared do you feel to teach English language arts in Spanish? Explain.

9. What are some of the positives/negatives of teaching English language arts in Spanish? How have you dealt with the challenges?

10. How would you rate, on a scale of 1 to 10, your students’ learning of English language arts as compared to mainstream students’ learning (those taking the class in English)? Please explain.

11. In which specific areas do you think your students have shown more improvement?