A difficulty facing public schools along the US Mexican border is the placement of children with limited English proficiency (LEP) into special education programs. Sometimes it is difficult determining whether poor academic performance is caused by a disability or by lack of comprehension due to language. The Individuals with Disabilities Education Act (IDEA) states that a child is not eligible for special education services if the cause of the poor academic performance is due solely to limited language proficiency. Also, IDEA mandates that a child be assessed in his or her native language. However, this problem is compounded when a child’s native language is a mixture of local English and Spanish.

The purpose of this article is to examine the issues involved when children with limited English proficiency are referred for special education placement. Are the results of standardized tests affected when a child’s native language is a mixture of English and Spanish? Should students be tested in both English and Spanish? What are the implications of testing a child in both languages?

Hispanic Assessment

The Hispanic population has become the largest minority group in the United States. With this increase, it becomes imperative that assessment procedures identifying Hispanic students as having disabilities be reexamined. The Individual with Disabilities Education Act (IDEA) requires that assessments must be given in a child's native language as part of the nondiscriminatory evaluation guaranteed under federal law. IDEA further mandates that evaluation material used to assess a child with limited English proficiency must assess whether a child has a disability, not measure the child's English skills. Several studies have examined the validity of assessing Hispanic students with standardized tests.

Standardized tests do not consider the characteristics of the language spoken by bilingual students (Ascher, 1990). The relative proficiencies of both languages are ignored (Wilkinson & Holtzman, 1990). Often, the features of the native language are integrated into English and become a unique language of its own. The evolution of this language is a microcosm of the development of the Romance Languages and is a significant consideration when assessing individuals who are bilingual.

Standardized tests also do not consider the cultural background of bilingual students. Often, the culture of minority children is different from the dominant culture, and the culture influences how students take tests (Geisinger & Carlson, 1992). Culture must be taken into consideration whenever a child is being assessed for special education placement. Many Hispanic cultures display simpatia. Simpatia is behavior that generates pleasant social relationships and minimizes conflict with others (Marin & Marin, 1991). As a result of simpatia, a student being assessed may nod in agreement with the tester without understanding the given directions.

This study focuses on the differences between students identified as learning disabled and as having limited English proficiency, and students identified as learning disabled without having limited English proficiency. All students were assessed using the Comprehensive Test of Nonverbal Intelligence (C-TONI), a nonverbal test of intelligence; the Woodcock-Johnson Achievement Test (WJ-A) and its Spanish version, the Bateria Woodcock-Muñoz -Revisada. Language proficiency was determined by home surveys and the Bilingual Verbal Ability Tests (BVAT).
This research explores the following research questions:
1. Does a statistically significant difference exist between the IQ scores of non-LEP and LEP students identified as learning disabled?
2. Does a statistically significant difference exist between the WJ-A subtests of non-LEP and LEP students identified as learning disabled?
3. Does a statistically significant difference exist between the WJ-A subtests of non-LEP students identified as learning disabled and the Batéria subtests of LEP students identified as learning disabled?
4. Does a statistically significant difference exist between LEP students' scores on the WJ-A and the Batéria subtests?
5. Does a statistically significant difference exist between LEP students' English and Spanish standard scores on the BVAT?
6. How is the discrepancy analysis required for determining learning disabilities affected by the different scores obtained from the WJ-A and the Batéria?

Method

Participants
Laredo is a community nearing 200,000 citizens on the Texas-Mexican border. Because of its geographic location, it had little influence from any major metropolitan center (either in the United States or Mexico), and over the last 250 years has developed its own culture and language. The native language of Laredo is a mixture of English and Spanish, called Tex-Mex, but with characteristics unique to Laredo. For example, in most Hispanic cultures, a mariachi is a band with guitars, strings, and trumpets. However, only in Laredo, a mariachi is also a taco.

During the 1998-1999 school year, the two Laredo school districts had a combined total of 23,425 (50%) students having limited English proficiency and 5,470 (11.7%) students receiving special education services. The subjects were 50 students identified as learning disabled in grades one through four from three elementary schools. The district had classified 25 students as limited English proficient using the results of a home language survey and the Bilingual Verbal Ability Test (BVAT).

Instruments
All students were assessed using one or more of the following instruments: (a) the Comprehensive Test of Nonverbal Intelligence (C-TONI), the Batéria Woodcock-Muñoz-Revisada, the Woodcock-Johnson Psycho-Educational Battery-Revised (WJ-R), and the Bilingual Verbal Ability Tests (BVAT).

Procedures
School records of Hispanic children with and without limited English proficiency and learning disabilities were examined. Twenty-five students with limited English proficiency and receiving special education services had been tested using the C-TONI, Batéria Woodcock-Muñoz, WJ-R, and the BVAT. Twenty-five students without limited English proficiency and receiving special education services had been tested using the C-TONI and the WJ-R.

Data Analysis
Educational diagnosticians scored tests using test publishers' instructions. Based on the results of the BVAT, 25 students were considered limited English proficient. Standard scores were used for the C-TONI, Batéria, WJ-R, and the BVAT.

The C-TONI was used to determine the IQ scores of the students. It was assumed that since the subjects were from the same population, a difference would not exist between the IQ scores of both groups especially since the C-TONI is a non-verbal test of intelligence.

Because the Batéria is the Spanish version of the Woodcock-Johnson Test of Achievement, it was also assumed that little difference would exist between the WJ-A scores of subjects identified as learning disabled without limited English proficiency and the Batéria scores of subjects identified as learning disabled with limited English proficiency.

English and Spanish standard scores for children with limited English proficiency were obtained from the BVAT. These students obtained a higher standard score on the Spanish language proficiency component of the BVAT than on the English component. Examination of raw scores confirmed language proficiency differences. The mean Spanish language proficiency score was higher than the mean English language proficiency score. These standard scores were compared using the Pearson product moment correlation using the minimum value of t for significance at the .05 level.

Differences in scores achieved by English and Spanish dominant students on the C-TONI, the WJ-A, and the Batéria subtests were compared using a series of t-tests. English dominant subjects obtained higher scores on all tests. The standard scores of English and Spanish language proficiencies were compared with the standard scores of the WJ-A and Batéria subtests using the Pearson product moment correlation. The minimum value of t for significance at the .05 level was obtained. A t-test was employed to determine whether a significant difference exists between the means of the WJ-A and Batéria subtests. Finally, the standard scores of the C-TONI, WJ-A, and the Batéria were used to compute the discrepancy analysis required for determining learning disabilities. These scores were examined to determine whether the discrepancy analysis was affected.

Results

IQ Scores
The IQ scores were obtained from the C-TONI. The C-TONI is a non-verbal test of intelligence and is used widely whenever language proficiency is a concern. It was assumed that since both groups were from the same population, little difference would occur in IQ scores. However, a statistically significant difference ($t = -5.78$, df = 48, $p < .05$) did occur between the two groups. Subjects identified as learning disabled without limited English proficiency had a mean of 98.40; however, subjects identified as learning disabled with limited English proficiency had a mean of 85.60.

WJ-A and Batéria Scores
When examining the WJ-A subtest scores for both subjects with and without limited English proficiency, a statistically significant difference did occur with all three subtests. The subjects without limited English proficiency had a mean of 79.60 in the broad reading subtest while the subjects with limited English proficiency had a mean of 62.12. This was statistically significant ($t = 4.14$, df = 48, $p < .05$). Subjects without limited English proficiency had a mean of 90.92 in the broad math subtest while the subjects with limited English proficiency had a mean of 79.60. This was also statistically significant ($t = 2.71$, df = 48, $p < .05$). The subjects without limited English proficiency also scored higher in the broad writing subtest with a mean of 84.84 while the subjects with limited English proficiency had a mean of 60.64. A statistically significant difference was also calculated in the
broad writing subtest ($t = 6.70, df = 48, p < .05$). When the subjects without limited English proficiency WJ-A scores were compared with the subjects with limited English proficiency Batéria subtest scores, a statistically significant difference was observed in all comparative subtests. The subjects with limited English proficiency had a higher mean for the WJ-A subtest than the Batéria subtests.

**BVAT Scores**

The students with limited English proficiency English and Spanish standard scores obtained from the BVAT were compared. All students obtained a higher standard score on the Spanish language proficiency component of the BVAT than on the English component. The mean score of the English component was 62.16 while the mean score of the Spanish component was 72.56. Using the Pearson $r$, a correlation coefficient of .87 was obtained indicating a high positive relationship between the English and Spanish proficiency variables. Using the minimum value of $r$ at the .05 level, the results of this analysis were significant. Thus, the null hypothesis, that no significant difference exists between the English and Spanish proficiency scores, is rejected. This would seem to indicate that because the students scored higher on the Spanish component of the BVAT and that a difference does exist between the Spanish and English scores, the students should perform better on the Batéria, the Spanish version of the WJ-A.

**Correlations Among Language Proficiencies, IQ, and Achievement.**

The relationship between the English language proficiency standard score and the Spanish scores, and the standard scores on the C-TONI, Batéria Woodcock-Batéria, WJ-R were examined using a Pearson $r$. Of the 18 correlations computed, only three were statistically significant at the .05 level. The English scores were associated with higher scores on the WJ-A Broad Math, WJ-A Math Reasoning, and the Batéria Math Reasoning. These scores had a correlation coefficient between .47 and .53 indicating a moderate positive relationship. None of the Spanish scores were significant.

A $t$-test was employed to determine if a statistically significant difference existed between the WJ-A subtests and the Batéria subtests. The results indicate that a statistically significant difference at the .05 level occurred for the Broad Reading, Broad Writing, Broad Math, and Math Reasoning subtests. When comparing the mean scores between the subtests of the WJ-A and the Batéria, the participants scored higher on all WJ-A subtests. These scores had a correlation coefficient between .47 and .53 indicating a moderate positive relationship.

**Differences in LD eligibility**

For children to be considered eligible for special education services for a learning disability, a significant discrepancy must exist between intellectual functioning and achievement. In the state of Texas, a significant discrepancy is defined as one standard deviation or more, or more than 15 points discrepancy between assessed intelligence and achievement. The standard scores from the C-TONI and the various achievement subtests were utilized to determine if a discrepancy exists. In each case, more students with limited English proficiency qualified as learning disabled using the Batéria subtests than the WJ-A subtests. Only one subject without limited English proficiency would not have qualified based on assessment results.

**Discussion**

The most unsettling result of this research was the statistical significant difference between the C-TONI standard scores of subjects with and without limited English proficiency. It was assumed that since the sampling came from the same population, a difference in IQ would not exist. If this sample is indeed similar, then either the C-TONI was administered incorrectly, or the C-TONI is somehow culturally bias to this particular population.

A statistical significant difference was also found between the English and Spanish scores of the BVAT of subjects with limited English proficiency. The students had higher scores on the Spanish subtest of the BVAT and were considered limited English proficient. Because the students had a higher score on the Spanish subtest of the BVAT, it was assumed that they would also perform better on the Batéria, the Spanish version of the WJ-A. However, this was not true in example after example. The students performed better on the WJ-A Broad Reading, Broad Math, Math Reasoning, and Broad Writing subtests. The difference between the WJ-A and the Batéria subtest was statistically significant. When correlating the CTONI, BVAT, WJ-A, and the Batéria, the Spanish scores were only associated with higher scores on the WJ-A and Batéria Math Reasoning subtests. This is not surprising because the math subtests are not dependent on whether the child is limited English proficient. However, the English scores were only associated with higher scores on the WJ-A Broad Math, WJ-A Math Reasoning, and the Batéria Math Reasoning. It is interesting that no statistical significance existed for either the WJ-A or the Batéria Broad Reading and Broad Writing. However, the students did have higher scores on the WJ-A Broad Reading and the Broad Writing than on the Batéria version of the same subtests.

**The Individuals with Disabilities Education Act (IDEA)** states that a child should be evaluated in the child’s native language. However, school personnel need to be cautious in assuming that because a child has limited English proficiency that his native language is Spanish, and thus should be tested in Spanish. In border communities, many children are exposed to both English and Spanish and these children sometimes have limited proficiency in both languages. From the assessments conducted, students were more likely to qualify as learning disabled when the Batéria achievement scores were used to calculate discrepancies than when the WJ-A achievement scores were used. This makes it more imperative that a child who is identified as limited English proficiency be evaluated using both English and Spanish assessments. Nearly 40% of the participants in this study would not have qualified as learning disabled if the WJ-A and the Batéria were used to calculate discrepancies. As the number of students with limited English proficiency are inappropriately placed in special education programs, the amount of federal special education funding increases.

A southwest Texas school district has a student population of 25,627. Twelve percent of the students have been identified as needing special education services. Conversely, 45% of the students have been identified as limited English proficient. Yet, only 3% of the total instructional expenditure is for bilingual/ESL education, while 7% of the instructional expenditure is for special education. This proportion of instructional expenditure between bilingual education and special education is similar throughout the border region of Texas. If the number of students with limited English proficiency who
are inappropriately placed in special education can be reduced, then the instructional expenditure and federal funding for special education can be reduced. The total instructional expenditure for school districts in counties along the Texas-Mexican border for the year 2000 was $1,497,249,073. Instructional expenditure for special education programs in this region was $138,196,089. One possible solution to the inappropriate placement of students in special education is to develop achievement and aptitude assessments normed for Texas-Mexico border populations.

The limitations in this study necessitate further research. This study focused on elementary Hispanic children from a border community. The results of this study may not be generalized to other age and language groups or even to Hispanic children living in other parts of the country. Because only a few students were assessed using the C-TONI, BVAT, WJ-A, and the Batéria, the number of participants was small.

Finally, more reliable methods for determining learning disabilities in children who have a limited language proficiency are needed. According to IDEA, a child is not eligible for special education services if the determining factor is due to limited English proficiency. School personnel in border communities must provide assessments that take into account students with dual languages when determining eligibility for special education services.

References

