Representational Patterns of English Language Learners Receiving Special Education Services in South Texas

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Abstract
This study examined the representational patterns of English language learners (ELLs) receiving special education services in school districts in South Texas and school district characteristics that were related to the probability that an English language learner might be placed in special education programs. Results indicated that 77% of the school districts in the South Texas area showed overrepresentation of ELLs in special education classes. Data indicated that ELLs in South Texas and the three Education Service Centers (ESC) that comprise South Texas were anywhere from two times to two and one-half times more likely to be identified as needing special education services than their non-English language learner peers. The districts with overrepresentation concerns were overwhelmingly located in ESC Region I, where 92% of the districts demonstrated overrepresentation. Finally, results indicated that relative risk ratios indicating overrepresentation of ELLs were inversely correlated with low percentages of poor/underserved students, Latino students, ELLs, Latino teachers, and students in bilingual/English as a second language programs.

As children in America’s classrooms increasingly come from culturally and linguistically diverse families, teachers are faced with the challenge of educating a more diverse population than ever before (Gollnick & Chinn, 2006). Related to the increased diversity of the school population is the concern of the disproportionate number of students of color receiving special education services (Warger & Burnette, 2000). The phenomenon of disproportionate representation has been documented and studied for more than 35 years (Hosp & Reschly, 2003). Reports and studies (Donovan & Cross, 2002; Losen & Orfield, 2002; U.S. Department of Education, 2001; Zhang & Katsiyannis, 2002) continue to document the overrepresentation of African American and Native American children in programs for students with mild disabilities and the underrepresentation of Asian American and Latino students in these special education programs.

The knowledge base concerning the representational patterns of English language learners (ELLs) receiving special education services is scarce (Artiles, Trent, & Palmer, 2004; Klingner & Artiles, 2003). Results from the scant research that does exist document contradictory conclusions. In one study, Zehler et al. (2003) reported an underrepresentation of ELLs receiving special education services, while other researchers have found that ELLs are overrepresented in special
education programs (Artiles, Rueda, Salazar, & Higareda, 2002). Additionally, there is preliminary evidence that overrepresentation of English learners in speech/language impairment category may exist in some states (Artiles, Harry, Reschly, & Chinn, 2002), and that ELLs who lack proficiency in both their native language and English may be heavily overrepresented in special education programs (Artiles, Rueda, Salazar, & Higareda, 2005).

A national, in-depth descriptive study concerning ELLs with disabilities was conducted under the auspices of U.S. Department of Education’s Office of English Language Acquisition, Language Enhancement, and Academic Achievement of Limited English Proficient Students. Zehler et al. (2003) studied 3,424 schools in 1,315 school districts across the nation. With regards to ELLs, the study documented a 72% increase from 1992 through 2002 in the number of ELLs in public schools. Seventy-seven percent of ELLs spoke Spanish. The investigators found evidence of underrepresentation of ELLs in special education programs. In particular, the researchers documented smaller proportions of ELLs than students in the general school population in special education programs. In 2002, 13.5% of students from the general population were receiving special education services, while only 9.2% of ELLs were. Additionally, smaller proportions of ELLs than students from the general population were reported for each of the mild disability categories. For example, in 2002, 6.6% of students from the general population were identified as having a learning disability, while only 5.2% of ELLs were. Likewise, 1% of students from the general population were identified as having an emotional disturbance, while only .23% of ELLs were. Similarly, 1.2% of the students from the general population were in special education programs for students with mental retardation, while only .72% of ELLs were. Finally, 2.7% of the general education students were identified as having a speech/language impairment, while 2.1% of the ELLs were.

Within states, there also appears to also be great variations in placement rates. For example, in Texas, Robertson and Kushner (1994) found that ELLs were up to five times as likely to be in special education programs in one district as in another. In Illinois, ELLs with disabilities are underrepresented and underserved at the state level, but Brusca-Vega (2002) acknowledged that variations might exist at the district level. Two state-level studies, one from California (Artiles, Rueda et al., 2002, 2005) and the other from Texas (Johnson, Lessem, Bergquist, Carmichael, & Whitten, 2002), merit in-depth analyses and discussion in this literature review because of their comprehensiveness and importance to the understanding of the representation patterns of ELLs in special education programs.

Artiles, Rueda, Salazar, and Higareda (2002) asserted, “the intersections of ELLs and special education are little understood” (p. 118). These researchers noted that when Latinos and other groups are studied at the national level, Latinos are not overrepresented (e.g., the way that African Americans are); however, “when the issue of language is added in, the results change and a serious civil rights issue emerges” (p. 118). With the hopes of adding to this critical knowledge base, Artiles and his colleagues studied 11 urban districts, “heavily populated by English learners, particularly of Latino descent” (Artiles et al., 2002, p. 121) in the state of California during the 1998-1999 school year, where 42% of the student population was classified as ELLs. Using the “aggregate of districts as the unit of analysis” (Artiles et al., p. 123), the researchers described the placement patterns of ELLs identified as having mental retardation or a speech/language impairment.

Important results indicated patterns of English language learner representation in special education with regards to grade level, disability category, language support and special education program. Artiles and his colleagues found that ELLs were overrepresented in special education programs in secondary grades, but not in elementary grades, nor at the district level. Specifically,
when data were disaggregated by grade level, ELLs were not overrepresented in grades K-4, but the problem emerged at grade five and remained though grade twelve. “English language learners are 27 percent more likely to be placed [in special education programs] in elementary grades and almost twice as likely to be placed in secondary grades” (Artiles, Rueda, Salazar, & Higareda, 2002, p. 127).

When data were examined by disability category, the English learner population was overrepresented at the district level, in both the categories of mental retardation and speech/language impairment. Overrepresentation was not a concern at the elementary level, but ELLs were noticeably overrepresented at the secondary level in the mental retardation and speech/language impairment categories. The investigators noted “for the MR [mental retardation] category, the situation in secondary classes is dramatic, as English learners are more than three times as likely to be placed in this program” (Artiles, Rueda, Salazar, & Higareda, 2002, p. 127).

With regards to language support and special education placement, the researchers found that the probability of being placed in the more restrictive special day class was higher for English learners in straight English immersion programs when compared with English learners in modified English immersion programs and bilingual education programs. The researchers noted “elementary English learners in the straight English immersion program are more than twice as likely to receive RSP [resource specialist program] services than are English learners placed in the modified English immersion model, and almost three times more likely than English learners placed in bilingual programs” (pp. 128-129). Finally, the most glaring evidence of the disproportionality concern among ELLs’ participation rates in special education was that during the five years between 1993-1994 and 1998-1999, there was an increase of 12% in the ELL subgroup of Latinos, but an increase of 345% of Latino ELL students in special education (Rueda, Artiles, Salazar, & Higareda, 2002).

In a follow-up study of the same districts for the same year, Artiles, Rueda, Salazar, and Higareda (2005) calculated the risk indices (in addition to the composition indices and odds ratios previously reported) and provided information concerning English language learner representation in the category of learning disabilities. In addition to reporting the previous findings, the researchers found that ELLs were overrepresented in special education programs for learning disabilities at the secondary level. There was overrepresentation of low-socioeconomic status (SES) English language learners in learning disability programs at all grade levels, as well as the speech/language impairment disability category at the secondary level. Finally, at the conclusion of their research, Artiles and his colleagues again underlined the importance of studying English language learner representation in special education programs using disaggregated data because reliance on national or state data may obscure important local trends.

In Texas, the Public Policy Research Institute at Texas A&M University convened a team of investigators to examine the representation of minority students in special education (Johnson, Lessem, Bergquist, Carmichael, & Whitten, 2002). Two components of this study merit discussion here: an examination of national and state statistics from the IDEA database by Johnson, Lessem, and Bergquist (2002) and an analysis of Public Education Information Management System (PEIMS) data to further examine the extent and possible variables underlying the disproportionate representation of minorities in special education across Texas by Carmichael and Whitten, (2002).

Johnson, Lessem, and Bergquist (2002) analyzed data provided by the U.S. Department of Education via the IDEA database for the 1999-2000 to answer the questions: “What were the participation rates of minority children [students of color] in special education reported by Texas?” and “How does Texas compare with the rest of the nation?” (p. 4). Johnson and his colleagues
disaggregated data according to five race/ethnicity categories: American Indian/Alaskan Native, Asian/Pacific Islander, African American, Hispanic, and White. The authors noted that in Texas, as in most of the nation, overrepresentation of African American in special education, especially in programs for mental retardation, was a serious concern. Regarding Latinos identified as having disabilities, the researchers found a slight underrepresentation of Latinos identified as having speech/language impairment, but more underrepresentation of Latino students identified as having an emotional disturbance. Indeed, Texas had the fourth largest disparity in the nation. However, the authors concluded the discussion of their study by stating: “Texas was not marked by extreme anomalies [when their representational patterns were compared to that of other states],” and noted, “it was particularly important to review school district level information on these same issues” (Johnson, Lessem, & Bergquist, 2002, p. 22).

Carmichael and Whitten (2002) used Public Education Information Management System (PEIMS) data available for each student in the State of Texas to further examine representational patterns of students of color. The researchers investigated whether individual or district-level characteristics influenced the probability that students of color would be identified as having a disability. Individual student characteristics included ethnicity, gender, “at-risk” designation, income status, English proficiency, and immigrant/migrant status. District-level variables included “characteristics of the student body (size, ethnicity, TAAS passing rates, and attendance rate), characteristics of the teaching staff (ethnic composition, qualifications, and experience, and district characteristics (wealth, instructional expenditures, and geographic location)” (p. 8).

Regarding characteristics that impacted representation of students of color in special education programs at the individual level, Carmichael and Whitten (2002) found a slight underrepresentation of Latinos in special education programs, a difference score of almost -4%. However, there was more pronounced evidence of underrepresentation of Latinos in the special education categories of speech/language impairment (difference score of -6.1%) and emotional disturbance (difference score of -13.1%).

Concerning the participation rates of ELLs, the authors found that these students were underrepresented in special education programs (difference score of -4.7%). Additionally, the authors found that ELL designation was the least likely of all the individual risk factors studied to be associated with placement in special education programs. That is, ELLs were significantly less likely to have received special education services than students with no risk factors. ELLs were designated as either bilingual or ESL according to the type of instruction they received to address their second language acquisition concerns.

Bilingual status was found to influence placement in special education programs. The proportion of Latino bilingual students enrolled in special education (9.8%) was only half that of the overall student population (18.4%). Interestingly, this finding held true for ELLs in bilingual programs but not for ELLs in English as a Second Language programs, where their representational patterns were found to be the same as their European American peers. Carmichael and Whitten (2002) noted: “where students are identified as having language barriers, participation in special education drops dramatically” (p. 11). Since 93% of ELLs are Latinos, this finding is consistent with patterns of underrepresentation of Latinos in special education. The researchers surmised that language differences might still be the key to the underrepresentation problem (Carmichael & Whitten, 2002).

Regarding district characteristics that impacted representation of students of color in special education programs, Carmichael and Whitten (2002) found that teacher ethnicity was the only district characteristic significantly related to the placement of students of color in special education.
For example, in a district with no teachers of color, the likelihood that a student would receive special education services is “15.8% for an African American student, 13.4% for a White student, and 11.1% for a Hispanic student” (p. 24). Carmichael and Whitten stated “as the proportion of minority teachers increases, the number of students expected to be placed declines to less than 9% for both minority ethnicities but remains the same for White students” (p. 24). However, although the probability of placement in special education classes for Latino students increases where there are fewer minority teachers, Latinos are still dramatically underrepresented. Finally, other district variables, including size of district, enrollment of students of color, teacher qualifications, teacher experience, student-teacher ratio, district wealth, instructional expenditures per student, and district location in the state were unrelated to the likelihood that students of color would be placed in special education programs.

The results of the research conducted in Texas are surprising against the backdrop of recent measures taken by the State of Texas to make districts accountable for disproportionate representation of students of color in programs for students with disabilities (i.e., the implementation of the Special Education Data Analysis System and, as recently as the school year 2004-2005, the Performance-Based Monitoring Analysis System). Given the high percentage of Latino students and ELLs in certain districts in the State of Texas, especially in South Texas, the need for a study to better understand the representation of ELLs in special education programs is apparent and warranted. Therefore, this purpose of this study was to (a) examine the representational patterns of ELLs receiving special education services in South Texas and (b) identify possible relationships between the representational patterns of ELLs receiving special education services and the characteristics of school districts in South Texas.

Method

Population

The population for this study consisted of school districts located in three Education Service Center (ESC) Regions (N=130). These are ESC Region I (N=38), ESC Region II (N=42), and ESC Region XX (N=50). This area is defined as South Texas for the purpose of this investigation. The characteristics of the population for this study are summarized in Table 1.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>State of Texas</th>
<th>Region I</th>
<th>Region II</th>
<th>Region XX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrollment</td>
<td>4,311,502</td>
<td>340,361</td>
<td>106,865</td>
<td>349,126</td>
</tr>
<tr>
<td>Latino Students</td>
<td>43.8</td>
<td>96.3</td>
<td>68.1</td>
<td>65.5</td>
</tr>
<tr>
<td>ELLs</td>
<td>15.3</td>
<td>39.3</td>
<td>6.4</td>
<td>10.2</td>
</tr>
<tr>
<td>Poor</td>
<td>52.8</td>
<td>84.6</td>
<td>59.0</td>
<td>61.0</td>
</tr>
<tr>
<td>Latino Teachers</td>
<td>18.8</td>
<td>81.2</td>
<td>42.2</td>
<td>34.2</td>
</tr>
<tr>
<td>Bil/ESL</td>
<td>14.1</td>
<td>37.2</td>
<td>5.6</td>
<td>8.9</td>
</tr>
</tbody>
</table>

Note. All numbers, except those for enrollment, are in percentages. ELLs means enrollment of English language learners. Poor means enrollment of poor/underserved students. Bil/ESL means enrollment of students in bilingual or English as a second language programs. Source: Texas Education Agency (2004b).
During the 2003-2004 school year, as noted in Table 1, the percentage of Latino students enrolled in each of the regions in the study was approximately 1.5 times or more above the state average of 43.8%. Additionally, the three regions in the study had higher averages than the state for poor/underserved students and Latino teachers. Finally, the total student enrollment for the regions in the study was 796,352 students, which accounted for 18.5% of the total enrollment for the State of Texas (Texas Education Agency, 2004b).

Twenty of the districts had to be eliminated from the originally defined population because data for students identified as ELLs and/or special education students were not available due to the masking of reports in order to comply with the Family Educational Rights and Privacy Act. Data were masked if the number of special education students or ELLs was less than five, or if the number of ELLs identified as special education students was less than three (B. Pena, personal communication, March 30, 2004). The final number of districts comprising the sample of the study was 110. This constituted 94.7% of the districts from ESC Region I (N=36), 78.6% of the districts from ESC Region II (N=33), and 82% of the districts from ESC Region XX (N= 41).

Data Sources

The two data sources used for this research study were The Performance-Based Monitoring Analysis System 2004-2005 (Texas Education Agency, 2005) and the Academic Excellence Indicator System (Texas Education Agency, 2004a). The Performance-Based Monitoring Analysis System 2004-2005 provided data for each of the school districts concerning total student enrollment, number of Latinos, number of ELLs, number of special education students, and number of ELLs who had been identified as having a disability. Data in this report corresponded to the 2003-2004 school year. These data were used to calculate composition indices, risk indices, and relative risk ratios for the population.

The Academic Excellence Indicator System (Texas Education Agency, 2004a) was used to provide additional data concerning the district characteristics of percentage of Latino teachers, percentage of poor/underserved students and percentage of students enrolled in bilingual/English as a second language programs. Data in this report corresponded to the 2003-2004 school year. The data were used in the correlational part of the study.

Data Analysis

In order to determine the representational patterns of ELLs receiving special education services in South Texas, composition indices, risk indices, and relative risk ratios were reported for each of the districts in the study. First, composition indices indicated the percent of students with disabilities that were ELLs in each of the districts in the study. Then risk indices indicated the percent of ELLs that were identified as having a disability in each of the districts in the study. Finally, relative risk ratios indicated the extent to which being an English language learner affected the probability of being identified as a student having a disability in each of the school districts in the study.

In order to determine possible relationships between the representational patterns of ELLs receiving special education services and the characteristics of school districts in South Texas, Pearson product-moment correlation coefficients for each of the districts in the study were calculated in order to describe the direction and strength of the relationship among relative risk ratios and school district variables.
Results

For each of the districts in the study, composition indices, risk indices, and relative risk ratios were calculated to report the representational patterns of ELLs receiving special education services in South Texas. Composition indices and risk indices depicted the same representational patterns, which was be expected given that composition and risk indices report a similar phenomenon; that is, the participation of ELLs in special education programs. Composition indices and risk indices for school districts in ESC Region I indicated that 33 (91.7%) of the 36 school districts had an overrepresentation of ELLs in special education programs. Additionally, two school districts (5.5%) showed composition indices that indicated an underrepresentation of ELLs receiving special education services, while only one (2.8%) district demonstrated the number of ELLs in special education programs that was proportional to ELLs’ enrollment in the district. In ESC Region II, 26 (78.8%) of the 33 districts demonstrated overrepresentation of ELLs in special education programs, while five (15.2%) of the districts reported underrepresentation, and two (6%) districts demonstrated proportional representation. In ESC Region XX, 26 (63.4%) of the 41 districts had an overrepresentation of ELLs in special education programs, while six (14.6%) of the districts depicted underrepresentation, and nine (22%) districts revealed proportional representation.

Coutinho and Oswald (1998) used relative risk ratios to calculate the degree of disproportionate representation defined as “the extent to which membership in a given ethnic group affects the probability of being placed in a specific special educational disability category” (p. 67). The relative risk ratios reported in this study describe the extent to which being an English language learner affected the probability of being identified as a student having a disability. Relative risk ratios greater than 1.00 indicate that ELLs are at a greater risk of being identified for special education services than their peers who are not ELLs. Furthermore, relative risk ratios of less than 1.00 indicate that ELLs are less likely to be identified for special education services than their peers who are not ELLs (Donovan & Cross, 2002). Table 2 summarizes the descriptive statistics of the relative risk ratios in the three regions included in this study, as well as the aggregate category of South Texas. As noted, the mean relative risk ratios for each of the ESC Regions, as well as the region of South Texas, are 2.00 or greater. These data indicate that ELLs in South Texas and the three ESC Regions that comprise South Texas were anywhere from two times to two and one-half times more likely to be identified as needing special education services than their non-English language learner peers.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Descriptive Statistics of Relative Risk Ratios in South Texas and ESC Regions I, II, and XX</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ESC Region</td>
</tr>
<tr>
<td>I</td>
<td>36</td>
</tr>
<tr>
<td>II</td>
<td>33</td>
</tr>
<tr>
<td>XX</td>
<td>41</td>
</tr>
<tr>
<td>South Texas</td>
<td>110</td>
</tr>
</tbody>
</table>

Note. Mean (M) and standard deviation (SD) have been rounded to the nearest hundredth.
Overall, the representational patterns of ELLs receiving special education services in school districts in South Texas indicated overrepresentation. Eighty-five (77.3%) of the 110 school districts in the South Texas area demonstrated overrepresentation of ELLs in special education classes, either by Parrish’s (2002) definition of an odds ratio equal to or greater than 2.0 (47.3%), or by Chinn and Hughes’ (1987) 10% rule (30%). The districts with overrepresentation concerns were overwhelmingly located in ESC Region I, where 33 (91.7%) of the 36 districts met both of the criteria.

**Relative Risk Ratios and School District Characteristics**

Table 3 shows the relationship between relative risk ratios and the characteristics of the school districts in South Texas (N=110) and ESC Region I (N=36), Region II (N=33), and Region XX (N=42).

As noted in Table 3, for the school districts in South Texas, Pearson product-moment correlation coefficients were statistically significant for relative risk ratios and the school district characteristics of percentage of ELLs, percentage of Latino teachers, and percentage of students enrolled in bilingual/English as a second language programs. Furthermore, the coefficients indicated a positive relationship, meaning that districts in the study with higher relative risk ratios (indicating overrepresentation) had greater numbers of ELLs enrolled in the districts, greater percentages of Latino teachers, and larger numbers of students in the districts enrolled in bilingual/English as a second language programs. Positive relationships were also found in Region II between relative risk ratios and the school district characteristics of percentage of Latino students enrolled in the district and percentage of Latino teachers employed by the district.

Since an overwhelming number of districts in South Texas (85 out of 110, or 77.3%) demonstrated overrepresentation of ELLs receiving special education services, additional analyses were undertaken to determine if there were any relationships between relative risk ratios and school districts’ characteristics when relative risk ratios were rank ordered and divided into subcategories.
After rank ordering the relative risk ratios for South Texas and ESC Regions I, II, and XX, four subcategories were created: districts with relative risk ratios equal to or greater than 1.12 (N=85), districts with odd ratios equal to or greater than 2.00 (N=52), districts with relative risk ratios equal to or greater than 2.50 (N=34), and districts with relative risk ratios equal to or greater than 3.00 (N=20). Pearson product-moment correlation coefficients were again calculated to determine if there were relationships between relative risk ratios and school district characteristics. Table 4 shows the relationship between relative risk ratios and characteristics of school districts in the study when the relative risk ratios were equal to or greater than 2.50.

As noted in Table 4, statistically significant inverse relationships began to appear as relative risk ratios became larger. For example, inverse relationships between percentage of Latino students and relative risk ratios greater than 2.50 were documented in South Texas, Regions I and XXI. Additionally, the percentage of ELLs, the percentage of poor/underserved students, the percentage of Latino teachers employed by the district, and percentage of students served in bilingual/English as a second language programs were inversely related to relative risk ratios greater than 2.50 in ESC Region I.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>South Texas</th>
<th>Region I</th>
<th>Region II</th>
<th>Region XX</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=34</td>
<td>N=15</td>
<td>N=13</td>
<td>N=6</td>
</tr>
<tr>
<td>Enrollment</td>
<td>-.161</td>
<td>-.303</td>
<td>-.509</td>
<td>-.362</td>
</tr>
<tr>
<td>ELLs</td>
<td>-.142</td>
<td>-.576*</td>
<td>.408</td>
<td>-.349</td>
</tr>
<tr>
<td>Latino students</td>
<td>-.364*</td>
<td>-.784**</td>
<td>.191</td>
<td>-.912*</td>
</tr>
<tr>
<td>Poor</td>
<td>-.290</td>
<td>-.666**</td>
<td>-.041</td>
<td>-.705</td>
</tr>
<tr>
<td>Latino teachers</td>
<td>-.306</td>
<td>-.696**</td>
<td>.296</td>
<td>-.734</td>
</tr>
<tr>
<td>Bil/ESL</td>
<td>-.130</td>
<td>-.515*</td>
<td>.442</td>
<td>-.325</td>
</tr>
</tbody>
</table>

*Significant at the .05 level (2 tailed).
**Significant at the .01 level (2 tailed).

### Discussion

Although trends of underrepresentation of ELLs receiving special education services have been reported at the national level (Zehler et al., 2003) and state level (Carmichael & Whitten, 2002; Henderson, Abbot, & Strang, 1993), the present study documented the contradictory finding of considerable overrepresentation of ELLs in special education programs in districts in South Texas. The fact that the regional patterns of disproportionality found in this investigation are contrary to national and state patterns punctuates the importance of the observation made by researchers to disaggregate data in order to fully understand the representational patterns of students of color.
in special education programs (Artiles, Rueda, Salazar, & Higareda, 2002; Donovan & Cross, 2002; Harry, 1994; Losen & Orfield, 2002; Zhang & Katsiyannis, 2002). The present study has demonstrated that data aggregated and reported at the national and state levels should not be extrapolated to ascertain representational patterns in smaller entities within the State of Texas, such as ESC regions and individual districts, as this information may not accurately depict the representational patterns of ELLs receiving special education services.

The patterns of overrepresentation among ELLs receiving special education services discovered in this study are supported by the results of studies conducted by Artiles and his colleagues (Artiles, Rueda, Salazar, & Higareda, 2002; Artiles, Rueda, Salazar, & Higareda, 2005), who studied the representational patterns of ELLs in the State of California. This comparability may be attributed to the similarities between the present study conducted in Texas and the Artiles study conducted in California. Firstly, the districts in both studies were “heavily populated by English [language] learners, particularly of Latino descent” (Artiles et al., 2002, p. 121). Additionally, the unit of analysis, an aggregate of districts, was utilized in both studies. In the California study, Artiles and his investigators’ unit of analysis were 11 urban school districts throughout the state. Likewise, in the present study, the unit of analysis was an aggregate of districts as defined by an ESC Region.

**Implications for Practice**

The findings from this study have implications for school districts. First, school district personnel need to understand that studies of representational patterns of ELLs at the national and state level may not be representative of the representational patterns of ELLs in their districts and on their individual campuses. Therefore, school district administrators need to become aware of the representational patterns at the state level and document and monitor the participation rates of ELLs receiving special education services in their districts. These monitoring efforts could be instrumental in helping reduce or prevent disproportionate representation of ELLs in special education programs (Coutinho & Oswald, 2004; U.S. Office of Special Education Programs, 2003). Additionally, district administrators should disaggregate data at the district and campus levels concerning the participation rates of ELLs in special education programs according to grade level, disability category, special education placement, and bilingual/English as a second language designation, in order to better understand the types of services ELLs with disabilities are being afforded and to determine whether or not these services are appropriate. Finally, after schools have accurate data regarding the representational patterns of ELLs receiving special education services in their districts and on individual campuses, they should “then study the referral, assessment, and placement decision making process to guide reforms or changes in practice” (Coutinho & Oswald, 2000, p. 146).

**Limitations of the Study**

There were limitations to the present study. First, due to the masking of data for confidentiality purposes, the sum total of the districts identified in the original population for this study had to be reduced by 15%. With the exception of one district, the districts that were deleted from the original population identified for the study had enrollments of less than 1000 students. Excluding some of the smaller districts may have affected the results reported herein.

Although this study presented data in a more disaggregated form than previous studies at the national and state level, the unit of analysis was the aggregate of districts at the ESC region level and the subsequent aggregation of three regions at the South Texas level. Likewise, representational
patterns and the school district characteristics that were related to the patterns were reported for the aggregate category of all disabilities, and not disaggregated according to disabilities category; for example, learning disabilities. Important trends at the district level may have been overlooked by this aggregation of data.

Finally, due to the scarcity of research concerning the representational patterns of ELLs in special education programs and the school districts’ characteristics related to their placement, it was difficult to identify parallels between the findings of this study and previously conducted studies cited in the literature. Most of the previously conducted studies involved African Americans and/or Latinos. The possible exception to this dilemma was the California study by Artiles and his colleagues (Artiles, Rueda, Salazar, & Higareda, 2002, 2005).

**Suggestions for Further Research**

Considering the need to more accurately understand the representational patterns of ELLs in special education programs, several recommendations seem warranted for future research. Most important, this study necessitates replication, especially in the other 17 ESC Regions in the State of Texas not included in the study. For example, ESC Region XVIII (Midland) and ESC Region XIX (El Paso) could be studied as West Texas. Likewise, a study of Central Texas would consist of ESC Region IX (Wichita Falls), ESC Region XI (Fort Worth), ESC Region XII (Waco), ESC Region XIII (Austin), ESC Region XIV (Abilene), and ESC Region XV (San Angelo). Studying the Texas Panhandle would require including ESC Regions XVI (Amarillo) and XVII (Lubbock). The study of East Texas could be comprised of ESC Region VII (Kilgore), ESC Region VIII (Mount Pleasant), and ESC Region X (Richardson). ESC Region III (Victoria), ESC Region IV (Houston), ESC Region V (Beaumont), and ESC Region VI (Huntsville) could comprise a study of the Texas Coastal Region. Finally, this study should be replicated in any district or combinations of districts in the nation where there is evidence to suggest that national and/or state data on disproportionality do not reflect trends in a given geographical area.

Once overall representational patterns for ELLs in the aggregate category of all disabilities have been discerned, data need to be disaggregated according to disability category. This in-depth analysis of data is especially critical in the high incidence disability categories because of the ongoing concern of other groups of students of color being disproportionately represented in special education programs. It is safe to assume that ELLs may also be at risk. Moreover, there are data in Texas (Johnson, Lessem, Bergquist, Carmichael, & Whitten, 2002) to suggest that Latinos are decidedly underrepresented in the low incidence categories of autism and other health impairments. Finally, data concerning representational patterns need to be disaggregated and reported according to grade level, special education placement, and type of bilingual program, as was done by Artiles and his colleagues in their California study (Artiles, Rueda, Salazar, & Higareda, 2002, 2005).

The relationships between representational patterns of ELLs receiving special education services and school district characteristics such as total student enrollment, percentage of poor/underserved students, percentage of Latino students, percentage of ELLs, percentage of Latino teachers, and percentage of students in bilingual/English as a second language programs are still not clear. Further research is needed to determine if these or other characteristics associated with school districts (e.g., teacher-student ratio, per pupil expenditure, and dropout rates) are related to representational patterns and how they are related.
References


