PLACEMENT AND ACHIEVEMENT OF URBAN HISPANIC MIDDLE SCHOOLERS WITH SPECIFIC LEARNING DISABILITIES

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ABSTRACT

This study examined achievement gains in reading and math for Hispanic middle school students with specific learning disabilities in inclusive versus segregated settings in a large urban school district. The authors report learning gains for students with and without disabilities in inclusive versus segregated settings. Results indicate no significant difference in reading or math achievement in inclusive co-taught classrooms versus segregated settings. Implications for best placement and educational practices in urban middle schools are examined.

Introduction

Culturally and linguistically diverse students in the United States continue to encounter educational deficits at a high rate due to unequally structured learning opportunities (Losen & Skiba, 2011; Townsend, 2002). According to the National Assessment of Educational Progress (NAEP; U.S. Department of Education, 2011a; 2011b), students with disabilities, along with students from culturally and linguistically diverse and/or low-income backgrounds, continue to score well below their White counterparts in all areas tested and across all grade levels. Long-standing performance gaps for students with disabilities, combined with growing demands for social equity, have suggested a need for reconsideration of special education practices (Artiles, 2003; Lipsky, 2005). Schools must assess how educational services are being delivered as well as student placement decisions in order to understand achievement trends for students with disabilities. Since the inception of the inclusion movement, research has suggested that access to the general education curriculum through inclusive programs has several potential educational and social benefits for students with disabilities as well as for their peers without disabilities (e.g., Rea, McLaughlin, & Walther-Thomas, 2002; Saint-Laurent et al., 1998).

Culturally and linguistically diverse students with disabilities are often excluded from the general education classroom (Reid & Knight, 2006). Even with the push for more inclusive practices from the national and state level (Individuals with Disabilities Education Improvement Act of 2004 (IDEIA), 2004; No Child Left Behind Act of 2001 (NCLB), 2002), the presence of diverse students with disabilities included in the general education setting does not guarantee educational equity (Townsend, 2002). Access to the general education curriculum coupled with the competence of educators to teach diverse learners are both key factors in the success of students with disabilities.

IDEIA (2004) mandates both a free and appropriate public education for students with disabilities situated in the least restrictive environment and with access to the general curriculum. The general curriculum is defined as the same curriculum and standards-based instruction that nondisabled peers receive. The purpose of this mandate is to ensure that students with disabilities have access to a demanding curriculum, are held to high expectations, and are not excluded from accountability measures stemming from school reform (Wehmeyer, Lattin, Lapp-Rincker, &

Agran, 2003). This requires that students' Individual Education Plans (IEPs) address the accommodations and modifications that will be used to guarantee involvement *and* progress (defined by content and student performance standards) in the general education curriculum. However, IEPs, which document the specialized services students with disabilities receive, often lack a relationship to the general curriculum or are rarely used as guidelines for standard instruction (Karger, 2004).

The quality of instruction is further called into question when we factor in students with disabilities who also come from culturally and linguistically diverse backgrounds. The overwhelming majority of these students attend high poverty, low-quality schools where there is little or no consideration for race, ethnicity, culture, language, or disability (Blanchett, Klingner, & Harry, 2009). Despite the reform efforts cited in the Elementary and Secondary Education Act, the quality of education in urban schools is generally inferior to that of schools in suburban neighborhoods (Taines, 2012).

Conceptual Framework

Historically, marginalization and exclusion of minority students have been justified by an overlap in the rhetoric of race and disability. It is vital to understand the impact of culture on academic achievement and student placement within school programs, especially when recent trends reveal that students with disabilities are increasingly educated in general education classrooms, while the number receiving instruction in resource rooms or separate classes has decreased substantially (Fore, Hagan-Burke, Burke, Boon, & Smith, 2008). Klingner et al.'s (2005) conceptual framework designed for addressing disproportionate representation of culturally and linguistically diverse students in special education calls for the creation of culturally responsive educational systems that utilize evidence-based interventions that cut across the three interrelated domains of policies, practices, and people.

The "people" of specific learning disability (SLD) programs have shifted from primarily White students to students of color, and students with SLD in urban settings are more likely to be serviced in more restrictive environments than their suburban peers. This suggests that the amount of time a student with a disability spends in the general education setting is highly correlated to the student's race (Ferri & Connor, 2005). Culturally and linguistically diverse students with disabilities are further overrepresented in more restrictive educational environments (Skiba, Poloni-Staudinger, Gallini, Simmons & Feggins-Azziz, 2006). In other words, even within special education, students with disabilities who are also culturally and linguistically diverse are more likely to be served in separate settings.

According to the National Center for Educational Statistics (NCES, 2013), nationally 65.1% of students with SLD spend 80% or more of their school day in the general education classroom. However, simply following inclusion policies and placing students with disabilities in general education classrooms is not enough. Karger and Hitchcock (2003) explain that successful inclusion requires participation and progress in the same meaningful curriculum and content standards that students without disabilities receive. Despite the increase in inclusion rates, there is limited research, particularly at the secondary level, to suggest whether these inclusive placements lead to effective practice or increased academic achievement, particularly for students who are also culturally and linguistically diverse. Of the many issues related to the integration or inclusion of students with disabilities into the general education classrooms, there is none more important than the effects of placement on students' learning (Fore et al., 2008).

The purpose of this study was to determine if placement (inclusive versus non-inclusive classrooms) affect achievement change for urban low socio-economic Hispanic middle school students with and without SLD in reading and math. Middle school settings were chosen because inclusive education is a challenge at the middle school levels (Kozik, Cooney, Vinciguerra, Gradel, & Black, 2009). Implications related to class placement and instructional access will be discussed.

Methods

This study compared performance levels of four middle school student subgroups: (a) students with SLD in inclusive, co-taught settings, (b) students without disabilities in inclusive, co-taught settings, (c) students with SLD in segregated resource room settings, and (d) students without disabilities in segregated general education settings. Each group had been in their respective placements for two consecutive years to determine if placement (inclusive versus non-inclusive classrooms) affects achievement change for urban low socio-economic Hispanic middle school students with and without SLD in reading and math.

Context

This study took place in Miami-Dade County Public Schools, the fourth largest system in the nation, serving a total of 353,152 students: 8% White, Non-Hispanic; 67% Hispanic; 24% Black, Non-Hispanic; and 1% of "other" ethnicity. Spanish is the most commonly spoken home language and 73% of all students receive free/reduced price lunch. The total number of students with a disability in the district is 76,062.

The Florida Comprehensive Assessment Test (FCAT) was used as the indicator for measuring achievement. Scores on the FCAT are reported in terms of scaled scores (range 100-500) and achievement levels. Because it is difficult to determine student growth year-to-year using standard or scale scores, developmental scores are also provided, ranging from 0 to 3000, allowing the tracking of an individual student's achievement progress and growth over time (FDOE, 2004). As student achievement improves (as measured by FCAT scores), the developmental scores rise. If a student regresses from one year to the next, the developmental score decreases. For this study, the change in developmental scale scores were used to measure the mean learning change in both math and reading.

Participants

Two Title I urban middle schools, each 94% Hispanic in overall school population, were examined. Both had been recognized as Schools in Need of Improvement by the state because students with disabilities and English language learners (ELLs) had not made adequate yearly progress on their standardized tests. The participants in this study consisted of 80 seventh and eighth grade students per school for a total of 160 students, each in their respective placements for the two consecutive years of examined data. All students were selected based on similar socio-economic status, ethnicity, disability status, school attendance, and language dominance. Within each school, the population studied consisted of 20 students without disabilities who were enrolled in unique (segregated) general education reading and math classes; 20 students without disabilities who were enrolled in co-taught inclusion reading and math classes; 20 students with

disabilities who were enrolled in co-taught inclusion reading and math classes; and 20 students with disabilities who were enrolled in reading and math unique (segregated) resource classes. (See Tables 1 and 2 for demographics of the schools engaged in this study.)

Table 1
Middle School One Student Demographics

Grade	Caucasian		African Am.		Hispanic		Asian/Indian		Total
	Number	%	Number	%	Number	%	Number	%	Number
6	25	6	1	0	386	93	2	0	414
7	18	5	2	1	360	94	1	0	381
8	17	4	0	0	393	95	0	0	413
Total	60	5	3	1	1139	94	6	0	1208

Table 2
Middle School Two Student Demographics

Grade	Caucasian		African Am.		Hispanic		Asian/Indian		Total
	Number	%	Number	%	Number	%	Number	%	Number
6	9	3	10	3	302	93	5	2	412
7	6	2	8	3	275	94	3	1	292
8	7	2	8	2	308	95	5	2	403
Total	22	2	26	3	885	94	13	1	1107

Research Design and Analysis

Two (reading and math) Three-Way Mixed Analysis of Variance (ANOVAs) were used to compare the amount of between group variance on the students' mean change scores on the FCAT in the areas of reading and mathematics for each group of students (students with or without disabilities), for each grade, and by grade level interactions. Mean scores for the initial and post-test were analyzed using F-tests. The achievement changes were determined for the four middle school student subgroups and relationships were examined by engaging statistical controls for gender, ELL status, and socio-economic status, while controlling for ethnicity. The t-test for two independent samples was used to determine the statistical difference of the mean reading and math scores on the FCAT for students with SLD and their peers without disabilities. An alpha level of 0.05 was used on all tests. The Scheffe post-hoc analysis was applied with an alpha level 0.05 when significance in the ANOVA was found.

Results

Data collected revealed that there was significant difference in placement, grade level, and disability in student achievement in predicting the mean performance level changes in math. Data also revealed that performance varied as a result of disability in mean performance level changes in reading. Segregated versus inclusive settings did not account for statistically significant differences in achievement for students, meaning that the presence or absence of inclusion had no impact on their achievement in either reading or math. Significant differences were found between students with and without disabilities in reading achievement. Statistical differences were also found between grade levels in math.

Figures 1 and 2 depict the findings in terms of mean difference scores per grade level (7th or 8th grade), setting (inclusive or non-inclusive) and disability (student with or without disability). The mean score for students with disabilities in a non-inclusive setting in math was 21.80 with a standard deviation of 273.92 and a mean of 96.48 with a standard deviation of 242.64 for students with disabilities in a co-taught inclusion setting. The mean score for students without disabilities in a non-inclusive setting in math was 66.60 with a standard deviation of 187.68. For students without disabilities in a co-taught inclusive setting in math, the mean was 96.48 with a standard deviation of 242.64. In reading, the mean for students with disabilities in a non-inclusive setting was 159.42 with a standard deviation of 230.40. Students with disabilities in a co-taught inclusive setting had a mean of 168.38 and a standard deviation of 341.20. The mean for students without disabilities in a non-inclusive setting in reading was 37.40 with a standard deviation of 217.190 and a mean of 43.72 with a standard deviation of 208.50 for students in an inclusive setting.

Mean Math Difference Developmental Scores

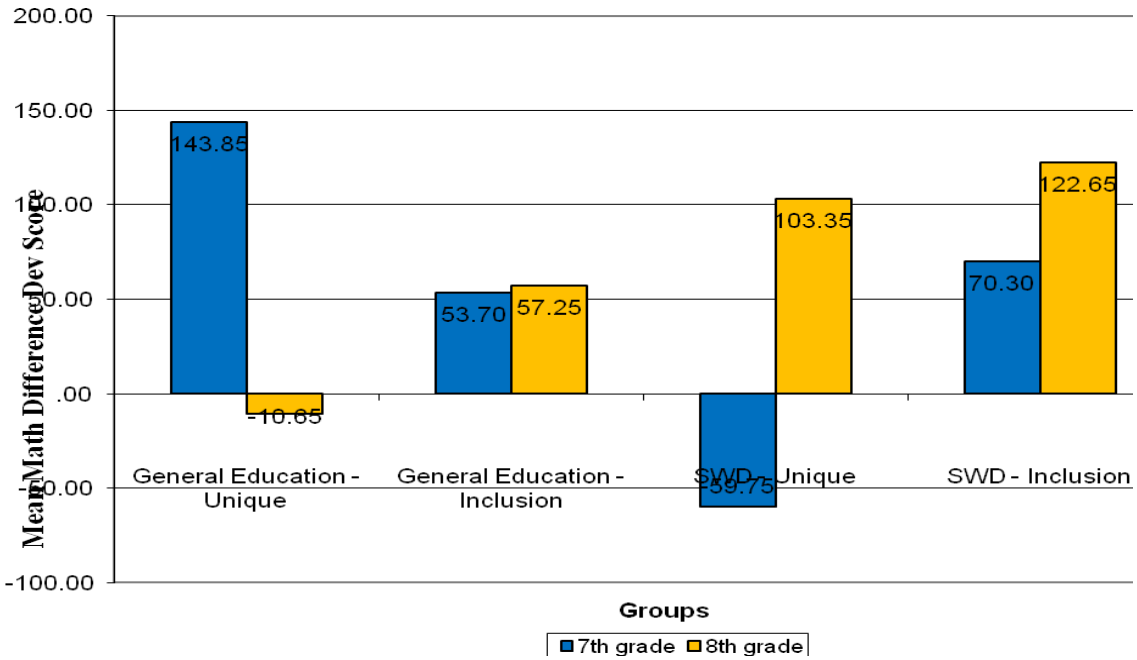

Figure 1. Mean differences in math developmental scores are depcited for each of the four groups of students.

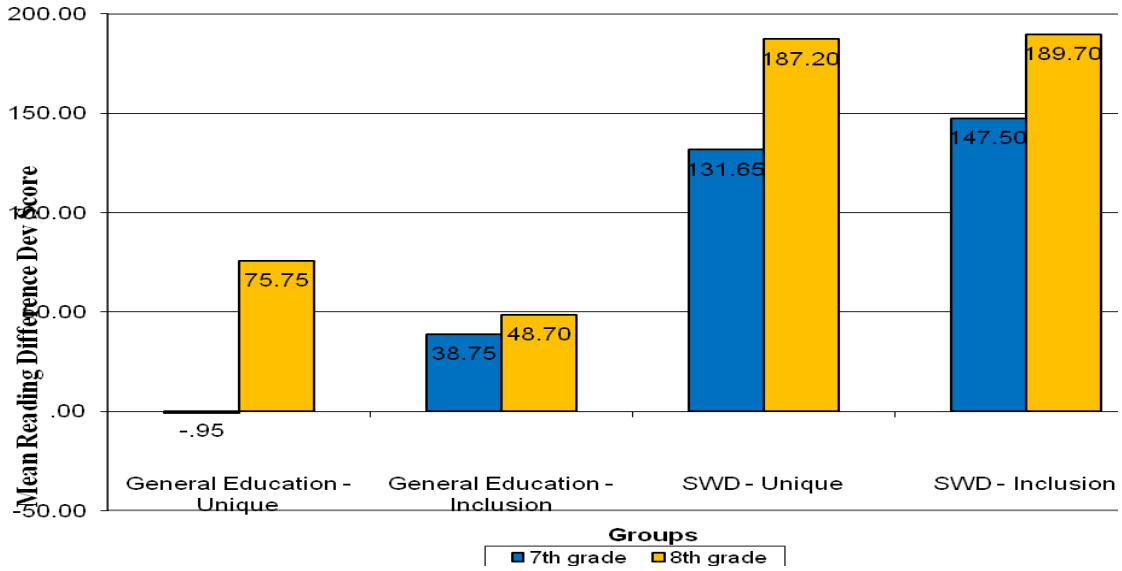

Figure 2. Mean differences in reading developmental scores are depcited for each of the four groups of students.

Tables 3 and 4 contain the independent variables and show the statistical significance of each. The level of significance for the procedure was 0.05. As shown, grade level and disability together accounted for a significant difference in predicting mean performance level changes in math with an obtained p-value of 0.008, as seventh grade students had significantly larger developmental gains than eighth grade students. The results of this analysis on reading difference developmental scores indicates significance that performance varies as a result of disability with an obtained p-value of 0.03, meaning that students without disabilities overall had significantly higher performance. As one of the main goals of this study was to explore relationships among educational placement and performance levels, it is important to note that educational setting (inclusion or non-inclusion), disability (students with or without disability), and grade level (7^{th} grade or 8^{th} grade) accounted for significant variance for students in math with an obtained p-value of 0.049. However, educational setting did not account for significant variance for students with or without disabilities in grades seven or eight in reading when statistically controlling other variables.

Discussion

While the present study did find some significance (i.e., differences in overall achievement between students with and without disabilities and differences between seventh and eighth graders), segregated versus inclusive settings did not account for statistically significant differences in achievement for any of the students, meaning that the presence or absence of inclusion had no impact on their achievement in either reading or math. It is important to note that although this study did not find statistically significant differences in achievement, as the law (IDEIA) requires that students are educated in the least restrictive environment possible, if students can achieve equally in a segregated or inclusive setting, certainly students should be included by default. Although some scholars (e.g., Rea, et al., 2002; Strieker & Logan, 2001) found academic gains associated with inclusive practices, this study did not. The findings of this study are consistent, however, with a similar study of mathematics and reading achievement in

which Redmon (2007) examined whether or not the inclusive classroom improved the achievement scores of elementary students with disabilities on state assessments of reading and mathematics across a three-year period. Redmon did not find a statistically significant difference between students educated in inclusive settings and students educated in resource settings. The findings of this study also parallel the results of McDonnell and colleagues (2003), Haseldon (2004), and Murawski (2006).

Table 3
Tests of Between Subject Effects for Math

Source	Type III Sum of Squares	*Df*	Mean Square	*F*	Sig.
Corrected Model	646396.675[a]	7	92342.382	2.007	.058
Intercept	577681.225	1	577681.225	12.555	.001
INCLUSION	40386.025	1	40386.025	.878	.350
EIGHTH GRADE	10400.625	1	10400.625	.226	.635
Disability	144.400	1	144.400	.003	.955
INCLUSION * EIGHTH GRADE	5593.225	1	5593.225	.122	.728
INCLUSION * Disability	73616.400	1	73616.400	1.600	.208
EIGHTH GRADE * Disability	335622.400	1	335622.400	7.294	.008
INCLUSION * EIGHTH GRADE * Disability	180633.600	1	180633.600	3.926	.049
Total	8218080.000	160			
Corrected Total	7640398.775	159			

a. R Squared = .085 (Adjusted R Squared = .042)

Table 4
Tests of Between Subject Effects for Reading

Source	Type III Sum of Squares	*Df*	Mean Square	*F*	Sig.
Corrected Model	719754.894[a]	7	102822.128	1.557	.152
Intercept	1672196.556	1	1672196.556	25.325	.000
INCLUSION	2333.256	1	2333.256	.035	.851
EIGHTH GRADE	85423.806	1	85423.806	1.294	.257
Disability	608485.556	1	608485.556	9.215	.003
INCLUSION * EIGHTH GRADE	15860.306	1	15860.306	.240	.625
INCLUSION * Disability	68.906	1	68.906	.001	.974
EIGHTH GRADE * Disability	333.506	1	333.506	.005	.943
INCLUSION * EIGHTH GRADE * Disability	7249.556	1	7249.556	.110	.741
Total	1.243E7	160			
Corrected Total	1.076E7	159			

a. R Squared = .067 (Adjusted R Squared = .024)

More specifically, McDonnell and colleagues (2003) found that there were no significant differences among students with disabilities who were enrolled in inclusive classroom settings as compared to students without disabilities within a general classroom setting. Similarly, Haseldon (2004) found no statistically significant differences in passing rates among the full mix of students in four settings, including one co-taught class and two general education classes. Murawski (2006) found no significant differences in academic outcomes for reading assessments for students with disabilities in the co-taught environment as compared to students with disabilities in the resource room. Additionally, the findings of this study are also consistent with an inclusion study (Beam, 2005) that examined the relationship between inclusion and pullout special education programs for special education students with learning disabilities on reading and mathematics scores achievement. As in the previous studies, differences in the present study were not evident between the two models.

Considering the inconsistencies in the existing body of research, further study is needed before conclusions can be drawn between inclusion and achievement, particularly in urban schools. A number of factors may have accounted for the lack of significant difference in the present study including the large amount of variance among students and the high levels of variance found in the large standard deviations. Additionally, the amount of and quality of professional development provided to staff in order to co-teach was quite limited in both settings examined. Another issue to consider is that all of the students in this study were Hispanic, a group that as noted earlier has been underperforming on state assessments. It is possible that the education provided to students in both settings lacked cultural relevance or rigor. Finally, although there is a lack of conclusive achievement data, the social importance of including students cannot be ignored.

It is interesting to note that students with SLD made larger learning gains in reading in both settings than their peers without disabilities in both settings. This underscores the need to rely on measures of progress and change such as developmental scale scores, rather than simply on test averages as a means to assess culturally and linguistically diverse learners and students with disabilities. The heavy reliance on one specific test score as an indicator of achievement is often erroneous, particularly for urban schools. McNeil (2000, p. 730) labeled high-stakes testing as “the new discrimination for minority students,” (p.730) while Hargreaves and Fink (2006) stated that “standardization has become the enemy of diversity” (p. 232). In many schools, common curricula and learning standards as a result of high-stakes testing have institutionalized inequitable systems of academic tracking and uneven student achievement, with minority students being disproportionately represented in lower academic tracks (Oakes, Hunter Quartz, Ryan, & Lipton, 2002).

Results for both math and reading achievement gains and educational placement contrast with research that suggests more inclusive placements are linked to performance on eighth grade state level assessments for students with disabilities (Luster & Durrett, 2003). Although the results contradicted earlier findings, in the absence of strong support for segregated settings, certainly social equity would call for inclusive settings as the norm.

Implications and Conclusion

Federal and state legislation have created explicit expectations for student performance and consequences for schools, teachers, and students that fail to meet expectations. These policy changes have raised the bar for all students and educators in America’s public schools. As such,

educational practitioners need to re-examine training provided for teachers working in inclusive programs and for differentiating to meet the needs of individual learners, particularly within the context of Common Core State Standards. Furthermore, collecting and evaluating data with a variety of assessments during the school year would provide ongoing information on the achievement of all students rather than excessive reliance on one high-stakes test. Student success depends in large part on the individual student's needs. With regards to students with disabilities, the variety of student needs and responsibility to address those needs increases. There are no clear remedies for increasing the achievement of racial/ethical minority students or students with disabilities. Better education requires expanding the knowledge and skills of teachers in order to engage students and create positive, culturally responsive climates of instruction.

Inconsistent and mixed findings across the growing literature base suggest that an examination of the types and quality of instruction occurring in various class placements, particularly in urban schools and with culturally and linguistically diverse learners across grade levels and exceptionalities, is warranted. Frattura and Capper (2006) developed an integrated comprehensive services model that includes four components: (a) focusing on equity, (b) establishing equitable structures, (c) implementing change, and (d) providing access to high-quality teaching and learning. The goal of this model is to prevent student failure and this is accomplished by building teacher capacity to reach the diversity of students and creatively plan to meet diverse and individualized needs. It is critical that as we shift toward a culture of common curricula and high accountability standards, we provide necessary supports to teachers and to schools to implement such structures for all learners. Educational researchers and practitioners alike need to re-examine the preparedness of teachers and the adequacy of instruction existing in urban inclusive class placements. In view of the findings of this study, equity of access to an inclusive education should be the norm for students with and without disabilities alike.

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