ABSTRACT

            This report discusses the outcomes of a study that examined
the influence and additive effects of student demographic characteristics on
student placement in special education programs in Michigan. Using a
combination of outside data and the Michigan Department of Education Student
Database (1999), statewide findings indicate that taken individually, age,
race/ethnicity, and disability were all predictive of inclusive placement.
Overall, 45.7% of Michigan students with disabilities are included in regular
education classes 80% or more of their school day. Age, race/ethnicity, and
disability were each predicative of inclusive education placement.
Specifically, elementary school students were more included than their
secondary school counterparts. White students had a higher rate of inclusion
than non-white students regardless of gender or type of disability. As for
disability, students with judgmental disabilities had a slightly higher rate
of inclusion than students with organic disabilities. Of organic
disabilities, inclusive placements were highest for students with visual
impairments, physical and other health impairments, and hearing impairments.
Least included were students with mental retardation. A review of 69 diverse
local districts found wealthy and suburban districts were able to include the
greatest percentage of students across all predictor variables. Implications
for practice and future research needs are discussed. (Contains 20
references.) (CR)

The Demography of Inclusive Education in Michigan: State and Local District Findings

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Abstract

While it is well documented that students of color are over-represented in special education, little research exists to shed light on what happens to them once they are placed in that program. This study examined the influence and additive effects of student demographic characteristics on the placement within special education in Michigan. Combined with outside data, and using the Michigan Department of Education Student Database (1999), statewide findings indicate that taken individually age, race/ethnicity and disability were predictive of inclusive placement. The additive bivariate effect of age and race/ethnicity were found to influence placement; trivariate effects found that white students had a higher rate of inclusion than nonwhite students regardless of gender or type of disability. Within a selection of 69 diverse local districts, wealthy and suburban districts were able to include the greatest percentage of students across all predictor variables. Implications for practice and future research needs are discussed.

The Demography of Inclusive Education in Michigan: State and Local District Findings

Background

By the year 2010, the face of American society will look dramatically different. In many states no single cultural or ethnic group will represent a majority of the population. Rather 38.2% of citizens, 18 years and younger, will be individuals of color (Hodgkinson, 1995). Special education is not immune to this sociological pattern. In fact, students of color are over-represented in special education (Reschly, 1996; Artiles & Trent, 1994), particularly in what researchers term the "judgment categories" that represent mild learning disabilities with no clear biological etiology (Reschly, 1988). In this category, students of color represent more than half of all students (Artiles & Trent, 1994). A review of data from the Office of Civil Rights (Harry, et. al., 1995) found that over-representation is not limited to high incidence disabilities. In comparing the percentage of total school enrollment to the enrollment of persons with the label of trainable mental retardation, from 1980-1990, students with these moderate cognitive disabilities were disproportionately African American and Hispanic, particularly after 1986. Not only is the percentage of students of color increasing, but the overall special education population is growing yearly. Since 1975, the number of students receiving special education has increased from 3.7 million to 4.6 million, representing a jump from 8% to 11% of the school population (Parrish & Chambers, 1996).

A confounding factor in the disproportionality discussion is the high correlation between students of color and poverty, particularly in inner cities. Nearly 20% of American children live in poverty (Children's Defense Fund, 1999). This percentage

increases dramatically for children of color, with 39.8% of African Americans; 32.2% of Hispanics; and 38.8% of Native Americans living in poverty (Ibid, 1999). Wagner (1995) reports that 68% of high school students with disabilities come from households with incomes of less than $25,000, as compared to 40% of the general school population. The 20th Annual Report to Congress on the implementation of IDEA (1998) found an increase in poor and minority children as a percentage of the total student population.

At the same time that the special education population is growing and becoming disproportionately composed of students of color, federal mandates and litigation are pushing the delivery system toward increased placement in least restrictive environments. Since the 1980s, the number of students with disabilities who are educated in general education classrooms has increased steadily and substantially, with the majority of this change being attributable to the movement of students from resource rooms and separate schools into general education classrooms (McLeskey et al, 1998; 1999). However, this movement is not universal. According to the 18th Annual Report to Congress, students with disabilities in inner city schools are more likely than students with disabilities in non-inner city schools to be placed in more restrictive settings (1996). Newman (1992) found that Hispanic students with disabilities were unlikely to be educated in mainstream or integrated classrooms with typical peers. In a study of early childhood placement, LeRoy and Johnson (1999) found that young children of color were less likely than white children to be recommended by their teachers for inclusive placements.

Paralleling this trend toward segregation for students of color is a growing body of research which indicates that experiences in integrated programs are strongly linked to positive post-school outcomes (Brown et al, 1989; Hasazi et al, 1985). In a synthesis of

the literature on best practices in inclusive schooling, McGregor and Vogelsberg (1998) found that students with disabilities have demonstrated gains in development when educated in inclusive settings. Wagner and Blackorby (1996) found a positive correlation between time spent in regular classrooms and employment for youth with disabilities.

While the literature has documented that students of color are disproportionately represented in special education and that access to the regular education classroom and curriculum is conducive to positive school outcomes, it is sparse on the demography of inclusive education. The study will examine the effect of various student and district demographic characteristics on inclusive education placement through an analysis of the Michigan statewide data and selected local district data.

Theoretical Framework

This research program is framed by Status Characteristics Theory (Berger & Zelditch, 1984). This theory is particularly relevant to the problem of demographic differences in education programs for two specific reasons. One, a large component of its theory building research was conducted in school settings. Two, the theory has generated a strong intervention methodology that has proven to be successful in addressing unequal status interactions across a variety of settings, including schools and classrooms. Status Characteristics Theory postulates that status (demographic) characteristics, such as race and gender have the ability to act as cues in task interactions and decisions, such that an individual who possesses valued characteristics (e.g., white/race) will have more power in the interaction than an individual who possesses the devalued characteristic (e.g., black/race). In applying this theoretical hypothesis to inclusive education, the student's demographic characteristics can be seen as the cues which have the ability to direct the

interactions and decisions (e..g, inclusive education placement) between the teacher and the student or parent.

Method

Population and Sample

The population for this study was Michigan special education students for the 1999-2000 school year. Students, ages 6-21 years old, were included in the population to facilitate comparisons with national and state data. The Michigan database contains information on 194,353 students, from 724 local school districts, including charter schools. Specific variables within the database address student demographic characteristics, school placement and services.

A sample of local districts (n = 69) was drawn from the state population to examine the impact of district wealth and population on education placement. This sample was selected based on above average minority student enrollment in special education. Specifically, districts whose white special education student enrollment was below the state average (mean = 75.1%) were selected for the sample. This sample included 57,336 students.

Variables

The predictor variables for this study were the student demographic characteristics of age, gender, race/ethnicity, and disability. The contextual variables were two community demographic characteristics, wealth, as measured by percent of students receiving free and/or reduced lunch, and population density, as defined by Census data and categorized as urban, surburban, and rural. The dependent variable was

education placement. *For purposes of this study, inclusive education placement was defined as placement in the regular education classroom 80% or more time.*

Data Analysis

All variables were submitted to univariate, bivariate, and multivariate analyses. Since the predictor variables are nominal in value, the chi square statistic was used for bivariate analyses, while logistic regression was used for multivariate analyses. All dependent variables were tested at a .001 alpha level.

Results

Table 1 presents the demographic characteristics of the population. For purposes of the inferential analyses, the disability categories were categorized into organic and judgmental, as defined by previous studies (Reschley, 1988). Table 2 presents the demographic characteristics of the sample.

Table 1

Demography of Michigan Special Education Students (N=194,353)

Characteristic	**n**	**%**
Gender		
Male	130,985	67.4
Female	63,303	32.6
Age		
6-12 years	113,406	58.4
13-21 years	80,947	41.6
Race/Ethnicity		
Native American	1,721	.9
White	144,444	75.1
Black	35,883	18.7
Hispanic	5,342	2.8
Asian	4,069	2.1
Middle Eastern	898	.5

Disability (n=152,279)		
Organic	*24,146*	*15.9*
SMI	1,164	.8
TMI	4,664	3.1
HI	2,993	2.0
VI	862	.6
POHI	11,696	7.7
SXI	2,767	1.8
Judgmental	*128,133*	*84.1*
EMI	17,657	11.6
EI	18,418	12.1
LD	92,058	60.5

Table 2

Demography of Sample Local Districts (N=69 Local Districts; 57,336 Students)

Characteristic	n	%
Gender		
Male	38,671	67.4
Female	18,650	32.5
Age		
6-12 years	34,130	59.5
13-21 years	23,206	40.5
Race/Ethnicity		
Native American	687	1.2
White	18,852	33.3
Black	30,163	53.3
Hispanic	3,142	5.5
Asian	3,140	5.5
Middle Eastern	638	1.1
Disability		
Organic	6,545	14.2
Judgmental	39,576	85.8

State Data

Table 3 presents the findings for inclusive education placement for Michigan special education students by their demographic characteristics.   Overall, 45.7% of Michigan students are included in regular education 80% or more of their school day. Age, race/ethnicity, and disability were each predictive of inclusive education placement. Specifically, elementary school students were more included than their secondary school counterparts. White students had significantly higher rates of inclusion than student of all other racial/ethnic groups.   In terms of a race/ethnicity hierarchy for placement, white students had the highest rate followed by Native American students, Hispanic students and Black students, respectively. As for disability, students with judgmental disabilities had a slightly higher rate of inclusion than students with organic disabilities. There were no gender effects for inclusive education placement.

Table 3

Statewide Demography of Inclusive Education Placement

Characteristic	% of Special Ed. Population	Population (n)	Included Count (n)	% Included*
Overall		*194,353*	*88,834*	*45.7*
Gender			88,797	45.7
Male	67.4	130,985	59,628	45.5
Female	32.6	63,303	29,169	46.1
Age*			88,834	43.9
6-12 years	58.4	51,879	61,692	54.4
13-21 years	41.6	36,955	27,142	33.5
Race/Ethnicity*			84,774	45.2
White	75.1	144,444	70,891	49.1
Black	18.7	35,883	11,194	31.2
Hispanic	2.8	5,342	1,958	36.7
Native American	.9	1,721	731	42.5

			52,878	34.7
Disability*				
Organic	12.3	24,146	8,128	33.7
Judgmental	66.0	128,133	44,750	34.9

p = <.001

Table 4 presents a breakdown of the placement data by specific disabilities. While students with judgmental disabilities were slightly more included overall, there was a significant difference between the two types of disability categories. Within the category of organic disabilities, inclusive education placements were highest for students with visual impairments, physical and otherwise health impairments, and hearing impairments, respectively. Least included were students with trainable mental impairment, severe multiple impairment, and severe mental impairment, respectively. Within the category of judgmental impairment, students with learning disabilities were most likely to be included, followed by students with emotional impairments. Students with educable mental impairment followed at a distant third within this category.

Table 4

Inclusive Education Placement by Type of Disability (N=152,279)

	% of Special Ed. Population	Population (n)	Included Count (n)	% Included
Organic	*12.3*			*33.7*
SMI	.6	1,164	21	1.8
TMI	2.4	4,664	149	3.2
HI	1.5	2,993	1,474	49.2
VI	.4	862	524	60.8
POHI	6.0	11,696	5,880	50.3
SXI	1.4	2,767	80	2.9
Judgmental	*66.0*			*34.9*
EMI	9.1	17,657	1,697	9.6
EI	9.5	18,418	5,596	30.4
LD	47.4	92,058	37,457	40.7

* p = <.001
Note: Percentage does not equal 100% because PPI, AI and SPEECH were excluded from the analysis.

Table 5 presents the significant additive effects of student demography on inclusive education placement. Bivariate additive effects were found for age and race/ethnicity. For age, both gender (female) and race (nonwhite) were significant for elementary versus secondary placement. Females and nonwhite students had significantly higher placement rates in elementary school than in secondary school. For race/ethnicity, both gender and disability were significant predictors of inclusion for white students versus nonwhite students. Within the category of organic disability, only those with severe and trainable mental impairment had no significant differences in the rates of inclusive education placement. Within the judgmental category of disability, there were significant race differences in placement rate by the three types of disability, such that white students were more included for all disability types.

Table 5

Significant Additive Effects of Student Demography on Inclusive Education Placement

Bivariate Effects*	% Included	
Age Additive Effects	**Elementary**	**Secondary**
Female x Age	55	33
Nonwhite x Age	42	24
Race/Ethncity Additive Effects	**White**	**Non-White**
Male x Race	49	42
Female x Race	49	35
Organic Disability x Race	37	22
HI x Race	54	35
VI x Race	65	51
POHI x Race	52	39
SXI x Race	4	1
Judgmental Disability x Race	39	24
EMI x Race	10	8

	White	Non-White
EI x Race	33	20
LD x Race	44	30

Trivariate Effects*	% Included	
	White	*Non-White*
Male x Organic x Race	39	22
Male x Judgmental x Race	38	24
Female x Organic x Race	35	22
Female x Judgmental x Race	39	25

* $p < .001$

Trivariate additive effects were found for gender, disability, and race, such that white students had higher rates than nonwhite students, whether they were male or female and whether they had organic or judgmental disabilities.

Local Districts within the Context of Wealth

For purposes of the analysis, district wealth was defined as percentage of students who receive free and/or reduced lunch. The districts were further categorized as above average income (free and/or reduced lunch less than the state average: < 29.4%), average income (free and/or reduced lunch at or 100% above the state average: 29.4%-58.8%), and below average income (free and/or reduced lunch at two times the state average and above: > 58.8%). Table 6 presents the demography of inclusive education for the sample districts by district wealth. There were significant differences between the three types of districts for each of the four demographic characteristics. Across all predictor variables, wealthy districts were able to include a greater percentage of students than the State percentages. Additionally, wealthy districts were able to include a greater percentage of students than both average income districts, and poor districts, respectively. For both average and poor districts, across all demographic characteristics, they had lower rates of inclusion than State percentages.

Table 6

Demography of Inclusive Education Placement by District Wealth[1] (N=68 Local

Districts; 57,330 Students) [2]

Characteristic	State	Above Average Income (n=12)	Average Income (n=38)	Below Average Income (n=18)
Overall*	45.7	64.2	39.5	30.1
Gender*				
Male	45.5	63.9	39.3	30.2
Female	46.1	64.8	39.9	29.9
Age*				
6-12 years	54.4	69.7	47.9	37.4
13-21 years	33.5	56.4	27.1	19.4
Race/Ethnicity*				
White	49.1	66.5	43.0	38.0
Black	31.2	63.7	33.5	28.3
Hispanic	36.7	49.0	31.5	31.3
Native American	42.5	33.3	43.2	28.5
Disability*				
Organic	33.7	61.6	28.2	16.1
Judgmental	34.9	57.0	30.1	17.2

$p = < .001$

[1] Wealth is defined by district percentage of free and reduced lunch.
Above Average Income = Lower than the State average (< 29.4)
Average Income = State average to 100% above State average (29.4 – 58.8)
Below Average Income = 2x the State average and above (> 58.8)

[2] One district did not have free/reduced lunch data available and was
excluded from this analysis.

Local Districts within the Context of Population

Districts were categorized as urban, suburban, or rural according to the criteria

developed by the National Center for Education Statistics (Common Core of Data), based

on the U.S. Census / Metropolitan Statistical Abstract. Table 7 presents the findings for

the demography of inclusive education placement by population clusters. There were significant differences between the three population clusters for each of the four demographic characteristics. As with wealthy districts, suburban districts included a greater percentage of students across all demographic characteristics than the State average and than their rural and urban counterparts, respectively. With the exception of organic disabilities, rural districts had lower rates of inclusion than State percentages. For urban districts, their inclusion rates were significantly lower than State rates across all demographic characteristics.

Table 7

Demography of Inclusive Education Placement by Population[1] (N=68 Local Districts; 57,330 Students)

Characteristic	State	Urban (n=15)	Suburban (n=32)	Rural (n=22)
*Overall**	*45.7*	*32.1*	*53.9*	*41.6*
Gender*				
Male	45.5	32.1	53.6	41.8
Female	46.1	32.6	54.8	41.2
Age*				
6-12 years	54.4	39.3	61.3	49.4
13-21 years	33.5	21.7	42.7	30.6
Race/Ethnicity*				
White	49.1	41.2	55.3	40.2
Black	31.2	27.3	48.3	25.7
Hispanic	36.7	31.0	41.8	30.6
Native American	42.5	31.8	45.5	43.7
Disability*				
Organic	33.7	21.2	51.0	45.8
Judgmental	34.9	20.5	43.5	27.7

p = < .001

1 Population is defined by census categories relative to the
Metropolitan Statistical Area, as developed by the National Center for
Education Statistics (Common Core of Data)
Urban = Large or Mid-size Central City
Suburban = Urban Fringe of a Large or Mid-size City
Rural = Small Town or Rural (inside or outside a MSA)

Table 8 presents the logistic regression model for inclusive education placement versus segregated placement by the student demographic characteristics and the two contextual variables, district wealth and population. With the model able to predict 75% of the placement variance, district wealth was the overarching variable in the model, followed by race. Students in wealthy districts were 2.69 times more likely to be in inclusive education placements as compared to students in less wealthy districts. White students were 1.52 times more likely to be in inclusive education than their nonwhite peers.

Table 8

Inclusive Education vs. Segregated Placement: Logistic Regression Model (N=69 Local Districts; 57,336 Students)

Variable	Odds Ratio	95% Confidence Interval
Race		
White	1.52*	(1.45, 1.60)
District Wealth		
Below State Average of Free/Reduced Lunch	2.69*	(2.72, 3.10)
Above State Average (2x) of Free/Reduced Lunch	.66*	(.63, .70)
Population		
Urban	.55*	(.53, .58)
Rural	.55*	(.49, .61)

* p = <.001

Discussion

Using the stringent standard for defining inclusive education as 80% of the student's day being spent in the regular education classroom, slightly less than half of all Michigan special education students are in inclusive education placements. While there were no effects for gender on placement, age (elementary), race (white), and disability (judgmental), each were significant predictors of placement. Across the four racial/ethnic categories, black students had the lowest rate of inclusive education placement. Within organic category of disabilities, sensory and physical impairments had the highest rates of inclusive education placement. Students with cognitive disabilities, regardless of the level of severity, were least likely to be included in regular education.

According to Status Characteristics Theory the impact of demography on decision making is an additive process. In applying this theory to special education, a student with several culturally perceived negative characteristics would theoretically be less included. The findings of this study support the detrimental effects of an additive model on professional decision making with regard to inclusive education placement. Specifically, bivariate effects were found for age and girls, age and nonwhite students, and disability and nonwhite students. Specific trivariate effects were found for gender, disability, and race, such that nonwhite students fared worse across all combinations than their white peers.

A second level of inquiry in this study examined inclusive education placement within the context of district wealth and population. The findings strongly indicate that students in suburban, wealthy districts have the best chance for an inclusive education placement. Within those contexts, the only demographic characteristic that continued to

matter was race. Again, students of color were significantly less likely to be in inclusive education. This study seems to support the common wisdom that inclusive education is a white, middle class, suburban phenomenon for students with sensory and/or physical disabilities. Conversely, a nonwhite student with a cognitive impairment living in a poor urban district has little chance of accessing inclusive education. While these students are being over-identified for special education, they are not gaining access to inclusive education and the promise it holds for important, valuable adult outcomes.

Further research is needed to understand these findings within the reality of the daily operation of schools, real time decision making (teacher/parent interactions at student planning meetings), and family knowledge and the realities of their interfaces with the special education system.

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