This policy brief reports on a study exploring state by state variation in placement rates for students with disabilities in either regular or special education settings and the relationship of economic, sociodemographic, and educational factors to these rates. The study analyzed data for the school year 1992-93 and compared the percent of identified students placed into six settings: regular class, resource room, separate class, separate school, residential facility, or homebound/hospital. It also interviewed state level personnel in three states with relatively high rates of placement in regular class settings. Although overall, placement data showed an orderly progression from most students served in the least restrictive setting (regular class) to the fewest number served in the most restrictive settings (separate facilities), analysis by disability category showed that most students with learning disabilities are served in resource room settings and most students with severe emotional disturbances and mental retardation are served in separate classes. Application of several prediction models found achievement variables emerged as predictors for all disabilities combined, but that a wide variety of other factors, including economic and demographic variables, predicted placement of students with specific disabilities. Results suggest the need to incorporate systems approaches to special education issues. Graphs detail study findings by disability and state. (Contains 29 references.) (DB)
Placement in Regular Classes and Separate Facilities

A Project ALIGN Issue Brief

The Role of Economic and Demographic Factors for Children with Disabilities

February 1997

Donald Oswald
Commonwealth Institute for Child and Family Studies
Department of Psychiatry, MCV/VCU
PO Box 980489
Richmond, VA 23298-0489

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The Continuing Debate

The reauthorization of the Individual with Disabilities Education Act (IDEA; P.L. 101-476) symbolizes an enduring commitment to quality of life and equality of educational opportunities for all Americans, including those with disabilities. The contentious debate surrounding reauthorization, however, also signifies some disagreement and disappointment.

No one could have anticipated the lively debate in the years following the passage of P.L. 94-142, accompanying the issue of where special education services are to be provided. The requirement that children be served in "the least restrictive environment" (LRE) is a major provision of IDEA and "created a presumption in favor of educating students with disabilities in general education environments" (Hasazi, Johnston, Liggett, & Schattman, 1994, p. 491). IDEA also acknowledged the need for a range of alternative placements and called for placement decisions to be made on an individual basis. The commitment to increase opportunities for children with disabilities to be educated alongside their nondisabled peers has been evident in the many federal- and state-sponsored initiatives (U.S. Department of Education, 1994, 1995, 1996). However, the regulations implementing the LRE requirement have failed to provide educators and parents with sufficient guidance. The courts have entertained related legal actions, and the trend has been in favor of more inclusive services, though not universally or uniformly (Coutinho & Repp, in press; Osborne, 1996).

Efficacy studies comparing outcomes in various placements have intensified rather than resolved the debate (Fuchs & Fuchs, 1994, 1995; Zigmond, 1995). It is now quite possible to cite evidence supporting and refuting the benefits of inclusion for students with disabilities. Studies must be examined closely to determine the conditions believed responsible (e.g., specific instructional procedures, administrative arrangements), the reported benefits (e.g., social, achievement, or post school outcomes), and the actual disability conditions for which effects are described (Fuchs, Roberts, Fuchs & Bowers, 1996; Mather & Roberts, 1995; Zigmond, 1995).

Nowhere are the problems of misunderstanding and overgeneralization more likely than in studies of national rates of placements in integrated settings. In the Eighteenth Annual Report to Congress, for example, the U.S. Office of Special Education Programs reported:

During the past several years, the percentage of students with disabilities served in regular classes has increased considerably, while the percentage of students in resource rooms has gradually decreased. Other placement percentages have remained stable... As a result, for 1993-94, States reported serving 43.4 percent of students with disabilities ages 6-21 in regular classroom placements, 29.5 percent in resource rooms, 22.7 percent in separate classes, 3.1 percent in separate schools, 0.7 percent in residential facilities, and 0.6 percent in homebound/hospital placements (U.S. Department of Education, 1996, p. 66).

Whether this represents progress depends on many factors, including (a) one's understanding of the definitions of placement settings (e.g., regular class permits services outside of the regular class up to 20 percent of the day); (b) one's interpretation of variations in placement rates across disability conditions; (c) one's opinion regarding whether serving approximately seven percent more children in regular class settings is evidence of significant change; and (d) one's assumptions about the services available in a given setting.

It is now quite possible to cite evidence supporting and refuting the benefits of inclusion for students with disabilities.
Indeed, many different conclusions are possible but not all are responsible, bringing to mind Macmillian, Semmel, & Gerber’s (1994) advice to use utilize empirical data, like the lamppost, for “illumination rather than support.” Such guidance is quite apropos when examining the data regarding placement practices.

One approach to a better understanding of current placement rates and practice has examined the attitudes of teachers regarding inclusive practices. In a comprehensive synthesis of 28 studies spanning the 1958 through 1996 period, Scruggs and Mastropieri (1996) clarified the many seemingly different views that teachers have reported about serving students with disabilities in mainstream environments. In general, although a majority of teachers supported the concept and expressed a willingness to implement inclusive practices, teachers indicated differing levels of support for including students with disabilities, depending, in part, on the severity of the disability and the amount of additional teacher responsibility required. Scruggs and Mastropieri stated that classroom procedural concerns, including not having enough time or resources to implement inclusion, appear to influence teacher attitudes more than “affective responses to working with students with disabilities” (p. 64). The continuing debate, and the perception that the movement toward inclusion is inevitable, emphasize the need for a better understanding of the factors that contribute to the tremendous variation in placement rates.

Factors Influencing Placement Rates

Researchers are increasingly interested in the incorporation of a broad array of social and political factors that may influence special education practices. The impact of poverty is regarded as particularly important (e.g., Gottlieb, Alter, Gottlieb, & Wishner, 1994). Studies of the relationships between placement patterns and educational, socio-cultural, child, and economic variables are becoming more common. Buysse, Bailey, Smith and Simeonsson (1994) investigated early childhood placement as a function of child characteristics. For children with serious emotional disturbance (SED), a number of studies have examined the impact of child, teacher, and program characteristics, producing mixed results (e.g., Martin, Lloyd, Kaufman & Coyne, 1995).

Unfortunately, most studies have relied on local or regional samples, and have not included economic and demographic variables. The substantial amount of information collected annually regarding children with disabilities by the U.S. Office of Special Education Programs and the data amassed regularly by the National Center for Education Statistics about educational, economic, and social indicators for all of the nation’s school districts are relatively untapped resources.

Existing work has suggested the importance of systematic investigations of national placement rates for children with disabilities and emphasized the importance of the role of demographics, school or program characteristics, economics and other educational variables. Ethnicity and educational revenues have been identified as significant predictors of states’ rates of placement in regular classes, separate classes and separate facilities for students with SED (Coutinho & Oswald, 1996).

Purpose of the Analyses

The purpose of this Project ALIGN study was to explore state by state variation in placement rates for students with disabilities and to investigate the contribution of economic, socio-demographic, and educational factors on these rates. Descriptive profiles of state and national trends are presented first to provide a picture of the placement rates for all children with disabilities, and for those with specific learning disabilities (SLD), SED, and mental retardation (MR) separately. Subsequent analyses produced predictive models of the relationships between placement rates and a number of economic, educational, and demographic variables.

Descriptive Findings

Our analysis of placement rates drew from data submitted to the US Department of Education by the states for school year 1992-93. The federal definitions of the educational placement settings used in the analyses are presented in Table 1. The following were used for the present analyses: regular class, resource room, separate class, and separate facility (a variable representing the total number of students served in the federally defined categories of separate public and private day facilities, residential, and homebound/hospital arrangements).

For each state, we calculated the proportion of the resident population that was served in each of the four placement settings. This
### Table 1
Definitions of Educational Environments

- **Regular class** includes students who receive the majority of their education program in a regular classroom and receive special education and related services outside the regular classroom for less than 21 percent of the school day. It includes children placed in a regular class and receiving special education within the regular class, as well as children placed in a regular class and receiving special education outside the regular class.
- **Resource room** includes students who receive special education and related services outside the regular classroom for at least 21 percent but no more than 60 percent of the school day. This may include students placed in resource rooms with part-time instruction in a regular class.
- **Separate class** includes students who receive special education and related services outside the regular classroom for more than 60 percent of the school day. Students may be placed in self-contained special classrooms with part-time instruction in regular classes or placed in self-contained classes full-time on a regular school campus.
- **Separate school** includes students who receive special education and related services in separate day schools for students with disabilities for more than 50 percent of the school day.
- **Residential facility** includes students who receive education in a public or private residential facility, at public expense, for more than 50 percent of the school day.
- **Homebound/hospital environment** includes students placed in and receiving special education in hospital or homebound programs.


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Formula for calculating placement rates differs from the usual method, i.e., calculating what percent of identified students are served in each setting. The rationale for the resident population formula is that it removes the effect of varying identification rates across states. For example, if two states each serve 30 percent of their identified students in regular class settings, but State A identifies 7 percent of the resident population for special education services and State B identifies 11 percent of the resident population, the placement rates cannot be compared with integrity. An accurate description of the placement rates used for the analyses below is "the percent of the resident population that is identified as a special education student with X disability and is served in Y setting."

Because of the formula used for the calculation of placement rates, states' placement figures and relative ranking in the analyses presented below differ from those published elsewhere (e.g., U.S. Department of Education, 1995). We believe, however, that the present method provides an improved means of characterizing national placement patterns and of comparing states' placement practices.

Comparison of national placement rates for all disabilities with rates for individual disabilities reveals some striking differences (see Figure 1). The placement data for all students with disabilities shows an orderly progression from the most students served in the least restrictive setting (Regular Class) to the least students served in the most restrictive settings (Separate Facilities). However, when the disability categories are examined separately, one can see that a plurality of the students with LD are served in Resource Room settings while a plurality of the students with SED and MR are served in Separate Classes. Further, although the total number of students with SED is smaller than the total number with LD or with MR, the SED disability category has more students in Separate Facility settings.

Placement rates across the fifty states and the District of Columbia also show considerable variation. For example, the percent of the resident population that is identified as students with SLD and is placed in regular class settings ranges from 1.8 percent (Georgia) to 5.8 percent (Massachusetts). (See Figure 2) Conversely, The percent of the resident population that is identified as students with SLD and is placed in separate facility settings (see Figure 3) ranges from .001 percent (Georgia) to .38 percent (District of Columbia). Figure 3 also illustrates that the distribution is markedly skewed with a large majority of states having fewer than .05 percent of their resident population.
identified as SLD and placed in separate facilities.

**Predicting Placement Rates**

The descriptive findings cited above make it clear that placement rates for students with disabilities show considerable variation across states. In an effort to understand the meaning of that variation, we created a set of predictive models that examined the relationship between placement variables and other educationally relevant characteristics of states.

A set of educational, economic, and demographic predictors were extracted from the National Center for Educational Statistics electronic catalog (NCES, 1992). The catalog is a collection of tables summarizing information relevant to education.

The selection of variables that were chosen for inclusion in the analyses was informed by previous related studies (Coutinho & Oswald, 1996; McLaughlin & Owings, 1992; Oswald & Coutinho, 1995, 1996).

Three types of variables were included in the models: education-related variables, demographic variables that characterized significant features of states and their populations, and economic variables that captured important aspects of states' fiscal circumstances. A detailed listing of the variables is found in Table 2.

Predictive models were constructed using a stepwise linear regression procedure that tests which of the predictors contribute significantly to a model designed to explain the variation in the response variables. Inclusion in the final model means that the predictor contributes significant unique variance to the model.

The placement models examined the relationship of predictors to students' rate of placement in regular classes and in separate facilities.

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**Table 2**

**Variables included in prediction models**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placement rate</td>
<td>The number of students identified as eligible for special education (with a particular disability) who are served in a given setting, divided by the state's resident population, ages 6-21 years.</td>
</tr>
<tr>
<td>4th grade reading proficiency</td>
<td>State average for 4th grade NAEP reading proficiency scores</td>
</tr>
<tr>
<td>8th grade math proficiency</td>
<td>State average for 8th grade NAEP math proficiency scores</td>
</tr>
<tr>
<td>Student-teacher ratio</td>
<td>Ratio of students to teachers for state as a whole</td>
</tr>
<tr>
<td>Average teacher salary</td>
<td>Mean of states' teachers' salaries</td>
</tr>
<tr>
<td>Percent (of school staff) that are aides</td>
<td>Number of aides divided by total number of instructional and noninstructional staff</td>
</tr>
<tr>
<td>Chapter 1 funding</td>
<td>Total amount of Chapter 1 program funding divided by school enrollment</td>
</tr>
<tr>
<td>Per pupil revenue</td>
<td>Total amount of states' education revenue divided by school enrollment</td>
</tr>
<tr>
<td>Current expenditure per pupil</td>
<td>States' current education expenditures divided by school enrollment</td>
</tr>
<tr>
<td>Percent revenue from local sources</td>
<td>Percent of states' educational revenue that comes from local sources</td>
</tr>
<tr>
<td>Percent revenue from state sources</td>
<td>Percent of states' educational revenue that comes from state sources</td>
</tr>
<tr>
<td>Percent revenue from federal sources</td>
<td>Percent of states' educational revenue that comes from federal sources</td>
</tr>
<tr>
<td>Elem/Sec Ed. expenditures per capita</td>
<td>Expenditures on elementary and secondary education divided by population</td>
</tr>
<tr>
<td>Educational expenditures per capita</td>
<td>Expenditures on all education divided by population</td>
</tr>
<tr>
<td>Educational Expenditures as % of GSP</td>
<td>Expenditures on all education divided by the Gross State Product</td>
</tr>
<tr>
<td>Human Services expenditures per capita</td>
<td>Expenditures on all human services programs divided by population</td>
</tr>
<tr>
<td>Gross State Product per capita</td>
<td>Gross State Product divided by population</td>
</tr>
<tr>
<td>Median household income (1990)</td>
<td>Median income for all households in state.</td>
</tr>
<tr>
<td>Percent of households earning &lt; $25,000/yr</td>
<td>Percent of households that report earning less than $25,000 per year</td>
</tr>
<tr>
<td>Per capita income</td>
<td>Total personal income divided by population</td>
</tr>
<tr>
<td>Population density</td>
<td>Number of persons per square mile</td>
</tr>
<tr>
<td>Community adult dropout rate</td>
<td>States' dropout rate for adults</td>
</tr>
<tr>
<td>Percent white</td>
<td>Percent of the population that is identified as White</td>
</tr>
<tr>
<td>Percent of households below poverty level (1992)</td>
<td>Percent of households that report income below the poverty level</td>
</tr>
<tr>
<td>Community adult % unemployment</td>
<td>Percent of adults that are classified unemployed</td>
</tr>
</tbody>
</table>
As seen in Table 3, achievement variables emerged as predictors for all disabilities combined. States with higher fourth and eighth grade achievement scores tend to place more special education students in regular classes and the model accounts for nearly one half of the variation across states.

The picture varies substantially, however, across disabilities. The model predicting placement of students with SLD in regular classes is not statistically significant, accounting for only 7 percent of the variation. The model for students with SED is even higher proportion when disability categories are examined separately. Population density appears to play an important role in states' use of separate facilities for students with disabilities, appearing in all four of the models. In each case, states with relatively higher population density tend to have more special education students in special schools.

The findings are troubling, because they provide evidence that non-child-specific factors influence variations in placement rates in both the most inclusive and the most segregated settings. The predictive value of economic and demographic variables suggests the influence of many factors on placement decisions. The influence of population density across the disability conditions reinforces the belief that services in rural districts, for any number of reasons, are provided in more integrated settings. The positive contribution of income and economic predictors in the prediction of separate facility placements is difficult to interpret. Should monies be re-directed to support more placements in inclusive settings, or conversely, does the relationship suggest continued support for the continuum of placement settings? This study cannot answer the questions because the data do not indicate the appropriateness of the services received in regular classes or in separate facilities.

An alternative explanation is that a full continuum of options is not always available (Martin, Lloyd, Kaufman, & Coyne, 1995), but when resources are available to support of the full continuum, more children are served in more restrictive placements. Although difficult to interpret, the findings are troubling, because they provide evidence that non-child-specific factors influence variations in placement rates in both the most inclusive and the most segregated settings. Additional research is needed to detect and understand the influence of these variables at the district and individual child level.

Table 3
Predicting States Placement of Special Education Students in Regular Classes in 92-93

<table>
<thead>
<tr>
<th>Disability Condition</th>
<th>Predictors Entering Stepwise Model</th>
<th>Bivariate Correlation</th>
<th>Model R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>4th grade reading proficiency</td>
<td>.45</td>
<td>.48</td>
</tr>
<tr>
<td></td>
<td>8th grade reading proficiency</td>
<td>.20</td>
<td></td>
</tr>
<tr>
<td>LD</td>
<td>Per pupil revenue</td>
<td>.27</td>
<td>.07</td>
</tr>
<tr>
<td>SED</td>
<td>% Revenue from federal sources</td>
<td>-.52</td>
<td>.35</td>
</tr>
<tr>
<td>MR</td>
<td>Community adult dropout rate</td>
<td>.60</td>
<td>.62</td>
</tr>
<tr>
<td></td>
<td>Percent white</td>
<td>.14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Percent (of school staff) that are aides</td>
<td>-.20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elem/Sec Ed. Expenditures per capita</td>
<td>-.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Median household income (1990)</td>
<td>-.51</td>
<td></td>
</tr>
</tbody>
</table>
Progress in Implementing the LRE Mandate: Three States' Experiences

To build on our understanding of factors influencing placement rates, three states were interviewed whose rate of placement in regular class settings was relatively higher than other states and was increasing over a recent five year period. The states were selected on the basis of the percentage of students ages 3-21 served in regular class settings in the most recent five year period for which data was available (School years 1988-89 through 1992-1993). Table 5 summarizes demographic characteristics of the three states.

Special Education Directors and others were asked to describe criteria for reporting placement settings, including changes in recent years, and state initiatives or traditions that are believed to have influenced increasing rates of placement in integrated settings.

With respect to reporting criteria, all three states require LEAs to report on at least as many
National Placement Rates by Setting and Disability

Figure 1
National Placement Rates
Learning Disability - Regular Class Placement

Figure 2
Regular Class Placement Rates for Students with Learning Disabilities
Figure 3
Separate Facility Placement Rates for Students with Learning Disabilities
environments as the U.S. Office of Special Education Programs requires. Two of the three required additional specificity, e.g., up to 10 options or the actual number of minutes per day by setting. All three states had worked out acceptable policies to permit students with disabilities who are served full-time in special education to be reported as disabled. Reporting, for example, included designation of consultative assistance. None of the three states had changed their definition of educational environments in the last several years.

All states reported that state initiatives have been implemented to sustain progress in increasing placements rates in integrated settings. Common across all of these initiatives were the emphases on responsiveness to local conditions, ongoing professional development, and sustained state leadership.

In one state, local capacity was built through a two year effort in which a group of collaborative teams were trained, followed by training to subsequent groups and extensive sharing and statewide dissemination of best practices. Systematic, regional technical assistance provided through institutions of higher education and other agencies, was a second initiative in which individualized assistance was provided to local districts. A separate project, federally funded and supplemented with local matching funds, provided assistance with curricular adaptations and team capacity at the local level. In sum, Part B set aside and other funds (federal, state, and local) were being used to support ongoing changes responsive to local conditions.

In another state, leadership and support was created and sustained through development of an inclusion position statement. The position statement was the culmination of work by a broadly constituted collaborative team. A second mechanism was special study institutes formed to provide "best practice" training of teams at the local level who, in turn, trained other teams. An independent facilitator, supported by the state, but based in a local district, also worked with local districts individually to problem solve regarding local obstacles and issues.

The third state provided support for a state-department position dedicated to assisting local districts implement more successful inclusive practices. This assistance was complemented by state sponsored workshops over a several year period. Also, a local educational agency served as a model program, acting as a host site and consultant for visits by other districts to learn first hand what works. Finally, the state authorized waivers for some districts to support services delivered appropriately by instructional aides.

When asked about linkages with other educational reforms or traditions, one state reported tremendous success building on already-existing site-based prereferral teams and assisting with inclusive programming for students with attention deficit disorders.

States were also asked to look ahead and indicate if any new initiatives were needed or planned. One state was in the process of developing a statewide stakeholder group on LRE—not inclusion. A second state was to begin complementing professional development with individualized monitoring and assistance to local districts whose placement rates indicated that disproportionately more students were served in segregated settings than in other districts. In a third state, proposals were being studied to change the current funding formula for support of special education services to be placement neutral, i.e., to offer no incentive or disincentive for serving students in a particular environment (e.g., a separate class).

Conclusions

The purpose of this study was to provide a broader context within which to investigate the issue of where special education services are to be provided. The consideration of economic, demographic, policy, and program variables to the study of these issues introduces more complexity but also offers the possibility of a more comprehensive understanding. The findings suggest a need to incorporate systems approaches to special education issues. A wealth of special education research is now available that examines student, teacher, and curriculum variables within well-designed studies of learning and behavior. Many recent studies, however, have included a broadening array of inputs and outputs when investigating issues related to the placement of students with disabilities (Buysse et al., 1994; Fuchs et al., 1996; Hasazi et al., 1994; Janney, Snell, Beers, & Raynes, 1995; Martin et al., 1995; Rock, Rosenberg, & Carran, 1995). These reports, and the present study, indicate that economic, educational program, teacher, and demographic inputs, in addition to specific child
characteristics (e.g., behavior, vocational skills, and achievement), function in a complex manner to influence where students with disabilities are served.

Results of this study support disability specific investigations and development of recommendations responsive to conditions and opportunities at the local district level, potentially through applications of full-service school models. "At a gross level of abstraction, we all agree that every child deserves a free appropriate, public education. The pinch comes in allotment of scarce resources... Who is to get how much?" (Morse, 1994, p. 536). With adequate understanding, schools can align commitment with resources in an equitable fashion that ensures that each child with a disability is educated in the least restrictive, appropriate environment.

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U.S. Department of Education.
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For more information about this Issue Brief or other Project ALIGN products, please contact:

Donald Oswald, Ph.D.
Commonwealth Institute for Child and Family Studies, Medical College of Virginia, P.O. Box 980489, Richmond Virginia 23298
Or
Martha Coutinho, Ph.D.
East Tennessee State University, HDAL, P.O. Box 70548, Johnson City, Tennessee 37614.

Issue Brief Newsletter Editor:
Melissa Mitchell, East Tennessee State University