

The Role of Special Education in School Choice[†]

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1. Introduction

A wide variety of policy initiatives fall under the umbrella of school choice. These policies include increased choice within the public sector through open enrollment, magnet schools, and charter schools, as well as increased private school choice through vouchers. There are differing views of the potential impact of school choice programs on the distribution of student opportunity. Proponents claim that all students, both those who take advantage of choice and those who remain in their neighborhood schools, will benefit as schools are forced to improve in response to competitive pressures. Others fear that only the most advantaged and informed students will opt out to better schools, leaving more disadvantaged students isolated in the worst schools with declining resources.¹ It is an open question whether public and private school choice programs will lead to virtuous or destructive cycles.

Among the students who may be left behind are special needs students. Students with disabilities are more costly to educate and may therefore encounter explicit or implicit barriers to attending choice schools. Also, high concentrations of special needs students may be a "push" factor for other students deciding on schooling options. These concerns about the relative access and participation of students with disabilities overlap with concerns about low-income and minority students. However, the legal context of special education generates unique issues that will affect both student and school behavior under choice.

Since 1975, disabled students have been guaranteed a free and appropriate public education (FAPE). While federal and state agencies provide partial funding and technical support, local education agencies are legally responsible for ensuring that resident students with special needs are both identified and served. Given the inherent ambiguity in determining what is appropriate and the potential for extremely high costs, special education has become the most litigated area in education (Katsiyannis and Maag 1997). Introducing flexibility into the system through choice promises to exaggerate existing concerns about the appropriate identification of students with special needs and ambiguities about who is financially responsible for the costs of any additional services. Particularly for high cost disabilities, districts may face a strong tension between expanded choice and cost minimization. While the types of issues relevant to special education are similar across choice systems, the extent to which special education students are "priced" to account for the net marginal costs imposed and the responsibilities of the institutions serving these students vary across traditional public schools, charter school, and private schools.

In the next section, we provide background to clarify what is "special" about special education. Section 3 presents a general framework of choice that will help to frame the relevant forces at play when parents choose schools and schools design special education programs. We then consider in more detail what is known about special education under traditional public school choice in Section 4. Using recent data from Texas public schools, we provide new evidence on the stratification of special needs students across and within districts. Sections 5, 6, and 7 separately address the unique considerations that arise for open enrollment, charter schools, and vouchers. For each of these forms of choice, we review the relevant literature. We rely on data from the Chicago Public Schools and Texas schools to provide additional evidence on open enrollment and charter schools, respectively. The final section includes a brief conclusion.

2. Background on Special Education

¹ For discussions of the advantages and disadvantages of school choice, see, for example, Chubb and Moe (1990) and Cookson (1994).

The initial federal special education legislation grew out of concerns about extremely limited educational choices for disabled students. A congressional investigation undertaken in the early 1970s revealed that a majority of disabled students received inadequate educational services and at least a third of severely disabled students were excluded all together from public schools (Verstegen 1994). In order to protect these children's rights to a public education, the Education for all Handicapped Children Act (EHA) was passed in 1975.

The EHA and its successor, the Individuals with Disabilities Education Act (IDEA), outline the procedures that each public education agency must follow in order to identify, assess, and serve the needs of students with disabilities. The process begins either with systematic screening (for visual, speech, and hearing problems) or referral. Students can be referred by teachers, other appropriate school personnel, or by parents. Following referral, experts (e.g. psychologists, physicians, and educational diagnosticians) administer a battery of tests to determine whether the student has a recognized disability. There are state and federal guidelines delineating which physical, emotional, and mental disabilities are eligible for special services provided in the school.² If the student is deemed eligible, the team assesses the student's special needs and designs the individualized education plan (IEP). The IEP designates the services and the setting in which the services will be provided. Parents can refuse the IEP and have the right to due process with reimbursement for legal costs, and in recent cases damages, if their child is not being adequately served.

The types of services that special needs students receive may include additional support in the regular classroom, pull-out for part of the day in a resource room, or instruction in separate classes and schools. Students with relatively mild disabilities tend to be served in less restrictive instructional settings. The excess costs associated with educating disabled students vary according to the intensity of instruction provided.³ In an analysis based on nationally representative data from 1987-88, Moore et al (1988) find that per pupil spending on special education students is on average 2.3 times per pupil spending on regular education students. Using Massachusetts expenditure data, Chambers (1998) finds a very similar average cost ratio, and disability and setting-specific ratios that range from 1.24 for learning disabled students served within regular elementary schools to 31.4 for students with multiple disabilities served in external facilities.

In order to support localities in providing these services, the federal government and states provide some funding. In overall terms, about 8% of special education funding is federal,⁴ some 56% comes directly from states, and the remainder is local. These shares are approximately equivalent to the shares of total elementary and secondary spending. However, there is wide variation in the funding mechanisms states have implemented to deliver special education resources to districts.⁵ The dominant mechanism involves pupil weighting, in which special education students are weighted more heavily than general education students within the

² The categories of disabilities that qualify for special education are: mental retardation, serious emotional disturbance, autism, deaf-blindness, traumatic brain injury, speech, hearing, visual, orthopedic, and other health impairments and learning disabilities.

³ In 1993, the national average pupil-teacher ratio was 24 to one for learning disabled and speech impaired students, and as low as six to one for the more severely disabled (U.S. Department of Education 1996).

⁴ The federal government has traditionally provided a flat grant to states based on the total number of disabled students served in special education in each state. Since the IDEA Amendment of 1997, a new formula based on total student enrollment (85 percent) and school-age poverty rates (15 percent) is being phased in.

⁵ See Parrish et al (1997) for a detailed analysis of the various state special education funding mechanisms, and Parrish and Chambers (1996) for a discussion of the impact on the operations of special education programs.

basic school finance formula. The weights are often specific to the type of disability, the type of instructional setting, and/or the grade-level.

Recently, special education has become more controversial largely because of two striking trends. First, student disability rates have been growing at an extraordinary pace. Over the past two decades, the percentage of students classified as disabled has increased more than 50% to the current rate of more than one in eight students. Virtually all of the growth has come from an increase in students classified as learning disabled, which is a category where it is difficult to ascribe precise cut-offs in evaluation. The second trend is the disproportionate growth in per-student special education expenditures. During the 1980s, Hanushek and Rivkin (1997) estimate that special education accounted for roughly 20% of the increase in per student spending, slightly less than double the share of special education students.

The rapid growth in special education enrollment and expenditures has fueled concerns that special education has adversely affected other students, both by the diversion of dollars away from regular instruction and by the inclusion of students classified as disabled into regular schools and classrooms. While the empirical evidence on achievement effects is mixed, the tenor of the public debate strongly suggests that parents consider the size of special education programs in their choices of public school districts and whether to send their children to private schools.⁶ It should be clear from the above discussion that special education is a diverse program serving a diverse population, so there will be no single impact on either special needs or regular education students.

3. General School Choice Framework

A growing body of research examines the distribution of school quality by a variety of factors including race, income, ability, the school finance structure, and degree of competition among both public and private schools. Though they differ in their details, choices, be they of residential location and choice of school district, attendance at a public or private school, willingness to exchange school quality for other goods, or level of public school spending and taxes, form the core of virtually the entire body of research. Of course families, students, voters, and other actors do not make their choices in a vacuum; rather they are constrained by federal, state, and local laws and regulations as well as institutions. Litigation related to racial segregation beginning with the decision in *Brown v. Board of Education* (1954) has had a profound effect on public school enrollment patterns. More recently, court cases and legislative action have altered the distribution of school financing, substantially reducing expenditure inequalities within states.⁷ In the case of special education, the passage of IDEA has changed the allocation of resources within as well as across schools.

This section considers the impact of special education on the distribution of school quality both under the traditional hybrid structure of publicly provided schooling along with private alternatives and under reforms such as charter schools and vouchers. Importantly, the choices of students not classified as special needs form only one part of the story. Parents of special needs students are likely to search at least as aggressively for programs that best suit the needs of their children. Families may also seek out schools with special education classification policies that conform most closely to their preferences. Finally, schools almost certainly respond to cost pressures determined by special education funding formulae as well as pressures from parents of both children with and without special needs. Of course school decisions depend in

⁶ See Cullen (1997) and Hanushek, Kain, and Rivkin (1998) for evidence on special education effects.

⁷ See, for example, Murray, Evans, and Schwab (1998).

large part on their constituency, so that the choice processes of parents are intricately related to school administrative decisions.

For ease of presentation, we begin by describing a framework of the distribution of school quality that separates the choice processes of parents on the one hand and the determination of public school policies on the other. Essentially this means that parents take the schooling landscape as given. We then briefly consider how the two interact.

Choosing a school

We consider a framework in which the demand for school characteristics depends not only on income, preferences for schooling in general, and child ability but also on the presence of disabilities and perception of special education. Parents choose communities and schools in an effort to maximize utility, which is a function of school, housing and community characteristics including housing and private school costs and community tax rates, given family preferences, child characteristics, and income. While Bayer (2000), Epple and Romano (1998), Nechyba (2000) and others focus on a single dimension of school quality, we need to explicitly recognize the multi-dimensional nature of schools in order to incorporate special education. As such, school characteristics include: 1) regular education quality; 2) special education quality; and 3) special education classification criteria.⁸ Similarly, family characteristics include child ability, any child special needs, and tastes for regular and special education programs.

The importance of special education services depends crucially on needs. Parents of special needs children undoubtedly place much greater weight on the quality of special services, though most special education children spend much of the day in regular classrooms. On the other hand, parents of children not currently classified as disabled likely place much less emphasis on such programs, though the possibility that their children may one day benefit from such services probably precludes a zero valuation.

It is important to recognize that classification as disabled is not an objective process, particularly for students who exhibit academic or behavioral difficulties. The definitions of learning disabled and emotionally disturbed do not draw clear boundaries between those with and without disabilities. Rather school personnel exert substantial discretion, likely responding to both pressure from parents and budgetary considerations as well as differences in pedagogical approaches. Therefore, whether a child is classified as special needs and can take advantage of any associated services is not inherent, but jointly determined with the schooling decision.

The production of school quality

We assume that both regular and special education quality are a function of the level and use of resources, the quality of instruction, and peer characteristics. How parents and students perceive special education quality will depend on the types of settings in which special needs students are served. More intensive resources may not be highly valued if those resources are accompanied by more isolated placements and reduced contact with nondisabled students. There is very little consensus about what types of interventions are effective for special needs students so that parent beliefs about what is effective will play a particularly important role.

There are two primary links between special education and regular education quality—

⁸ Peer characteristics and school inputs such as class size, teacher education, etc. are presumed to influence choices primarily through their impacts on school quality. However, characteristics such as student racial composition may also exert an independent effect. Lankford and Wyckoff (1999) document preferences for racial composition much stronger than would be predicted by the evidence on the link between racial composition and school quality.

through the budget and through classroom dynamics. Given that special education spending is legally protected, state education financing formulae are a primary determinant of the financial tradeoff between special and regular education spending. Three possibilities exist, each of which provides schools with different incentives for classifying students as disabled. The marginal cost of serving an additional disabled student may either exceed, match, or fall short of the additional revenue from state and federal sources. The net local financial burden will not only vary by state, but may also vary by district characteristics, type of disability, and treatment type and intensity. Cullen (2000) describes in detail the variation by district wealth, disability type, and setting for students in Texas public schools during the early 1990s. Reimbursement rates for some disabilities are much more generous relative to costs than they are for other disabilities, and the effective cost to districts varies substantially by the type of setting. Given the reimbursement rate, decisions about service quality and intensity as well as any scale economies also affect the financial ramifications of serving or classifying an additional student as disabled. If the net cost is positive, either regular education spending will fall or residents will bear the costs through increased taxes.⁹ Of course, the ultimate effect on regular education quality depends upon the elasticity of regular education quality with respect to spending.

Spending provides only one of the paths through which changes in the size of the special education program can affect regular education quality. By changing the student composition of regular classrooms or the distribution of abilities and behaviors, special education programs may enhance or detract from the regular education program. Special education may remove disruptive or struggling students from the classroom, improving the educational experience for other students. Special education may also improve student behavior and provide skills with which to keep up in regular classes, which will also improve regular classroom quality for all students. In the cases where students are mainstreamed, there may be negative spillovers through peer effects or positive spillovers through increased resource intensity in regular classes.

The total effect of increasing or decreasing the proportion of students classified as disabled thus depends on a combination of financial and student composition effects. Even if the expansion of special education crowds out some regular education spending, it may not have an adverse effect on the quality of regular education if the change in student environment offsets the effects of lower spending.¹⁰ We would expect schools to try to repel special needs students that impose net (fiscal and peer) negative externalities and to attract those with positive externalities.

Interaction between parent choices and school quality

As parents move across jurisdictions, there are feedback effects between parents' choices and the choices available to them. First, there are affects on the composition of students at any given school. If special education program quality and classification criteria affect regular education quality, special education may have an additional indirect link to program quality through student choice of school. Special education programs may change the underlying distribution of ability and behavior in a school or district through student mobility.

Second, parental pressures to provide more or less special education will change as families relocate. Given that a large majority of students never receive special education

⁹ Lankford and Wykoff (1996) find that special education appears to crowd out regular education spending in New York state during the 1990s, and Cullen (1997) finds a similar result for Texas.

¹⁰ These potentially offsetting effects can reconcile the apparently contradictory findings of Cullen (1997) and Hanushek, Kain, and Rivkin (1998). Cullen finds that high rates of severe disability reduce regular education expenditures and performance, while Hanushek et al find that increases in the proportion classified as disabled raises achievement among students never classified as disabled.

services, it is not surprising that legislation was needed to ensure adequate provision for the minority of students with disabilities. Voters knowing their family circumstances would be unlikely to favor special education expenditures over those for regular education unless it could be shown that such spending is quite efficacious in raising the quality of regular instruction and thus the value of property in a community. However, because of the legal protections, disabled children are empowered to obtain at least a minimum set of special services no matter where they live. How liberal the classification rules are and how many additional services are provided, though, will likely depend in part upon community composition.

Finally, the menu of schooling options available to parents is endogenous. If parents are dissatisfied with the public school, they may choose to remain in the same community but attend private school or another alternative school. Thus, the demand and, in equilibrium, the supply of alternatives will depend on perceptions of and responses to special education programs.

Expanded School Choice

The main concerns about equity and efficiency under the traditional system of school choice arise from incorrectly pricing special needs students. If schools are adequately reimbursed for the excess costs they will compete for these students. As Pijl and Dyson (1998) highlight, a necessary condition for effective competition is that school resources must increase with the incidence of student disability. Under systems where schools are reimbursed for serving special needs students through pupil-weighting schemes, special needs students can shop across schools and programs and are able to essentially take the financial resources with them. Yet while pupil-weighting insures districts against the high costs of providing special education, it may also provide incentives for school districts to over-classify students as disabled. Ironically, the recent national movement toward prospective reimbursement systems to avoid this type of moral hazard may discourage schools from competing for special needs students. If excess revenues do not match excess costs, districts may engage in "race to the bottom" behavior in the provision of special education.

For expanded school choice to improve opportunities for disabled students, it is important that special needs students have access to the same types of choices as other students and that they take advantage of them. This requires the playing field to be level. However, private schools are explicitly not subject to the same special education regulations as traditional public schools, and charter schools' position with respect to these laws has been ambiguous. The willingness of charter and private schools to take on voluntarily the responsibilities of educating students with disabilities hinges largely on the pricing arrangements. A compensation scheme that fully or more than fully offsets the additional costs of providing special services would almost certainly weaken resistance to accepting students with disabilities. While peer group composition may continue to fuel concerns of parents who seek out schools with small numbers of disabled students, the financial burden would no longer provide an obstacle. In the next sections, we present evidence on a variety of choice mechanisms and their likely impacts on the distribution of special education students and services.

4. Traditional public school choice: Evidence from Texas

The previous sections have covered what is currently known about the interplay between special and regular education programs under traditional public school choice. In this section, we rely on data from the Texas public schools to provide new evidence on how the choices of special needs and regular education students affect stratification by disability. Our objective is

not to identify the causal impact of either peer characteristics or other aspects of special education on school choice. Rather, we provide indirect evidence on the strength of "race to the bottom" pressures in the provision of special education and of "push" factors for students without disabilities from student enrollment and mobility patterns.

The analysis follows a single cohort of students from 3rd to 7th grade. We begin by exploring how the concentration of disabled students across schools and across districts changes across grades. We then provide a detailed description of the changes in school attended or district of residence and in special education status that underlie changes in the overall distributions. We examine whether special and general education students tend to systematically move to schools with higher or lower proportions of students classified as disabled. We also consider the linkages among student mobility, changes in special education status, and changes in special education program size.

Data

This analysis is based on a unique matched panel data set of school operations constructed by the UTD Texas Schools Project under the direction of Professor John Kain. Our cohort includes the universe of students who began the 3rd grade in 1993. The data report race and ethnicity, eligibility for a subsidized lunch, and a unique identifier for each student. Students who switch public schools within the state of Texas can be followed just as students who remain in the same school or district. The cohort contains over 200,000 students in over 3,000 public schools. The substantial numbers of students who change schools and change special education status provide a detailed picture of the link between mobility and special education. The student IDs link the student records with a separate special education module. These data contain information on disability type and instructional setting. A much more detailed discussion of the data can be found in Hanushek, Kain, and Rivkin (1998).

Distribution of special needs students across schools and districts

Figures 1 through 4 describe the distribution of special needs students across schools and districts using analogues of Lorenz curves. Schools (Figure 1) or districts (Figure 2) are ordered according to the proportion of students in a specific category, e.g. special education. The cumulative proportion of all 3rd grade special education students in Texas public schools is plotted against the cumulative proportion of all students. The diagonal line represents perfect integration, attainable only if each school has the population share of special education students. Any deviations from perfect integration cause the curve to fall below the 45 degree line, and curves further from the line indicate greater segregation.¹¹ These descriptions possess the desirable property of scale invariance, meaning that if special education enrollment increases by 10%, the curves will not shift if the increase is 10% at each school. Scale invariance allows for meaningful comparisons across time despite changes in classification rates.

The district segregation curves are derived from data aggregated to the district level. Just as school segregation curves ignore the allocation of students among classrooms, these curves ignore the allocation of students across schools within districts. Comparing the degree of segregation across schools and across districts reveals how much of any existing concentration occurs within versus across districts.

The first two figures present distribution curves for Black, Hispanic, and free lunch

¹¹ When curves cross there is no simple segregation ranking because crossing implies that different parts of the distribution are more or less unequal in different years. See Allison (1978) for a discussion of this issue.

eligible students as well as for students with disabilities for comparison. Figure 1 shows that while there is a substantial degree of early sorting across schools according to special education program participation, segregation is much stronger by other demographic characteristics, particularly by race. While nearly a third of special needs students are educated in schools with below median shares of special needs students, less than a tenth of black students attend schools with below median minority shares.¹²

There is a strong similarity between the enrollment patterns described in Figures 1 and 2. Not only does Figure 2 preserve the same ordering of the curves by student characteristics, but it also largely preserves the distances between them as well. Aggregation to the district level effectively removes all within district segregation, and all district curves do lie closer to the 45 degree line than the school curves. However, aggregation to the district level does not eliminate much of the variation on any dimension, and the extent of segregation by income, ethnicity, and disability status is largely determined at the district level. In the case of income and ethnicity, housing patterns determine district enrollment, but differences in special education program participation cannot be attributed solely to the living patterns of students with disabilities. Unlike race, schools must actively classify students as disabled, so the differences among districts emanate from both the underlying residential distribution of disabled students and differences in the ways districts implement state guidelines. Of course families may respond to district policies in their choice of districts, making it extremely difficult to separate the contributions of residential location and district policies.

The remaining figures begin to disentangle the contributions of the underlying distribution of disability and district classification practices. Figure 3 is based on school-level data and Figure 4 is based on district-level data. The results are shown for students classified with any disability and then separately for students with specific learning disabilities, emotional disturbances, and physical disabilities. Each graph presents four distribution curves. Two of the curves are based on concurrent disability classification status, with one for students served in special education in 3rd grade and one for students served in special education in 7th grade. The other two show the distribution of students in these same two grades on the basis of whether they were ever classified as disabled between third and seventh grade, inclusive.

Focusing on the curves based on concurrent status, changes in the distribution of special needs students across grades provides a sense of whether special needs program sizes are becoming more disparate as students progress through school. Changes across grades will be driven by several factors. Holding the school or district attended constant, special education participation rates among a given set of students may change. While some disabilities may be treated by effective interventions, other may develop over time. In addition, the aggressiveness and timing of district and school labeling and interventions may also vary because of the beliefs of school leaders, community pressures, or other factors. Holding classification constant, an overwhelming majority of students change schools at least once between grades three and seven as they transition from middle school to junior high, and a substantial percentage switch districts. There are also potential interactions between school or district switching and transitions into or out of special education. All of these effects are captured by changes in the distribution of students participating in special education.

Our alternative approach of classifying students based on their entire special education

¹² To simplify the discussion, percentiles of schools (and districts) are described where the percentiles are determined by student enrollment or are from the student perspective. For example, what we describe as schools with below median disability shares are schools that have disability shares below that faced by the median student.

histories isolates changes in the distribution of special needs students between 3rd and 7th grades that arise strictly due to student mobility. Structural moves from elementary to secondary schools within the same district will affect the degree of measured segregation at the school level but not at the district level. Differences between the results from the two approaches are driven by differences in classification rates for specific grades and schools.

While the segregation curves in Figures 3 and 4 reveal some heterogeneity by disability type, there are strong similarities, particularly at the district level. In fact all four district curves lie virtually on top of one another regardless of disability type, suggesting that specific districts are not magnets to special education students and that families do not tend to relocate en masse to avoid large special education programs. In addition, there is little evidence of much variation in classification timing among districts, as the district distributions do not appear to become more equal as students age.

The school level diagrams, on the other hand, display much more heterogeneity across disabilities and greater changes in segregation over time. In particular, physically disabled students become significantly less concentrated between grades three and seven. This trend does not result from new classifications as students age, since the 3rd grade distributions for those classified in 3rd grade and those ever classified are virtually identical. Rather the results suggest that already classified students become more dispersed. Whether this reflects changes over time in state policies, consolidation of students into more heterogeneous junior high schools, or a combination of these and other factors cannot be determined from these comparisons.

There is a trend towards less segregation as students age for emotionally disturbed students as well, but the mechanism appears to be different in this case. Here the 3rd grade distribution of those ever classified is over two thirds of the way toward the 7th grade distribution, suggesting that differences in classification behavior in the third grade accounts for a portion of the variation in the incidence of students classified as emotionally disturbed. An alternative explanation is that students differ systematically in the grade at which they manifest symptoms of the disability, and the two explanations cannot be distinguished from one another. The pattern for students with learning disabilities is similar to that for students with emotional disabilities, but the changes across grades are smaller.

Overall these figures provide no evidence of increasing segregation as students age. While families may segregate prior to the 3rd grade, one would still expect to find movements during these grades if responding to special education programs formed an important part of family location decisions. Note that the convergence occurs at the same time that classification rates for lower income students diverge from those of students not eligible for subsidized lunch (see Appendix Table A1). However, both income groups experience similar percent changes in classification rates, and the reported segregation curves are invariant to equi-proportional changes throughout the initial distribution. If segregation were measured by absolute differences in the size of special education programs, the larger increases for low income students would likely produce an increase in measured segregation.

Student Mobility

We provide further evidence on how choices correlate with special education program size by analyzing movement in and out of special education and across schools and districts. Table 1 reports annual special education transition rates by disability type and student mobility. The results are based on annual observations of students in the 1993 cohort pooled across grades three through seven. Students are divided among four categories: not classified as disabled in

either year; classified in both years; not in special education in the first year but classified in the second year; and in special education in the first year but exiting from the program prior to or during the second year. Within each of these categories, students are divided further on the basis of school transfer patterns: "same school" refers to students who either remain at the same campus or transition from middle to junior high school along with their class; "w/in district" refers to students who switch to a new school in the same district; and "b/w district" refers to students who change districts. A small number of students who either change disability types or who move multiple times are excluded from consideration as are students who exit the Texas public schools entirely.

A number of similarities appear across disabilities in the pattern of transitions. First, students not classified as disabled are less likely to move than students classified in one or both years; the gap is greatest for the emotionally disturbed. Second, a substantial proportion of students remaining in special education switch schools within districts. For the emotionally disturbed and physically disabled roughly twice as many students transfer within as transfer between districts, while for the learning disabled the differential is approximately 50%. With the exception of the physically disabled, a similar pattern holds for those entering special education. On the other hand, those who exit special education exhibit by far the highest mobility rates, and they are much more likely to move to new districts than to find a new school in the same district. Less than 70% of emotionally disturbed and learning disabled students who exit special education remain in the same school, while almost 20% switch districts. A similar though slightly muted pattern emerges for the physically disabled. Note that the greater average stability of all disabilities combined reflects lower migration rates of those no longer classified as speech impaired, the group that makes up a large share of those who exit special education.

Overall, the table suggests that students with disabilities move around more than others, and those who move tend to change their classification status more often than those who remain in the same district. The greater mobility of those classified as disabled may partly result from income and other family factors that affect both mobility and disability rates. For example, mobility rates are much higher for lower income students eligible for a subsidized lunch regardless of special education status, and these students are also more likely to have special needs (see Table 2). Nevertheless, though it is possible that movers systematically experience greater changes in personal conditions, a more plausible explanation for changes in special education status, particularly for those exiting special education, is that mobility facilitates the change. This more detailed analysis of individual student mobility is consistent with marginal students relocating to either obtain or shed the special education label and helps to explain some of the changes in the distribution of special needs students observed between grades in the figures.

Tables 3 and 4 examine changes in the proportion of schoolmates classified as disabled by the above special education transitions. There is no evidence that students who are in regular education in consecutive years move to schools or districts with smaller special education programs. Nor is there a systematic pattern for students who remain in special education in both years. However, Table 3 shows that entrants to special education tend to experience increases in the proportion of schoolmates classified as disabled, and those exiting special education tend to experience declines. Entrants and exiters who move experience significantly larger changes than those who remain in the same school, with the exception of entrants classified as learning

disabled.¹³ Note that the estimates of changes in peer composition for emotionally disturbed and physically disabled students are noisy and are greatly affected by the minority of students who move to separate special education schools.

Table 4 reports differences in changes in peer disability rates by student income. Not surprisingly, the largest increases occur among those eligible for a subsidized lunch for whom classification rates rise much more rapidly in absolute terms. For both groups, movers tend to experience the largest changes.

There are at least two hypotheses that are consistent with the results for movers who exit or enter special education. Families may be attempting to find a more preferred classification system and special education program. Or, students who move to schools with larger special education populations and therefore more liberal classification rules may simply be more likely to be classified. The pattern we observe confounds deliberate family efforts and any unintended effects of school regime. While we cannot determine the relative contributions of these two effects, the results are at least consistent with students who transition into or out of special education being sensitive to special education program size.

Lessons

The results from both the segregation and mobility analyses suggest that fears about regular education students self-segregating from disabled students are not likely to be realized. There are neither large increases in the segregation of special needs students across grades, nor do regular education students appear to move schools to avoid high disability rates. The group that appears to be most responsive to special education when making schooling decisions are marginal students who are on the border between being considered disabled and nondisabled. We find that these students move to schools with programs that are systematically larger or smaller than their initial schools. It remains to square this evidence with the broad trend toward less segregation shown in the enrollment distribution figures, though it should be noted that special education entrants and exiters constitute fewer than 3% of all students. While this type of mobility increases the absolute divergence in disability rates across schools and districts, it does not apparently affect the relative divergence and produce increasingly segregated schools.

There are several caveats restricting the generalizability of these results to other choice settings. First, we analyze changes in sorting over time rather than trying to explain initial sorting. The impact of any decisions that are made based on special education programs is therefore understated. Also, as we have emphasized, both student and school responses are dependent on the pricing regime. In Texas, special education students generate additional marginal revenue for their school district. Cullen (2000) calculates that there is likely to be a net financial gain to classifying marginal students as disabled for most districts during the time period of our analysis. Also, because of the small size of many rural districts in Texas, over 80% of districts participate in some type of cooperative arrangement for providing certain types of special education services. For these reasons, the incentives for regular education students to avoid special needs students and for special needs students to shop across programs may be weaker than in other states or under other choice systems.

¹³ Tests of the hypothesis that the average change in proportion special education for entrants who move is equal to the change for entrants who do not move show that this hypothesis is rejected for all of the disability types at the 0.01 level. A test for those who exit special education leads to a rejection of the equality hypothesis for the learning disabled and all categories combined at the 0.01 level, for the physically disabled at the 0.1 level, but not for the emotionally disturbed at any conventional level. Note that the latter two disabilities had only a small number of students who exited.

5. Open Enrollment

The pressures that affect whether schools compete for special needs students under traditional public school choice are magnified under open enrollment within or across school districts. Not only is financial responsibility for excess costs more difficult to assign, but officials may also have more scope for counseling students either in or out of their schools. And, with a greater number of schooling options, it may simply become more costly to guarantee special needs students FAPE at any given school.

Most of the existing evidence on open enrollment comes from Minnesota, which was the first state to introduce this type of choice legislation in 1990. In Minnesota, students can apply to transfer to any other district in the state. Districts can only refuse to accept transfer students on the basis of capacity constraints. State per pupil revenue follows all students who choose to travel, and any excess costs for services provided to special needs students are billed back to the district of residence. This type of financial arrangement greatly reduces any potential resistance to accepting transfer students with special needs. At the same time, it increases incentives to try to keep special needs students since home districts largely lose control of costs if these students choose to travel. Parent and school responses are conditioned, therefore, by what should be a relatively competitive special education environment.

It appears that special needs students are in fact taking advantage of choice at rates similar to other students. Over the first four years of the program, special education participation rates doubled, rising from 5% to 10% of transfers between 1990-91 and 1993-94 (Lange et al 1995). In making their transfer decisions, parents of disabled students are sensitive to special education program characteristics. Based on interviews with parents, Ysseldyke et al (1994) find that parents of children with disabilities most often report that they opted to transfer in order to better meet their children's special needs.

In their analysis of school districts with particularly high gains or losses of disabled students, Lange et al (1995) provide insight into the program characteristics that parents value. Parents do not seem to perceive higher special education quality as synonymous with smaller class sizes. Disabled children are more likely to transfer to schools with larger special education caseloads per teacher. However, districts that gain special education students demonstrate better home-school communication practices and a higher commitment to spending on special services. Parents also choose schools based on classification practices. Ysseldyke et al (1994) find that 4% of parents with disabled children report transferring to obtain special education labels while 3% transfer to shed labels. Parents of children with behavioral disorders are often simply looking for a new start for their child.

Despite the fact that disabled students are actively participating in open enrollment, there may be signs of increased stratification in Minnesota. Jimerson (1998) analyzes trends in special education populations before and after open enrollment was introduced. She finds a steady decrease in the fraction classified as disabled in districts that are primarily receiving districts compared to a much more erratic pattern for sending districts. While these results are not conclusive, active participation in school choice clearly does not preclude increased segregation.

The variation in school districts' experiences with special education and open enrollment highlights other potential hazards. Lange et al (1995) find that districts that gain special education students largely respond by absorbing students into existing programs and increasing class size, thereby bearing few additional costs. Districts that lose disabled students, however, are not able to proportionately cut back on special education staff because of the requirement to

maintain minimum services for the remaining students.¹⁴ Further, these home districts face escalating costs when any additional services are provided to transfer students due to the lack of incentives for the district of attendance to control costs under the bill-back policy. Finally, districts find it very difficult to plan for low incidence populations because of the uncertainty in enrollment. The mandate to offer all disabled students appropriate services has the potential to exaggerate negative budget shocks for districts that are already facing other difficulties.

Evidence from Chicago

We provide additional evidence on special education participation rates and stratification from the open enrollment program within the Chicago Public School (CPS) district. The origins of the policy date back to court-ordered desegregation in 1980. Currently, each high school student is assigned to a default school based on residence and attendance area zones. Students can then apply to any one of the more than sixty high schools, which include magnet schools and career academies as well as more traditional high schools. Most schools that are over-subscribed use a lottery to admit students, however, the most selective magnet schools rely on test scores.

Our analysis is based on the cohort enrolled in eighth grade in a CPS school in the Spring of 1995.¹⁵ Of the 31,485 students in this cohort, only 81.0% enter a CPS high school in the following year. Four-fifths of this attrition can be attributed to students who leave the CPS after eighth grade. The majority of these students either switch to the private sector or move outside of the Chicago area. Special education students leave at similar overall rates as nondisabled students, but if they leave are one-fifth less likely to leave to attend a Chicago private school (28.7% vs. 35.9%). The remaining attrition is due to student retention. While only 2.0% of regular education students repeat 8th grade, 17.4% of special needs students do. Due to the dramatic difference in rates at which special needs and other students are held back, the fraction served in special education in 8th grade falls from 14.9% in the full 8th grade sample to 13.0% in the sub-sample that enters a CPS high school the following year.

We identify 61 high schools that serve regular populations. There are a variety of other schools and institutions that serve special populations of secondary students, such as juvenile delinquents and other troubled youths. While only 1.2% of non-disabled students in our cohorts entering 9th grade attend one of these alternative schools, a disproportionate share (5.9%) of special needs students attend alternative schools that serve only special needs students. The students placed in these more isolated settings tend to have relatively severe disabilities. For example, most physically disabled students (69.6%) are assigned to special schools, compared to a negligible share (1.8%) of learning disabled students. The specialized instruction appropriate to students with severe disabilities places some limits on the range of integrated choices that is available to these students.

For the more than 24,00 students who attend one of the regular CPS schools, we consider the impact that open enrollment has on the concentration of students with disabilities. To do this, we compare the actual distribution to that which would prevail under the counterfactual where all students attend the assigned high school. In this analysis, students are identified as disabled if they were served in special education in 8th grade. Figure 5 shows that stratification by disability

¹⁴ Jimerson (1997) finds special education expenditures per special needs student increased in districts with high student loss rates compared to districts with high gain rates. This may be consistent with more severe disabilities remaining behind or increased costs because of the bill-back policy, as she notes, and would also be consistent with decreased economies of scale.

¹⁵ See Cullen, Jacob, and Levitt (2000) for a more detailed description of the policy and of the data.

based on residential choices is relatively weak, but the degree of stratification is increased by choice. Very little of this increase can be explained by the three selective magnet schools that use test scores in admissions.

Underlying this shift toward greater segregation of disabled students are different patterns of participation in open enrollment. While nondisabled students opt out of their assigned schools 52% of the time, special education students opt out only 36% of the time. Only one in ten special needs students who opt out attends schools that are ranked in the top fifth in terms of average achievement, compared to one in three of other travelers. Surprisingly, both the least severely and most severely disabled students are more likely to opt out than moderately disabled students, though the severely disabled students in this sample are a select group. Students who opt out tend to choose schools with smaller disability caseloads regardless of disability status. Both disabled and nondisabled travelers were initially assigned to schools with average disability rates of approximately 16%.¹⁶ By traveling, disabled students attend programs with caseloads that are 2.3 percentage points lower, and nondisabled students lower their exposure to disabled students by 5.7 percentage points on average.

The evidence from Chicago presents a mixed picture for special education students. On one hand, disabled students are actively participating in open enrollment—with more than one in three students with disabilities opting to attend an alternative high school. On the other hand, these students are participating at significantly lower rates than other students and are not attending schools of the same quality, at least as measured by average achievement.¹⁷

6. Charter Schools

Charter schools are becoming increasingly prevalent, with 1700 schools in operation in 31 states and the District of Columbia in the beginning of fiscal year 2000 (Center for Education Reform, 1999). In order to offer innovative alternatives to traditional public schools, charter schools are granted waivers from many state and local regulations. However, like any other public school, they must be in compliance with federal civil rights legislation (Heubert 1997). IDEA requires the identification of students with qualifying disabilities and the design and provision of individualized education plans. The other two relevant laws, Section 504 of the Rehabilitation Act (1973) and Title II of the Americans with Disabilities Act (1990), protect students from discrimination on the basis of disability.¹⁸

These federal regulations may have a profound influence on instruction and operation, yet most states have not articulated how they are to be implemented in the charter school context. In most states' charter school enabling legislation, the only references to students with disabilities are indirect and are through general prohibitions against discrimination (Fiore and Cashman 1998). Companion state policy documents that provide operational guidelines for providing special education in charter schools generally do not exist at all or are inadequate, though there are exceptions and technical assistance is continually improving (Ahearn 1999).

¹⁶ This disability share is higher than the average in the full sample because a school's fraction disabled is based on the status of students who actually attend, and no students are assigned to certain magnet and vocational schools.

¹⁷ It is hard to judge from special education expenditures how close school funding correlates with expenditures. A regression of per pupil special education expenditures on the share of enrollment within each detailed disability category has an adjusted R-squared of 0.32, suggesting the reimbursement is not very strongly correlated with caseload characteristics.

¹⁸ These laws pertain to a broader student population than that served by IDEA since disabled students who do not require instructional accommodations are also included. Section 504 applies to any program that receives federal assistance and Title II applies to all public agencies regardless of sources of funding.

Moreover, many states do not require charter school applicants to specify how they will accommodate students with disabilities (Rhim and McLaughlin 2000). Not surprisingly, charter school applicants and operators tend to have very little knowledge of what constitutes discrimination, of the procedures involved in providing FAPE, and of how the services are funded.¹⁹

One of the key areas of confusion was the determination of the agency that is legally responsible for ensuring the rights of disabled students, but the 1997 amendments to IDEA clarified this ambiguity by including specific provisions for charter schools. These amendments require state and local education agencies (LEAs) to ensure that students with disabilities who attend charter schools are served in the same manner as their counterparts in traditional public schools. Dependent charter schools and sponsoring agencies negotiate to determine who is responsible for referral, evaluation, development of IEPs, provision of services, and funding. Charter schools that are independent LEAs have full procedural and financial responsibility. Without an established school district to provide support and serve as a liaison, independent charter schools face greater barriers to effectively implementing special education programs (GAO 1995; 1997).

Legal status interacts with charter school type to determine how burdensome the special education regulations are. Start-up schools must develop and staff special education programs from scratch, whereas charter schools that have converted from traditional public schools already have special education programs in place.

There has been widespread concern about the potential budgetary impact of special education on charter schools. These schools tend to be small and per pupil funding is often below costs (Bielin and Fulton 1996). While IDEA requires states to distribute funds to charter schools in the same way as to other schools, local resources are typically negotiated. Compared to traditional schools and school districts, charter schools have limited ability to absorb unexpected costs associated with high disability rates or low incidence disabilities. They do not have the same access to general operating funds and cooperative arrangements that can help to smooth costs (Buechler 1996). Independent charter schools are especially vulnerable since, by default, they bear the costs of severely disabled students who require expensive placements. To mitigate the potential destabilizing impact of special education, many states have implemented schemes that transfer some or all of the expenditure risk to traditional LEAs.²⁰

The need to coordinate with a district or another agency to provide and finance special education can compromise a charter school's autonomy. This is only one of the potential conflicts between the type of flexibility that characterizes charter schools and the regulations that accompany students with disabilities.²¹ Rhim and McLaughlin (2000) quote one state charter school director as saying:

"The biggest challenge is that special education law and ideology is based on the thought that all schools need to be all things to all people, to accommodate

¹⁹ See, for example, McKinney (1996), Powell et al (1997), Rhim and McLaughlin (2000) and Urahn and Stewart (1994).

²⁰ For example, Massachusetts requires districts of residence to cover the costs of any residential placements. Minnesota charters are independent LEAs but they are able to bill-back any excess special education costs to the district of residence. And, some charter schools in Colorado use prospective payment, whereby charter schools pay home districts a fixed fee per pupil or per disabled students to cover any excess special education costs (McLaughlin et al 1996).

²¹ Ahearn (1999) and Rhim and McLaughlin (2000) provide thorough discussions of the tension between the special education and charter school environments.

everyone who walks through the door, but we have allowed charters to focus their program and not be all things to all people." (p.22)

Legally, charter schools must ensure students with disabilities equal consideration for admission, though interpretation of the law varies by state. Some states require schools to accept all students who wish to attend and to use a lottery if oversubscribed.²² Others permit schools to use selection criteria, such as test scores, that are consistent with the school's purpose. The possibility for charter schools to "cream" the best students has fueled concerns about charter schools serving as elite academies (Szabo and Gerber 1996; Fuller and Elmore 1996).

In addition to being legally bound not to discriminate in admissions, charter schools must identify students with special needs and make accommodations to address those needs. Given that many charter schools emphasize the need to develop individualized instruction programs for all students, personnel may be reluctant to identify specific students as disabled. Developing an IEP can also be problematic if the student's needs are not best served by the given instructional approach or approaches (McKinney and Mead 1996). A final rigidity that directors face in the provision of special education relative to regular education is the impossibility of staffing special education programs with teachers who have alternative licensure, since federal law requires all special education teachers to be appropriately certified. Table 6 summarizes current state charter school provisions that most affect whether serving a disabled student is an encumbrance to a charter school relative to serving a non-disabled student.

Despite the burdens of providing special education, the evidence on whether special education students have equal access to charter schools in practice is encouraging.²³ While early studies found that disabled students were participating at rates far below other students (e.g. McKinney 1996), the most recent National Charter School Study (1999) reports that the gap has closed as more charter schools have opened. In the states studied, 8% of charter school enrollment is classified as disabled compared to 11% in traditional schools. There is substantial heterogeneity across charter schools, with start-ups being less likely to serve special needs students and some schools specifically targeting them. There is also heterogeneity across disability type, with more severely disabled students choosing to remain in traditional public schools.

Part of the remaining discrepancy between caseloads at charter and traditional schools can be explained by differences in classification policies. Finn et al (1996) and Vanourek et al (1997) discover that a large proportion of students who would have had an IEP in their former school do not have one in the chosen charter school. Consistent with this, parents report choosing charter schools to escape the stigma of labels and to take advantage of effective mainstreaming options (Vanourek et al 1997).

The current strands of evidence are not sufficient to determine how the charter school movement has impacted stratification by disability. There is no direct evidence of which we are aware of how special education programs affect the decisions of regular education students to attend a charter school. Indirect evidence through charter school location decisions is mixed.²⁴

²² In order to receive federal funds, charter schools must use a lottery to determine admission.

²³ See Fiore et al (1999) for a recent review of the existing empirical evidence pertaining to special education and charter schools.

²⁴ Glomm et al (1999) uncover a positive correlation between the number of charter schools in an area and the level of per pupil special education expenditure in Michigan school districts. For Texas, Grosskopf et al (2000) find an insignificant relationship between the proportion of students in special education and the number of charter schools.

Evidence from Texas (Pending access to the recent TX data)

We plan to show initial patterns of charter school attendance for special education students versus regular education students.

7. Private schools and vouchers

Private schools have a dual relationship with special education. On the one hand, public school administrators regularly contract with private schools to educate students with severe disabilities who cannot be adequately served in public schools. A number of private schools have been established specifically to accommodate low incidence, severely disabled populations. On the other hand, most other private schools have admissions requirements, only half offer remedial reading and math and very few offer special education services (McLaughlin and Broughman 1997).

Fox (1999) argues that the fact that a market has evolved to educate the neediest students implies that disabled students will not be left behind in a voucher system. However, students served in private special education settings are not representative of the typical student with special needs. Not only do these students make up a negligible share of the disabled population, excess costs associated with serving severely disabled students can be more than 30 times those for students who have milder disabilities (Chambers 1998).²⁵ The intensive equipment and services involved necessitate that students with similar disabilities be pooled in separate instructional or residential settings. For other disabled students, this type of pooling would be in direct conflict with the philosophy of IDEA that requires students to be served in the least restrictive environment possible. When a student with disabilities attends a private school that serves a general student population, it is unclear how market pressures and federal regulations interact since it is public and not private schools that are responsible for guaranteeing FAPE.

Exactly what obligations public schools have toward students with disabilities who voluntarily enroll in private schools have not been fully established. Whereas the full costs of educating disabled students *assigned* to private school settings are paid from federal, state, and local funds, those who *choose* to opt out of the public sector are not protected to the same degree. IDEA (1990) requires public schools to ensure that these students have “equitable” access to special education services, so public schools cannot categorically deny private school students services (Linden 1995). But, schools have discretion in deciding which private students will be served, which services will be provided, and where those services will be provided (Osborne 1999). Additional regulations passed in 1995 (EDGAR 1995) clarify that any services offered must be of comparable quality, that public schools must consult with private school representatives before making decisions, and that public schools can satisfy the requirements by making services available at public or neutral sites. The 1997 amendments to IDEA offered a quantitative minimum standard by requiring local school districts to expend at least a proportionate share of federal IDEA funds on services for private school students. Though private school students are not entitled to any given services, the amendments require public school districts to identify and evaluate all resident students with disabilities who attend private schools.

A recent legal debate has centered on whether public schools can provide special

²⁵ Fox (1999) students served in private settings make up 1.8% of the special education population and are educated at a cost of over \$2 billion. Average contracted tuitions for day and residential placements are \$22,000 and \$66,000, respectively.

education services on site at parochial schools without violating the Constitution.²⁶ The establishment clause of the First Amendment prohibits public funds to be used in ways that may yield indirect benefit to religious organizations. Though *Aguilar v. Felton* (1985) banned the provision of on-site Title 1 services in religious schools, two more recent Supreme Court rulings reverse the ban (*Agostini v. Felton* 1997; *Zobrest v. Catalina Foothills School district* 1993). Congress weighed in on this issue through the 1997 amendments to IDEA which permit special education services to be furnished on private school premises, at least for now.

Given the stark contrast between public and private schools' roles, only very carefully designed voucher programs will lead to expanded choice options for disabled students. Private schools are not likely to admit disabled students if they are not compensated for net costs. Theoretical models predict that vouchers will lead to increased segregation by ability if the vouchers do not vary to compensate for undesirable student characteristics (Epple and Romano 2000; Glomm and Raviknur 2000). Not only are private schools unlikely to welcome disabled students, parents of disabled children are unlikely to leave the public sector if by so doing they give up equal rights.

Existing evidence does suggest that there are barriers to the participation of special education students in voucher programs. Based on interviews with 200 administrators in urban areas across the U.S., Kapel et al (1995) find that private schools would be likely to reject special education students. Two-thirds of the schools in their sample use testing for academic ability in admissions and most would exclude students who lack of academic readiness or have emotional/behavioral problems. A few schools reported that they would categorically exclude disabled students. Results from early voucher experiments support these qualitative findings. Peterson et al (1999a) report that only 8% of the students enrolled in the Horizon Scholarship Program in Texas were learning disabled and physically impaired, compared to 16% in the public school district. Only 1.5% of participants were physically disabled, compared to 4.5% of non-participants. Peterson et al (1999b) find similar patterns of under-enrollment in the Cleveland Scholarship program. Parents of disabled students who chose to remain in the public sector were more likely to report that programs were available to address their special needs, which echoes parents' sentiments from national public opinion polls comparing public and private schools (Sconyers 1996).

As they have been implemented, voucher programs have not been providing opportunities that are equally attractive or accessible to special education students. Of course if participation in the voucher program is contingent on serving students with disabilities according to the laws for public schools, many private schools would likely participate if disabilities were priced correctly. Moreover, if a public school district were to embrace private provision of schooling, it is likely that the courts would treat the private schools in a far different way than they are currently treated.

8. Conclusion

The additional costs, real or perceived peer influences, and the potential for discrimination and segregation of the disabled combine to make special education the most litigious and one of the most politicized areas of education in the United States. Not surprisingly, the often vague and ever-changing laws and complex financial relationships among various branches of government as well as between public and private schools create a number of tensions under the current structure of public and private schools. Expanded choice along a

²⁶ See Katsiyannis and Maag (1998) for a description and discussion of the legal history.

number of dimensions will almost certainly amplify the tensions and lead to additional changes in policy and law and also to additional litigation.

One issue that will impact the viability of equitable choice for disabled students is cost containment. Even if school finance rules get the prices right, the potential gains from expanded choice will butt up against the cost savings of designated special education programs and schools, particularly for students with severe disabilities where service provision is characterized by substantial returns to scale. It seems implausible for the government to require each and every school to accept all applicants regardless of the cost of providing services. Yet, a failure to introduce competition into the special education environment may inhibit gains in the efficiency and quality of service provision. Ultimately, the effects on students will depend on the severity of the disability and the match or mismatch between actual costs and funds provided.

As of today, the legal responsibilities of charter and private schools in the provision of a free and appropriate education for students with disabilities remain unsettled. Whether students with disabilities force charters to provide special education services or whether districts and states can satisfy the law by providing alternative arrangements remains to be seen. Private schools are exempted from special education requirements currently, however, a large-scale voucher program would no doubt threaten the current arrangement. In the extreme, a fully privatized system not required to provide special services would clearly violate the spirit if not the letter of the 1975 law.

The empirical evidence presented in this paper highlights that any effects of school choice on special education will be system-dependent. The evidence from Texas public schools presents some hopeful signs, showing that students do not appear to be self-segregating by disability status across grades, though students may be seeking preferred classifications. The evidence from the Chicago public schools is less favorable from this perspective. Open enrollment appears to be increasing student sorting according to special needs. In neither case are we able to get direct evidence on whether special education quality is improving. The degree of heterogeneity across states and localities in the types of choice programs that are offered provide a fertile ground for identifying which program characteristics are associated with positive outcomes for disabled students, as well as for other disadvantaged groups.

Appendix Table A1. Special Education Transition Rates by Grade, Disability, and Family Income

		Not Eligible For Subsidized Lunch				Eligible For Subsidized Lunch			
		Entering Grade:				Entering Grade:			
		4 (%)	5 (%)	6 (%)	7 (%)	4 (%)	5 (%)	6 (%)	7 (%)
Learning Disabled									
	not classified in either year	93.6	93.6	93.4	93.3	88.8	88.2	87.5	87.0
	classified in both years	4.9	5.6	6.0	6.0	8.5	10.2	11.6	12.0
	enters special education	1.2	0.5	0.3	0.3	2.3	1.2	0.5	0.4
	exits special education	0.3	0.3	0.4	0.5	0.4	0.4	0.5	0.6
Emotionally Disturbed									
	not classified in either year	99.4	99.4	99.3	99.2	98.8	98.7	98.5	98.2
	classified in both years	0.4	0.5	0.6	0.7	0.9	1.1	1.3	1.4
	enters special education	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1
	exits special education	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2
Physically Disabled									
	not classified in either year	99.0	98.9	98.9	98.7	99.1	99.1	99.0	98.8
	classified in both years	0.8	0.9	1.0	1.1	0.7	0.8	0.9	1.0
	enters special education	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	exits special education	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
All Disabilities									
	not classified in either year	85.6	86.8	87.7	88.6	80.1	79.4	79.2	79.5
	classified in both years	9.2	10.2	9.8	9.5	13.6	16.5	17.7	17.5
	enters special education	2.8	1.4	1.1	0.8	4.6	2.8	1.8	1.3
	exits special education	2.3	1.6	1.4	1.2	1.7	1.3	1.4	1.6

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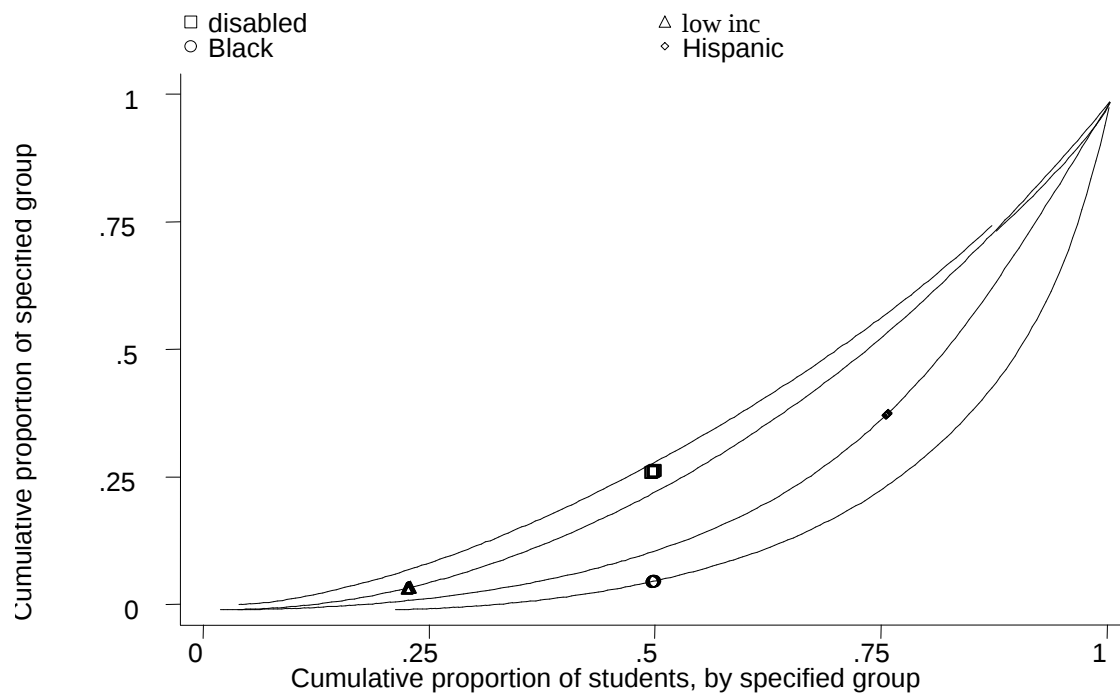


Figure 1. Third Grade School Segregation Curves

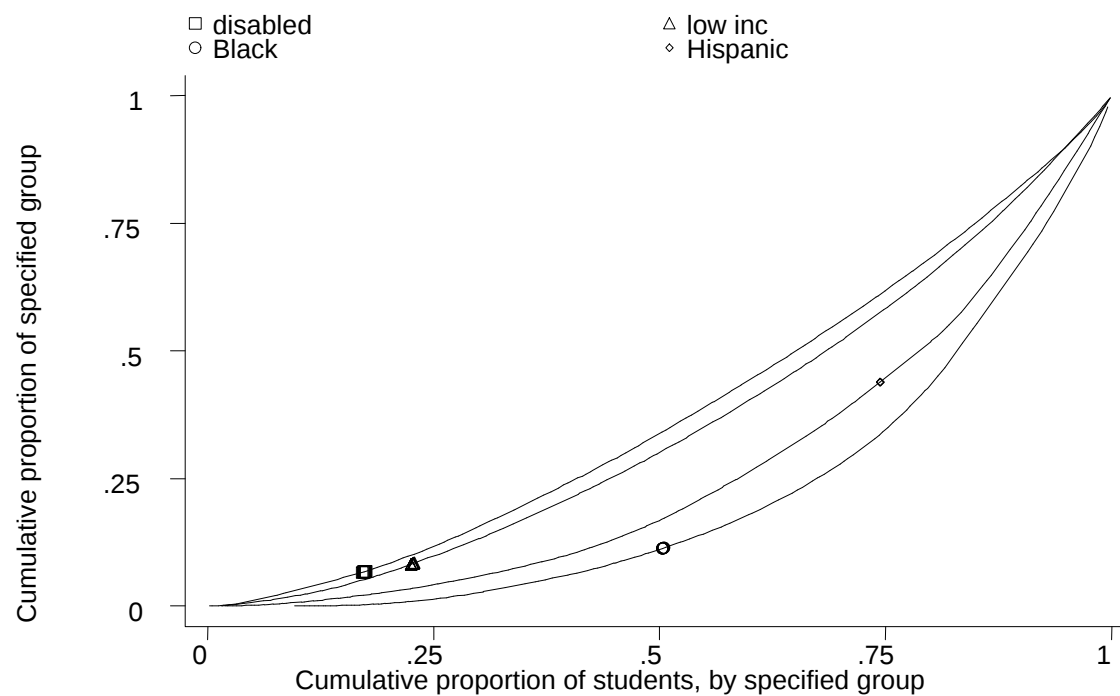


Figure 2. Third Grade District Segregation Curves

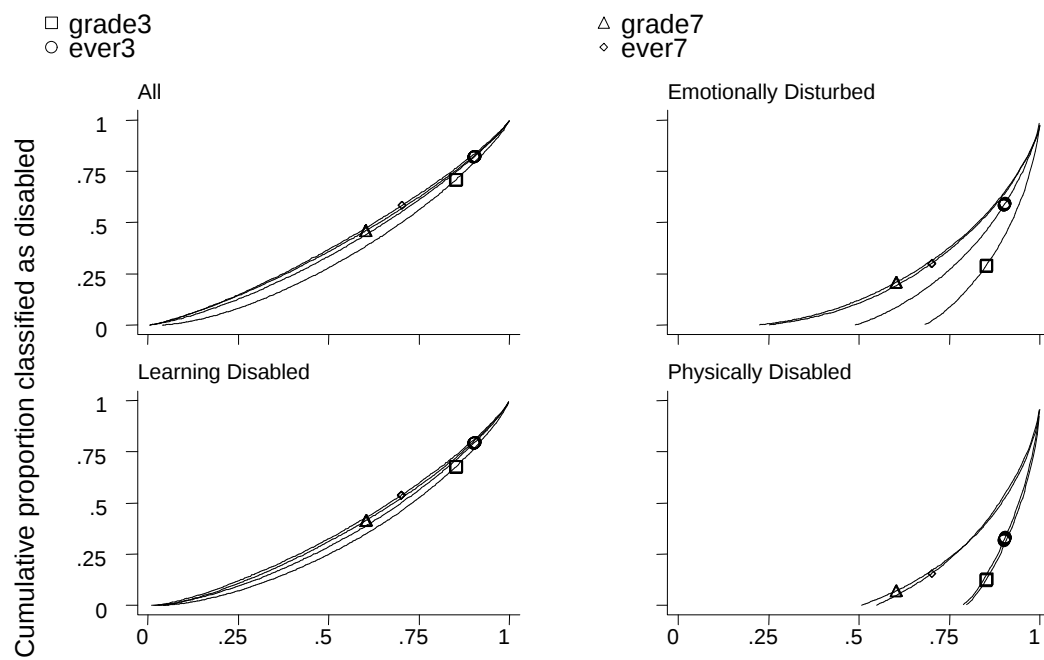


Figure 3. Special Education School Segregation Curves

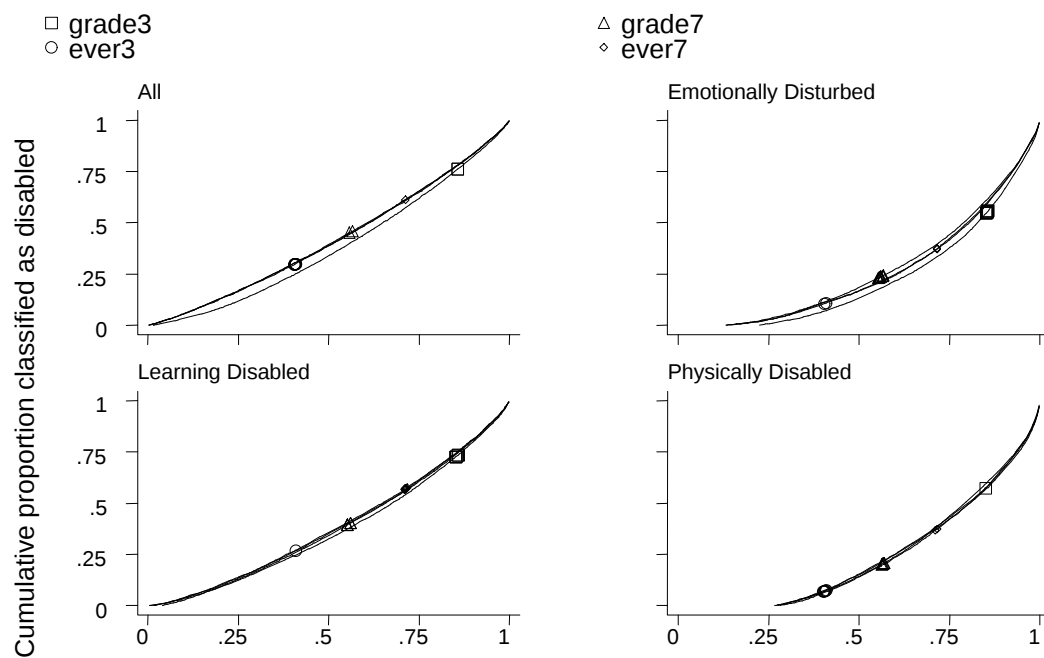
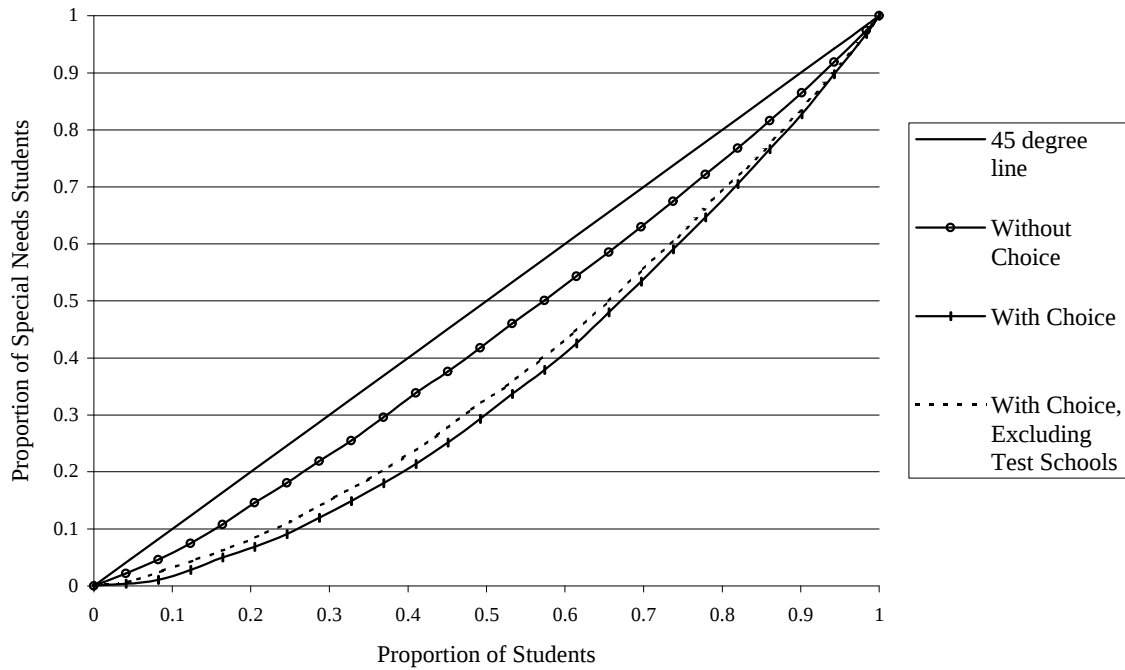


Figure 4. Special Education District Segregation Curves

Figure 5. Distribution of Special Needs Students Across High Schools Within the Chicago Public School District



Notes to Figure 5: The sample is the full sample of 24,404 students who attended a CPS school for 8th grade in the Spring of 1995 and attended a (non-special) CPS high school in the Fall of the following year, as described in the text. Special education status is based on classification in 8th grade, and the distributions are based on 9th grade school assignments and enrollments. The counterfactual with no choice calculates special education fractions given the schools to which students are assigned. The distribution labeled "with choice" is based on actual attendance patterns. We also show the distribution given actual attendance patterns, but excluding the three selective magnet schools that use achievement tests to determine admissions.

Table 1. Annual Mobility Rates by Special Education Transition for Grades 3 through 7, by Disability Type

	Special Education Transition:				number classified as disabled
	not classified in either year (%)	classified in both years (%)	enters special ed (%)	exits special ed (%)	
Learning Disabled					89,915
same school	85.4	82.5	81.6	68.7	
w/in district	7.9	9.6	10.7	8.5	
b/w district	6.0	6.7	6.4	19.6	
	99.3	98.8	98.7	96.8	
distribution of special ed transitions	90.2	8.5	0.8	0.4	
Emotionally Disturbed					9,269
same school	85.4	69.3	65.2	63.4	
w/in district	7.9	17.8	20.7	15.4	
b/w district	6.0	9.9	10.0	18.1	
	99.3	97.0	95.9	96.9	
distribution of special ed transitions	98.9	0.9	0.1	0.1	
Physically Disabled					3,027
same school	85.4	82.9	73.4	72.3	
w/in district	7.9	10.9	12.7	8.9	
b/w district	6.0	5.6	12.7	15.8	
	99.3	99.4	98.8	97.0	
distribution of special ed transitions	99.7	0.3	0.0	0.0	
All Disabilities					172,919
same school	85.4	79.6	77.2	77.0	
w/in district	7.9	11.0	12.4	8.5	
b/w district	6.0	7.8	8.6	12.6	
	99.3	98.4	98.2	98.1	
distribution of special ed transitions	82.8	13.5	2.1	1.6	

*Column totals do not add to 100% because of rounding and a small number of students who change schools more than once in a year

Table 2. Annual Mobility Rates by Special Education Transition for Grades 3 through 7, by Family Income

Special Education Transition:				
	not classified in either year (%)	classified in both years (%)	enters special ed (%)	exits special ed (%)
Eligible for Subsidized Lunch				
same school	81.8	76.6	74.0	70.8
w/in district	9.9	12.6	14.3	11.1
b/w district	7.1	8.6	9.4	15.3
	98.8	97.8	97.7	97.2
distribution of special ed transitions	79.7	16.2	2.5	1.5
Not eligible for Subsidized Lunch				
same school	90.2	86.9	85.0	85.5
w/in district	5.2	7.0	7.8	5.0
b/w district	4.4	5.6	6.4	8.9
	99.8	99.5	99.2	99.4
distribution of special ed transitions	87.4	1.6	1.5	9.5

Table 3. Change in Percent Classified as Disabled, by Special Education Transition, Mobility and Disability Type

	Special Education Transition:			
	not classified in either year (%)	classified in both years (%)	enters special ed (%)	exits special ed (%)
<i>Change in percent classified as:</i>				
Learning Disabled				
same school	0.5	0.4	2.0	-0.4
w/in district	0.4	1.1	2.2	-1.2
b/w district	0.4	0.5	1.9	-1.8
All	0.5	0.6	2.1	-0.6
Emotionally Disturbed				
same school	0.1	-0.3	0.6	-1.5
w/in district	0.0	1.5	4.3	-2.2
b/w district	0.1	-2.8	13.5	-1.8
All	0.2	-0.1	3.0	-1.7
Physically Disabled				
same school	0.0	-0.4	0.2	-0.3
w/in district	0.0	0.4	3.4	-3.0
b/w district	0.0	1.0	0.2	-6.2
All	0.0	-0.3	0.6	-1.5
All Disabilities				
same school	0.1	0.1	1.9	-0.8
w/in district	0.0	1.2	3.0	-1.9
b/w district	-0.3	-0.8	2.7	-1.8
All	0.3	0.5	2.4	-0.8

Table 4. Change in Proportion Classified as Disabled, by Special Education Transition, Mobility and Family Income

Special Education Transition:				
	not classified in either year (%)	classified in both years (%)	enters special ed (%)	exits special ed (%)
<i>Change in percent classified as disabled:</i>				
Eligible for Subsidized Lunch				
same school	0.3	0.2	2.2	-0.9
w/in district	0.3	1.4	3.1	-2.1
b/w district	-0.1	-0.8	2.9	-2.1
Not eligible for Subsidized Lunch				
same school	0.0	0.0	1.2	-0.7
w/in district	-0.6	0.2	2.6	-1.3
b/w district	-0.6	-0.8	1.9	-1.1

Table 5. Opting out of the Assigned Chicago Public School by Disability Type

	Percent of Students	Percent Opting Out of Assigned School To:			
		Any Other High School	Career Academy	High-Achieving School	Other High School
Not in Special Education in 8 th Grade	88.0	51.5	14.5	16.5	20.5
In Special Education in 8 th Grade	12.0	35.8	8.2	4.0	23.6
Learning Disabled	9.0	33.8	8.0	2.7	23.1
Emotionally/Behaviorally Disturbed	1.3	28.2	7.0	0.3	20.9
Speech/Language Impaired	0.8	52.3	12.8	12.8	26.7
All Other Disabilities	0.9	52.3	7.4	14.8	30.1

Notes to Table 5: The results are based on the cohort of students who entered a Chicago public high school in the Fall of 1995 and who attended 8th grade in the prior year. We exclude students who attended special schools, such as centers for juvenile delinquents and schools that only serve disabled students as described in the text. The total number of students in the sample is 24,404. High-achieving schools are the schools in the highest fifth in terms of average 8th-grade test scores among the entering 9th grade class. "Other" schools are high schools that are neither career academies nor high-achieving.

Table 6. State Charter School Provisions Relevant to Special Education

St.	No.	Legal Autonomy	Automatic Waiver	Enrollment Preferences	Funding	Teacher Certification
AK	17	No	No	Not permitted	100% of state and district operations funding follows students	Required
AZ	352	Yes	Yes	Not permitted	Negotiated in charter if authorized by LEA, otherwise determined by the state base support level formula	Not required
AR	0	No	No	Not addressed	Specified in charter	Required
CA	239	Yes	Yes	Not permitted	100% of state and district operations funding follows students	Required
CO	65	No	No	Not permitted	Minimum of 95% of average per pupil revenue follows the students	Required (but often waived)
CT	16	No	No	Not permitted	Specified in charter for local charters; 110% of average district per pupil revenue for state charters	50% must have regular certification
DE	5	Yes	Yes	Can screen on interest or ability	100% of state funding based on unit funding formula and 100% of home district's local per pupil expenditure in prior year follows students	Exceptions may be made
DC	31	Varies	Yes	Can screen on area of focus	100% of operations funding follows students based on D.C. per-pupil funding formula	Not required
FL	111	Yes	No	Not permitted	100% of state and district operations funding follows students	Not required
GA	32	No	Yes	Not permitted	Negotiated with sponsor district	Specified in charter
HI	2	No	Yes	Not applicable	Based on per-pupil funding	Required
ID	8	No	Yes	Not applicable	Use Idaho code to calculate funding based on support units	Required
IL	19	Yes	Yes	Not permitted	Negotiated with sponsor district, but not less than 75% or more than 125% of per capita district student tuition	Not required
KS	15	No	No	Specified in charter	Discretion of district	May grant waivers
LA	17	Varies	Yes	May screen on area interests	100% of state and district operations funding follows students if approved by LEA; 100% of average per-pupil revenue of their resident district if approved by state board	25% may be non-certified
MA	39	Varies	No	Not permitted	100% of state and district operations funding follows students (minimum of average cost per pupil across sending and receiving district)	Not always required
MI	173	Yes	No	Not permitted	100% of state and district operations funding (up to a cap)	Required
MN	59	Yes	Yes	Not permitted	Average state per-pupil operations funding revenue follows student (district portion is lost)	Required
MS	1	No	Yes	Not permitted	Not addressed	Required
MO	18	Yes	Yes	Can limit based on age/grade	100% of state and district operations funding and proportionate share of state and federal special education funds follows students	Up to 20% may be non-certified
NV	5	No	No	Not permitted	100% of per pupil funding	70% must be

						licensed
NH	0	Yes	Yes	May screen on aptitude if related to mission	Minimum of 80% of district's prior year average cost per pupil and any special education funding follows students	50% must be certified
NJ	48	Yes	No	Can use reasonable criteria	90% of the lesser of state and district operations funding or the state-mandated minimum	Required
NM	3	No	No	Not permitted	Minimum of 98% of state and district operations funding follows students	Required
NY	5	Yes	Yes	Not permitted	Formula results in about 2/3 of traditional school's funding	30% may be non-certified
NC	75	Yes	Yes	Not permitted	100% of state and district operations funding and special needs funding follows the student	Up to 50% may be uncertified
OH	48	Yes	Yes	Can limit enrollment to at-risk students	Formula for that county plus the cost of doing business plus any special need money	Alternative certification is available
OK	0	No	No	Not permitted	At least 95% of average daily expenditure	Specified in charter
OR	4	Varies	Yes	Not permitted	At least 80% of district's average daily expenditure for K-8 and 95% for 9-12 (90% for K-8 if through state)	50% must be licensed
PA	47	Varies	Yes	Can screen based area of focus or other reasonable criteria	Average prior year per-pupil budgeted expenditure and special needs funding follows students; can apply for transitional state grants if a student has a budgetary impact	Up to 25% may be uncertified
RI	2	No	No	May use academic standards [†]	100% of state and district operations funding follow students	Required
SC	8	Varies	Yes	Not permitted	100% of state and district operations funding follows students	Up to 25% may be uncertified
TX	167	Varies	Yes	No enrollment preferences	Negotiated if is district-approved; 100% of state and district operations funding if state-approved	Not required
UT	3	No	No	Not permitted	On average 75% of per pupil funding follows the child, qualified students receive all their federal monies	May have alternative certification
VA	0	No	No	Not permitted	Treated as public school with fees negotiated	Required
WI	55	Yes	Yes	Can use at-risk criteria	Negotiated with sponsor district	Special licenses available
WY	0	No	No	Cannot be based only on ability	Negotiated with sponsor district	Required

Notes to Table 5: The source for this information is the Center for Education Reform's Charter school legislation profiles [www.edreform.com/charter_schools/laws]. The second column shows the number of charter schools in operation as of Spring 2000. The third column indicates whether charters are legally autonomous. The fourth column indicates whether charters receive an automatic waiver from most state education laws, regulations, and policies. The remaining columns describe policies related to enrollment decisions, funding, and teacher certification.

[†]The combined fraction special needs, LEP, and free-lunch must equal the fraction in the district.