

Is School Choice Equitable? Enrollment of Students with Disabilities in Public Charter Schools  
versus Traditional Public Schools

Sarah Hofgesang

University Honors

Dr. Seth Gershenson, Department of Public Administration and Policy

Spring 2013

**Abstract**

Due to the rapid expansion of charter schools as popular education reforms, charter schools are the focus of extensive research into their effectiveness in improving student outcomes; however, the research question of who benefits from enrollment in charter schools has received less attention. Case studies provide evidence that some charter schools purposefully exclude students with disabilities from enrollment in violation of the Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA). However, the existing literature has not demonstrated that charter schools systematically violate IDEA, Section 504, and ADA. This study uses data from the 1998-99 through 2010-11 Common Core of Data of the National Center for Education Statistics at the U.S. Department of Education and multiple regression analysis to test whether public charter schools enroll disproportionately fewer students with disabilities than do traditional public schools. Results show that public charter schools enroll lower percentages of students with disabilities than do traditional public schools, but this effect is a result of student demographic characteristics. Schools that enroll higher percentages of minority students enroll disproportionately fewer students with disabilities. This indicates a need for further investigation of public charter school enrollment practices.

## 1. Introduction

In the United States, public education is essential for the provision of an educated citizenry capable of participation in representative democracy and the market economy. Because educational attainment has implications for political influence and economic mobility (Checchi, 2006), the achievement gap between students with low socioeconomic status and high socioeconomic status is of particular concern. Politicians, community activists, and the media cite education reform as a potential solution to the achievement gap, as inequities in access to quality public education may contribute to it. Though this assertion is subject to debate, there is evidence that elements of school quality are associated with the racial and socioeconomic composition of the school population. Schools with high minority populations and higher populations of students living in poverty are likely to have teachers with fewer years of experience and less content knowledge than schools with low minority populations and lower populations of students living in poverty (Corcoran & Evans, 2008). Some researchers have speculated that the concentration of minority students in high poverty schools contributes to the black-white achievement gap (Berends & Peñaloza, 2008).

The creation of charter schools is a popular education reform, premised on a “market approach to education,” in which competition between charter and traditional public schools promotes innovation and increases student achievement (Viteritti, Walberg, & Wolf, 2005, 138). Charter schools operate with public funds and are held accountable to the public via the renewal or revocation of their charters, yet they have considerable operational flexibility. The National Center for Education Statistics reports that 1.6 million students are currently enrolled in charter schools in forty states and the District of Columbia (U.S. Department of Education, 2012). Due

to this rapid expansion, charter schools are the focus of extensive research into their effectiveness in improving student outcomes.

Who benefits from enrollment in charter schools is a related research question. Case studies provide evidence that some charter schools purposefully exclude students with disabilities from enrollment (Bordelon, 2010; Estes, 2003). These practices, as well as failure to provide adequate special education services to students with disabilities, violate the Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA). Charter schools must comply with these federal laws because they are treated as local educational agencies (LEAs) in matters of legal compliance. Though case studies provide evidence of non-compliance, the existing scholarship has not demonstrated that charter schools systematically violate IDEA, Section 504, and ADA. This study investigates whether or not charter schools enroll disproportionately lower percentages of students with Individualized Education Plans (IEPs) than do traditional public schools in the United States using district-level panel data from the 1998-99 through 2010-11 school years.

Should this be the case, instances in which charter schools exclude students with disabilities from enrollment are not isolated but indicate a need for public policy to address the systematic exclusion of students with disabilities from charter schools. Results of the ordinary least squares regression analysis show that certain characteristics of charter schools, such as enrollment of relatively high percentages of minority students and enrollment of relatively high percentages of students eligible for free and reduced price lunch, are more determinative of enrollment of students with IEPs than simply schools' classification as charter schools. Charter schools enroll fewer students with IEPs than do traditional public schools, on average, although

this difference is almost entirely driven by demographic differences in the respective student bodies. This indicates a need for further evaluation of charter school enrollment practices.

This study begins with an overview of the institutional details of charter schools in Section 2, including a brief history of charter schools and descriptions of IDEA, Section 504, and ADA. Section 3 provides a literature review, comprised of evidence of charter schools' violation of IDEA, Section 504, and ADA in Section 3.1 and research on the impact of charter schools on student outcomes in Section 3.2. Section 4 is the data analysis, including data source, method, and hypothesis. Section 5 describes results, and Section 6 is the conclusion.

## **2. Institutional Details**

### **2.1 History of Charter School Legislation**

Charter school legislation is premised on a “market approach to education” first articulated in 1955 in Milton Friedman’s *The Role of Government in Education* (Viteritti, Walberg, & Wolf, 2005, 138). Competition between traditional public schools and public charter schools over student enrollment and public per pupil funding tied to student enrollment could encourage traditional public schools to improve in order to retain students (Imberman, 2011; Viteritti et al., 2005). In 1991, the Minnesota state legislature passed the first charter school law in the United States, which gave local education agencies (LEAs) authority to issue contracts to other entities that could operate alternative public schools (Bulkley & Fisler, 2003). Because LEAs had no administrative control of these alternative public schools, the contracts specified a period of time after which LEAs reviewed the performance of the charter schools and either renewed or revoked the contracts (Bulkley & Fisler, 2003).

The market approach to education proved persuasive to state legislatures, and by the end of the decade, thirty-five states had passed similar charter school legislation (Shober, Manna, & Witte, 2006). Forty states and the District of Columbia now have charter school laws in place (U.S. Department of Education, National Center for Education Statistics, 2012).<sup>1</sup>

State legislatures adapted charter school legislation to better reach their targets for the type and quantity of charter schools. Two illustrative cases are charter school laws in Wisconsin and Louisiana. In 1993, the Wisconsin state legislature passed a law that allowed ten school districts to each authorize two charter schools, which would result in a maximum of twenty charter schools in the state (Shober et al., 2006). Two years later, it passed another law to increase the number of charter schools in the state (Shober et al., 2006). In 1997, in response to Milwaukee Public Schools' resistance to authorize charter schools, the Wisconsin state legislature passed another law that allowed the city of Milwaukee and public universities to authorize charter schools (Shober et al., 2006). Legislation expanding the number of charter school authorizers increased the prevalence of charter schools in Wisconsin, accomplishing the state's goal.

Louisiana seized control of charter school authorization from the Orleans Parish School District (OPSD) after Hurricane Katrina (Garda, 2011). Because OPSD struggled to reopen public schools in the aftermath of Hurricane Katrina, in September and October of 2005, Governor Kathleen Blanco issued executive orders designed to facilitate the opening of charter schools in New Orleans (Garda, 2011). These executive orders eliminated requirements for faculty and parent consent and minimum timelines in the conversion of public schools to charter

---

<sup>1</sup> The state legislatures of Alabama, Kentucky, Maine, Montana, Nebraska, North Dakota, South Dakota, Vermont, Washington, and West Virginia have not passed charter school laws (U.S. Department of Education, National Center for Education Statistics, 2012).

schools (Garda, 2011). Further, the Louisiana state legislature passed Act 35, which authorized the state to assume control of public schools with performance scores below the state average from school districts in “academic crisis” (Garda, 2011). The state took control of one hundred seven OPSD schools (Garda, 2011). As a result, the state became the sole determinant of whether or not these public schools would be converted to charter schools. Charter school laws are thus subject to adaptation when state legislatures modify targets for the type and quantity of charter schools in their respective states.

## **2.2 Charter School Definition and Function**

Because charter school legislation was passed at the state level, there is no comprehensive or universal definition of charter schools. State legislatures determined the terms by which charter schools could be authorized and operated. Charter school authorizers included state boards, state departments of education, LEAs, and public entities such as cities and universities (Vergari, 2001, 131-132). As exemplified in Wisconsin, which public entities were chosen to authorize charter schools, or to issue and enforce the contracts with charter school operators, influenced the type and quantity of charter schools created. For example, LEAs and public school districts are often hostile to charter school reform; LEAs and public school districts can lose public per pupil funding when students exit their schools for charter schools, and oftentimes LEA and public school district administrators believe charter schools overburden their budgets and personnel and consume resources that could be used for other reform initiatives (Vergari, 2001). When LEAs and public school districts are the only entities permitted to authorize charter schools, it is likely that few or no charter schools will be authorized (Vergari, 2001).

In addition to determining the type and quantity of charter schools, charter school authorizers hold charter school operators accountable to the public (Vergari, 2001). Since charter schools are publicly financed, it is important that a public entity monitor their operation. Charter school authorizers decide whether to renew or revoke charters, which serves as the primary accountability mechanism (Vergari, 2001). Typically, authorizers determine their own review process, which may involve a hearing by a board or a more informal procedure (Vergari, 2001). To reach this decision, a charter school authorizer is expected to review whether or not the charter school has met the operation and performance standards written in its charter and has complied with applicable laws and regulations (Vergari, 2001). The charter may include provisions and standards related to governance, curriculum, student achievement, fiscal management, personnel, transportation, and food services (Vergari, 2001). The terms of the charter are determined during the charter application process, and different charter school authorizers will have different priorities for the charter terms (Vergari, 2001).

Beyond the scope of charter school authorizers and state laws, there are few other mechanisms by which the state can control charter schools. The philosophy on which charter schools are premised, a “market approach to education” (Viteritti et al., 2005, 138), requires accountability and flexibility in practice (Shober et al., 2006). As noted above, accountability is achieved through charter school authorizers’ issue, renewal, and revocation of charters. Flexibility facilitates competition between traditional public schools and charter schools, as it allows charter schools to implement more innovative educational practices and potentially achieve better student outcomes as a result (Preston, Goldring, Berends, & Cannata, 2012). Since traditional public schools compete with charter schools for student enrollment and public per pupil funding, this competition incentivizes traditional public schools to improve their



performance in relation to charter schools (Imberman, 2011). This, in turn, should result in rising educational standards and outcomes; however, there is evidence that the presence of charter schools in geographic proximity to traditional public schools does not predict higher student standardized test scores or implementation of innovative educational practices in those traditional public schools (Imberman, 2011; Preston et al., 2012). To create an educational market of traditional public schools and charter schools, states grant greater flexibility and freedom from regulation to charter schools.

Though charter schools are not subject to some of the state regulations to which traditional public schools are subject, they are treated as “one-school LEAs” in matters of compliance with federal law (Garda, 2012, 665). This includes compliance with adequate yearly progress (AYP)<sup>2</sup> dictated by the No Child Left Behind (NCLB) Act (Shober et al., 2006). Congress passed NCLB in 2002, establishing a national test-based accountability system of penalties for states’ and LEAs’ failure to meet student performance criteria, or AYP, on standardized tests (Hanushek, 2009). The federal government has also introduced programs to increase the prevalence of charter schools. For traditional public schools that consistently do not meet AYP, NCLB acknowledges that the LEA of which a school is a part may convert the school to a charter school to try to improve student achievement on standardized tests (Shober et al., 2006). NCLB further standardized a definition for charter schools while affirming that they are subject to federal law, including the Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA) (Lawton, 2009).

---

<sup>2</sup> State education agencies determine AYP as part of their timelines for groups of students, specified in NCLB, to meet proficiency standards on standardized tests by the 2013-14 school year (20 USC 6301 §1111 (b)(2)).

### **2.3 Federal Disability Law Related to Public Education**

State charter school legislation, state special education statutes, and federal disability law dictate how public charter schools must provide special education and related services to their enrolled students (Lange et al., 2008). Federal disability law, specifically the Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA), is applicable to public charter schools since they are treated as local educational agencies (LEAs) in matters of legal compliance (Garda, 2012). While public charter schools may be excused from state regulations, all public charter schools must comply with federal disability law (Rhim et al., 2007).

The U.S. Congress passed the first iteration of the IDEA in 1975 (Glick, 2005). Since then, the IDEA has been amended several times, with its most recent reauthorization in 2004 (Glick, 2005). The IDEA is premised on a system in which state education agencies receive funding from the federal government specifically for educating students with disabilities (Swanson, 2004). State education agencies must ensure compliance with the IDEA if they accept the funds; all fifty states and the District of Columbia accept these funds, so they must comply with the IDEA (Swanson, 2004). The 2004 reauthorization of the IDEA states that “children with disabilities who attend public charter schools and their parents retain all rights under this [law]” (34 CFR §300.2(a)).

The IDEA entitles students with disabilities to free and appropriate public education in the least restrictive environment, which implies a continuum between a self-contained classroom for students with disabilities and the general education classroom (Bordelon, 2010). Generally, effective classroom instruction for students with disabilities should be the principal outcome of the IDEA when it is effectively implemented (Bordelon, 2010). An important provision of the

IDEA is the individualized education plan (IEP) to which students with disabilities are entitled. The IEP is a detailed description of the special education and related services the student needs and is formulated by school special education staff, the student's parent(s), and other specialists (Heubert, 1997). The IDEA outlines the specific procedures, timelines, and methods of written documentation according to which the IEP must be formed (Heubert, 1997). Once the IEP is finalized, the school must provide the student with the special education and related services outlined in the IEP.

While the IDEA has increased the provision of special education and related services to students with disabilities, a primary outcome of the IDEA is litigation between LEAs and parents of students with disabilities over the formulation of the IEP (Boeckman, 1998). The IDEA does not outline any standards or guidelines for this litigation, and court decisions vary widely in their findings (Boeckman, 1998). Still, the IDEA serves as an important guarantee of educational rights for students with disabilities.

Section 504 prohibits discrimination of any individual who has a physical or mental impairment that substantially limits one or more major life activities (Bordelon, 2010). This definition of disability is more expansive than the definition used in the IDEA, and many students are eligible for Section 504 Plans who are not eligible for IEPs (Bordelon, 2010). Section 504 Plans differ from IEPs in that they outline accommodations to which students with disabilities are entitled, but these accommodations may not include special education (Heubert, 1997). Like the IDEA, Section 504 mandates compliance from recipients of federal funding (Heubert, 1997).

In 1990, Congress passed the ADA, which reiterates Section 504 and in some sections uses verbatim text from Section 504 (Colker, 2002). New regulations in the ADA apply

primarily to employment of individuals with disabilities and accessibility in the private sector (Colker, 2002). In relation to education, the ADA specifies “affording students with disabilities an unequal opportunity to participate in or benefit from covered programs and activities” is considered discrimination (28 CFR §35.130(b)(1)(ii)). This is applicable to magnet schools and schools that offer choices of different curricula or pedagogy more generally (Heubert, 1997). In 2008, Congress amended the ADA to add new student eligibility criteria, including thinking, concentrating, and sleeping as major life activities with which disabilities can interfere (Zirkel, 2009). This amendment has clarified the inclusion of psychological disorders such as Attention Deficit Hyperactivity Disorder (ADHD) as disabilities under the ADA (Zirkel, 2009).

### **3. Literature Review**

#### **3.1 Charter School Violation of Federal Disability Law**

There is evidence that public charter schools violate the IDEA, Section 504, and the ADA in their application processes, the practice of “counseling out” students with disabilities, and the ability to expel students with disabilities who violate student codes of conduct. Some researchers attribute these practices to the difficulty some public charter schools have with acquiring the resources needed to provide students with disabilities with special education and related services since they typically operate independently and cannot take advantage of the institutional knowledge and capacity to which traditional public schools have access (Lange et al., 2008, 14).

Public charter schools sometimes use application processes to determine student enrollment. They are typically afforded permission to do so since public charter schools can have specialized academic or operational focuses, such as Montessori curriculum, that are meant to serve specific students (Garda, 2012). It is possible that application processes screen out students

with disabilities as a class of students, which is prohibited by the ADA clause against “categorical exclusions” of individuals from “all services, programs, and activities provided or made available by public entities” (Heubert, 1997, 336; 28 CFR §35.102(a)). In some instances, complicated application procedures make it difficult for parents to enroll their children with disabilities in public charter schools (Swanson, 2004). For example, the state of Massachusetts does not require public charter schools to enroll students who have severe disabilities that require most of the students’ instructional time be spent outside the general education classroom (Zollers & Ramanathan, 1998). This is an exclusion of students with severe disabilities as a class from public charter schools.

Public charter schools may engage in “counseling out” students with disabilities to convince parents whose children won enrollment in the schools via lottery to withdraw from the schools. Explanations used for “counseling out” typically include that the school does not have adequate services or resources, that the student would not be well served by the curriculum, or that the traditional public school could better provide special education and related services to the student (Garda, 2012). In a case study, some Texas public charter school administrators acknowledge that their schools have family orientations in which they tell parents what services they are not able to provide to students with disabilities (Estes, 2003). Regardless of the school’s resources, the IDEA is clear that schools must provide the special education and related services noted in students’ IEPs (Garda, 2012). In New Orleans, Recovery School District employees confirm some public charter schools practice “counseling out” (Bordelon, 2010). According to these employees, in many instances, public charter school administrators will tell parents that the school does not have any staff members with the capacity to provide special education and related services to the student (Bordelon, 2010). There is also some quantitative data that implies

public charter schools are “counseling out” students with disabilities who have severe disabilities and who are more expensive to provide free and appropriate public education in the least restrictive environment. In a study of enrollment of students with disabilities in Arizona public charter schools, traditional public schools were significantly more likely to enroll students with more severe disabilities who needed more expensive educational services (Garcy, 2011). Public charter schools were significantly less likely to enroll these high-need students (Garcy, 2011).

It is likely there is little investigation of “counseling out” because state officials assume parents are not choosing to enroll their children with more significant disabilities in charter schools since they are satisfied with the services their children receive in current public schools (Rhim & McLaughlin, 2001). Other researchers assert that parents of children with disabilities are likely to want to take advantage of the choices available in charter schools (Ahearn, 2001). There are a few cases in which charter contracts have been revoked because of evidence of “counseling out,” meaning this practice is beginning to be addressed (Swanson, 2004).

Since in many cases public charter schools are able to expel students who then must enroll in their local, traditional public schools, there is concern that some public charter schools use this ability to exclude students with disabilities (Garda, 2012; Swanson, 2004). The Texas Education Code allows public charter schools to expel students who have documented histories of “discipline problems,” even when these students have disabilities such as emotional and behavioral disorders (Estes, 2003, 219). Arguably, this facilitates the exclusion of a class of students from public charter schools when these students would otherwise be afforded special education and related services in compliance with their IEPs.

Another issue is whether or not public charter schools have explicit requirements to outline their provision of special education and related services to students with disabilities

during the charter application process. In a survey of state directors of special education and state charter school officials, researchers found few officials agreed that the authorization process includes outlining specific plans for delivering special education to students or that the renewal process includes reviewing special education implementation (Lange et al., 2008). In a review of state charter school legislation, researchers found charter school laws in twenty-nine states do not require review of plans for the provision of special education and related services during the charter application process (Rhim et al., 2007). Without intentionally including special education in their charter applications, public charter schools dismiss their responsibility to educate students with disabilities.

### **3.2 Charter Schools' Impact on Student Outcomes**

If charter schools do have a positive impact on student outcomes, including academic achievement and student behavior, then it is important that students with disabilities not be systematically excluded from enrollment in charter schools. There is some evidence that charter schools have mixed effects on student outcomes; some studies show that charter schools have a positive impact on student outcomes whereas other studies show that charter schools have a statistically insignificant or negative impact on student outcomes (Loeb, Valant, & Kasman, 2011; Zimmer & Buddin, 2006; Zimmer, Gill, Booker, Lavertu, & Witte, 2012). In research on the student outcomes in particular charter schools, there is more evidence that students glean real benefits from attending charter schools.

In one study, charter school attendance improved student discipline and attendance, but attendance did not improve student standardized test scores (Imberman, 2011). For students who returned to traditional public schools after having attended charter schools, they lost any

improvement in discipline and attendance (Imberman, 2011). In relation to academic performance, another study found that charter schools improve students' standardized test scores in both middle and high schools (Abdulkadiroglu, Angrist, Dynarski, Kane, & Pathak, 2011). Charter school practices are likely responsible for these improvements; there are differences in charter school performance depending upon their models, and one class of charter schools seems to show the most robust improvements in student academic achievement (Buddin & Zimmer, 2005).

Charter schools that have extended instructional time, focus on human capital development among teachers, offer tutoring, use data to drive instruction, and have a culture of high expectations exhibit improved academic achievement among students (Fryer, 2011). The Harlem Children's Zone, a network of community programs and charter schools in New York City, implements these practices (Dobbie & Fryer, 2011). Its charter schools have demonstrated academic gains large enough to close the black-white achievement gap in math and reading at the elementary level and to close the black-white achievement gap in math at the middle school level (Dobbie & Fryer, 2011). Another charter school network that operates schools across the country, the Knowledge is Power Program (KIPP), shows similar results. For example, KIPP Lynn in Massachusetts improves student standardized test scores in both math and reading (Angrist, Dynarski, Kane, Pathak, & Walters, 2010). A subsequent study found that most of these academic gains were among limited English proficiency, special education, and low-achieving students enrolled in KIPP Lynn (Angrist, Dynarski, Kane, Pathak, & Walters, 2012). This provides evidence that charter schools have the potential to profoundly benefit students with disabilities.



Evidence that school choice as a reform effort improves student outcomes is more varied. In one study, students attending Chicago Public Schools who chose to attend high schools different from their geographically assigned schools were more likely to graduate high school than were students who attended their assigned schools (Cullen, Jacob, & Levitt, 2005). However, whether this effect was due to school or student characteristics is unclear (Cullen et al., 2005). In Texas, there is evidence that the competition created by school choice improved students outcomes. The presence of charter schools in geographic proximity to traditional public schools was associated with improved standardized test scores in math and reading for students who attended traditional public schools (Booker, Gilpatric, Gronberg, & Jansen, 2008). In California, another study found that the presence of charter schools was not associated with improvement in standardized test scores for traditional public school students (Zimmer & Buddin, 2009).

Even so, there is evidence that when charter school practices are adopted in traditional public schools, it improves student academic outcomes. In Houston, Texas, nine low-performing traditional public schools that adopted the charter schools practices of extended instructional time, a focus on human capital development among teachers, tutoring, using data to drive instruction, and a culture of high expectations exhibited improvements in student standardized test scores similar in magnitude to those found in the Harlem Children's Zone and KIPP schools (Fryer, 2011). With increasing evidence that charter schools improve student outcomes, it is important that students with disabilities have access to enrollment in these schools.

## 4. Study Design

### 4.1 Data

The data analyzed in this paper are from the Common Core of Data (CCD) of the National Center for Education Statistics at the U.S. Department of Education. This data source is publicly available.<sup>3</sup> The sample is made up of school district-level data for fifty states and the District of Columbia from the 1998-99 school year through the 2010-11 school year. School districts are categorized as containing public charter schools or traditional public schools. Because public charter schools are organizationally represented as their own local educational agencies (LEAs), they are included in school district-level data.

Table 1 shows descriptive statistics for the proportion of students with Individualized Education Plans (IEPs), Asian students, Hispanic or Latino students, black or African American students, and students who are eligible for free and reduced price lunch as well as the school districts' expenditures per student. Public charter school districts are approximately eight percent of the sample, and of total school districts in the sample, approximately nine percent are located in urban areas and approximately 52 percent are located in rural areas.

Figure 1 shows the trend in enrollment of students with IEPs in public charter schools and traditional public schools for school years 1998-99 through 2010-11. In comparison to traditional public schools, public charter schools enroll lower percentages of students with IEPs for all years, but this disparity narrows after 2004.

---

<sup>3</sup> <http://nces.ed.gov/ccd/elsi/>

## 4.2 Methodology

To determine whether public charter schools enroll disproportionately lower percentages of students with Individualized Education Plans (IEPs) than do traditional public schools, this paper uses ordinary least squares regression to estimate the following regression equation:

$$IEP_{it} = \alpha Charter_{it} + \beta_{it} X_{it} + \varepsilon_{it}$$

where  $IEP_{it}$  is the proportion of students with IEPs enrolled in  $i$  district during  $t$  year.  $Charter_{it}$  is a dummy variable equal to one if  $i$  district is a public charter school district.  $X_{it}$  represents a vector of control variables including proportions of minority students and students who qualify for free and reduced price lunch, school districts' expenditures per student, and school districts' location in rural or urban areas.  $\varepsilon_{it}$  is the error term. To make statistical inference robust to within-district serial correlation and arbitrary heteroskedasticity, standard errors are clustered by school district.  $\alpha$  is the parameter of interest. It indicates by how many units the percentage of students with IEPs enrolled in a school district changes when the school district is a public charter school district as opposed to a traditional public school district and control variables are fixed.

The following regression equation is also estimated:

$$IEP_{it} = \alpha Charter_{it} + \beta_{it} X_{it} + \theta_{it}^s + \varepsilon_{it}$$

to control for state fixed effects. State fixed effects,  $\theta_{it}^s$ , control for time-invariant state-level education policies that may jointly predict IEP classification rates and the proliferation of charter schools.

## 5. Results

Table 2 shows the results of the ordinary least squares regression analysis of enrollment of students with Individualized Education Plans (IEPs) in charter schools. Before adding control variables, the preliminary regression in Column 1 shows that on average, charter schools enroll 1.79 percent fewer students with IEPs than do traditional public schools. The coefficient is statistically significant at the  $p < 0.01$  level. Though the magnitude of this effect appears small, the mean proportion of students with IEPs enrolled in schools in the sample is 15.35 percent. When compared to the mean, the coefficient has an about 12 percent effect size. However, including control variables in the regression analysis eliminates this effect.

Column 2 shows the regression analysis with control variables. These control variables appear to have a greater effect on the enrollment of students with IEPs than does whether or not a school is a charter school or a traditional public school. Schools with higher proportions of Asian, Latino, and African American students have fewer students with IEPs. Coefficients for each of these variables are statistically significant at the  $p < 0.01$  level. Because the magnitude and statistical significance of the effect of charter schools is effectively eliminated when these demographic control variables are introduced, charter schools appear to be more likely than traditional public schools to enroll high proportions of minority students. Schools with higher proportions of students eligible for free and reduced price lunch are statistically significantly more likely to have higher proportions of students with IEPs. Schools in rural districts are estimated to have about one percent fewer students with IEPs enrolled, statistically significant at the  $p < 0.01$  level, and schools in urban districts are estimated to have about one percent more students with IEPs enrolled, statistically significant at the  $p < 0.05$  level. The coefficient for the

total expenditures per student variable is also statistically significant, but it is small enough to not have much effect on enrollment of students with IEPs.

Column 3 shows the regression analysis with control variables and charter school-year interaction variables. There is no discernible pattern in the magnitude or statistical significance of the coefficients for the charter school-year interaction variables. Fluctuations in the growth of charter schools over time could account for these results. Column 4 introduces state fixed effects to the regression analysis to control for state differences in the prevalence of charter schools and other factors that vary by state.

The results of the regression analysis with state fixed effects do not differ from the results of the regression analyses in Columns 2 and 3 with respect to the magnitude and statistical significance of the control variable coefficients. The coefficients are slightly smaller, but the effects of the proportion of minority students and of the proportion of students eligible for free and reduced price lunch are the same. Schools with higher proportions of Asian, Latino, and African American students are estimated to have lower proportions of students with IEPs while schools with higher proportions of students eligible for free and reduced price lunch are estimated to have higher proportions of students with IEPs.

## **6. Conclusion**

Ordinary least square regression analysis of data from the Common Core of Data (CCD) of the National Center for Education Statistics at the U.S. Department of Education for the 1998-99 through 2010-11 school years suggests that public charter schools enroll disproportionately fewer students with Individualized Education Plans (IEPs) than do traditional public schools, but this effect is largely the result of relatively higher percentages of Asian, Hispanic or Latino, and

African American or black students enrolled in public charter schools. If student demographics are responsible for the magnitude and statistical significance of this effect, the student enrollment practices of public charter schools are implicated in the possible explanations for the effect.

Because minority students are historically disproportionately more likely than white students to be diagnosed with disabilities and placed in special education categories, it could be expected that schools with higher percentages of minority students would also have higher percentages of students with IEPs (Artiles, Kozleski, Trent, Osher, & Ortiz, 2010; Shifrer, Muller, & Callahan, 2011). However, there is evidence that within disability diagnoses, such as emotional disturbance, mild and moderate mental retardation, learning disabilities, and speech and language disabilities, minority students are more likely to be placed in more restrictive educational environments outside the general education classroom (Skiba, Poloni-Staudinger, Gallini, Simmons, & Feggins-Azziz, 2006). It could be the case that public charter schools with higher percentages of minority students deny enrollment to minority students with IEPs, effectively restricting their access to the general education classroom environment most public charter schools maintain. Accusations that public charter schools that enroll higher percentages of minority students “skim” the most academically proficient students from traditional public schools support this scenario (Baldwin, 2003; Simon, 2013).

Because student demographics are closely tied to student enrollment, the results of this study indicate that the student enrollment practices of public charter schools may be responsible for the disproportionately lower enrollment of students with IEPs in public charter schools than in traditional public schools. Case studies confirm that some public charter schools exclude students with disabilities through application processes and “counseling out” and expelling students, and the regression analysis implies that public charter schools systematically exclude

students with disabilities from enrollment. These practices violate the Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA). Because violation may be widespread and is arguably a consequence of the leeway public charter schools have in student enrollment and specialization of their academic programs, public charter schools must be given more scrutiny to ensure they comply with the IDEA, Section 504, and the ADA.

As schools that operate independently of the traditional public school system, public charter schools are still held accountable to the public through either renewal or revocation of their charters by charter school authorizers. State standardization of the charter review process could potentially ensure that student enrollment practices in public charter schools are reviewed with regard to ensuring equitable access for students with disabilities. Explicit requirements for public charter schools to outline their provision of special education to students with disabilities could further help ensure that public charter schools provide services to which students with disabilities are lawfully entitled. Because there is evidence that public charter schools enroll disproportionately fewer students with disabilities than do traditional public schools and may systematically exclude students with disabilities from enrollment, more rigorous statistical analyses are warranted to further investigate these enrollment patterns, and specific mechanisms must be put in place to monitor whether public charter schools are fulfilling their legal obligations to students with disabilities.

### References

- Abdulkadiroglu, A., Angrist, J. D., Dynarski, S. M., Kane, T. J., & Pathak, P. A. (2011). Accountability and flexibility in public schools: Evidence from Boston's charters and pilots. *The Quarterly Journal of Economics*, 126, 699-748.
- Ahearn, E. M. (2001). Public charter schools and students with disabilities. *ERIC Digest*.
- Angrist, J. D., Dynarski, S. M., Kane, T. J., Pathak, P. A., & Walters, C. R. (2012). Who benefits from KIPP? *Journal of Policy Analysis and Management*, 31(4), 837-860.
- Angrist, J. D., Dynarski, S. M., Kane, T. J., Pathak, P. A., & Walters, C. R. (2010). Inputs and impacts in charter schools: KIPP Lynn. *The American Economic Review*, 100(2), 239-243.
- Artiles, A. J., Kozleski, E. B., Trent, S. C., Osher, D., & Ortiz, A. (2010). Justifying and explaining disproportionality, 1968-2008: A critique of underlying views of culture. *Exceptional Children*, 76(3), 279-299.
- Baldwin, W. (2003). Reading, writing, and cream-skimming. *Forbes*, 172(10), 26.
- Berends, M. & Peñaloza, R. V. (2008). Changes in families, schools, and the test score gap. In K. Magnuson & J. Waldfogel (Eds.). *Steady Gains and Stalled Progress: Inequality and the Black-White Test Score Gap* (66-109). New York, NY: Russell Sage Foundation.
- Boeckman, L. L. (1998). Bestowing the key to public education: The effects of judicial determinations of the Individuals with Disabilities Education Act on disabled and nondisabled students. *Drake Law Review*, 46(4), 855-880.
- Booker, K., Gilpatric, S. M., Gronberg, T., & Jansen, D. (2008). The effect of charter schools on traditional public school students in Texas: Are children who stay behind left behind? *Journal of Urban Economics*, 64, 123-145.



- Bordelon, S. J. (2010). Making the grade? A report card on special education, New Orleans charter schools, and the Louisiana charter schools law. *Loyola Journal of Public Interest Law*, 11, 441-468.
- Buddin, R. & Zimmer, R. (2005). Student achievement in charter schools: A complex picture. *Journal of Policy Analysis and Management*, 24(2), 351-371.
- Bulkley, K. & Fisler, J. (2003). A decade of charter schools: From theory to practice. *Educational Policy*, 17(3), 317-342.
- Checchi, D. (2006). *The Economics of Education: Human Capital, Family Background, and Inequality*. New York, NY: Cambridge University Press.
- Colker, R. (2002). The death of Section 504. *University of Michigan Journal of Law Reform*, 35, 219-234.
- Corcoran, S. P. & Evans, W. N. (2008). The role of inequality in teacher quality. In K. Magnuson & J. Waldfogel (Eds.). *Steady Gains and Stalled Progress: Inequality and the Black-White Test Score Gap* (212-249). New York, NY: Russell Sage Foundation.
- Cullen, J. B., Jacob, B. A., & Levitt, S. D. (2005). The impact of school choice on student outcomes: An analysis of the Chicago Public Schools. *Journal of Public Economics*, 89, 729-760.
- Dobbie, W. & Fryer, R. G. Jr. (2011). Are high-quality schools enough to increase achievement among the poor? Evidence from the Harlem Children's Zone. *American Economic Journal: Applied Economics*, 3, 158-187.
- Estes, M. B. (2003). Zero reject and school choice: Students with disabilities in Texas' charter schools. *Leadership and Policy in Schools*, 2(3), 213-235.

- Fierros, E. G. & Blomberg, N. A. (2005). Restrictiveness and race in special education placements in for-profit and non-profit charter schools in California. *Learning Disabilities: A Contemporary Journal*, 3(1), 1-16.
- Fryer, R. G. Jr. (2011). Injecting successful charter school strategies into traditional public schools: Early results from an experiment in Houston. *National Bureau of Economic Research*.
- Garcy, A. M. (2011). High expense: Disability severity and charter school attendance in Arizona. *Education Policy Analysis Archives*, 19(6), 1-26.
- Garda, R. A. Jr. (2012). Culture clash: Special education in charter schools. *North Carolina Law Review*, 90, 655-718.
- Garda, R. A. Jr. (2011). The politics of education reform: Lessons from New Orleans. *Journal of Law and Education*, 40(1), 57-103.
- Glick, D. B. (2005). Statutory spotlight: Individuals with Disabilities Education Act 2004. *UC Davis Journal of Juvenile Law & Policy*, 9, 439-444.
- Hanushek, E. A. (2009). Building on No Child Left Behind. *Science*, 326(5954), 802-803.
- Heubert, J. P. (1997). Schools without rules? Charter schools, federal disability law, and the paradoxes of deregulation. *Harvard Civil Rights-Civil Liberties Law Review*, 32(2), 301-353.
- Imberman, S. A. (2011). Achievement and behavior in charter schools: Drawing a more complete picture. *The Review of Economics and Statistics*, 93(2), 416-435.
- Imberman, S. A. (2011). The effect of charter schools on achievement and behavior of public school students. *Journal of Public Economics*, 95, 850-863.

- Lange, C. M., Rhim, L. M., & Ahearn, E. M. (2008). Special education in charter schools: The view from state education agencies. *Journal of Special Education Leadership*, 21(1), 12-21.
- Lawton, S. B. (2009). Effective charter schools and charter school systems. *Planning and Changing*, 40, 35-60.
- Loeb, S., Valant, J., & Kasman, M. (2011). Increasing choice in the market for schools: Recent reforms and their effects on student achievement. *National Tax Journal*, 64(1), 141-164.
- Preston, C., Goldring, E., Berends, M., & Cannata, M. (2012). School innovation in district context: Comparing traditional public schools and charter schools. *Economics of Education Review*, 31, 318-330.
- Rhim, L. M., Ahearn, E. M., & Lange, C. M. (2007). Charter school statutes and special education: Policy answers or policy ambiguity? *The Journal of Special Education*, 41(1), 50-63.
- Rhim, L. M. & McLaughlin, M. J. (2001). Special education in American charter schools: State level policy, practices and tensions. *Cambridge Journal of Education*, 31(3), 373-383.
- Shifrer, D., Muller, C., & Callahan, R. (2011). Disproportionality and learning disabilities: Parsing apart race, socioeconomic status, and language. *Journal of Learning Disabilities*, 44, 246-257.
- Shober, A. F., Manna, P., & Witte, J. F. (2006). Flexibility meets accountability: State charter school laws and their influence on the formation of charter schools in the United States. *The Policy Studies Journal*, 34(4), 563-587.
- Simon, S. (2013). Class struggle: How charter schools get students they want. *Reuters*.

- Skiba, R. J., Poloni-Staudinger, L., Gallini, S., Simmons, A. B., & Feggins-Azziz, R. (2006). Disparate access: The disproportionality of African American students with disabilities across educational environments. *Exceptional Children*, 72(4), 411-424.
- Swanson, E. A. (2004). Special education services in charter schools. *The Educational Forum*, 69(1), 34-43.
- U.S. Department of Education, National Center for Education Statistics. (2012). *The Condition of Education 2012*.
- Vergari, S. (2001). Charter school authorizers: Public agents for holding charter schools accountable. *Education and Urban Society*, 33(2), 129-140.
- Viteritti, J. P., Walberg, H. J., & Wolf, P. J. (2005). School choice: How an abstract idea became a political reality. *Brookings Papers on Education Policy*, 8, 137-173.
- Zimmer, R. & Buddin, R. (2009). Is charter school competition in California improving the performance traditional public schools? *Public Administration Review*, 69(5), 831-845.
- Zimmer, R. & Buddin, R. (2006). Charter school performance in two large urban districts. *Journal of Urban Economics*, 60, 307-326.
- Zimmer, R., Gill, B., Booker, K., Lavertu, S., & Witte, J. (2012). Examining charter student achievement effects across seven states. *Economics of Education Review*, 31, 213-224.
- Zirkel, P. A. (2009). What does the law say? New Section 504 student eligibility standards. *Teaching Exceptional Children*, 41(4), 68-71.
- Zollers, N. J. & Ramanathan, A. K. (1998). For-profit charter schools and students with disabilities: The sordid side of the business of schooling. *Phi Delta Kappan*, 79, 297-304.

**Appendix**

Table 1. Descriptive Statistics for Variables of Interest

Variable	Mean	SD
Proportion Students with IEPs	0.15	0.81
Proportion Asian Students	0.02	0.04
Proportion Hispanic/Latino Students	0.10	0.19
Proportion African American/Black Students	0.09	0.20
Proportion Free Lunch Eligible	0.30	0.21
Total Expenditures per Student	10,077.11	6,436.55
Observations	152,633	

Figure 1. Enrollment of Students with IEPs

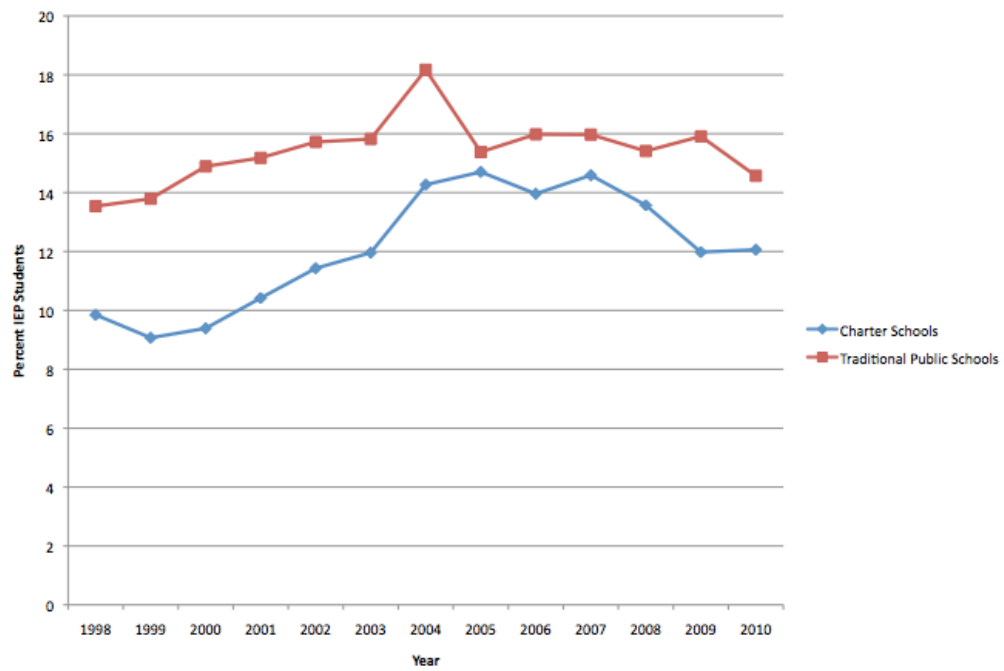


Table 2. Proportion Students with IEPs Regressions

Variables	1	2	3	4
	Proportion IEP	Proportion IEP	Proportion IEP	Proportion IEP
Charter Schools	-0.0179*** (0.00403)	0.0005 (0.00522)	-0.00576 (0.00471)	0.00368 (0.0115)
Proportion Asian		-0.140*** (0.0197)	-0.145*** (0.0197)	-0.132*** (0.0206)
Proportion Hispanic/Latino		-0.0688*** (0.00536)	-0.0678*** (0.00531)	-0.0657*** (0.00933)
Proportion African American/Black		-0.0485*** (0.00495)	-0.0464*** (0.00491)	-0.0429*** (0.013)
Proportion Free Lunch Eligible		0.0620*** (0.00496)	0.0589*** (0.00482)	0.0578** (0.027)
Total Expenditures per Student		6.49e-06*** (1.13E-06)	6.34e-06*** (1.03E-06)	6.53e-06** (3.19E-06)
Urban District		0.00712** (0.00335)	0.00724** (0.0034)	0.00688 (0.00804)
Rural District		-0.00835*** (0.00276)	-0.00805*** (0.00272)	-0.00902** (0.00418)
1998	0.00343*** (0.000686)	0.00163* (0.000863)		
1999	0.00117 (0.00109)	-0.00416** (0.00165)		
2000	0.0133*** (0.0013)	0.00643*** (0.00222)		
2001	0.0154*** (0.00155)	0.00525* (0.00311)		
2002	0.0197*** (0.00138)	0.00615* (0.0033)		
2003	0.0189*** (0.00147)	0.00533 (0.00339)		
2004	0.0228*** (0.00149)	0.00686* (0.00376)		
2005	0.0277*** (0.0083)	0.00583 (0.00989)		
2006	0.0226*** (0.00164)	-0.00266 (0.00523)		
2007	0.0182*** (0.00149)	-0.00872 (0.00544)		

	1	2	3	4
Variables	Proportion IEP	Proportion IEP	Proportion IEP	Proportion IEP
2008	0.0163*** (0.00148)	-0.0188*** (0.00707)		
1998*Charter			-0.0334** (0.016)	-0.0335 (0.0229)
1999*Charter			-0.0716*** (0.0193)	-0.0606*** (0.0171)
2000*Charter			-0.0109 (0.00741)	-0.00173 (0.0188)
2001*Charter			-0.0101* (0.00604)	-0.00697 (0.0174)
2002*Charter			0.00358 (0.00561)	0.0029 (0.0175)
2003*Charter			-0.00029 (0.00497)	-0.00128 (0.0133)
2004*Charter			0.0225*** (0.00478)	0.0227** (0.0115)
2005*Charter			0.0266*** (0.00384)	0.0281** (0.0125)
2006*Charter			0.0143*** (0.00332)	0.0156** (0.00781)
2007*Charter			-0.00366 (0.00545)	-0.000735 (0.0124)
2008*Charter			0 (0)	0 (0)
Clustered by district	Yes	Yes	Yes	No
State fixed effects	No	No	No	Yes
Constant	0.129*** (0.00151)	0.0764*** (0.00849)	0.0789*** (0.0103)	0.0777*** (0.0261)
Observations	152,633	152,633	152,633	152,623
R-squared	0.001	0.018	0.018	

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1