

PROJECT INTERSECT:

STUDYING SPECIAL EDUCATION IN CHARTER SCHOOLS

Research Report #5: Access and Accountability
for Students With Disabilities in California
Charter Schools
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Lauren Morando Rhim, University of Maryland
Jennifer Faulkner, California Department of Education, Division of Special Education
Margaret J. McLaughlin, University of Maryland

Institute for the Study of Exceptional Children and Youth
University of Maryland, College Park
1220 E. Benjamin Building
College Park, MD 20742-1161

(301)405-6494
www.education.umd.edu/EDSP/Projectintersect

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This document is one of a series of research reports developed by Project Intersect. Based at the University of Maryland, College Park, Project Intersect examined special education in the charter school sector and, specifically, documented how charter schools build capacity to educate students with disabilities. The project was directed by Margaret J. McLaughlin and Lauren Morando Rhim.

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ABSTRACT

Fifteen years ago charter schools were a new and radical concept. Today, they are part of the public education system in all but 10 states. Yet, little quantifiable information is available regarding to what degree students with disabilities enroll in charter schools, what services they receive, and what outcomes they achieve. This paper presents findings from a study of student enrollment, service provision, and outcome data from California charter schools operating during the 2003–2004 academic year. The study reveals that these charter schools enrolled a smaller proportion of students with disabilities and fewer students with severe disabilities than traditional public schools did. Charter schools educated their students with disabilities primarily in general education classrooms, and with some exceptions, these students received services comparable to those received by similar students in traditional schools. The population of students studied also posted similar or better outcomes than their peers in traditional public schools did, but important questions remain regarding inferences that may be drawn from this finding.

EXECUTIVE SUMMARY

Charter schools are public schools that are funded by tax dollars and must offer open enrollment policies. Furthermore, they must operate within the parameters of state charter school statutes and federal statutes such as the No Child Left Behind Act (NCLB) and the Individuals with Disabilities Education Act (IDEA). IDEA dictates that students with disabilities who qualify for services are guaranteed a free and appropriate public education (FAPE) in the least restrictive environment (LRE). This statute is based on the notion that a public education is a civil right for students with disabilities.

Fifteen years ago charter schools were a new and radical concept. Today, they are part of the public education system in all but 10 states. Yet, little quantifiable information is available regarding to what degree students with disabilities enroll in charter schools, what services they receive, and what outcomes they achieve. This paper presents findings from a study of student enrollment, service provision, and outcome data from California charter schools operating during the 2003–2004 academic year.¹

Multiple general and special education databases created by the California Department of Education (CDE) are the sources of data. California was selected to be studied because (1) the state has a large charter sector that provides sample sizes large enough for analyses and (2) it maintains an extensive database on students with disabilities.

Key Findings

In aggregate, our analyses documented that charter schools differ from traditional public schools on multiple school, student, and performance indicators. Of note, we found that students with disabilities are opting to enroll in charter schools, but when grouped by disability type, the proportions of students enrolling differ notably. In particular, charter schools are educating more students with specific learning disabilities (61% compared to 55%) and fewer students with mental retardation (2% compared to 6%). Possibly due in part to this enrollment pattern, charter schools typically serve their students with disabilities in the general education classroom more of the time than traditional schools do, with 71% of charter students placed in those

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¹ This report is based on a paper presented at the Annual Meeting of the American Educational Research Association, April 7–11, 2006, San Francisco, California.

classrooms at least 80% of the day, compared to 50% of their peers in traditional schools.

While charter schools are enrolling children who have what are characterized as low-incidence disabilities (i.e., deaf-blind, traumatic brain injury, hard of hearing, deaf, visual impairment, orthopedic impairment, and multiple disabilities) that frequently require more intensive services, they are not educating as many students in what are characterized as more restrictive settings (i.e., homebound/hospital, residential public or private, separate day private, correctional facilities, or private school placements made by parents). It is unclear whether this finding reflects a change in where students are receiving their special education services or whether charter schools are attracting more students who can succeed in the general education classroom environment. Furthermore, these findings do not provide material insight into whether students with disabilities are receiving adequate support services to succeed in the general education classroom.

Our analyses of special education and related services documented that during the 2003–2004 school year, charter schools provided a variety of services to students with disabilities, with notably more students in these schools being provided individual and small-group instruction, assistive technology, and resource specialist services. The findings regarding assistive technology may be skewed by data from the independent-study charter schools that rely upon computer technology to deliver their curricula. While these schools may be providing assistive technology through use of computers, computers in and of themselves do not necessarily constitute assistive technology specific to the needs of students with disabilities.

Within the total population of students with disabilities enrolled in both traditional and charter public schools, few are achieving desired levels of proficiency in English or mathematics. In charter schools, a slightly larger proportion of these students are achieving academic proficiency compared to their peers in traditional public schools, with the difference more noteworthy in English than in mathematics (in fact, the difference in math scores is arguably too small to matter). The data do not provide insight into whether test scores reflect growth or a higher baseline, and the difference in the size of the two populations raises questions regarding the reliability of the score differentials noted, particularly in the smaller disability-type subgroups. Nevertheless, given previous findings regarding the levels of proficiency of the general education population (i.e., students in charter schools in California scored the same as or below their peers in traditional public schools), these findings raise questions that need to be explored using growth models that can

isolate student and school characteristics and track a cohort of students over multiple years.

Conclusions

The defining bargain of charter schools is autonomy in exchange for accountability. State charter statutes establish the parameters of that autonomy, which subsequently defines the degree that charter schools function outside of the traditional public school sphere. Yet, charter schools are required to abide by all federal laws, including those pertaining to students with disabilities. Our analyses of student enrollment, service provision, and outcome data document how a distinct group of charter schools in a single state address their obligation as public schools to offer open enrollment; including enrollment of students with disabilities. Given the current emphasis on market-based reforms such as charter schools and privatization embedded in NCLB, documenting how charter schools educate students with disabilities—arguably a key public policy challenge in need of thoughtful solutions—contributes to a more sophisticated discussion of the merits of charter schools. Our analyses of special education in California charter schools simultaneously underscores the need for further analyses to determine (1) the reasons why fewer students with disabilities are opting to enroll in charter schools than in traditional schools and (2) the factors that account for these students' academic performance.

Given the current emphasis on market-based reforms such as charter schools and privatization embedded in NCLB, documenting how charter schools educate students with disabilities—arguably a key public policy challenge in need of thoughtful solutions—contributes to a more sophisticated discussion of the merits of charter schools.

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INTRODUCTION

Fifteen years ago charter schools were considered a new and radical departure from traditional public schools.² Today, they are part of the public education system in all but 10 states. Charter schools aim to infuse competition and accountability into the nation's public education systems. The theory underlying charters is that once granted autonomy from district bureaucracy while simultaneously held accountable through renewable contracts, charter schools will increase student achievement. Based on this premise, charter schools are one of multiple restructuring options embedded in the No Child Left Behind Act (NCLB) and as a result, their numbers will likely continue to grow in the foreseeable future.

Charter schools are public schools funded by tax dollars and must offer open enrollment policies. Furthermore, they must operate within the parameters of state charter school statutes and federal statutes such as the NCLB and the Individuals with Disabilities Education Act (IDEA). IDEA dictates that students with disabilities who qualify for services are guaranteed a free and appropriate public education (FAPE) in the least restrictive environment (LRE). This statute is based on the notion that a public education is a civil right for students with disabilities.

Both policy makers and practitioners are struggling to develop coherent policies and practices related to special education in the charter sector (Heubert, 1997; Rhim, Lange, & Ahearn, in press). Much of the conversation about special education in the charter sector is based on anecdotes and outliers. Little quantifiable information exists regarding the degree to which students with disabilities are enrolling in charter schools, what services they are receiving, and what academic outcomes they are achieving. This paper presents findings from an analysis of student enrollment, service provision, and outcome data from charter schools operating in California during the 2003–2004 academic year. Multiple general and special education databases created by the CDE are the sources of data. California was selected to be studied because the state has a large charter sector that provides sample sizes large enough for analyses and it also maintains an extensive database on students with disabilities.

Charter schools are public schools funded by tax dollars and must offer open enrollment policies.

Documenting special education enrollment and service provision trends in charter schools and analyzing student outcomes is critical to advancing the public discussion about the potential of charter schools to expand opportunities within the public sector for all students.

² For the purposes of this analysis, public schools that are not charter schools are referred to as *traditional* or *non-charter* schools.

Analytic Perspective

A growing body of research examines the current status of the evolving charter sector in the 40 states and the District of Columbia that have operating charter schools (cf. Anderson et al., 2002; Finnigan et al., 2004; Lake & Hill, 2005; Nelson et al., 2000). Effort has been expended to document trends related to governance, general enrollment trends, and how students enrolled in charter schools perform relative to their peers enrolled in traditional public schools (Hassel, 2005; Nelson, Rosenberg, & Van Meter, 2004). Yet, relatively little attention has focused on the degree to which students with disabilities are accessing charter schools, whether they are supported in these schools, or how they are performing once enrolled.

The perspective guiding this research is that a study documenting special education enrollment and service provision trends in charter schools and analyzing student outcomes is critical to advancing the public discussion about the potential of charter schools to expand opportunities within the public sector for all students. An in-depth examination of special education trends in a single state informs the public discussion about chartering as a meaningful reform. The degree that charter schools are accessible and structured for students with disabilities is arguably one of multiple indicators of the extent to which these schools are fulfilling their fundamentally public mission.

An emergent body of research reveals concerns regarding access and special education service provision in charter schools. Charter schools have been under the microscope about whether they are a viable option for students with disabilities and the degree to which students may be counseled away from charter schools (Guarino & Chau, 2003; Fiore, Harwell, Blackorby & Finnigan, 2000; McLaughlin & Henderson, 1998; Miron & Nelson, 2002). McKinney's (1996) early survey of charter schools in Arizona found that those schools enrolled a disproportionately small number of students with disabilities relative to national enrollment trends and that charter operators regularly counseled students with disabilities away from their schools primarily due to fears about the costs of educating these students. A national study commissioned by the U.S. Department of Education (USDE) found that charter schools regularly discouraged students with disabilities from enrolling in the schools out of concern about the focus of the curriculum or instruction and the child's unique educational needs (Fiore et al., 2000).

A recent analysis of 19 states with charter schools conducted by the Center for Reinventing Public Education found that 10.8% of all students in charter schools are identified as eligible for special education, whereas the national average is 13.4% (Lake & Hill, 2005). Miron and Nelson's (2002) study of

Michigan charter schools found that they enrolled a smaller proportion of students with disabilities and that most students with disabilities who did enroll in charter schools were identified as having mild disabilities (i.e., speech and language impaired and specific learning disabilities).

Case studies of multiple states documented that charter schools frequently struggle to understand their roles and responsibilities as they relate to special education and to amass the capacity required to provide special education and related services to students with disabilities (Ahearn, Lange, Rhim, & McLaughlin, 2001). The study also documented that special education is frequently an afterthought in the development of charter schools and that most schools examined in the seven states reported serving children with disabilities in general education classrooms, although the degree that the students received adequate support in this setting was somewhat ambiguous.

We know that the mechanics of providing special education can be difficult for charter schools and in some instances, students with disabilities are not enrolling in charter schools to the same degree as they are in traditional public schools (Ahearn et al., 2001). However, a comprehensive analysis of the degree that students with specific disabilities are accessing and/or receiving services or succeeding in charter schools has not yet been conducted.

The purpose of this research study was to compare charter schools in California to traditional public schools in the state according to special education (1) enrollment, (2) educational settings, (3) services, and (4) academic outcomes measured on state assessments in English and mathematics. Ideally, these types of analyses would be conducted using a growth model that would document students' academic performance prior to enrolling in the charter school relative to their performance after a specific period of time (e.g., one to three years). However, data and resource limitations restricted the analyses to a descriptive examination of the state program data regarding enrollment, educational setting, service provision, and outcome patterns for students with disabilities enrolled in charter and non-charter public schools in California during the 2003–2004 academic year. While limited in terms of informing the broader debate regarding the academic merits of charter schools individually or collectively, the study examines an aspect of charter schools that has previously been limited to anecdotal accounts and speculation. Of particular note, our study examines enrollment by specific disability type as opposed to an aggregate group of all students with disabilities.

This report describes the policy context in which special education is delivered in charter schools in California, describes the study's research methodology, presents a profile of California charter schools compared to non-charter public schools for the 2003–2004 school year enrolling students in

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kindergarten through 12th grade, and presents a comprehensive examination of secondary data maintained by the CDE pertaining to special education student enrollment, education setting, service provision, and academic outcomes.

California Charter School Policy Context

Special education in California charter schools represents the intersection of two distinct policy contexts—the California charter school movement and California special education policies and procedures.

California Charter Schools

The California charter statute, adopted in 1992, stipulates that charter schools may be granted by one of three entities: local education agencies (LEAs), county offices of education, or the state board of education. To date, most charter schools have been granted by LEAs. California's first charter school opened in 1992, and by the 2003–2004 academic year, a total of 450 charter schools were operating in the state.³ Charter schools offer a variety of grade configurations including but not limited to the traditional elementary, middle, and high school. Schools that offer K–8 or K–12 configurations are also popular among charter schools in California.

Charter schools in California may be either new start-ups or conversion schools. A new start-up is a school that did not exist prior to its founders submitting an application to operate a charter school. A conversion charter school is a school that operated as a traditional public school prior to electing to convert to charter status. California has an unusually large proportion of conversion schools among its charters, approximately 30% (Zimmer et al., 2003). Conversion status is relevant because research has documented that conversion schools experience fewer challenges in the early years of operation than new start-ups do (Finn, Manno, & Vanourek, 2000; Zimmer et al., 2003). When applied to special education, conversion schools presumably enjoy the benefit of a stable student population and an already established system for meeting special education requirements. In contrast, charter schools that are new start-ups need to recruit students and create a system of service to support children with disabilities, including understanding what their responsibilities are related to IDEA.

California is also unusual due to the prevalence of independent-study charter schools, which may be either new start-ups or conversion types. An independent-study charter school does not require students to attend classes in a

³ As of spring 2005, 410 of those 450 continue to operate, 30 have closed, 9 have had their charter revoked, and 1 has become inactive. In addition, many new charter schools have opened.

designated school building, and students are not under the direct supervision or control of a qualified teaching employee for at least 80% of their instructional day (Zimmer et al., 2003). Students enrolled in independent-study charter schools receive their instruction from parents (i.e., the home-schooling model), computer-based instruction, teacher-directed distance learning, or limited site-based models, or students are taught through a combination of these approaches (Guarino, 2005). According to data published on the CDE charter school website, approximately 30% of all California charter schools are considered independent-study schools (CDE, 2005a).

Independent-study charter schools are required to comply with specific procedures and provide documentation to certify that their students participate in state testing programs (CDE, 2005a). It is not clear how many students with disabilities are opting to enroll in independent-study charter schools or to what degree these schools can provide students with a full range of special education services.

Regardless of whether they are new start-ups, conversion schools, and/or independent-study schools, the California charter statute allows charter schools to choose whether to be part of an LEA or to operate as their own LEA. This decision determines a charter school's legal status (i.e., operating as its own district or as part of a district) and has notable policy implications related to special education (Heubert, 1997). The IDEA assigns responsibility for providing FAPE in the LRE to states, and states in turn assign this responsibility to local districts. Charter schools that are their own local districts are responsible for providing special education and related services. Charter schools that are part of a local district share this responsibility with their chartering agency and can access services from the multiple schools that comprise the district.

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California has had charter schools for 14 years. Charter schools in the state enjoy the benefit of a relatively sophisticated advocacy community and a network of established technical assistance providers. Whereas other states have relatively young or small charter school sectors, California's charter school sector is notably large and established (Smith, 2003; Zimmer et al., 2003).

Special Education in California Public Schools

During the 2003–2004 school year, approximately 6.3 million children in California were enrolled in 9,222 schools distributed among approximately 1,059 school districts; just over 10% of these students were identified as having a disability that qualified them to receive special education services (CDE, 2005b; 2006). Special education programs and services in California are

dictated by federal laws and state statutes that represent the state's interpretation of the federal laws.

Specifically, the education of children with disabilities is subject to three federal laws, the 2004 IDEA, Section 504 of the 1973 Rehabilitation Act, and Title II of the Americans With Disabilities Act of 1990 (ADA). The IDEA is the primary federal policy that defines which individuals can be considered eligible for special education. It also establishes specific entitlements, including the right to a FAPE to be defined through an Individualized Education Program (IEP). Section 504 and the ADA are antidiscrimination laws that guarantee children with disabilities access to education and entitle them to reasonable accommodations within the schools to allow them such access. Among individual states, a great deal of variability exists in the interpretation of federal special education policies, including the criteria used to identify students as eligible to receive additional specialized services.

During the 2003–2004 school year, approximately 6.3 million children in California were enrolled in 9,222 schools distributed among approximately 1,059 school districts: just over 10% of these students were identified as having a disability that qualified them to receive special education services.

California provides special education services to students with disabilities through a continuum of placement options in a variety of settings ranging from general education classrooms to highly specialized programs collectively aimed at providing students with disabilities specially designed instruction in the least restrictive environment (CDE, 2004a). Administratively, special education in California is organized under regional administrative units referred to as Special Education Local Plan Areas (SELPA). SELPAs are agencies that coordinate special education programs and services within a geographic region and can be comprised of single or multiple districts. Historically, SELPAs were created to allow districts to develop a comprehensive plan for special education incorporating regional or countywide agencies as well as public school districts, to receive and distribute funds among their member districts, and to provide administrative support.

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There are currently 120 SELPAs operating in the state; 32 are comprised of a single LEA member (e.g., the San Diego School District). Each SELPA is required to develop and maintain a local plan that outlines how members in the SELPA will comply with federal and state special education rules and regulations. The California Education Code contains extensive requirements related to the operation of SELPAs and the content of their local plan (Education Code, Part 30, Sec. 56200–56208). Every charter school in California must be part of a SELPA structure and can operate either as part of a district or as an independent LEA for the purposes of special education and funding within this structure. Because SELPA membership is a local function, the state does not currently maintain data regarding the total number of charter schools that operate as LEAs for the purposes of special education and funding.

In California, both federal and state special education funding flows from the state to the county and local education offices through a designated administrative unit. These units are identified in the SELPA local plan.⁴ All LEAs and county education offices are required to be members of a SELPA.

The CDE Special Education Division collects data through the California Special Education Management Information System (CASEMIS) about the state's population of special education students. All local educational agencies in the state providing special education services to students with disabilities report required data to CDE through their local SELPA, which has statutory requirements to collect, monitor, and disseminate data.

Special Education in California Charter Schools: Research to Date

Special education has been documented to be a challenge for charter schools, and the data on special education in California charter schools reflect this national trend. Key issues of concern in the literature have been whether students with disabilities are enrolling in charter schools and where charter schools are educating students with disabilities.

An analysis of 17 charter schools in California conducted by University of California, Los Angeles researchers found notable variability in the reported enrollment of students with disabilities. During the 1997–1998 school year, 7 of the 17 (41%) schools examined reported that they did not enroll any students with disabilities, and for the 10 schools that did report enrolling such students, the percentage of students with disabilities ranged from 1% to 10%, with a mean across all 17 schools of 3.5% (Wells, 1998).

A case study of special education in California charter schools conducted in the late 1990s documented that charter schools frequently struggle to hire required specialized personnel and that special education services are frequently provided by LEA personnel assigned to the charter schools. The case study documented that many charter schools are educating students with disabilities primarily in general education classroom settings. Some schools reported that they struggled to meet the special needs of students with disabilities in the context of their mission and philosophy (Ahearn et al., 2001).

A comprehensive analysis of California charter schools conducted by RAND Corporation in 2002 found that the percentage of students with disabilities identified in charter schools was smaller than that in traditional public schools (Zimmer et al., 2003). Based on a survey of charter school principals, RAND reported that 7.6% of all students enrolled in charter schools included in their sample were identified as having a disability and had an IEP. The RAND survey

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⁴ In California, an administrative unit is typically a county office of education or the district office of one of the SELPA members.

of a comparable sample of traditional public schools found that 8.9% of the students in the traditional public schools were identified as having a disability and had an IEP (Guarino & Chau, 2003). The difference in enrollment of students with disabilities in charter versus traditional public schools did not reach statistical significance unless the two charter schools that were designed primarily to educate students with disabilities were excluded from the calculation.

When asked to report the number of students with severe disabilities, the principals in the RAND sample reported that 1.3% of the total student population in charter schools and 1.1% of the total student population in traditional public schools were identified as severely disabled.⁵ This difference was not found to be statistically significant. Conversion charter schools were found to be educating more students with disabilities than were new start-ups (10.4% versus 5.5%) and more students identified as having a severe disability (2.3% versus 0.4%), and these differences were statistically significant. The researchers suggested that the differences could be attributed to the fact that conversion charter schools give preference to students who were enrolled in the school prior to conversion and as a result, these schools are more likely to reflect the traditional public school population.

In addition to the survey questions regarding enrollment, the RAND study asked principals to report data regarding the degree that students with disabilities are being educated in general education classrooms. Educating students with disabilities in general education classrooms with the appropriate supports as outlined in their IEP is referred to as *inclusion*. However, inclusion is not simply a matter of where a child is being educated but rather, the degree that the placement enables the child with a disability to adequately access and progress in the general education curriculum alongside his or her nondisabled peers (Vitello & Mithaug, 1998).

The RAND study documented that charter schools are serving more students with disabilities exclusively in general education classrooms than traditional public schools are, and also found that the difference was statistically significant (38.5% versus 19.3%) (Guarino & Chau, 2003). When education settings were analyzed for students with disabilities in start-up versus conversion schools, the study found that start-up charter schools are serving more students in general education classrooms than conversion charter schools are (63.8% versus 20.7%). Furthermore, the study documented that size of a charter school

⁵ RAND researchers defined *severely disabled* as students who had severe autism, deaf-blindness, severe developmental delay, severe emotional disturbance, severe hearing impairment or deafness, severe mental retardation, multiple disabilities, severe orthopedic impairment, traumatic brain injury, or severe visual impairments or blindness (Guarino & Chau, 2003, p. 163).

negatively correlated with inclusive practices in that the larger schools educated a greater proportion of students in pullout programs than smaller charter schools did. These findings do not provide insight about whether students with disabilities educated in the general education classrooms received adequate supports, only that they were being educated a greater proportion of the time in the general education classroom.

The RAND study could not confirm the reason for the differences according to size or type of charter school but the research team speculated that small or new start-up charter schools may educate more children with disabilities in general education classrooms due to financial or facility-related limitations or a philosophical commitment to what they believe to be inclusion. A potentially plausible alternative explanation is that the charter schools may simply enroll fewer children with disabilities and consequently, lack the critical mass necessary to hire or designate a teacher for the group of students who require services in a separate setting. Another factor that the RAND researchers considered was the motivation of parents who choose charter schools. Specifically, parents may elect to enroll their child with a disability in a charter school explicitly for the purpose of shedding a special education label or seeking a more inclusive educational setting (Guarino & Chau, 2003).

Finally, the RAND team asked principals to provide information regarding including students with disabilities in state assessments. Principals reported that in both traditional and charter public schools, approximately 75% to 85% of the students with disabilities were taking the statewide assessment; no significant difference between the two types of schools was documented.

The limited research to date on special education in the California charter schools indicates that students with disabilities do not appear to be enrolling in charter schools at the same rate as their nondisabled peers. However, the literature is limited and does not provide adequate insight regarding statewide trends or provide information regarding what types of services are being provided or the academic outcomes of students with disabilities who are enrolled in charter schools. The review of the literature regarding special education in charter schools in California illustrates the considerable need for more comprehensive analyses of this topic both in California and nationwide.

The review of the literature regarding special education in charter schools in California illustrates the considerable need for more comprehensive analyses of this topic both in California and nationwide.

METHODOLOGY

This inquiry extends and expands upon previous research, notably RAND Corporation’s study (Guarino & Chau, 2003) and the multiple case studies of special education in charter schools conducted by

The value of the analyses is to identify current practices of a specific cohort of charter schools in order to advance the level of discussion of issues related to the provision of special education in this relatively new but growing sector.

Ahearn et al. (2001). This study analyzed secondary data submitted by schools and districts to CDE and maintained by the CDE for the 2003–2004 academic year. The study was guided by four primary research questions:

1. Are students with various disabilities enrolling in charter public schools in California in the same proportions as they are enrolling in non–charter public schools?
2. Are students with various disabilities ages 6–18 who enroll in California charter schools being served in different settings as defined under the IDEA reporting requirements in the same proportions as their peers in traditional public schools?
3. What special education and related services are students with various disabilities ages 6–18 who enroll in California charter schools receiving compared to children who enroll in traditional public schools?
4. What is the academic performance level as measured by state assessments in English and mathematics of students with various disabilities who enroll in charter schools compared to their peers in traditional public schools?

This study is not a comprehensive analysis of the merits of charter schools for students with disabilities, and the findings must be interpreted as descriptive, narrow, and preliminary as opposed to evaluative, comprehensive, or summative. It does not document whether an individual student’s academic performance is changing from year to year, which is the indicator largely seen as the critical means to accurately assess the merits of an educational intervention (Goldschmidt et al., 2005). A growth model analysis that could track a cohort of students over multiple years would be required to assess the changes in academic performance of students with disabilities who attend charter schools. While preferable, more comprehensive analyses were not possible due to limitations with the data and resources allocated to conducting the study.

The value of the analyses is to identify current practices of a specific cohort of charter schools in order to advance the level of discussion of issues related to the provision of special education in this relatively new but growing sector. Accurate interpretation of the study findings is predicated on an understanding of its limitations and the specific questions being investigated.

This study was conducted under the auspices of Project Intersect, a national research study developed to expand the existing base of knowledge regarding policies and practices related to special education in charter schools. The Project Intersect research team has conducted multiple national surveys of key stakeholders (i.e., state policy leaders, authorizers, and operators) that sought to

quantify data previously documented in a limited number of states.⁶ As part of the larger goal of Project Intersect, this quantitative study of California provides in-depth information about a single state with a large number of charter schools.

Sample State

The analyses of special education in California charter schools use secondary school-level and aggregate student-level data reported by schools and districts to CDE for the 2003–2004 academic year. We selected California due to the size of its charter sector ($N = 450$) and the quality of its existing data-management systems for students with and without disabilities that allows for the analyses of school-level data. The CDE maintains multiple databases regarding student and school characteristics that allowed for relatively comprehensive analyses of the characteristics of charter schools and their population of students with disabilities. Furthermore, the CDE, specifically its Division of Special Education, agreed to serve as a collaborative partner in the research study and provide the Project Intersect team with access to data that would otherwise not have been available.

Data Sources

The sources of data for this study were existing CDE databases that contained data regarding school and student characteristics and academic outcomes: California Basic Educational Data System (CBEDS), California Special Education Management Information System (CASEMIS), Student Testing and Reporting (STAR), and Charter School Locator. The databases are described here and a more detailed description is provided in Appendix A.

California Basic Educational Data System (CBEDS)

The CBEDS database contains program record data collected by the CDE in October of each year. CBEDS data are used for NCLB reporting requirements (CDE, 2003). CDE uses three separate forms to collect data for CBEDS. The County/District Information Form gathers data on staff and enrollment. The School Information form gathers data on school-specific staff and enrollment. The Professional Assignment Information Form gathers data regarding certificated staff from county offices of education and school districts.

⁶ For more information about Project Intersect and to view copies of previously released reports, please see: <http://www.education.umd.edu/EDSP/ProjectIntersect/index.html>.

California Special Education Management Information System (CASEMIS)

CASEMIS is a special education information reporting and retrieval system developed by CDE. Local districts, SELPAs, county offices of education, school districts, and the state-operated programs for students with disabilities submit student-level data to CDE in December and June of each academic year using CASEMIS. The data submitted to CASEMIS are primary data (as opposed to secondary, derived, or calculated data) at the student level, rather than aggregate data at the district or SELPA level. CASEMIS enables the state and local districts to collect and share accurate and reliable student-level data in a timely manner (CDE 2004b).

California Student Testing and Reporting Program (STAR)

The STAR program encompasses a series of standardized tests that students in California enrolled in grades 2–11 take each spring.⁷ The tests include the California Standards Tests (CSTs) in English-language arts, mathematics, and history-social science; the California High School Exit Examination (CAHSEE); the CST in science for grades 9–11; the California Alternate Performance Assessment (CAPA) for students with the most severe cognitive disabilities; and the Spanish Assessment of Basic Education (SABE).

California Charter School Locator

The CDE Office of Charter Schools maintains a public website that contains a comprehensive database of all charter schools currently or formerly operating in the state.⁸ This web-accessible database contains data collected from multiple sources including but not limited to CBEDS, STAR, and a funding report that all charter schools are required to complete annually.

Data Analyses Procedures

The study data were downloaded from the CDE websites described in Appendix A, or they were provided by the CDE Division of Special Education. All data were initially managed in spreadsheets and then transferred to a relational database program. All charter schools included in the analyses were assigned a pseudo-code to mask their identity. The pseudo-code served as the key identifier that enabled us to link the various databases. Once data from

⁷ For more information about STAR, see <http://star.cde.ca.gov>.

⁸ For more information about the Charter School Locator, see <http://www.cde.ca.gov/ds/si/cs/>.

various sources were combined, we conducted a variety of calculations to determine proportions. For a detailed description of the data analyses procedures, see Appendix B.

Program Record Data Limitations

The data collected through CBEDS, CASEMIS, and the Charter School Locator are program record data reported by individual schools using standard state-provided data reports. These data are critical to state funding and accountability systems but have potential limitations associated with the fact that they are submitted by individual schools across the state as opposed to a single entity that could institutionalize consistent standards of data reporting. We cannot quantify potential variability in the data associated with the nature of reporting or determine whether the variability is different for traditional or charter public schools. As a result, the potential level of error or “noise” in the self-reported data is unknown and represents a limitation of the analyses based on the CBEDS, CASEMIS, and Charter School Locator data.

Population of Charter Schools

Our initial inquiry began with an examination of all 450 charter schools operating during the 2003–2004 academic year. This examination revealed that the database lacked data related to students with disabilities from 180 of the 450 schools; as a result, these schools had to be excluded from our study

Although CDE maintains basic descriptive data (e.g., total enrollment and performance on state assessments) on all 450 schools in CBEDS, certain key variables collected through CASEMIS and STAR (e.g., enrollment of students with disabilities by disability category and academic performance of students with disabilities) were missing from the charter school profiles; for some variables, nearly half of all charter schools lacked data.

As noted previously, in California, a charter school may operate as an independent district or as part of an existing district. According to CDE, individual districts develop local policies that may include the manner that charter school student data are aggregated or disaggregated from traditional school data. While it is plausible that some charter schools did not report data regarding students with disabilities during the time period of interest because they did not enroll any students with disabilities or simply did not report providing any services, it is also plausible that data collected from the 180 schools excluded from our analyses were embedded in the non-charter data.

Our analyses focused on a nonrandom group of 270 charter schools for which CDE had data for all variables of interest (e.g., general student demographic data, enrollment of students with disabilities, and assessment results for all students with and without disabilities ages 6–18 in English-language arts and mathematics) for the 2003–2004 academic year.

Other possible explanations for the lack of relevant data from these schools include school-level data-entry mistakes that made it impossible to determine what type of school a child attends, and charter school personnel’s lack of experience with state data-reporting formats, procedures, and systems. CDE personnel from the Division of Special Education reported that discerning the explanation for absence of data from charter schools is complicated by schools’ legal identity and the local special education administrative structure that determines how the charter school data eventually reach the state (J. Faulkner, personal communication February 28, 2006).

As a result of these data limitations, our analyses focused on a nonrandom group of 270 charter schools for which CDE had data for all variables of interest (e.g., general student demographic data, enrollment of students with disabilities, and assessment results for all students with and without disabilities ages 6–18 in English-language arts and mathematics) for the 2003–2004 academic year.

To discern whether the cohort of 270 schools is different from the 180 schools that we did not have data regarding students with disabilities, we compared the known characteristics of the two groups of charter schools (e.g., grade configuration, type of school, years of operation, total enrollment, minority enrollment, free and reduced-price meals, and academic outcomes⁹). Given that we are analyzing all 450 charter schools in California (i.e., the population of charter schools), any difference between the two groups is statistically significant. However, of interest to the larger analysis is what differences are noteworthy based on what we understand about charter schools.

Overall, the 270 schools included in our analyses are more likely to be elementary schools and combination K–8 schools and less likely to be high schools than those not in the analyses. The charter schools in our analyses are on average nearly double the size (450 versus 249 students), employ more certified teachers (77% versus 71%) and have been operating longer (five versus three years) than those charter schools that are not in our analyses. In addition, the schools in the sample enroll fewer English language learners but more students who qualify for free and reduced-price meals. The schools in the sample also enroll fewer students who are minorities, and their students are performing better academically than those in the schools excluded from the analyses. Table 1 presents a complete summary of the two groups of charter schools.

⁹ Academic outcomes are presented according to the California Academic Performance Index (API) and Adequate Yearly Progress (AYP). The API is a numeric index ranging from a low of 200 to a high of 1,000 that reflects a school’s or a district’s performance level based on the results of statewide testing. For more details about API and the California’s assessment of AYP, see Appendix B.

The profile of the two groups of charter schools documents that the 270 schools in our analyses are in fact different from the 180 excluded from our analyses. Thus, our findings are generalizable only to the 270 schools analyzed and not to all California charter schools. Nevertheless, the results of our analyses provide valuable insight into the status of special education in 60% of the state's charter schools (serving more than 120,000 students) during the 2003–2004 academic year.

Tests of Significance

The descriptive analyses entailed comparing the characteristics of the total population of students with disabilities in traditional public schools to all charter schools that reported special education data. While most research entails analyzing a sample of a larger population for the purpose of extrapolating findings to the population, the data from our two types of schools are what is considered population data. Statistical significance represents how sure you are that a difference or relationship detected in the sample actually exists in the population (Hinkle, Wiersma, & Jurs, 1988). Due to the fact that we are not trying to generalize to the population from a sample of the population, the notion of statistical significance cannot be applied to our data. Any differences found between two distinct populations would be considered significant by definition, because they would in fact actually exist within these populations. Of interest to us were differences related to special education between the two types of schools, and whether any such differences were large enough to be considered a topic for future research.

TABLE 1. CHARACTERISTICS OF CHARTER SCHOOLS IN CALIFORNIA

Characteristics	Charter Schools in Analyses (N = 270)	Charter Schools Not in Analyses (N = 180)
School Characteristics		
Elementary school	28.1% (76)	22.2% (40)
Middle school	8.5% (23)	10.6% (19)
High school	20.4% (55)	35.6% (64)
Combination I (K–12)	18.1% (49)	15% (27)
Combination II (K–8)	21.1% (57)	15% (27)
Other (unique grade configuration)	3.7% (10)	1.7% (3)
Year-round school	26.7% (72)	28.3% (51)
Title I school	47.4% (128)	31.1% (56)
Total enrollment	121,657	44,853
Enrollment (<i>mean</i>)	450	249
Class size (<i>mean</i>)	18.4 students	16.5 students
Teachers fully credentialed (<i>mean</i>)	76.9%	71.4%
Pupil-teacher ratio (<i>mean</i>)	22.1:1	21.06:1
Years of operation (<i>mean</i>)	5.4 years	3.2 years
Traditional brick-and-mortar	73.3% (198)	71.1% (128)
Independent-study	18.5% (50)	19% (35)
Combination brick-and-mortar and independent-study	8.1% (22)	9.4% (17)
Conversion	26% (70)	11% (19)
New start-up	74% (200)	89% (161)
Student Characteristics (<i>mean</i>)		
English language learners	15.1%	19.2%
Free/reduced-price meals	33.9%	31.2%
Students with disabilities ¹⁰	7.8% (9,023) ¹¹	*
Ethnic diversity index	30.51	27.3
Minority	49.97%	55.0%
Performance Characteristics		
API base scores (<i>mean</i>)	695.7	647.9
API statewide rank (<i>mean</i>)	5.2	4.2
Schools that made AYP	60.4% (163)	55% (99)
AYP English language arts proficient (<i>mean</i>)	39.7%	35.0%
AYP math proficient (<i>mean</i>)	35.3%	28.4%

Table reads: 28.1% of all charter schools included in the analyses are elementary schools.*Data not available.
Source: Ed-Data, 2003–2004, www.ed-data.k12.ca.us/welcom.asp (unrestricted).

¹⁰ This figure represents all students with disabilities enrolled in the 270 charter schools for which CDE has data. This figure includes students enrolled in K–12th grade (i.e., potentially younger than 6 and older than 18). The total number of students with disabilities varies slightly according to the age or grade parameters being considered.

¹¹ This figure represents the unweighted mean percentage of students with disabilities enrolled in charter schools, reflecting the average percentage of students with disabilities enrolled in all 270 schools without adjustment for school enrollment. The weighted calculation found by dividing the total number of students with disabilities (i.e., 9,023) by the total number of students enrolled (i.e., 121,657) yields a lower percentage (7.4%). The difference is due to the existence of a few small charters that serve high percentages of students with disabilities.

FINDINGS

The following sections present findings based on the four research questions. The findings are preceded by a basic demographic profile of the charter versus non-charter public schools in California.

Traditional and Charter School Profiles

A charter school is not a specific entity that always adopts a specific curricular or educational model. Rather, while charter schools are frequently referred to as a homogeneous cohort of schools that share key characteristics, in practice they are relatively heterogeneous both in their approach to education and their student characteristics (Nelson et al, 2000; Zimmer et al, 2003). A profile of all 270 California charter schools we studied and a parallel profile of all traditional public schools highlight key differences in basic school characteristics, student demographics, and academic outcomes (see Table 2, page 18). This comparison does not capture characteristics such as school leadership or academic programs, but it does provide insight into key areas where charter schools are generally different from traditional public schools.

In California, the charter schools offer a more diverse array of grade configurations and are more likely to offer year-round options than traditional schools. Charter schools are smaller than traditional public schools on average (450 students compared to 788) and offer smaller class sizes (18 students compared to 24), but they have a slightly higher mean pupil-teacher ratio (22:1 compared to 21:1). They employ fewer certificated teachers (77% compared to 92%). Compared to non-charter schools, charter schools enroll fewer students who would be categorized as at-risk, such as low income students (34% compared to 51%), students with disabilities (7% compared to 11%), and English language learners (15% compared to 25%).

Overall, students in charter schools in California are not performing as well as students in traditional public schools. The mean API base score for all charter schools is lower than for traditional public schools (696 compared to 724), and fewer charter schools met AYP goals in 2003–2004 (60% compared to 70%). The difference is particularly large in the area of mathematics; 44% of students are proficient in mathematics in traditional schools versus only 35% proficient in charter schools.

Overall, students in charter schools in California are not performing as well as students in traditional public schools.

TABLE 2: STATEWIDE TRADITIONAL AND CHARTER PUBLIC SCHOOL PROFILES

Characteristics	Traditional Public Schools ¹² (N = 7,541 schools)	Charter Schools (N = 270 schools)
School Characteristics		
Elementary school	63.1% (4,757)	28.1% (76)
Middle/junior high school	15.6% (1,174)	8.5% (23)
High school	12.4% (938)	20.4% (55)
Combination I (K–8)	8.2% (622)	21.1% (57)
Combination II (K–12)	0.1% (4)	18.1% (49)
Other (unique grade configuration)	0.6% (46)	3.7% (10)
Year-round school	18.3% (1,382)	26.7% (72)
Title I school	68.5% (5,166)	47.4% (128)
Average enrollment	788	450
Class size (<i>mean</i>)	23.79	18.40
Teachers fully credentialed (<i>mean</i>)	92.17%	76.89%
Pupil-teacher ratio (<i>mean</i>)	20.88:1	22.1:1
Student Characteristics (<i>mean</i>)		
Students with disabilities	10.83%	7.42%
English language learners	25.19%	15.08%
Free/reduced price meals	50.55%	33.86%
Ethnic diversity index ¹³	34.09	30.51
Minority ¹⁴	61.84%	49.97%
Performance Characteristics		
API base scores (<i>mean</i>)	724	695.65
API statewide rank (<i>mean</i>)	5.54	5.24
Schools that made AYP ¹⁵	70% (5,281)	60.4% (163)
AYP English-language arts proficient (<i>mean</i>)	40.11%	39.68%
AYP math proficient (<i>mean</i>)	44.42%	35.29%

Table reads: 63.1% of all traditional public schools and 28.1% of all charter schools are elementary schools.
Source: Ed-Data, 2003–2004-www.ed-data.k12.ca.us/welcom.asp (unrestricted).

¹² The traditional public school data include all elementary, middle school, high school, and K–12 schools for which CDE has data for the 2003–2004 academic year. The following types of schools and specialized programs are excluded from the traditional public school profile: charter, alternative, continuation, community day, county community, juvenile court, opportunity, and special education.

¹³ The Ethnic Diversity Index (EDI) is a measure of a school’s ethnic diversity. The Index reflects how evenly distributed these students are among the ethnic categories reported to the California Department of Education. The more evenly distributed the student body, the higher the number. For example, a school that had exactly 1/7th of its students in each of the seven categories would have an Ethnic Diversity Index of 100, and a school where all of the students are the same ethnicity would have an index of 0. Currently the highest index for a school is 77 (<http://www.ed-data.k12.ca.us/articles/Article.asp?title=Ethnic+Diversity+Index>).

¹⁴ The percentage of minority students is somewhat misleading because in many California schools and districts, populations generally considered minorities (i.e., African American or Hispanic students) are the majority. A more accurate description of this variable would be percentage of nonwhite students.

¹⁵ Adequate Yearly Progress (AYP) refers to whether a school has met state-defined goals related to performance on state assessments, attendance, and testing participation rates for the purpose of NCLB accountability requirements. For high schools, AYP also incorporates graduation rates.

Special Education Enrollment by Disability Type Analyses

Because it is a public school, a charter school may not discriminate in enrollment practices. Yet, research has documented that on average, fewer students with disabilities choose to enroll in charter schools than in traditional public schools (Fiore et al., 2000; Finnigan, et al., 2004; Guarino & Chau, 2003). Furthermore, existing research does not reveal whether charter schools and traditional schools attract the same proportions of students with disabilities within specific disability categories. We analyzed the available data relevant to this question.

The 270 charter schools in our analyses enrolled a total of 9,023 (7.42%) students with disabilities out of a total enrollment of 121,657.

As reported in CASEMIS, the 270 charter schools in our analyses enrolled a total of 9,023 (7.42%) students with disabilities out of a total enrollment of 121,657.¹⁶ Across all 270 schools, the mean number of students with disabilities was 33, and the mode was 7 (SD = 41.789). The minimum number of students with disabilities was 1 and the maximum was 300.¹⁷ Calculated as a percentage of each school's total population, the mean percentage of students with disabilities was 7.82%, the mode was 3.53%, the minimum was <1%, and the maximum was 56.81% (SD = 5.173). Traditional California public schools enrolled a total of 6,177,117 students in kindergarten through 12th grade, including ungraded elementary and secondary schools, and 627,168 (10.15%) of these students were identified as having a disability that qualified them for special education (CDE, 2006).

Traditional California public schools enrolled a total of 6,177,117 students in kindergarten through 12th grade, including ungraded elementary and secondary schools, and 627,168 (10.15%) of these students were identified as having a disability that qualified them for special education.

A potentially relevant consideration when comparing overall enrollment of students with disabilities between the two school types is that students with disabilities in California may be educated in a diverse array of specialized programs and settings (i.e., special education, continuation, community day, opportunity, juvenile court, county community, California Youth Authority, and state special schools) inside or outside of a traditional neighborhood school.¹⁸ Of the 595,695 students who were identified as having a disability that qualified them for special education for which we were able to obtain education placement data, a total of 26,098—representing 4.38% of the public school population of students with disabilities ages 6–18—attended school in one of the following separate special education options: separate day public or private,

¹⁶ These figures represent *all* students enrolled in charter schools in grades K–12 and includes students that may be younger than 6 and older than 18.

¹⁷ As noted previously, only charter schools that reported enrolling students with disabilities were included in our dataset. We were unable to discern whether the other 180 charter schools did not enroll any students with disabilities or whether the students with disabilities enrolled in these schools are embedded in the traditional public school data.

¹⁸ For more information regarding the definition of these highly specialized programs, see <http://www.ed-data.k12.ca.us/definitions/DefinitionsWrapper.asp?inc=print>.

residential public or private, or homebound/hospital. These students are included in the traditional public school enrollment totals in CASEMIS.

In general, charter schools are analogous to neighborhood schools (i.e., non-specialized), and therefore, we would expect their enrollment proportions to reflect the enrollment of traditional neighborhood schools and not necessarily schools considered highly specialized (e.g., community day, continuation, juvenile court schools). To examine this supposition, we compared percentages of non-charter and charter school students with disabilities who were enrolled in separate special education options. As shown in Table 3, we found that non-charter schools served more of their students with disabilities in specialized settings than charter schools did (4.34% compared to 2.64%).¹⁹ The number of students in highly specialized programs may account for some of the difference in overall enrollment of students with disabilities in charter schools relative to traditional public schools.

TABLE 3: SPECIAL EDUCATION ENROLLMENT

Type of School	Total K–12 Enrollment 2003–2004 (including ungraded elementary and secondary)	Total K–12 Special Education Enrollment	Percentage of Total K–12 Population Receiving Special Education Services	Percentage of Students With Disabilities Ages 6–18 Receiving Special Education Services in Specialized Settings (i.e., separate day school, public or private; residential facility, public or private; or homebound/hospital)
Non-Charter Public Schools	6,177,117	627,168	10.15%	4.38%
Charter Public Schools	121,657 ^a	9,023 ^b	7.42%	2.64%
All Public Schools	6,298,774	636,191	10.10%	4.34%

^a This figure represents total enrollment of the 270 charter schools that reported special education data.

^b This figure represents total enrollment of students with disabilities in the 270 charter schools.

Table reads: 6,177,117 students enrolled in California non-charter public schools in 2003–2004.

Source: CASEMIS December 2003–2004 (unrestricted), CASEMIS December 2003–2004 (restricted), and CBEDS 2003–2004 (unrestricted).

¹⁹ These figures are drawn from data provided from CDE regarding Least Restrictive Environment, December 2003, ages 6–18.

Age and Grade Levels

Enrollment of students with various disabilities varies somewhat according to age (USDE, 2005). For instance, in traditional public schools nationwide the proportion of children identified as having speech and language disabilities steadily decreases as children get older, so that the proportion of these students is far greater in elementary schools than in middle or high schools (McDonnell, McLaughlin, & Morrison, 1997; USDE, 2005). In contrast, the number of students identified with emotional disturbances, learning disabilities, or traumatic brain injuries generally increases as children get older (USDE, 2005). Our profile of the traditional and charter public schools revealed notable differences in the grade configurations offered by the two types of schools. For instance, whereas 63% of all traditional public schools are elementary schools, only 28% of all charter schools offer standard elementary school configurations. Given the national trends associated with type of disability and age and our noted grade configuration differences, we needed to assess to what degree charter schools actually serve different students according to age prior to examining the number of students with disabilities by disability type.

Our analysis required that we cluster the CASEMIS data regarding number of students with disabilities by age in order to align it with the CBEDS and Charter School Locator data that categorize schools by grade configurations. Given that our data contained information for students ages 6–18, we categorized students ages 6–10 as elementary students, 11–13 as middle school students and 14–18 as high school students. As outlined in Table 4, our analyses of the CASEMIS enrollment data by age revealed that while charter schools are configured differently according to standard grades, they are in practice serving approximately the same age ranges of students with disabilities (i.e., ages 6–10, 11–13, and 14–18) as traditional public schools.

TABLE 4: DISTRIBUTION OF STUDENTS WITH DISABILITIES AGES 6–18 BY AGE CATEGORIES

Age Category	Students With Disabilities Ages 6–18 Enrolled in Non- Charter Public Schools (N = 595,695 students)	Students With Disabilities Ages 6–18 Enrolled in Charter Public Schools (N = 8,848 students)
Elementary (ages 6–10)	38.11% (227,026)	38.99% (3,450)
Middle School (ages 11–13)	27.77% (165,433)	25.11% (2,222)
High School (ages 14–18)	34.12% (203,236)	35.90% (3,176)

Table reads: 38.11% of students with disabilities enrolled in non-charter schools in 2003–2004 were ages 6–10. Source: CASEMIS special education by disability category and age 2003–2004 (restricted).

The greatest differences in enrollments between charter and non-charter schools are evident for students identified as having mental retardation and specific learning disabilities.

Based on this analysis, we did not anticipate that we would observe differences in enrollment according to disability type due to the age of students enrolled in charter schools.

Enrollment Data According to Disability Type

Eligibility to receive special education services under IDEA requires that a student be identified as having one or more of the specific categories of disability defined under IDEA and that the disability is determined to have an adverse impact on the student’s educational achievement. California categorizes students with disabilities as having 1 of 13 disabilities: mental retardation, hard of hearing, deaf, speech or language impairment, visual impairment, emotional disturbance, orthopedic impairment, other health impairment, specific learning disability, deaf-blindness, multiple disabilities, autism, or traumatic brain injury.²⁰ In December and July of each year, all California public schools must report to the state—using CASEMIS data reports—how many of their students qualify for special education and related services due to being identified as having one of these 13 disabilities. Our first research question sought to compare the proportion of students with disabilities ages 6–18 by each disability type enrolled in traditional public schools to those enrolled in charter schools.

Our analyses revealed that for 12 of the 13 disability categories, the proportions of students enrolled differed between the two types of schools. Traditional public schools enrolled a greater proportion of students identified as having mental retardation (6% compared to 2%), speech or language impairment (22% compared to 20%), and emotional disturbance (4% compared to 3%). Children in the categories of multiple disabilities, autism, orthopedic impairment, visual impairment, hard of hearing, and traumatic brain injury also enrolled in traditional public schools at a higher proportion but the difference was less than a percentage point.

In contrast, charter schools enrolled a larger proportion of students in the categories of specific learning disability (61% compared to 55%) and deaf (2% compared to 1%), as well as a larger proportion of children with other health impairment, although the difference was less than a percentage point. Both traditional public schools and charter schools reported enrolling the same proportion of students identified as deaf-blind, less than 1%. The greatest differences in enrollments between charter and non-charter schools are evident

²⁰ The federal IDEA and California both identify 13 categories of disabilities but they are not the same 13. California separates the federal category of “hearing impairment” into “hard of hearing” and “deaf,” and California does not list “developmental delay” as a unique category of disability.

for students identified as having mental retardation and specific learning disabilities.

Table 5 presents a summary of our findings regarding enrollment in charter schools and Figure 1 (page 24) depicts the differences.

TABLE 5: ENROLLMENT DIFFERENCES BY DISABILITY TYPE FOR STUDENTS AGES 6–18²¹

Disability	Percentage of Students With Disabilities in Non-Charter Schools (N = 595,695 students)	Percentage of Students With Disabilities in Charter Schools (N = 8,848 students)	Rank Ordered Difference Between Charter Schools and Non-Charter Schools
Specific Learning Disability ²²	54.81% (326,511)	60.75% (5,375)	5.94%
Mental Retardation	5.78% (34,407)	2.46% (218)	3.29%
Speech or Language Impairment	22.13% (131,834)	20.48% (1,812)	1.65%
Deaf	0.57% (3,393)	2.02% (179)	1.45%
Emotional Disturbance	4.42% (26,327)	2.97% (263)	1.45%
Other Health Impairment	4.71% (28,052)	5.46% (483)	0.75%
Multiple Disabilities	0.78% (4,669)	0.28% (25)	0.50%
Autism	3.07% (18,260)	2.60% (230)	0.47%
Orthopedic Impairment	1.86% (11,107)	1.47% (130)	0.39%
Visual Impairment	0.59% (3,522)	0.29% (26)	0.30%
Hard of Hearing	1.01% (6,024)	0.97% (86)	0.04%
Traumatic Brain Injury	0.24% (1,444)	0.21% (19)	0.03%
Deaf-Blindness	0.02% (145)	0.02% (2)	0%

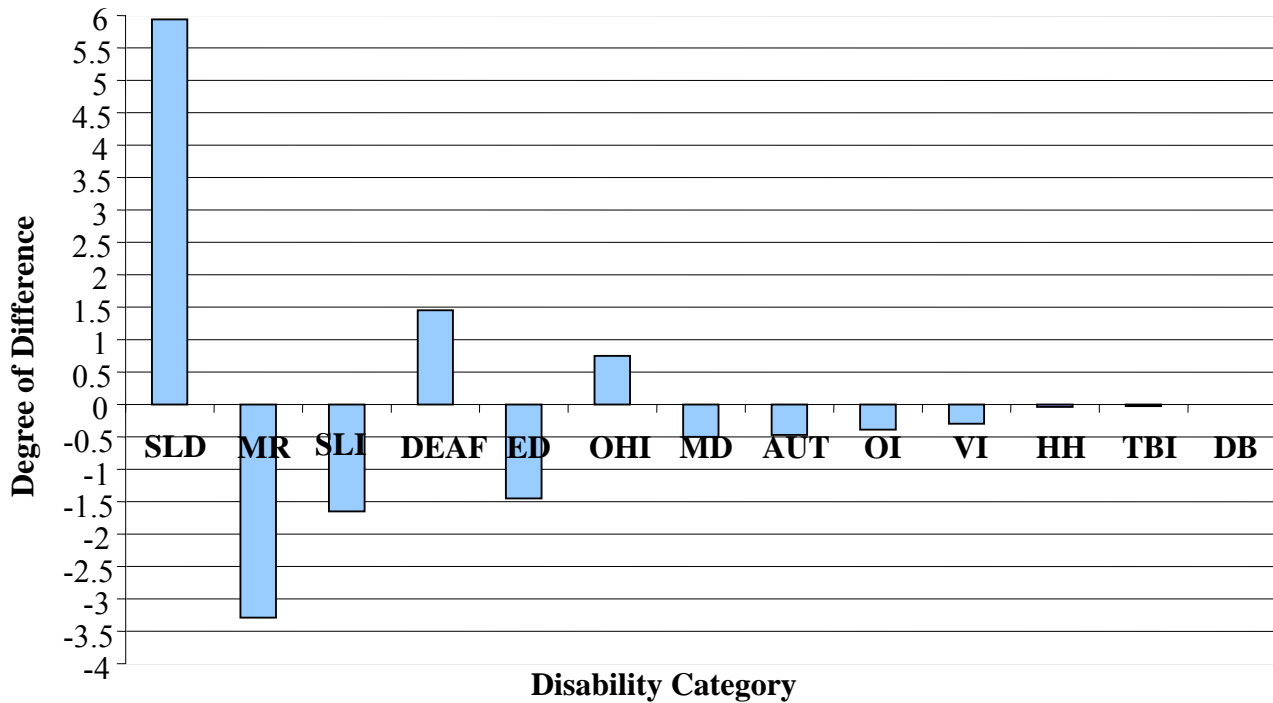
Table reads: 54.81% of all students with disabilities in non-charter schools in California are identified under the category “specific learning disability,” whereas 60.75% of students with disabilities in charter schools are identified in this category. The difference in proportions is 5.94%.

Source: CASEMIS, 2003–2004, December data for students ages 6–18 (restricted).

²¹ For more information regarding disability categories, see <http://www.cde.ca.gov/sp/se/ds>.

²² A Specific Learning Disability means a disorder in one or more of the basic psychological processes involved in understanding or using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include learning problems that are primarily the result of visual, hearing, or motor handicaps, of mental retardation, of emotional disturbance or of environmental, cultural, or economic disadvantage. (34 CFR Sec. 300.7(c)(10)).

FIGURE 1: ENROLLMENT DIFFERENCES BY DISABILITY CATEGORY IN CHARTER AND NON-CHARTER SCHOOLS (% CHARTER - % NON-CHARTER ENROLLMENT)



Key to abbreviations: SLD = specific learning disabilities, MR = mental retardation, SLI = speech/language impairment, DEAF = deafness, ED = emotional disturbance, OHI = other health impairment, MD = multiple disabilities, AUT = autism, OI = orthopedic impairment, VI = visual impairment, HH = hard of hearing, TBI = traumatic brain injury, DB = deaf-blindness

Graph reads: Charter public schools enroll nearly 6% more students with specific learning disabilities than non-charter schools and roughly 3.30% fewer students with mental retardation.

Source: CASEMIS, 2003–2004 (restricted).

Enrollment According to Least Restrictive Environment

One of the key principles of the IDEA is the least restrictive environment (LRE) provision, which requires that children with disabilities must be educated in the general education classroom with their peers without disabilities to the maximum extent possible and only removed from the general education classrooms when it is determined that the adequate supports cannot be provided there. States must report to the USDE data regarding the environments, also

referred to as educational settings, where students with disabilities receive their special education and related services. California reports according to the following 10 categories: outside of the general education classroom 0–20% of the school day, 21–60% of the school day, and 61–100% of the school day; public or private separate day classes; public or private residential facilities; homebound/hospital; correctional facility; or private school placement by parents.²³ Data regarding federal placement categories are reported by LEAs and SELPAs to the CDE, which in turn must report annually to the USDE. The placement data are maintained in the CASEMIS database.

Our second research question sought to determine whether the proportions of children with specific disabilities being educated in the above settings differed between traditional public schools and the 270 charter schools in our analyses. Based on previous research and enrollment data, we hypothesized that charter schools would serve more of their students with disabilities in traditional classroom environments (e.g., $\leq 20\%$ outside of the general education classrooms). Our hypothesis was based on the fact that charter schools were enrolling more students who traditionally receive special education services in general education settings (e.g., students with specific learning disabilities and students with other health impairments), and fewer students with severe disabilities who generally receive their services in more restrictive settings (e.g., students who have mental retardation and students who are emotionally disturbed); we also considered previous research that found that charter schools frequently do not have a continuum of program options for their students.

We compared the charter and non-charter school percentages of students with disabilities in each of the 10 placement options. A number of the settings represent highly restrictive environments (i.e., residential facilities, homebound/hospital, correctional facility, and private school) that are part of the larger California system of placements for students with disabilities.

Our comparison showed that charter schools were educating a greater proportion of their students with disabilities within general education classrooms (i.e., 80% or more of their day was spent inside a general education classroom). Broken down according to the percentage of time students with disabilities spent outside of the general education classroom, charter schools served more students within the regular classroom for larger proportions of time: 71% of charter students versus 50% of non-charter students spent 0–20% of their time outside of the general education classroom; 11% versus 22% spent 21–60% of their time outside the general education classroom, and 16% versus 24% spent 61–100% of their time outside the general education classroom.

Our comparison showed that charter schools were educating a greater proportion of their students with disabilities within general education classrooms (i.e., 80% or more of their day was spent inside a general education classroom).

²³ The counts for students being educated in correctional facilities and in private school placements made by parents are duplicative counts.

Charter schools also enrolled a greater percentage of their students with disabilities in separate public day schools than traditional public schools did (2.6% versus 1.3%). None of the charter schools in our analyses reported enrolling students with disabilities in separate private day schools or either public or private residential schools.

The data regarding correctional facilities and private placements made by parents represent duplicative data. Charter schools reported serving fewer students in correctional facilities (0.02% compared to 0.94%) and they did not report serving any students in private schools due to parental placement. See Table 6.

TABLE 6: PERCENTAGES OF NON-CHARTER AND CHARTER PUBLIC SCHOOL STUDENTS AGES 6–18 SERVED IN FEDERAL PROGRAM OPTIONS²⁴

Enrollment Option	Percentage of Students With Disabilities in Non-Charter Schools (N = 595,695)	Percentage of Students With Disabilities in Charter Schools (N = 8,848)	Rank Order Difference Between Charter Schools and Non-Charter Schools
0–20% of Day Outside Regular Classroom	49.64% (295,707)	70.98% (6,280)	21.34%
21–60% of Day Outside Regular Classroom	21.97% (130,889)	10.58% (936)	11.39%
61–100% of Day Outside Regular Class	24.05% (143,235)	15.80% (1,398)	8.25%
Separate Day Private	1.37% (8,152)	0% (0)	1.37%
Separate Day Public	1.30% (7,715)	2.61% (231)	1.31%
Residential Private	1.10% (6,559)	0% (0)	1.10%
Homebound/Hospital	0.45% (2,656)	0.03% (3)	0.42%
Residential Public	0.13% (782)	0% (0)	0.13%
Correctional Facility*	0.94% (5,588)	0.02% (2)	0.92%
Private School Placement by Parents*	0.14% (806)	0% (0)	0.14%

*These figures represent students who are counted twice (e.g., residential private and correctional facility).

Table reads: 49.64% of students with disabilities in non-charter schools are educated 0–20% of the time outside of a regular classroom.

Source: CASEMIS, 2003–2004 for students ages 6–18 (restricted).

²⁴ If a student enrolls in a charter school and thereafter is placed in a different setting, the student is reported as being enrolled in the charter but served in the designated setting (e.g., residential private or homebound/hospital)

Special Education and Related Services Provision^{25 26}

In addition to reporting how students with disabilities are educated according to the federal placement options, CDE also requires LEAs to report the specific special education and related services provided to individual students according to a list of 38 types of services, including a blanket “other special education services” option. Examples of these services are resource specialist program, audiological services, individual counseling, counseling and guidance, and occupational therapy.²⁷ Data regarding special education and related services are maintained in CASEMIS. A child may receive multiple types of services (e.g., resource specialist program, transportation, and psychological services) but a child cannot be counted more than once per service category. In other words, whether a child received one hour of occupational therapy or nine hours of occupational therapy, that child is reported to CASEMIS as one occupational therapy unit.

To compare which services the 270 charter schools and the traditional public schools provided to students according to their disability, we analyzed the six most prevalent disability categories (i.e., specific learning disability, speech and language impairment, other health impairment, emotionally disturbed, autism, and mental retardation) in aggregate. The decision to limit the analyses stemmed from the reality that the small number of students in the other disability categories precluded meaningful analysis. We initially examined all 38 services defined in CASEMIS but then narrowed our analyses to the 17 special education and related services that were provided to at least 1% of the students

²⁵ For more information about the definition of the full continuum of CDE special education and related services, see <http://www.cde.ca.gov/sp/se/ds/>.

²⁶ Related services are supportive services that are required to help a student with a disability benefit from special education. Examples of related services include but are not limited to speech pathology, psychological services, physical and occupational therapy, counseling and rehabilitation counseling services, and transportation. Schools are required to provide all related services that are included in a student’s Individualized Education Program (IEP).

²⁷ The CDE special education service categories include special education services that could more accurately be characterized as settings (e.g., regular class with accommodations and nonintensive school-based program). The data regarding settings is somewhat redundant of our analyses of least restrictive environment but the manner in which the state categorizes services does not align directly with the 10 categories of settings for purposes of LRE reporting (e.g., the definition of “special day class in an integrated facility” does not quantify the amount of time a child with a disability is educated in a general education classroom versus a separate classroom analogous to the LRE definitions). Therefore, in the interest of examining all potential differences according to how data are reported through CASEMIS, we examined the settings included in the service categories for the purpose of our analyses of special education and related services provision.

in the disability categories analyzed in either type of school. We limited our analyses to the services provided to at least 1% of the students with disabilities in either type of school because the differences in population size and potential margin of error in reporting precluded a meaningful analysis of the remaining services.

The six most prevalent disabilities represent 95% of all students with disabilities enrolled in both traditional and charter schools during the 2003–2004 school year. Table 7 presents a summary of the various services provided to students with disabilities in the two types of schools. The data revealed that in five service areas, a difference of roughly 5% or greater exists. The greatest difference was recorded in the degree to which the schools provided students with “special day class in a public integrated facility”: traditional public schools provided this service to 28% of their students with disabilities, while charter schools provided it to only 15%. According to the CDE, a special day class in a public integrated facility is defined as a setting that provides intensive instruction and services to students when the nature or severity of the disability precludes the student’s participation in the regular school program for a majority of a school day. This setting includes children placed in self-contained special classrooms that provide part-time instruction in a regular class or in self-contained special classrooms full-time on a regular school campus (CDE, 2004b, p. G12). The next greatest difference was in the number of students receiving a “resource specialist program”: 56% of charter school students with disabilities received this service, compared to just 46% of these students enrolled in traditional public schools. CDE defines a resource specialist program as “consultation and support to general education staff and/or direct instruction and services to those students whose needs have been identified in an IEP and are assigned to regular classroom teachers for the majority of a school day” (CDE, 2004b, p. G12).

The third greatest difference was documented in the number of students with disabilities receiving “individual and small-group instruction”: 9% in charter schools compared to 2% in traditional public schools. The CDE defines this service as instruction that is “delivered one-to-one or in a small-group, as indicated in an IEP and that enables the student(s) to participate effectively in the total school program” (CDE, 2004b, p. G15). Traditional and charter schools also provided different levels of “language and speech services” to their students with disabilities: 37% of students with disabilities in traditional public schools received such services compared to 32% in charter schools. Language and speech services are defined as “remedial intervention for eligible individuals who have difficulty understanding or using spoken language” (CDE, 2004b, p. G13).

TABLE 7: SERVICE PROVISION COMPARISON FOR STUDENTS AGES 6–18 IN THE SEVEN MOST PREVALENT DISABILITY CATEGORIES ENROLLED IN NON–CHARTER AND CHARTER SCHOOLS²⁸

Service Description	Percentage of Students With Disabilities in Non–Charter Schools (<i>N</i> = 565,391 students)	Percentage of Students With Disabilities in Charter Schools (<i>N</i> = 8,381 students)	Rank Ordered Difference
Special day class in public integrated facility	28.01% (158,349)	14.96% (1,254)	13.05%
Resource specialist program	45.86% (259,298)	56.15% (4,706)	10.29%
Individual and small-group instruction	1.56% (8,797)	9.13% (765)	7.57%
Language and speech	36.86% (8,421)	31.54% (2,643)	5.32%
Assistive technology	1.16% (6,534)	5.72% (479)	4.56%
Transition services	3.97% (22,427)	7.05% (591)	3.08%
Adapted physical education	4.59% (25,938)	1.89% (158)	2.70%
Special day class in a non-public	2.28% (12,880)	0% (0)	2.28%
Transportation	5.64% (31,899)	3.85% (323)	1.79%
Non-intensive school-based program	2.87% (16,208)	4.39% (368)	1.52%
Vocation education training	1.67% (9,446)	0.26% (22)	1.41%
Psychological services	1.45% (8,174)	0.33% (28)	1.12%
Other special education	1.53% (8,666)	2.14% (179)	0.61%
Individual counseling	2.57% (14,518)	3.13% (262)	0.56%
Regular class with accommodation	1.10% (6,230)	1.48% (124)	0.38%
Behavior intervention services	1.41% (7,966)	1.73% (145)	0.32%
Occupational therapy	3.48% (19,655)	3.46% (290)	0.02%

Table reads: 28.01% of the students enrolled in traditional public schools in California identified as having one of the seven most prevalent disability types received special education support services in a special day class in a public integrated facility during the 2003–2004 school year.

Source: CASEMIS 2003–2004 for students ages 6–18 (restricted).

The final service provided at markedly different rates in the two types of schools was assistive technology: 6% of students with disabilities enrolled in charter schools received assistive technology, which was provided to just 1% of the students with disabilities in traditional public schools. Assistive technology refers to “specialized training or technical support for the incorporation of assistive devices, adapted computer technology, or specialized media with the educational programs to improve access for students” (CDE, 2004b, p. G15).

²⁸ Students with disabilities may receive one or more of the services listed, and therefore the number of services is far greater than the number of students who receive services. However, regardless of how much of a service a child receives (i.e., one hour or five hours of counseling and guidance), that child is only counted once in that particular category.

Students with disabilities enrolled in charter schools were less likely to be English language learners, Hispanic, or Asian, and more likely to be Caucasian than were their peers in non-charter schools.

School-Level Student Performance

Our fourth research question focused on the academic proficiency rate of students with disabilities enrolled in the 270 charter schools compared to the rate of students with similar disabilities enrolled in traditional public schools. We precede our analyses with a profile of these students, an examination of their assessment participation rates in both types of schools, and an analysis of overall API growth for both types of schools.

Profile of Students With Disabilities in Non-Charter and Charter Schools

Prior to our comparative analyses of student outcomes, we compared the demographic characteristics of students with disabilities in the 270 charter schools to those of their peers enrolled in traditional public schools. Table 8 presents a profile of these two student populations. The data indicate that students with disabilities enrolled in charter schools were less likely to be English language learners, Hispanic, or Asian, and more likely to be Caucasian than were their peers in non-charter schools.

Charter schools enrolled fewer students who qualified for free or reduced-price meals (34% compared to 51%).

Ideally, we would have included information regarding percentages of students with disabilities who are economically disadvantaged. However, these data are only available at the school level (e.g., the percentage of all students who qualify for free and reduced-price meals in the school) and not for subgroups of students. When we examined the socioeconomic status of all students enrolled in the two types of schools during the 2003–2004 academic year, we found that the charter schools enrolled fewer students who qualified for free or reduced-price meals (34% compared to 51%). See Table 2. Given the documented correlation between academic achievement and poverty (cf. Coleman et al., 1966; Campbell, Humbo, & Mazzeo, 2000), we would anticipate that students enrolled in the charter schools included in our analyses may perform slightly better than their peers in traditional public schools. However, this is based on the assumption that the socioeconomic status of the school reflects the status of the subgroups of students with disabilities.

Assessment Participation Rate

Participation rates reflect the percentage of students who take specified assessments in any given testing cycle. In order to make AYP under NCLB, schools are required to test at least 95% of the students in the grades in which the tests are administered. Schools report their schoolwide participation rate and they are also required to report their participation rate for select subgroups (i.e., socioeconomically disadvantaged, English language learners,

TABLE 8: CHARACTERISTICS OF STUDENTS WITH DISABILITIES ENROLLED IN NON-CHARTER AND CHARTER PUBLIC SCHOOLS

Variable	Non-Charter Schools (<i>N</i> = 667,250 students) ²⁹	Charter Schools (<i>N</i> = 9,023 students)
Male	67.04% (447,353)	65.30% (5,891)
Female	32.96% (219,897)	34.70% (3,132)
English Language Learners	20.67% (137,940)	17.05% (1,539)
White	36.95% (246,584)	45.92% (4,143)
Hispanic	44.01% (293,721)	35.93% (3,242)
African American	12.15% (81,084)	12.4% (1,119)
Asian	4.24% (28,285)	2.62% (236)
American Indian	0.86% (5,728)	1.52% (137)
Pacific Islander	0.47% (3,139)	.04% (39)
Unknown	1.31% (8,709)	1.18% (107)

Table reads: 67.04% of those students with disabilities who are enrolled in non-charter schools are males.

Source: CASEMIS, 2003–2004 (restricted).

and students with disabilities).³⁰ However, if the subgroup enrollment is less than a specified reporting number—in California the reporting minimum is 11—the participation rate of that particular population is not considered for the purposes of assessing AYP. In order to protect the identity of the students, if a subgroup size is smaller than the reporting minimum, the school is not permitted to publicly report performance levels for the students in that particular subgroup.

A factor that may influence participation rates in California is a policy that permits parents to request that their children be excused from state assessments (CDE, 2004c). However, no data are available regarding the number or percentage of students who are opting out of tests under this provision. Consequently, there is no way to know if parents of children enrolled in charters may choose to have their children opt out of assessments at a different rate from parents of children in traditional public schools.

For our analyses of academic outcomes, we were able to analyze the aggregate academic performance of all traditional public schools and the 270 charter schools included in our study (i.e., including even those schools with

²⁹ These figures represent the total number of students with disabilities enrolled in grades K–12. Previous tables presented data on students ages 6–18, which represents a slightly smaller subset of the total K–12 population.

³⁰ For more information about the state accountability report and individual school participation rates, see http://ayp.cde.ca.gov/reports/API/2004API_Progress_state2.asp?

fewer than 10 students with disabilities). If a notable difference exists in the participation rates of students with disabilities in non-charters and the 270 charter schools in our analyses, the academic outcomes could potentially be biased due to the fact that different proportions of students with disabilities were excluded from testing in either of the two types of schools.

In 2003–2004, the statewide aggregate participation rate in California (including those enrolled in all charter schools) was 99% for English-language arts and 98% for mathematics. For the subgroup of students with disabilities, for all public schools, it was 97% in both content areas.³¹ For the 270 charter schools in our study, the overall participation rate was 96% in both content areas, and for students with disabilities, it was 94% for English-language arts and 93% for mathematics. See Table 9.

TABLE 9: STATEWIDE PARTICIPATION RATES FOR ALL CALIFORNIA PUBLIC SCHOOLS

	Non-Charter Schools		Charter Schools	
	English-Language Arts	Mathematics	English-Language Arts	Mathematics
All Students	99%	98%	96%	96%
Students With Disabilities	97%	97%	94%	93%

Table reads: 99% of all students enrolled in non-charter schools during the 2003–2004 academic year participated in the English-language arts portion of the CST.

Source: CDE State Report, 2004 Accountability Progress Report (unrestricted).

The difference in participation rates for students with disabilities is noteworthy and potentially a factor in the overall performance rates of students with disabilities in charter schools. However, our data do not provide insight regarding whether participation rates influence outcomes for students with disabilities.

API Growth Analyses

Additional analyses that provide further context for the larger discussion regarding performance focused on overall school performance growth. Using data obtained from the unrestricted CDE accountability report card, we examined the API base scores for the 270 charter schools included in our analyses as well as the statewide average API base scores for all public schools. The interpretation of the data is limited due to the fact that we were not able to remove the charter school data from the statewide total. In 2003, the statewide average API score was 683; it increased to 692 in 2004, an overall aggregate

³¹ Source: http://data1.cde.ca.gov/dataquest/API/2004API_Progress_state2.

increase of 9 API points. For the 270 charter schools in the sample, the average API score was 698 in 2003, and 700 in 2004; this reflects an overall aggregate increase of 2 API points.

Our analyses of aggregate API scores mask variance, but these data appear to indicate that while the students enrolled in the charter schools performed at a higher level of proficiency overall, the traditional public schools posted greater gains from 2003 to 2004 than the charter schools did (9 compared to 2 API points). Given that socioeconomic status and race have been documented to influence academic outcomes in public schools, it is plausible that the overall higher API scores were due to the demographics of the charter schools (i.e., fewer students who qualify for free or reduced-price meals, fewer students with disabilities, fewer Hispanic students, and fewer English language learners). The demographic profile does not provide any insight regarding the lack of gains on the API for charter schools but is nonetheless noteworthy.

Proficiency Rates for All Students With Disabilities in Non-Charter and Charter Schools

In spring 2004, 4.7 million students enrolled in grades 2–11 took the CSTs. Regardless of school type, few children with disabilities attained proficiency in either English or mathematics. We first analyzed proficiency rates on the English and mathematics CSTs for all students with disabilities statewide, and then for specific subgroups of students with disabilities. In aggregate, students with disabilities enrolled in charter schools posted higher proficiency rates in English-language arts than their peers in traditional public schools did (13.74% compared to 9.96% scoring at the proficient or advanced levels). In mathematics, charter school students with disabilities also posted higher proficiency rates, but the difference was relatively small (14.40% compared to 13.22%). Table 10 presents a summary of the overall performance of students with disabilities enrolled in non-charters and in the 270 charter schools included in our analyses.

In 2003, the statewide average API score was 683; it increased to 692 in 2004, an overall aggregate increase of 9 API points. For the 270 charter schools in the sample, the average API score was 698 in 2003, and 700 in 2004; this reflects an overall aggregate increase of 2 API points.

In aggregate, students with disabilities enrolled in charter schools posted higher proficiency rates in English-language arts than their peers in traditional public schools did (13.74% compared to 9.96% scoring at the proficient or advanced levels). In mathematics, charter school students with disabilities also posted higher proficiency rates, but the difference was relatively small (14.40% compared to 13.22%).

TABLE 10: AGGREGATE PERFORMANCE ON THE SPRING 2004 CSTs OF STUDENTS WITH DISABILITIES IN TRADITIONAL AND CHARTER PUBLIC SCHOOLS³²

Subject Area and Scoring Levels	Proficiency Rates of Students With Disabilities in Grades 2–11 in Non–Charter Schools	Proficiency Rates of Students With Disabilities in Grades 2–11 in Charter Schools
English	(<i>N</i> = 438,165 students) ³³	(<i>N</i> = 6,582 students)
Advanced	2.88% (12,608)	4.21% (277)
Proficient	7.08% (31,038)	9.53% (627)
Basic	20.15% (88,297)	23.03% (1,516)
Below Basic	30.94% (135,550)	31.12% (2,048)
Far Below Basic	38.95% (170,672)	32.12% (2,114)
Mathematics	(<i>N</i> = 397,004 students)	(<i>N</i> = 5,965 students)
Advanced	4.22% (16,773)	4.81% (287)
Proficient	9.00% (35,731)	9.59% (572)
Basic	17.15% (68,083)	18.54% (1,106)
Below Basic	42.20% (167,534)	42.90% (2,559)
Far Below Basic	27.43% (108,883)	24.16% (1,441)

Table reads: 2.88% of those students with disabilities enrolled in non–charter schools scored advanced on the spring administration of the CST for English-language arts.

Source: STAR 2003–2004 (restricted data).

Proficiency Rates for Subgroups of Students with Disabilities in Non–Charter and Charter Schools

The aggregate performance data present an approximate picture of the proficiency levels of *all* students with disabilities enrolled in the two types of schools. In an attempt to isolate and compare the performance of children with certain types of disabilities in traditional schools and charter schools, we analyzed the data for 19 subgroups reflecting students’ gender, grade level, English language learner status, ethnicity, and prevalent disability categories.

³² As noted previously, traditional public schools obtained 99% participation on English assessment and 98% on mathematics. The charter schools obtained 94% participation on English assessment and 93% on mathematics. The data regarding proficiency rates may be skewed upwards or downwards by schools that don’t test all eligible students and given that charter schools reported lower participation rates, their performance may be affected more than that of traditional public schools.

³³ The total number tested varies according to subject area. This is in part due to the fact that the mathematics assessment is administered to high school students based on what level of mathematics course work they have completed and as a result, not all students are tested at every grade.

Special Education Subgroup Performance on 2004 CST in English-Language Arts

When examined according to subgroup, the students with disabilities enrolled in charter schools achieved higher proficiency rates on the English-language arts CST than traditional public schools did in 16 of the 19 subgroup categories. In some instances, the difference was notably large (i.e., 9% or greater for emotional disturbance, other health impairment, and autism). However, the disparity in sample size between traditional and charter school students with these disabilities may undermine the reliability of these differences.

Other noteworthy differences in proficiency rates among the larger subgroups included higher rates for charter school students enrolled in middle schools (13.82% proficient compared to 7.47% proficient in the traditional schools), charter students with speech and language impairments (30.72% proficient compared to 25.62%), and charter students who were white (23.78% proficient compared to 18.68%).

Special Education Subgroup Performance on 2004 CST in Mathematics

Our analyses of mathematics proficiency levels by subgroups revealed fewer material differences between the two types of schools. The students with disabilities enrolled in charter schools recorded greater levels of proficiency than their peers in traditional schools in 14 of the 19 categories, but across nearly all the subgroups, the difference was less than two percentage points. An exception to this finding was the difference in performance for students enrolled in charter middle schools, whose proficiency rate was 3% higher than that of their non-charter peers. Charter school proficiency rates were also higher for several other subgroups: emotionally disturbed (11.11% proficient compared to 7.40% proficient in the traditional schools), other health impaired (15.20% proficient compared to 11.16%), and autism (38.60% proficient compared to 23.19%). However, the small number of these students enrolled in charter schools raises questions about the reliability of the differences noted. See Table 11, page 36.

As with prior descriptive analyses, these data do not provide insight regarding cause, and it is not possible to discern whether these test scores reflect a higher initial baseline performance level or actual gains due to the education provided in charter schools. Rather, the data raise additional questions that require more in-depth and longitudinal analyses. Of particular interest is the contrast between English and mathematics scores. The difference between the proficiency levels in English is notably larger between the two types of schools

These data do not provide insight regarding cause, and it is not possible to discern whether these test scores reflect a higher initial baseline performance level or actual gains due to the education provided in charter schools. Rather, the data raise additional questions that require more in-depth and longitudinal analyses.

TABLE 11: AGGREGATE PERFORMANCE LEVELS ON THE 2004 CST IN ENGLISH AND MATHEMATICS³⁴

Student Subgroup	English-Language Arts		Mathematics	
	Percentage of Students With Disabilities in Non-Charter Schools Attaining Proficiency	Percentage of Students With Disabilities in Charter Schools Attaining Proficiency	Percentage of Students With Disabilities in Non-Charter Schools Attaining Proficiency	Percentage of Students With Disabilities in Charter Schools Attaining Proficiency
All Students With Disabilities	9.96%	13.73%	13.23%	14.40%
Male	9.81%	13.24%	14.31%	15.65%
Female	10.27%	14.63%	11.09%	12.19%
Grades 2–5	14.70%	17.14%	21.48%	22.11%
Grades 6–8	7.47%	13.82%	7.71%	10.93%
Grades 9–11	5.64%	8.33%	4.01%	2.97%
English Language Learners	2.11%	1.81%	6.32%	6.30%
Mental Retardation	0.82%	1.82%	1.09%	2.22%
Emotional Disturbance	11.50%	20.25%	7.40%	11.11%
Speech/Language Impairment	25.62%	30.72%	34.24%	35.14%
Specific Learning Disability	3.60%	6.05%	5.02%	5.86%
Other Health Impairment	12.23%	25.07%	11.16%	15.20%
Autism	21.30%	39.83%	23.19%	38.60%
African American	3.68%	5.22%	4.50%	6.00%
Native American	7.75%	6.31%	9.76%	6.38%
Asian	22.36%	26.09%	31.42%	29.38%
Filipino	14.85%	14.29%	21.10%	21.67%
Pacific Islander	7.01%	13.04%	9.98%	28.57%
Hispanic	4.07%	5.55%	7.45%	9.13%
White	18.68%	23.78%	21.84%	21.45%

Table reads: 9.96% of those students with disabilities who were enrolled in grades 2–11 during the 2003–2004 academic year scored proficient or advanced on the CST assessment in English-language arts.

Source: STAR, 2003–2004 (restricted data).

³⁴ Proficiency rates represent the percentage of students who scored at the “proficient” or “advanced” levels on state assessments in spring of 2004. Aggregate performance rates are drawn from STAR for both the non-charter and charter schools. Percentages were calculated by adding the number of students achieving performance levels of proficient or advanced and then dividing the result by the total number of students tested in each of the categories. See Appendix C for a more detailed explanation of these calculations.

than is the difference between the proficiency levels in mathematics. Given the large differences in sample sizes and relatively small subgroups, it is debatable whether the differences detected in mathematics proficiency levels are material or statistically valid.

SUMMARY AND KEY FINDINGS

In aggregate, our analyses documented that charter schools are different from traditional public schools on multiple general school, student, and performance indicators. Our analyses documented that students with disabilities are opting to enroll in charter schools, but when grouped by disability type, the proportions of students enrolling differ notably. In particular, charter schools educated more students with specific learning disabilities (61% compared to 55%) and fewer students with mental retardation (2% compared to 6%). Possibly due in part to this enrollment pattern, charter schools served more students with disabilities in general education classrooms 80–100% of the day (71% compared to 50%) and fewer students in the classroom 40–79% of the day (11% compared to 22%). These data align with Zimmer et al’s (2003) research that also documented that California charter schools serve more students with disabilities in the general education classroom than comparable traditional public schools. While charter schools enrolled children characterized as having low-incidence disabilities that frequently require more intensive services (i.e., deaf-blind, traumatic brain injury, hard of hearing, deaf, visual impairment, orthopedic impairment, and multiple disabilities), charter schools did not educate as many students in what are characterized as more restrictive settings (i.e., homebound/hospital, residential public or private, separate day private, correctional facilities, or private school placements made by parents). It is unclear whether this finding reflects a change in where students received their special education services or whether charter schools attracted more students who could succeed in the general education classroom setting. Furthermore, these findings do not provide material insight into whether students with disabilities received adequate support services to succeed in the general education classroom.

Our analyses of special education and related services documented that during the 2003–2004 school year, charter schools provided a variety of services to students with disabilities, with a notably higher proportion of students in these schools receiving individual and small-group instruction, assistive technology, and resource specialist services. The findings regarding assistive technology may be heavily influenced by independent-study schools

Our analyses documented that charter schools are different from traditional public schools on multiple general school, student, and performance indicators.

While charter schools enrolled children characterized as having low-incidence disabilities that frequently require more intensive services (i.e., deaf-blind, traumatic brain injury, hard of hearing, deaf, visual impairment, orthopedic impairment, and multiple disabilities), charter schools did not educate as many students in what are characterized as more restrictive settings (i.e., homebound/hospital, residential public or private, separate day private, correctional facilities, or private school placements made by parents).

During the 2003–2004 school year, charter schools provided a variety of services to students with disabilities, with a notably higher proportion of students in these schools receiving individual and small-group instruction, assistive technology, and resource specialist services.

that rely upon computer technology to deliver their curricula. While these schools may provide assistive technology through use of computers, computers in and of themselves do not necessarily constitute assistive technology specific to the needs of students with disabilities.

Within the total population of students with disabilities in both types of schools, few achieved desired levels of proficiency in English or mathematics. However, in charter schools, a slightly larger proportion of these students achieved academic proficiency than their peers in traditional public schools, and the difference is greater for English than for mathematics. In fact, the differences detected on mathematics proficiency may not be particularly meaningful. The data do not provide insight into whether test scores reflect growth or a higher baseline, and the disparity in the size of the two populations raises questions regarding the reliability of the differences found, particularly in the small disability-type subgroups. Nevertheless, given previous findings regarding the levels of proficiency of the general education population (i.e., students in charter schools in California achieve scores at the same level or below those of their peers in traditional public schools [Zimmer et al., 2003]), these findings raise questions that need to be explored using growth models that can isolate student and school characteristics and track a cohort of students over multiple years relative to a comparable control group enrolled in traditional public schools.

Overall, these findings present new information about the status of special education in a cohort of charter schools in California during 2003–2004 and begin to illuminate an aspect of the evolving charter reform movement that was previously underanalyzed.

DISCUSSION

Our findings confirm and expand upon previous research examining special education in charter schools and provide a foundation upon which future research regarding special education in charter schools can be built. In particular, issues associated with selection bias embedded in schools of choice, data reporting and accountability, and academic outcomes require thoughtful policy development and additional research.

Controlling for Choice

Attempting to compare the students with disabilities in charter schools to their peers enrolled in traditional public schools poses a significant methodological challenge associated with controlling for the differences between families that select a school of choice versus families that enroll in their neighborhood school and the complexities embedded in parents' decisions associated with selecting a school for their child. Multiple research studies have documented that parents who exercise school choice, whether reflected in the neighborhood they live in or the school they select, tend to have completed a higher level of education and are more involved in their child's school than non-choosers (Fuller & Elmore, 1996). The factors that influence choice are also factors documented to positively influence academic performance (i.e., parental education and motivation) (Gill, Timpane, Ross, & Brewer, 2001). Therefore, it is possible that even before setting foot in a school of choice, students whose parents enroll them in charter schools are more likely to attain proficiency in English or mathematics than their peers in traditional public schools.

Attempting to compare the students with disabilities in charter schools to their peers enrolled in traditional public schools poses a significant methodological challenge associated with controlling for the differences between families that select a school of choice versus families that enroll in their neighborhood school.

Conversely, charter schools may be appealing to parents of students who are dissatisfied with traditional public schools for a variety of reasons that may correlate with depressed student outcomes. Some charter schools are specifically designed to attract students characterized as at-risk (Buckley & Schneider, 2005; Lacerino-Paquet, Holyoke, Moser, & Henig, 2002). In fact, the California statute dictates that the goal of charter schools is to improve pupil learning and includes explicit emphasis on "expanding learning experiences for pupils who are identified as academically low achieving." A more in-depth analysis of individual schools' academic missions is required to discern whether some charter schools are in fact appealing to low achieving students.

Alternatively, charter schools may not appear to be, or in actuality be, an attractive option for some students with disabilities. For instance, children with lower incidence disabilities generally require more specialized services and consequently, spending and systems that charter schools may not have in place. While charter schools are legally required to provide special education and related services, parents of some students with disabilities may assess the capacity of charter schools relative to traditional public schools and rationally conclude that charter schools are not a viable option for their child.

Our comparative profile of traditional and charter public schools appears to support the hypothesis that families that choose charter schools are different from families that don't make that choice, according to race, socioeconomic status, and disability.

Our comparative profile of traditional and charter public schools appears to support the hypothesis that families that choose charter schools are different from families that don't make that choice, according to race, socioeconomic status, and disability. We know that more white students and fewer students

who qualify for free and reduced-price meals and English language learner services were enrolled in the charter schools we examined. What we don't know is why some parents of similar characteristics choose charter schools and others do not. Furthermore, we don't know whether these trends actually reflect parental choice, if they simply reflect where the schools are physically located relative to neighborhood demographics, or if they reflect targeted marketed efforts by charter schools. Our analyses of aggregate group outcomes limit our ability to discern the cause of the variance in enrollment, service provision, or academic outcomes for students with disabilities.

Given diverse parental motives, programmatic differences, and distribution of schools across the state, it is nearly impossible to control for selection bias embedded in the population of students who enroll in charter schools. As a result, our point-in-time analysis is limited in terms of summative conclusions. The challenges associated with controlling for choice underscore the importance of conducting more sophisticated analyses that would isolate the impact on student learning of attending a charter versus a traditional school.

While parents of students with disabilities can assess the performance of nondisabled students as a rough proxy of the relative performance of disabled students in any given school, a more accurate understanding of this subgroup's performance is required in order to fulfill the core tenet of the charter concept and the broader requirements of NCLB.

Data Reporting and Accountability

Equal access to high-quality educational opportunities and accountability for educational outcomes are ubiquitous aspirations in contemporary federal, state, and local education reforms. Of particular significance, NCLB introduced explicit guidelines regarding how states must track and document accountability for subgroups of students overlooked in prior initiatives that relied upon aggregate data to judge school performance. The analyses revealed issues associated with identifying and tracking students with disabilities enrolled in charter schools. The data that were available arguably challenge perceptions that charter schools are not an option for students with disabilities and that charter schools deny services to students with disabilities who elect to enroll. Nevertheless, until schools, districts, and the CDE can more precisely track who is enrolling in specific types of schools and thereafter track their performance at the student level, informed decisions regarding the quality of specific school models is somewhat limited. While parents of students with disabilities can assess the performance of nondisabled students as a rough proxy of the relative performance of disabled students in any given school, a more accurate understanding of this subgroup's performance is required in order to fulfill the core tenet of the charter concept and the broader requirements of NCLB.

Our examination of enrollment, service provision, and academic outcomes sheds some light on the subject of special education in the charter sector, but more illumination is required before definitive conclusions may be reached. In particular, the emphasis on subgroup performance goals mandated by NCLB,

coupled with charter school accountability requirements, demands a more sophisticated system of tracking students with disabilities (and other students) enrolled in all schools and especially in small charter schools (Simpson, Gong, & Marion, 2005). At this point, neither researchers nor parents can discern the academic performance of students with disabilities in most charter schools. This lack of transparency undermines one of the core tenets of school choice: parents' ability to make informed decisions about their children's education. The absence of data regarding children with disabilities in 180 of the charter schools is evidence of the challenges associated with attempting to track the performance of these students in these new schools.

Performance on English Versus Mathematics Assessments

The performance data, and specifically the difference in performance levels in English-language arts and mathematics, raise additional questions. Are charter schools attracting students who perform better on English assessments but not on mathematics assessments, or is there a qualitative difference between the English-language arts curricula in charter schools and in traditional public schools? Alternatively, are the students who enroll in charter schools somehow better prepared to make gains in reading than they are in mathematics? Our data do not reveal answers but document intriguing outcomes that require additional examination.

CONCLUSION

The defining bargain of charter schools is autonomy in exchange for accountability. State charter statutes establish the parameters of that autonomy, which subsequently defines the degree that charter schools function outside of the traditional public school sphere. Yet, charter schools are required to abide by all federal laws, including those pertaining to students with disabilities. Our analyses of student enrollment, service provision, and outcome data document how a distinct group of charter schools in a single state address their obligation as public schools to offer open enrollment, including enrollment of students with disabilities. Given the current emphasis on market-based reforms such as charter schools and privatization embedded in NCLB, documenting how charter schools educate students with disabilities contributes to a more sophisticated discussion of the merits of creating autonomous charter schools and simultaneously underscores the need for further analyses to determine (a) the reasons why fewer students with disabilities are opting to

enroll in charter schools than in traditional schools and (b) the factors that account for these students' academic performance.

REFERENCES

- Ahearn, E., Lange, C., Rhim, L. M. & McLaughlin, M. J., (2001). *Project SEARCH: Special education as requirements in charter schools. Final report of a research study*. Alexandria, VA: National Association of State Directors of Special Education.
- Anderson, L., Adelman, N., Cotton, L., Finnigan, K., Donnelly, M. B., & Price, T. (2002). *A decade of charter schools: Evaluation of the public charter schools program, 2000–2001 evaluation report*. Retrieved March 1, 2005, from <http://sri.com/policy/cep/choice/yr2.pdf>
- Buckley, J., & Schneider, M. (2005). Are charter school students harder to educate? Evidence from Washington, DC. *Education Evaluation and Policy Analysis*, 27(4), 365–380.
- California Department of Education. (2003). *California basic educational data system: Administrative manual*. Sacramento, CA: Author.
- California Department of Education. (2004a). *Special education factbook*. Sacramento, CA: Author. Retrieved January 5, 2005, from <http://www.cde.ca.gov/re/pn/fb/yr04specialed.asp>
- California Department of Education. (2004b). *California special education management information system: 2004–2005 users manual*. Sacramento, CA: Author. Retrieved January 5, 2005, from <http://www.cde.ca.gov/sp/se/>
- California Department of Education. (2004c). *Understanding California's student testing and reporting program (STAR)*. Sacramento, CA: Author. Retrieved January 25, 2005, from <http://www.ed-data.k12.ca.us/articles/Article.asp?title=Understanding%20the%20STAR>
- California Department of Education. (2004d). *About STAR 2004*. Sacramento, CA: Author. Retrieved January 10, 2005, from <http://www.star.cde.ca.gov/star2004/aboutSTAR.asp>
- California Department of Education. (2004e). *2004 accountability progress report: Information guide*. Sacramento, CA: Author. Retrieved January 10, 2005, from <http://www.cde.ca.gov/ta/ac/ay/>
- California Department of Education. (2005a). *Charter school division*. Sacramento, CA: Author. Retrieved January 23, 2006, from <http://www.cde.ca.gov/re/di/or/division.asp?id=csd>
- California Department of Education. (2005b). *State of California education profile: Fiscal year 2003–2004*. Sacramento, CA: Author. Retrieved January 5, 2005, from <http://www.ed-data.k12.ca.us>
- California Department of Education. (2005c). *2004 accountability progress report*. Sacramento, CA: Author. Retrieved January 5, 2005, from http://ayp.cde.ca.gov/reports/API/2004API_Progress_state2.asp

- California Department of Education. (2006). *Pocketbook of special education statistics 2004–2005*. Retrieved November 6, 2006, from <http://www.cde.ca.gov/sp/se/ds/documents/pcktbk0405.pdf>
- Campbell, E., Hombo, C. M., and Mazzeo, J. (2000). *NAEP 1999 trends in academic progress: Three decades of student performance*. Washington, DC: U.S. Department of Education. Document no. NCES-2000469.
- Coleman, J., Campbell, E., Hobson, C., McPartland, J., Mood, A., Weinfeld, F. D., & York, R. (1966). *Equality of educational opportunity*. Washington, DC: U.S. Department of Health, Education and Welfare.
- Finn, C. E., Manno, B. V., & Vanourek, G. (2000). *Charter schools in action: Renewing public education*. Princeton, NJ: Princeton Press.
- Finnigan, K., Adelman, N., Anderson, L., Cotton, L., Donnelly, M., & Price, T. (2004). *Evaluation of the public charter school program: Final report*. Washington, DC: SRI International.
- Fiore, T. A., & Cashman, E. R. (1998). *Review of charter school legislation provisions related to students with disabilities*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.
- Fiore, T. A., Harwell, L. A., Blackorby, J., & Finnigan, L. A. (2000). *Charter schools and students with disabilities: A national study*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.
- Fiore, T. A., Warren, S. H., & Cashman, E. R. (1998). *Charter schools and students with disabilities: Review of existing data*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.
- Fuller, B., & Elmore, R. E. (1996). *Who chooses? Who loses? Culture, institutions, and the unequal effects of school choice*. New York: Teachers College Press.
- Gill, B. P., Timpane, P. M., Ross, K. E., & Brewer, D. J. (2001). *Rhetoric versus reality: What we know and what we need to know about vouchers and charter schools*. Santa Monica, CA: RAND.
- Goldschmidt, P., Roschweski, P., Choi, K., Auty, W., Hebbler, S., Blank, R., & Williams, A. (2005). *Policymakers' guide to growth models for school accountability: How do accountability models differ?* Washington, DC: Council of Chief State School Officers. Retrieved February 20, 2006, from <http://www.ccsso.org/publications/details.cfm?PublicationID=287>
- Guarino, C. (2005). *Nonclassroom-based charter schools in California and the impact of SB740*. Santa Monica, CA: RAND. Retrieved March 10, 2006, from <http://www.Rand.org>

- Guarino, C., & Chau, D. (2003). Special education in charter and conventional public schools. In R. Zimmer, R. Buddin, D. Chau, G. Daley, D. Guarino, L. Hamilton, C. Krop, D. McCaffrey, M. Sandler, & D. Brewer (Eds.), *Charter school operations and performance: Evidence from California* (pp.161–173). Santa Monica, CA: RAND.
- Hassel, B. C. (2005). *Charter school achievement: What we know*. Washington, DC: Charter School Leadership Council. Retrieved December 15, 2005, from <http://www.charterschoolleadershipcouncil.org/PDF/Paper.pdf>
- 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, 301–353.
- Hinkle, D. E., Wiersma, W., & Jurs, S. (1988). *Applied statistics for the behavioral sciences*. Boston: Houghton Mifflin.
- Individuals With Disabilities Education Improvement Act of 2004, U. S. Code Title 20, Chapter 33—Education of Individuals With Disabilities, as amended by P. L. 108-466.
- Lacerino-Paquet, N., Holyoke, T. T., Moser, M., & Henig, J. R. (2002). Creaming versus cropping: Charter school enrollment practices in response to market incentives. *Educational Evaluation and Policy Analysis*, 24(2), 145–158.
- Lake, R. J., & Hill, P. T. (2005). *Hopes, fears and reality: A balanced look at American charter schools in 2005*. Seattle: National Charter School Research Project Center on Reinventing Public Education.
- McDonnell, L. M., McLaughlin, M. J., & Morrison, P. (1997). *Educating one and all: Students with disabilities and standards-based reform*. Washington, DC: National Research Council.
- McKinney, J. R. (1996). Charter schools: A new barrier for children with disabilities. *Education Leadership*, 54(2), 22–25.
- McLaughlin, M.J., & Henderson, K. (1998). Charter schools in Colorado and their response to the education of students with disabilities. *The Journal of Special Education*, 32(2), 99–107.
- Miron, G., & Nelson, C. (2002). *What's public about charter schools? Lessons learned about choice and accountability*. Thousand Oaks, CA: Corwin Press.
- Nelson, B., Berman, P., Ericson, J., Kamprath, N., Perry, R., Silverman, D., & Solomon, D. (2000). *The state of charter schools: Fourth year report*. Retrieved February 9, 2005, from <http://www.ed.gov/PDFDocs/4yrrpt.pdf>
- Nelson, F. H., Rosenberg, B., & Van Meter, N. (2004). *Charter school achievement on the 2003 National Assessment of Educational Progress*. Washington, DC: American Federation of Teachers.

- No Child Left Behind Act of 2001, 20 U.S.C.A. § 6301–6578 (West Supp. 2002).
- Rhim, L. M., Lange, C., & Ahearn, E. (accepted for publication). Charter school statutes and special education: Policy answers or policy ambiguity? *Journal of Special Education*.
- Rhim, L. M., Lange, C., Ahearn, E., & McLaughlin, M. J. (2005). *Project Intersect research report #3: Survey of state charter school officials*. College Park, MD: University of Maryland, Project Intersect.
- Simpson, M. A., Gong, B., & Marion, S. (2005). *Effect of minimum cell sizes and confidence interval sizes for special education subgroups on school-level AYP determinations*. Dover, NH: National Center for Improvement of Educational Assessment. Retrieved January 25, 2006, from http://www.nciea.org/publications/NCEOAYPReport05_SMBGMS.pdf
- Smith, N. (2003). *Catching the wave: Lessons from California charter schools*. Washington, DC: Progressive Policy Institute. Retrieved November 10, 2005, from http://www.ppionline.org/documents/CA_Charters_0703.pdf
- U.S. Department of Education. (2005). *Annual report to Congress on the implementation of the Individuals with Disabilities Education Act*. Retrieved February 20, 2006, from <http://www.ed.gov/about/reports/annual/osep/2003/25th-vol-2-front.pdf>
- Vitello, S. J., & Mithaug, D. E. (Eds.). (1998). *Inclusive schools: National and international perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Wells, A. S. (1998). *Beyond the rhetoric of charter school reform: A study of ten California school districts*. Los Angeles: University of California, Los Angeles.
- Zimmer, R., Buddin, R., Chau, R., Daley, G., Guarino, D., Hamilton, L., Krop, C., McCaffrey, M., Sandler, M., & Brewer, B. (Eds.). (2003). *Charter school operations and performance: Evidence from California*. Santa Monica, CA: RAND.

APPENDIX A: DATA SOURCES

The sources of data for this study were existing CDE databases that contained data regarding school and student characteristics and academic outcomes: California Basic Educational Data System (CBEDS), California Special Education Management Information System (CASEMIS), Student Testing and Reporting (STAR), and Charter School Locator.

California Basic Educational Data System (CBEDS)

The CBEDS database contains program record data collected by the CDE in October of each year. CBEDS data are used for NCLB reporting requirements (CDE, 2003). CDE uses three separate forms to collect data for CBEDS. The County/District Information Form gathers data on staff and enrollment. The School Information form gathers data on school-specific staff and enrollment. The Professional Assignment Information Form gathers data regarding certificated staff from county offices of education and school districts.

For the purposes of this study, we analyzed the CBEDS school-level aggregate data regarding school traits (i.e., year-round calendar, Title I status, class size), student traits (i.e., percentage English language learners, percentage free or reduced-price meals, ethnic diversity, percentage minority), performance outcomes (i.e., Academic Performance Index [API] base score, API rank, Adequate Yearly Progress [AYP], and percentage of students proficient in English and mathematics), and teacher traits (i.e., percentage fully certified and pupil-teacher ratio). The CBEDS data were all accessed using the CDE search engine called Ed-Data that is located on the CDE website.³⁵ Ed-Data allows users to generate queries of school-level data for all schools as well as for just those schools identified as charters. Ed-Data allows users to generate a report with multiple descriptive variables (see above) and then request comparable data from similar schools (e.g., all charter schools). Ed-Data generates the report on the website and produces a Microsoft Excel spreadsheet that users can download.

The result of our query of CBEDS data accessed via Ed-Data was a spreadsheet containing school-level records on general school traits, student population, performance, and teachers for every one of California's 450 charter schools. All data used in our analyses attributed to CBEDS were drawn from public sources and did not require special access from state personnel.

³⁵ For more information about Ed-Data, see www.ed-data.k12.ca.us.

California Special Education Management Information System (CASEMIS)

CASEMIS is a special education information reporting and retrieval system developed by CDE. Local districts, SELPAs, county offices of education, school districts, and the state-operated programs for students with disabilities submit student-level data to CDE in December and June of each academic year using CASEMIS. The data submitted to CASEMIS are primary data (as opposed to secondary, derived, or calculated data) at the student level, rather than aggregate data at the district or SELPA level. CASEMIS enables the state and local districts to collect and share accurate and reliable student-level data in a timely manner (CDE 2004b).

While CASEMIS maintains data at the student level, this level of information is restricted in order to protect students' privacy. CASEMIS data regarding enrollment by age and disability type are available on public websites at the state-, SELPA-, district- and school-level. However, it is not possible to obtain aggregate CASEMIS reports about the age or disability type of students with disabilities in a particular type of school (e.g., all charter schools). Furthermore, it is not possible to obtain school- or student-level CASEMIS reports regarding where children with disabilities receive their education services (e.g., 0–20% in general education classroom or a specialized program), or what services they receive. Unrestricted data (i.e., data that do not compromise student privacy) collected through CASEMIS are available on the CDE website under the DataQuest system that allows users to generate reports according to a variety of levels (e.g., school, county, or state) and a variety of subjects including but not limited to students with disabilities (e.g., school performance, test scores, student demographics).³⁶

Drawing from data reported to CASEMIS in December 2003, staff at the CDE provided our research team with datasets containing state aggregate CASEMIS data for all charter schools regarding (1) age and disability type, (2) educational settings, and (3) special education and related services.

California Student Testing and Reporting Program (STAR)

The STAR program encompasses a series of standardized tests that students in California enrolled in grades 2–11 take each spring.³⁷ The tests include the California Standards Tests (CSTs) in English-language arts, mathematics, and history-social science; the California High School Exit Examination (CAHSEE); the CST in science for grades 9–11; the California Alternate

³⁶ For more information about DataQuest, see <http://data1.cde.ca.gov/dataquest/>.

³⁷ For more information about STAR, see <http://star.cde.ca.gov>.

Performance Assessment (CAPA) for students with the most severe cognitive disabilities; and the Spanish Assessment of Basic Education (SABE).

Data regarding each school's academic performance as measured by the multiple tests that comprise STAR can be downloaded from STAR directly or accessed through individual School Accountability Report Cards (SARCs). The CST scores identify the percentage of students scoring "at or above proficient" on the English-language arts, mathematics, history-social science, and science subject area tests across all grades. The performance level for each grade and subject are based on scaled scores that range from 150 to 600 with a difference of 350 points between basic and proficient scores.³⁸

The CDE STAR web-page allows users to request STAR data on the performance of all students with disabilities in any public school in the state. To protect student confidentiality, academic assessment results are not reported for any group of 10 or fewer students. Individual student results are not reported to the public. Individual results are available only to parents/guardians and may be obtained only from the schools and districts where students were tested (CDE, 2004c; 2004d). Academic performance data are published in the public arena at the school, district, county, and state levels in August of each year.

Our initial analyses of the unrestricted charter school STAR data published on the CDE website revealed that due to the minimum reporting requirement, data regarding the academic performance of students with disabilities were largely unavailable. To examine performance of students with disabilities enrolled in charter schools on the CST in English and mathematics, CDE personnel generated spreadsheets containing data on the academic outcomes of all students with disabilities enrolled in the charter schools as well as the academic outcomes of their nondisabled peers. The spreadsheets contained school-level data regarding the number of students who scored in each of the categories (i.e., far below basic, below basic, basic, proficient, or advanced proficient) on the spring 2004 CST assessments in both English and mathematics.

In addition to the data on all students with disabilities in each of the charter schools, CDE generated reports regarding the academic performance of students according to specific subgroups, such as male, female, grades 2–5, 6–8, 9–11, English language learners, students with autism, mental retardation, speech and language impairment, specific learning disabilities, other health impairment, emotional disturbance, African American, Hispanic, Asian, Filipino, Native American, and white. These data are restricted due to concerns about confidentiality of students. In order to protect the identity of students, the

³⁸ For more information about the CSTs and specifically the performance levels, see <http://www.cde.ca.gov/ta/tg/sr/resources.asp>.

University of Maryland provided formal assurances to CDE that it would not misuse or disclose the confidential information.

California Charter School Locator

The CDE Office of Charter Schools maintains a public website that contains a comprehensive database of all charter schools currently or formerly operating in the state.³⁹ This web-accessible database contains data collected from multiple sources including but not limited to CBEDS, STAR, and a funding report that all charter schools are required to complete annually. The database is unrestricted but it does not allow users to generate reports analogous to the Ed-Data program that generates CBEDS data reports. As a result, in order to obtain relevant descriptive data unavailable from CBEDS, Ed-Data, or DataQuest, we used the Charter School Locator database to manually extract the information about each school's total enrollment, grades served, year charter was granted, current status (i.e., active, inactive, closed, revoked), and type (e.g., independent-study or site-based).

³⁹ For more information about the Charter School Locator, see <http://www.cde.ca.gov/ds/si/cs/>.

APPENDIX B: DATA ANALYSIS PROCEDURES

The study data were downloaded from the CDE websites described in Appendix A, or they were provided by the CDE Division of Special Education. All data were initially managed in spreadsheets and then transferred to a relational database program. All charter schools included in the analyses were assigned a pseudo-code to mask their identity. The pseudo-code served as the key identifier that enabled us to link the various databases. Once data from various sources were combined, we conducted a variety of calculations to determine proportions. The procedures we used are described below according to the specific research question the analyses supported.

Traditional and Charter School Profiles

The descriptive profiles of traditional and charter schools are based on unrestricted data obtained from CBEDS and CASEMIS. As noted previously, Ed-Data permits users to run queries based on numerous school characteristics such as non-charter, charter, and grades served. The program permits a search for all charter schools and our queries generated spreadsheets that included data pertaining to demographics and outcomes. Due to technical difficulties associated with our web-browser managing large databases, the files for non-charter schools were pulled incrementally for the elementary schools according to total enrollment (i.e., all schools with a population of 100 students, give or take 25%), and all middle/junior high schools, high schools, and K–12 schools were obtained as distinct cohorts. Using Ed-Data, we were able to gather descriptive information for a total of 7,541 traditional public schools and 450 charter schools for the 2003–2004 academic year. These data enabled us to generate descriptive profiles of all traditional public schools, the 270 charter schools included in our analyses, and the 180 charter schools excluded from our analyses.

Enrollment by Disability Type Analyses

Our analyses of students with disabilities overall and by age and disability type required that we use both unrestricted and restricted CASEMIS data. To compare total enrollment of students with disabilities ages 6–18 in traditional versus charter schools required that we obtain analogous data. However, these data were not readily available for this age span. In an effort to come up with a

proximate comparison, we identified the total enrollment of the 270 charter schools published on DataQuest and divided it by the total number of students with disabilities in these schools as reported to CASEMIS and compared it to similar data available for traditional public school. Unlike our other analyses, these data include all students versus only students ages 6–18.

The unrestricted data regarding traditional public schools were obtained from DataQuest and consisted of a table of all students with disabilities sorted by age and disability category.⁴⁰ CDE personnel generated restricted data reports consisting of spreadsheets that contained the number of students with disabilities enrolled in charter schools according to age and disability type.

In order to compare enrollment trends between traditional and charter schools, the students with disabilities enrolled in charter schools were subtracted from the dataset of all California public schools. Having created two distinct yet parallel datasets, we then compared the enrollment of students with disabilities by age and disability category in traditional schools versus charter schools. This ensured that we did not count any student twice.

For each type of school, we divided the total number of students ages 6–18 in each disability category by the total number of students with disabilities. We were then able to compare the proportion of students identified as having a particular disability in traditional and charter schools.

Enrollment According to Least Restrictive Environment Analyses

The general public cannot access school-level CASEMIS data regarding educational settings for students with disabilities. In order to compare where traditional versus charter schools are educating students with disabilities, the CDE Division of Special Education generated spreadsheets of the number of students with disabilities in both traditional and charter schools are being served in each of the 10 placement categories. The database regarding enrollment in traditional schools included the students enrolled in charter schools, so prior to calculating percentages, we subtracted the total number of students in each placement category enrolled in charter schools from the traditional school counts. Using the total number of students ages 6–18 with disabilities enrolled in each of the two types of schools as the respective denominators, we calculated what percentage of all students with disabilities were served in each type of placement category. We compared these percentages to determine

⁴⁰ To view the data visit <http://data1.cde.ca.gov/dataquest/>. Request “state” level data and under subject, select “special education.” At the next prompt, select “2003–2004 academic year” and request data from the December reporting cycle. At the final prompt, request student count according to “age” and “disability type.”

whether a difference exists between where traditional and charter schools are serving their students with disabilities.

Special Education and Related Services Provision Analyses

The general public cannot access school-level CASEMIS data regarding the types of special education and related services provided to students with disabilities. To conduct our analyses, the CDE Division of Special Education generated spreadsheets containing data on how many students in each disability category received a variety of special education and related services during the 2003–2004 academic year for the entire state and for all charter schools that reported data. Similar to the procedures followed for the first two analyses, the traditional public school data included students who were enrolled in charter schools and prior to comparing the two populations, we had to subtract the charter school students from the traditional school totals.

After reviewing the data, we decided to limit our analyses to the six most prevalent disability categories (i.e., mental retardation, speech or language impairment, emotional disturbance, other health impairment, specific learning disability, and autism). The decision to limit the analyses stemmed from the reality that the small number of students in the other seven categories precluded meaningful analysis. To compare the services both types of schools are providing children with disabilities in the most prevalent disability groups, we calculated percentages of each disability type receiving the specific services (e.g., number of students receiving transition services divided by the total number of students in the seven most prevalent disability categories).

School-Level Student Performance Analyses

Our analyses of student academic performance entailed multiple steps designed to document the contextual factors that we hypothesized might influence outcomes as well as the actual analyses of the performance of students with disabilities on the 2003–2004 CST assessments in English and mathematics.

Accountability Progress Report: Participation Rates and the Academic Performance Indicator

In order to provide contextual information, we sought to document and compare the assessment participation rate of students with disabilities in traditional and charter public schools and to document the Academic Performance Index (API) base score growth rate from 2003–2004 for both types

of schools.⁴¹ Data regarding both the schoolwide and specific subgroups' participation rates (i.e., socioeconomically disadvantaged, English language learners, and students with disabilities) in both English-language arts and mathematics assessments and API growth rates are posted on the CDE Adequate Yearly Progress web-page in the form of Accountability Progress Reports.⁴² We obtained the 2003–2004 statewide report and then obtained comparable school-level reports for all 270 charter schools included in our analyses. We then calculated the average participation rate for all students and for students in the subgroups in the charter schools in both reading and mathematics in order to compare these rates to the rates of traditional public schools. We also calculated the average API base rate and growth rate for both types of schools.

For these analyses, we were not able to subtract the students enrolled in charter schools from the statewide participation figures or the API figures, and therefore, the participation rates and the API scores for charter schools are double counted. However, given the relatively small number of students with disabilities enrolled in charter schools compared to the number enrolled in traditional public schools (approximately 9,000 compared to 600,000) and the number of charter schools compared to traditional schools (270 compared to 9,000) neither the participation rates of the students enrolled in charter schools nor the API scores of these schools would have a discernible impact on the overall calculation. Nevertheless, the comparison between traditional public schools and charter schools is limited because the data are not distinct.

Academic Performance of Students With Disabilities

Our analyses of school-level academic performance were based on restricted CASEMIS and STAR data reports generated by CDE. In order to compare

⁴¹ As part of the California Public School Accountability Act of 1999, the state maintains an Academic Performance Index (API) for all public schools. The API is a numeric index ranging from a low of 200 to a high of 1,000 that reflects a school's or a district's performance level based on the results of statewide testing. The API incorporates the California Achievement Test, 6th Edition Survey (CAT-6 Survey); the California Standards Tests (CSTs) in English-language arts, mathematics, and history-social science; the California High School Exit Examination (CAHSEE); the CST in science for grades 9–11; and the California Alternate Performance Assessment (CAPA) for students with severe cognitive disabilities in grades 2–11. The final element of the API base score is a Scale Calibration Factor (SCF) which is a numerical constant that is calculated by grade span (2–6, 7–8, and 9–11) and then added to the API of each school and school district according to grade span. The SCF may be a positive or negative number. The purpose of the SCF is to enhance the stability and interpretability of the API by ensuring that the statewide average API does not fluctuate solely as the result of adding new API components. (Source: CDE <http://www.cde.ca.gov/ta/ac/ap/expnotes03b.asp>)

⁴² To learn more about the Adequate Yearly Progress in California and to see state- and school-level reports, see <http://ayp.cde.ca.gov/reports.asp>.

academic performance of charter school students with disabilities to non-charter school students with disabilities, we calculated what percentage of all students in each group attained each specific level of proficiency (i.e., far below basic, below basic, basic, proficient, and advanced) on the 2004 spring CST assessments in English-language arts and mathematics. The numerator in the calculation was the total number of students in the group scoring each proficiency level of interest, and the denominator was the total number of students tested.

The second level of analyses entailed analyzing and comparing proficiency rates for specific subgroups of students with disabilities in traditional and charter schools (e.g., all students with disabilities, students with disabilities in grades 2–5, 6–8, and 9–11). For this analysis, we did not examine each possible level of performance but rather, what percentage of students with disabilities had achieved proficiency (i.e., scored either proficient or advanced) on the 2004 CST assessments. This approach provides a more refined analysis because it narrows the population of students with disabilities by specific characteristics such as gender, grade range, and type of disability.

APPENDIX C: STUDENT SUBGROUP OUTCOME DATA, SPRING 2004 CST

Student Subgroup ⁴³	English-Language Arts		Mathematics	
	Percentage of Students With Disabilities in Non-Charter Schools Attaining Proficiency	Percentage of Students With Disabilities in Charter Schools Attaining Proficiency	Percentage of Students With Disabilities in Non-Charter Schools Attaining Proficiency	Percentage of Students With Disabilities in Charter Schools Attaining Proficiency
All Students With Disabilities	9.96% (43,646/438,165)	13.73% (904/6,582)	13.23% (52,504/397,004)	14.40% (859/5,965)
Male	9.81% (28,534)	13.24% (561)	14.31% (37,650)	15.65% (598)
Female	10.27% (15,106)	14.63% (343)	11.09% (14,849)	12.19% (261)
Grades 2–5	14.70% (26,532)	17.14% (457)	21.48% (38,723)	22.11% (590)
Grades 6–8	7.47% (10,541)	13.82% (304)	7.71% (10,618)	10.93% (235)
Grades 9–11	5.64% (6,573)	8.33% (143)	4.01% (3,163)	2.97% (34)
English Language Learners	2.11% (2,653)	1.81% (28)	6.32% (7,378)	6.30% (95)
Mental Retardation	0.82% (64)	1.82% (1)	1.09% (73)	2.22% (1)
Emotional Disturbance	11.50% (2,114)	20.25% (33)	7.40% (1,065)	11.11% (14)
Speech/Language Impairment	25.62% (25,635)	30.72% (447)	34.24% (33,652)	35.14% (506)
Specific Learning Disability	3.60% (9,672)	6.05% (256)	5.02% (11,928)	5.86% (218)
Other Health Impairment	12.23% (2,599)	25.07% (87)	11.16% (2,189)	15.20% (50)
Autism	21.30% (1,443)	39.83% (47)	23.19% (1,498)	38.60% (44)
African American	3.68% (1,960)	5.22% (42)	4.50% (2,122)	6.00% (42)
Native American	7.75% (405)	6.31% (7)	9.76% (446)	6.38% (6)
Asian	22.36% (3,849)	26.09% (48)	31.42% (5,088)	29.38% (52)
Filipino	14.85% (798)	14.29% (9)	21.10% (1,057)	21.67% (13)
Pacific Islander	7.01% (154)	13.04% (3)	9.98% (195)	28.57% (6)
Hispanic	4.07% (8,223)	5.55% (143)	7.45% (13,702)	9.13% (219)
White	18.68% (27,824)	23.78% (627)	21.84% (29,451)	21.45% (509)

Table reads: 9.96% of those students with disabilities who were enrolled in grades 2–11 during the 2003–2004 academic year scored proficient or advanced on the CST assessment in English-language arts.

Source: STAR, 2003–2004 (restricted data).

⁴³ The percentage represents the total number of students with disabilities in each sub-group divided by the total number of students with disabilities in the subgroup who participated in the spring 2004 assessment.