Making Connections

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Special education enrollment and classification in Louisiana charter schools and traditional schools

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Key findings

This study examined the special education enrollment gap (that is, the gap in the enrollment rate of students with an individualized education program) between charter and traditional public schools in four Louisiana educational regions from 2010/11 to 2013/14 and explored possible sources of the gap. Key findings include:

- The gap was 2.5 percentage points (8.5 percent in charter schools and 11.0 percent in traditional schools) in 2010/11 and declined to 0.5 percentage point (10.2 percent and 10.7 percent) in 2013/14.
- For three of the four study years the gap was largest in schools serving grades K–5, and for all four study years it was smallest in schools serving grades 9–12.
- By 2013/14 the special education enrollment rate in schools serving grades 9–12 was higher in charter schools than in traditional schools.
- The enrollment rate for students with an emotional disturbance was higher in charter schools than in traditional schools, but the enrollment rate for students with most other categories of disabilities was higher in traditional schools than in charter schools.
- Charter school enrollment was associated with an increased likelihood of a student being declassified from requiring an individualized education program, though less than 1 percent of students with an individualized education program in both charter schools and traditional schools were declassified over the study period.

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Summary

Charter schools are public schools authorized to operate with some independence from district or state public school regulations, while still being held accountable for student outcomes. Like traditional schools operated by school districts, charter schools are free and are intended to be open to all students who desire to attend.

Serving students with an individualized education program, which entitles them to special education services, can be a challenge for charter and traditional schools. The special education enrollment gap nationally between charter and traditional schools was estimated to be 3 percentage points in 2009/10, with 8 percent of students in charter schools and 11 percent of students in traditional schools having an individualized education program (U.S. Government Accountability Office, 2012). In Louisiana the gap was 2 percentage points in 2010/11, with 12 percent of enrollees in charter schools having an individualized education program compared with 14 percent of students in traditional schools (Center for Research on Education Outcomes, 2013; Cremata et al., 2013).

Members of the Louisiana Charter Schools Research Alliance, as well as policymakers and the public, are interested in an updated and more extensive examination of the dimensions and possible sources of the special education enrollment gap between charter schools and traditional schools in Louisiana. Is the gap larger in the earlier or later grades? Does it vary across disability categories? Is it due to a tendency for charter schools to declassify students as requiring an individualized education program at a higher rate than traditional schools do? Because charter schools educated nearly 60,000 Louisiana students in 2013/14, charter school operators and overseers, such as the Louisiana Department of Education, are interested in learning more about the population of students in special education that charter schools in the state serve. A total of 117 charter schools operated in Louisiana during the 2013/14 school year (Louisiana Believes, 2013).

This study is an exploratory analysis of special education enrollment rates in charter schools and traditional schools, as well as of factors associated with variations in classification and enrollment rates of students with an individualized education program across school types in the four educational regions of Louisiana that have three or more charter schools: Region 1, which includes New Orleans; Region 3, which includes Jefferson and five other parishes near New Orleans; Region 5, which includes Ouachita and five surrounding parishes in the northeast corner of the state; and Region 8, which includes Baton Rouge. In the 2013/14 school year, 77 percent of charter school students in Louisiana attended school in one of these four regions.

The study found that the special education enrollment rate was lower in charter schools than in traditional schools in the four Louisiana educational regions in the study from 2010/11 through 2013/14. However, the gap declined from 2.5 percentage points in 2010/11 to 0.5 percentage point in 2013/14. The gap was smallest in the Baton Rouge region for all four years and largest in the Ouachita region for three of the four years. For all four years the gap was smallest in schools serving grades 9–12, and in 2013/14 the special education enrollment rate was 2 percentage points higher in charter schools serving grades 9–12 than in traditional schools. For three of the four years the gap was largest in schools serving grades K–5, and for one year it was largest in schools serving grades 6–8. The gap varied by disability category: the enrollment rate for students with an emotional disturbance was

higher in charter schools than in traditional schools, but the enrollment rate for students with most other categories of disabilities was higher in traditional schools than in charter schools.

Charter school enrollment was not clearly associated with the likelihood of a student being newly classified as requiring an individualized education program. However, it was associated with an increased likelihood of a student being declassified from requiring an individualized education program. However, declassification was uncommon over the four-year period in both traditional schools (0.58 percent of students with an individualized education program) and charter schools (0.62 percent of students with an individualized education program). The 0.04 percentage point gap in the declassification rate favoring charter schools over the four years of the study was too small to explain the 2 percentage point reduction in the special education enrollment gap from 2010/11 to 2013/14.

Because this exploratory analysis is nonexperimental, the associations identified should not be interpreted as causal. Any associations between certain factors and the special education enrollment gap identified in this study may be limited to circumstances in Louisiana and may not be present elsewhere. Additionally, as an enrollment study, this analysis does not provide any information about how well students with an individualized education program are being identified or served in either charter or traditional schools.

Despite these limitations, the exploratory results signal that, by the 2013/14 school year, charter schools in Louisiana were serving students with an individualized education program in grades 9–12 at a rate similar to or higher than that of traditional schools in the state. The findings also suggest that charter schools are less successful at attracting and enrolling students with an individualized education program in the early elementary grades. Finally, the findings are consistent with those of prior studies that have shown that charter schools declassify students from requiring an individualized education program at a higher rate than do traditional schools; nevertheless, the rate of declassification in both types of school remained at less than 1 percent over the four-year period of the study.

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Why this study?

Charter schools are public schools authorized to operate with some independence from district or state public school regulations, while still being held accountable for student outcomes. Like traditional public schools operated by school districts, charter schools are free and are intended to be open to all students who desire to attend.

Serving students with an individualized education program, which entitles them to special education services, can be a challenge for both charter and traditional schools. In response to concerns about a gap in the enrollment rate of students with an individualized education program between charter schools and traditional schools, Congress ordered the U.S. Government Accountability Office to document any such gaps across the country (U.S. Government Accountability Office, 2012). Nationally, in 2009/10, 8 percent of students in charter schools had an individualized education program, compared with 11 percent of students in traditional schools, a gap of 3 percentage points. In Louisiana the gap was 2 percentage points in 2010/11, with 12 percent of students in charter schools having an individualized education program compared with 14 percent of students in traditional schools (Center for Research on Education Outcomes, 2013; Cremata et al., 2013).

Because charter schools educated nearly 60,000 Louisiana students in 2013/14, charter school operators and overseers, such as the Louisiana Department of Education, are interested in information about the population of students in special education that charter schools in the state serve

Providing special education services can be a challenge for charter schools because many lack the necessary administrative infrastructure to effectively serve students across the full spectrum of disability categories and severities (Ahearn, 1999; Hill, Jochim, & Campbell, 2013). Charter schools are required to follow the same procedures and apply the same criteria as traditional schools for classifying a student as requiring an individualized education program, developing the content of that individualized education program, and declassifying a student from requiring an individualized education program. However, according to a recent national study, in 2010/11 charter schools received an average of 28 percent less revenue per pupil than traditional schools did (Batdorff et al., 2014), making the full provision of special education services an organizational challenge. The relationship between the population of charter school students with an individualized education program and the charter school funding gap remains disputed (Baker 2014; Maloney & Wolf, 2017).

In 2013 the Louisiana Charter Schools Research Alliance of the Regional Educational Laboratory Southwest requested an updated and more extensive exploration of the dimensions and possible sources of the special education enrollment gap between charter schools and traditional schools in Louisiana. The alliance comprises representatives of Louisiana charter school networks, independent charter schools, charter school authorizers, state education officials, and university personnel.[1] Charter schools have increased in number and enrollment in Louisiana since 2009/10, especially in the urban regions of New Orleans and Baton Rouge.[2] Because charter schools educated nearly 60,000 Louisiana students in 2013/14, charter school operators and overseers, such as the Louisiana Department of Education, are interested in updated information about the population of students in special education that charter schools in the state serve.

A total of 117 charter schools operated in Louisiana during the 2013/14 school year (Louisiana Believes, 2013). Of these, 111 were open-enrollment charter schools that did not restrict admission to students by address, admissions test, or academic prerequisite. The remaining six Louisiana charter schools were conversion charter schools. Previously traditional schools, conversion charter schools were changed to charter governance to relieve them of the burden

of some regulations. Conversion charter schools admit students only within the neighborhood boundaries previously assigned to them when they operated as traditional schools. Because students with disabilities do not attend conversion charter schools through parent school choice but based on residential assignment, they were excluded from this analysis. The responsibility to educate students with disabilities enrolled in conversion charter schools rests with the local education agency that authorized the charter, not with the charter school itself.

To address the alliance's needs for information about possible changes in special education enrollment patterns and gaps since the 2012 U.S. Government Accountability Office report, this study used data from the 2010/11–2013/14 school years to examine whether a special education enrollment gap existed between charter schools and traditional schools in the four educational regions of Louisiana with a substantial charter school presence and, if a gap was found, to determine whether it differed by school grade range or student disability category.

This study examined special education enrollment gaps at the regional level, rather than at the state level, as well as by school grade range and student disability category, in order to better inform any actions taken by stakeholders to eliminate these gaps

This study addressed the needs of the Louisiana Charter Schools Research Alliance in several ways. It examined enrollment gaps at the regional level, rather than at the state level, as well as by school grade range and student disability category, in order to better inform any actions taken by stakeholders to eliminate these gaps. For example, in regions and in grade ranges where students with an individualized education program are underrepresented in charter schools, charter school leaders might seek collaborative partnerships with traditional schools to encourage more students with an individualized education program to enroll in their schools even if some of their special education services are delivered by traditional school officials and schools (Ahearn, 1999). Charter school leaders might be motivated to serve more students with an individualized education program because they are a substantial portion of the student population seeking education alternatives, and charter schools are under pressure from overseers to serve a diverse student population, including students with special needs (U.S. Government Accountability Office, 2012).

Additionally, evidence-based knowledge of the dimensions and sources of any special education enrollment gap between charter schools and traditional schools in Louisiana is an important first step toward reducing such gaps. For example, the results of this study could suggest whether it is worth examining in greater depth the processes used by charter schools to determine whether a student is classified or declassified as requiring an individualized education program.

This study also contributes to the emerging empirical scholarship on school choice and students with disabilities. For information about previous research on the special education enrollment gap between charter schools and traditional schools, see appendix A. For details about the historical context of charter schools and special education in Louisiana, see appendix B.

This is the first study to compare special education enrollment rates in charter schools and traditional schools in different regions of the same state. Two of the educational regions in this study contain medium-sized cities (New Orleans and Baton Rouge). One of the regions, Jefferson and surrounding parishes, is suburban. The fourth region, Ouachita and surrounding parishes, is rural (see map C1 in appendix C). This study provides information about the extent to which any special education enrollment gap between charter schools and traditional schools varies across those different environments. Key terms used in the study are defined in box 1.

Box 1. Key terms

Charter school. A public school authorized to operate with some independence from district or state public school regulations, while still being held accountable for student outcomes by an authorizing entity. For the purposes of this study, each school campus of a charter school operator within an educational region was counted as an individual charter school. (This condition applied only to the region of New Orleans.)

Charter school region. In Louisiana, any of the four official educational regions (of eight statewide) that contained at least three charter schools at any point between the 2010/11 and 2013/14 school years.

Disabilities that qualify a student for special education. Any of the following physiological or psychological conditions specified in the Individuals with Disabilities Education Act (IDEA) qualifies a student for special education: autism spectrum disorder, deaf-blindness, developmental delay, emotional disturbance, hearing impairment, intellectual disability, multiple disabilities, orthopedic impairment, other health impairment, specific learning disability, speech/language impairment, traumatic brain injury, and visual impairment.

Grade range (K–5, 6–8, 9–12). Schools are classified as serving a specified grade range if they enroll students in any of the grades in the range. For example, a school enrolling students in grades K–12 would be classified as serving the grade ranges of K–5, 6–8, and 9–12. A school enrolling students only in grades 4–6 would be classified as serving the grade ranges of both K–5 and 6–8.

High-incidence disability. An impairment that occurs at a relatively high rate in the student population and tends to be less severe. The disabilities classified by IDEA as high incidence are emotional disturbance, intellectual disability (if not severe), other health impairment, specific learning disability, and speech/language impairment.

Individualized education program. A document that "details the range of services to be provided" to a student with disabilities and "where a student's education is to take place" (Palmaffy, 2001, p. 7). Each individualized education program is developed and reviewed annually by a committee, including the child's guardians and school personnel.

Low-incidence disability. An impairment that occurs at a relatively low rate in the student population and tends to be more severe. The disabilities classified by IDEA as low incidence are autism, deaf-blindness, hearing impairment, intellectual disability (if severe), multiple disabilities, orthopedic impairment, traumatic brain injury, and visual impairment.

Special education. A term used in IDEA that is defined as specially designed instruction to increase a student's chances for success (Special Education Guide, 2017).

Special education enrollment gap. The difference between the proportion of the student body with an individualized education program enrolled in one type of school and the proportion of the student body with an individualized education program enrolled in another type of school.

Special education enrollment rate. The proportion of students enrolled in a school or school sector who have an individualized education program.

Traditional school. A government-funded and -operated public school enrolling students in one or more of grades K–12 that is free to attend but limited to students living within a defined geographic area.

What the study examined

This exploratory analysis addressed two groups of questions:

1. How did the enrollment rate of students with an individualized education program differ between charter schools and traditional schools in the 2010/11–2013/14 school years, overall and by educational region?

    a. Did the size of the enrollment gap vary across schools serving elementary (grades K–5), middle (grades 6–8), and high (grade 9–12) school levels?

    b. Did the size of the enrollment gap vary across different disability categories?

2. Was the likelihood of a student being classified as or declassified from requiring an individualized education program associated with charter school enrollment compared with traditional school enrollment in the 2010/11–2013/14 school years?

    a. Was charter school enrollment associated with variation in the likelihood of a student being classified as or declassified from requiring an individualized education program, after student grade was controlled for?

    b. Was charter school enrollment associated with variation in the likelihood of a student being classified as or declassified from requiring an individualized education program, after years of continuous enrollment in the same school were controlled for?

The study year range was a time of growth for charter schools in Louisiana, as charter school enrollment increased from 6 percent of all public school enrollment in the four regions in 2010/11 to 10 percent in 2013/14

The study is limited to the four Louisiana educational regions with three or more charter schools between the 2010/11 and 2013/14 school years. Data sources and methods are described in box 2. The study year range was a time of growth for charter schools in Louisiana, as charter school enrollment increased from 6 percent of all public school enrollment in the four regions in 2010/11 to 10 percent in 2013/14.

Research question 1 explores whether there was a gap in the percentage of students with an individualized education program between charter schools and traditional schools and whether that gap varied by school year, region, school grade range, or student disability category.

Research question 2 examines school and student factors associated with variations in the classification and declassification of students as requiring an individualized education program. The school factor was whether the school was a charter school, and the student factors were grade and years of continuous enrollment. A classification changed when a student was classified as requiring an individualized education program for the first time during the study's four-year observation period or when a student previously classified as requiring an individualized education program was declassified during this period (that is, reclassified as a general education student).

Continuous enrollment (research question 2b) was defined as remaining in the same school in which the student was enrolled during the 2010/11 school year. Students who left the school in which they were enrolled during the 2010/11 school year due to a

Box 2. Data sources and research methods

Data. This study used school- and student-level data provided by the Louisiana Department of Education for all public school students and schools in the four educational regions of New Orleans, Jefferson, Ouachita, and Baton Rouge for the 2010/11–2013/14 school years. The data included measures of whether each student was in a charter school or traditional school in a given year; educational region; grade; and whether the student had an individualized education program (and, if so, for which specific category or categories of disability).

Study population. All K–12 public school students, in charter or traditional schools, in the four study regions were included in the annual study population for research question 1. The study population grew from 366,025 students in 2010/11 to nearly 400,000 students in 2013/14. The percentage of students in charter schools grew from 6 percent to 11 percent over the study period.

For research question 2, the study team tracked a single baseline cohort, from 2010/11, across outcome years 2011/12, 2012/13, and 2013/14 for the purpose of estimating the hazard events of a new classification as requiring an individualized education program and a new declassification from requiring an individualized education program. Student grade was for the baseline year of 2010/11. A total of 302,631 individual students had between two and four years of data for the longitudinal study population used for the research question 2a analyses of new classification as requiring an individualized education program based on grade level. A total of 63,394 individual students were included in the longitudinal study population used for the research question 2a analyses of declassification from requiring an individualized education program based on grade level. A total of 287,608 individual students were included in the longitudinal study population used for the research question 2b analyses of new classification as requiring an individualized education program based on persistence in the same school. A total of 48,371 individuals were included in the study population for the research question 2b analysis of declassification from requiring an individualized education program based on persistence in the same school; the longitudinal study population for this research question did not include students from the study population for research question 2a who experienced a structural move. See tables C3, C5, and C6 in appendix C for additional descriptive statistics regarding several of the study populations.

Methodology. Research question 1, on the variation in the special education enrollment gap by region, year, and school grade range, was answered using descriptive statistics. Public school sector was the primary grouping variable, as special education enrollment rates were calculated for all charter and traditional school students in the study population in a given year, overall and then by region, school grade range, and student disability category. For the combined study population, the study team generated averages across the individuals in the study population, not averages of the rates across the four distinct regions, and then compared rates for traditional and charter school students. A *t* test for statistical significance was performed on the differences in special education enrollment rates between charter schools and traditional schools.

Research question 2, on differences in special education classification and declassification rates by school sector, was examined using regression methods designed to deal with the discrete nature of the outcome and the longitudinal nature of the data. The cohort of students enrolled in charter schools and traditional schools in 2010/11 was tracked over time through 2013/14, and average probabilities of being classified as and declassified from requiring an individualized education program were determined based on student characteristics, including whether the student was in a charter school. See appendix C for additional information on these research methods.

structural move were not included in that analysis, as the reason why their enrollment was not continuous was forced on them and not chosen. (A structural move is defined as a student changing schools due to a change of address or aging out of the offered grades.)

The enrollment file was from the fall of the period of confirmed enrollment; thus, any student enrolled in a charter school in the fall who subsequently transferred to a traditional school was considered to be a charter school student for that year and vice versa. Any change in special education status that occurred after the start of the 2010/11 school year but before the October attendance count that informed the 2010/11 enrollment file did not appear in the data as a status change, as only the student status starting in October 2010 was known.

What the study found

The special education enrollment rate in the four regions combined increased from 8.5 percent in 2010/11 to 10.2 percent in 2013/14 in charter schools, while the special education enrollment rate declined from 11.0 percent to 10.7 percent in traditional schools

Charter schools had lower special education enrollment rates than did traditional schools in all four years of the study, across all four regions, across two of three school grade ranges, and across most student disability categories. Charter schools had higher special education enrollment rates than did traditional schools at the high school level in 2013/14 and for emotional disturbance in all years. The study also identified clear variations in the rates of declassifying students from requiring an individualized education program by school sector, student grade level, and number of years enrolled in the same school.

The special education enrollment gap between charter schools and traditional schools declined from 2.5 percentage points in 2010/11 to 0.5 percentage point in 2013/14

The special education enrollment rate in the four regions combined increased from 8.5 percent in 2010/11 to 10.2 percent in 2013/14 in charter schools and declined from 11.0 percent to 10.7 percent in traditional schools. During the study period the special education enrollment gap between charter schools and traditional schools dropped from 2.5 percentage points in 2010/11 to 2 percentage points in 2011/12, to 1.3 percentage points in 2012/13, and to 0.5 percentage point in 2013/14 (table 1). The differences were statistically significant in all four years.

Table 1. Special education enrollment rates in Louisiana charter schools and traditional schools, by year, 2010/11–2013/14

Year	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)
2010/11	8.5	11.0	2.5**
2011/12	8.8	10.8	2.0**
2012/13	9.3	10.6	1.3**
2013/14	10.2	10.7	0.5**

** Significant at $p < .01$.

a. Calculated as the rate among students in traditional schools minus the rate among students in charter schools.

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

Both the level and trend of the special education enrollment gap in Louisiana varied across educational regions

The pattern of the special education enrollment rate in charter schools and traditional schools varied across educational regions (table 2). The Ouachita region had the largest special education enrollment gap in three of the four years, starting at 5.3 percentage points in 2010/11 and increasing to a statistically significant 5.6 percentage points in 2013/14. In the Jefferson region the gap started at 3 percentage points in 2010/11 and ended at 3 percentage points in 2013/14. The gap initially was largest in the New Orleans region, at 5.8 percentage points in 2010/11, but declined to 2.9 percentage points by 2013/14. The differences were statistically significant in each year for the New Orleans region, in part because it had the largest charter school enrollment. The gap was smallest in the Baton Rouge region, where it was 2.8 percentage points in 2010/11 and dropped to 1.2 percentage points in 2013/14.[3]

The special education enrollment gap tended to be smaller at schools serving grades 9–12 than at schools serving grades K–5 and schools serving grades 6–8 and at times favored charter schools

The special education enrollment gap between charter schools and traditional schools in Louisiana varied across schools by whether they served students in grades K–5, grades 6–8, or grades 9–12. The size of the gap also varied across time and region.

Table 2. Special education enrollment rates in Louisiana charter schools and traditional schools, by region and year, 2010/11–2013/14

Region and year	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)
Baton Rouge			
2010/11	6.3	9.1	2.8
2011/12	5.6	8.5	2.9
2012/13	6.6	8.4	1.8
2013/14	7.2	8.4	1.2
Jefferson			
2010/11	7.4	10.4	3.0
2011/12	6.5	10.3	3.8
2012/13	5.8	10.0	4.2
2013/14	7.0	10.0	3.0
New Orleans			
2010/11	8.8	14.6	5.8**
2011/12	9.5	14.5	5.0**
2012/13	10.2	14.1	3.9**
2013/14	11.2	14.1	2.9**
Ouachita			
2010/11	6.1	11.4	5.3
2011/12	5.7	11.4	5.7
2012/13	6.5	11.3	4.8
2013/14	5.8	11.4	5.6*

* Significant at $p < .05$; ** significant at $p < .01$.

a. Calculated as the rate among students in traditional schools minus the rate among students in charter schools.

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

The Ouachita region had the largest special education enrollment gap in three of the four years, and the Baton Rouge region had the smallest gap in all four years

In three of the four years the largest special education enrollment gap across regions was in schools serving grades K–5 (table 3). The gap in schools serving grades K–5 was statistically significant each year and fell from 4.1 percentage points in 2010/11 to 2.3 percentage points in 2013/14. In 2010/11 the largest gap, 4.6 percentage points, was in schools serving grades 6–8. The gap in schools serving grades 6–8 was the second largest in 2011/12, 2012/13, and 2013/14, when it reached zero. In schools serving grades 9–12 the special education enrollment rate was similar in charter schools and traditional schools in the first three school years. In 2013/14 the special education enrollment rate was 1.7 percentage points higher in charter schools serving grades 9–12 than in traditional high schools serving those grades, a reversal of the usual pattern of the gap favoring traditional schools.

The patterns of special education enrollment gaps by school grade range within regions were not always consistent with the patterns across regions (see tables D1–D4 in appendix D). In most years the gap in the New Orleans and Jefferson regions was most positive in schools serving grades K–5 and least positive or even negative (favoring charter schools) in schools serving grades 9–12, fitting the overall pattern, but the gap in the Baton Rouge and Ouachita regions was largest in schools serving grades 6–8, deviating from the overall pattern.

The size and direction of the special education enrollment gap varied by disability category

The special education enrollment gap between charter schools and traditional schools was consistently in favor of traditional schools (that is, traditional schools had a higher enrollment rate) for the four low-incidence disabilities of autism, severe hearing impairment, severe intellectual disability, and severe visual impairment (table 4). The enrollment rate

Table 3. Special education enrollment rates in Louisiana charter schools and traditional schools, by year and school grade range, 2010/11–2013/14

Year and school grade range	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)
2010/11			
Grades K–5	7.8	11.9	4.1**
Grades 6–8	8.6	13.3	4.6**
Grades 9–12	9.0	9.4	0.4
2011/12			
Grades K–5	8.1	11.4	3.3**
Grades 6–8	9.7	11.5	1.9**
Grades 9–12	9.2	9.4	0.2
2012/13			
Grades K–5	8.6	11.1	2.6**
Grades 6–8	10.1	11.3	1.2**
Grades 9–12	9.8	9.5	–0.3
2013/14			
Grades K–5	8.8	11.1	2.3**
Grades 6–8	11.4	11.4	0.0
Grades 9–12	11.0	9.4	–1.7**

* Significant at $p < .05$; ** significant at $p < .01$.

a. Calculated as the rate among students in traditional schools minus the rate among students in charter schools. The value may not equal the difference between the rates displayed in the table because of rounding.

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

In three of the four years the largest special education enrollment gap across regions was in schools serving grades K–5

Table 4. Special education enrollment rates in Louisiana charter schools and traditional schools, by low-incidence disability category and year, 2010/11–2013/14

Disability category and year	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)
Autism			
2010/11	0.30	0.53	0.23**
2011/12	0.39	0.60	0.21**
2012/13	0.49	0.63	0.14**
2013/14	0.59	0.67	0.08**
Hearing impairment (severe)			
2010/11	0.02	0.04	0.02**
2011/12	0.01	0.04	0.02**
2012/13	0.01	0.04	0.03**
2013/14	0.02	0.04	0.03**
Intellectual disability (severe)			
2010/11	0.02	0.06	0.04**
2011/12	0.04	0.06	0.02**
2012/13	0.03	0.05	0.02**
2013/14	0.02	0.05	0.03**
Visual impairment (severe)			
2010/11	0.00	0.02	0.02**
2011/12	0.01	0.02	0.01**
2012/13	0.02	0.03	0.01**
2013/14	0.02	0.03	0.01**

** Significant at $p < .01$.

a. Calculated as the rate among students in traditional schools minus the rate among students in charter schools. The value may not equal the difference between the rates displayed in the table because of rounding.

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

The enrollment rate of students with autism was statistically significantly higher in traditional schools than in charter schools in all four years, and the gap ranged from 0.08 percentage point in 2013/14 to 0.23 percentage point in 2010/11

of students with autism was statistically significantly higher in traditional schools than in charter schools in all four years, and the gap ranged from 0.08 percentage point in 2013/14 to 0.23 percentage point in 2010/11. In all four years the enrollment rate was 0.02–0.03 percentage point higher in traditional schools than in charter schools for students with severe hearing impairment, 0.02–0.04 percentage point higher in traditional schools than in charter schools for students with severe intellectual disabilities, and 0.01–0.02 percentage point higher in traditional schools than in charter schools for students with severe visual impairment.

The special education enrollment gap between charter schools and traditional schools varied across the four high-incidence disabilities of emotional disturbance, other health impairment, specific learning disability, and speech/language impairment (table 5). The enrollment rate of students with emotional disturbance was higher in charter schools than in traditional schools in all four years, and the gap grew from 0.2 percentage point in 2010/11 to 0.4 percentage point in 2013/14. However, the enrollment rate of students with other health impairments was statistically significantly higher in traditional schools than in charter schools in 2010/11 (gap of 0.4 percentage point) and 2011/12 (gap of 0.2 percentage point) and statistically similar in charter schools and traditional schools in 2012/13 and 2013/14. In 2010/11–2012/13 the enrollment rate of students with specific learning disabilities was statistically significantly higher (by 0.3–0.7 percentage point) in traditional

Table 5. Special education enrollment rates in Louisiana charter schools and traditional schools, by high-incidence disability category and year, 2010/11–2013/14

Disability category and year	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)
Emotional disturbance			
2010/11	0.4	0.3	–0.2**
2011/12	0.5	0.2	–0.3**
2012/13	0.6	0.2	–0.4**
2013/14	0.6	0.2	–0.4**
Other health impairment			
2010/11	1.0	1.4	0.4**
2011/12	1.2	1.4	0.2**
2012/13	1.3	1.4	0.1
2013/14	1.4	1.4	–0.0
Specific learning disability			
2010/11	2.6	3.2	0.7**
2011/12	2.6	3.3	0.6**
2012/13	2.9	3.2	0.3**
2013/14	3.1	3.2	0.1
Speech/language impairment			
2010/11	2.7	2.8	–0.1
2011/12	2.6	2.6	0.0
2012/13	2.3	2.4	0.1
2013/14	2.4	2.3	–0.1

** Significant at $p < .01$.

a. Calculated as the rate among students in traditional schools minus the rate among students in charter schools. The value may not equal the difference between the rates displayed in the table because of rounding.

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

The enrollment rate of students with emotional disturbance was higher in charter schools than in traditional schools in all four years, and the gap grew from 0.2 percentage point in 2010/11 to 0.4 percentage point in 2013/14

schools than in charter schools, but by 2013/14 there was no statistically significant difference. Traditional schools and charter schools enrolled a statistically similar percentage of students with speech/language impairment in all four years.

A separate analysis of special education enrollment gaps for students with intellectual disabilities, disaggregated by severity of disability, found that the gaps tended to favor charter schools for students with mild intellectual disabilities but traditional schools for students with moderate or severe intellectual disabilities (see table D14 in appendix D).

The association between being enrolled in a charter school and being newly classified as requiring an individualized education program was unclear after initial grade, which heavily influenced classification, was controlled for

New classifications of students as requiring special education services occurred at a rate of 11.67 percent in traditional schools (table 6). Although likelihood of a new classification was 0.73 percentage point higher for enrollment in a charter school (12.4 percent), the association was not statistically significant.

Table 6. Likelihood of being newly classified as requiring an individualized education program in Louisiana schools, by school type and grade, 2010/11–2013/14

Factor	Effect on likelihood[a] (percentage points)	Predicted likelihood of being newly classified as requiring an individualized education program[b] (percent)
Enrollment in a traditional school[c]	0.00	11.67
Enrollment in a charter school	0.73	12.40
Grade level in 2010/11[d]		
Prekindergarten[c]	0.00	11.67
Kindergarten	–3.56**	8.11
1	–4.82**	6.85
2	–4.50**	7.18
3	–4.58**	7.09
4	–3.98**	7.69
5	–5.13**	6.54
6	–5.96**	5.71
7	–6.30**	5.37
8	–6.54**	5.14
9	–5.92**	5.76
10	–7.89**	3.78
11	–8.43**	3.24
12	–8.07**	3.60

** Significant at $p < .01$.

a. Average change in percentiles associated with the factor.

b. Predicted likelihood based on the regression model for a student with average characteristics.

c. Reference category. A positive value in the effect on likelihood column indicates that students in a given category were newly classified more often than students in the reference category, and a negative value indicates that students in a given category were newly classified less often than students in the reference category.

d. Grade level refers to a student's grade in 2010/11, but new classifications of a student requiring an individualized education program are measured in the three subsequent years. Thus, a student who was in prekindergarten in 2010/11 could have been identified as newly classified in grade K, 1, or 2, and a student who was in grade 9 in 2010/11 could have been identified as newly classified in grade 10, 11, or 12. In other words, while the grade in 2010/11 is not the grade when the new classification was made, it is within three years of that grade.

Note: New classifications are identified starting in 2011/12 (see appendix C).

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

The likelihood of being newly classified as requiring an individualized education program was greatest for students who were in prekindergarten in 2010/11

New classifications were more likely to occur at the earlier stages of a student's education and less likely to occur at the later stages, based on the combined charter and traditional school study population. The likelihood of being newly classified as requiring an individualized education program was greatest for students who were in prekindergarten in 2010/11. The likelihood of being newly classified as requiring an individualized education program was 3.56 percentage points lower for students in kindergarten in 2010/11. For students in grades 1–4, the new classification rate was between 3.98 percentage points (grade 4) and 4.82 percentage points (grade 1) lower than the rate for students in prekindergarten in 2010/11. From grade 5 on, new disability classifications ranged from 5.13 percentage points lower (grade 5) to 8.43 percentage points lower (grade 11).

Being declassified from requiring an individualized education program was rare, but the likelihood was statistically significantly higher in charter schools than in traditional schools, after initial grade was controlled for

Students in charter schools were statistically significantly more likely to be declassified from requiring an individualized education program than were students in traditional schools (table 7). However, declassification was generally rare. After initial grade was controlled for, declassifications occurred to 0.62 percent of students in charter schools (62 of every 10,000 students), compared with 0.58 percent of students in traditional schools. In other words, being in a charter school had a statistically significant effect on the likelihood of a student being declassified, increasing it 0.04 percentage point.

Declassification was more likely to occur at the early stages of a student's education. Students who were in prekindergarten in 2010/11 were the most likely to be declassified, although the analysis does not identify what grade they were in when declassification occurred. The drop in the declassification rate between students in prekindergarten in 2010/11 and students in kindergarten in 2010/11 was not as large as the drop in the rate of students newly classified as requiring an individualized education program between

Table 7. Likelihood of being declassified from requiring an individualized education program in Louisiana schools, by school type and grade, 2010/11–2013/14

Factor	Effect on likelihood[a] (percentage points)	Predicted likelihood of being declassified from requiring an individualized education program[b] (percent)
Enrollment in a traditional school[c]	0.00	0.58
Enrollment in a charter school	0.04**	0.62
Grade level in 2010/11		
Prekindergarten[c]	0.00	0.58
Kindergarten	–0.04**	0.53
1	–0.11**	0.47
2	–0.12**	0.46
3	–0.12**	0.46
4	–0.13**	0.45
5	–0.13**	0.45
6	–0.13**	0.45
7	–0.12**	0.46
8	–0.12**	0.45
9	–0.12**	0.46
10	–0.11**	0.47
11	–0.11**	0.47
12	–0.12**	0.46

** Significant at $p < .01$.

a. Average change in percentiles associated with the factor.

b. Predicted likelihood based on the regression model for a student with average characteristics.

c. Reference category. A positive value in the effect on likelihood column indicates that students in a given category were de classified more often than students in the reference category, and a negative value indicates that students in a given category were declassified less often than students in the reference category.

Note: New declassifications are identified starting in 2011/12 (see appendix C).

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

Students in charter schools were statistically significantly more likely to be declassified from requiring an individualized education program than were students in traditional schools

those two grades. The highest likelihood of declassification by initial grade—excluding the omitted category of prekindergarten—for charter students was kindergarten, at 0.53 percent. Being in a grade beyond grade 1 in 2010/11 had little additional effect on the likelihood of being declassified during the study period; the likelihood in grades 1–12 was 0.45–0.47 percent.

The likelihood of being newly classified as requiring an individualized education program was statistically similar in charter schools and traditional schools but significantly higher for students who persisted in their original school for the first two years of the study and significantly lower for students who persisted for all four years

Enrollment in a charter school was associated with a 1.02 percentage point higher likelihood of being newly classified as requiring an individualized education program, but that association was not statistically significant (table 8). Persistence of enrollment since 2010/11 was associated with differences in the likelihood of being newly classified for students who did not graduate from their initial school during the four years of the study, based on the combined study population of charter schools and traditional schools. Compared with students who changed schools after the 2010/11 school year, persisting in a school for a second year was associated with an increase of 4.97 percentage points, from 11.67 percent to 16.64 percent, in the likelihood of being newly classified as requiring an individualized education program. Enrollment at the same school for three consecutive years was not associated with a difference in the classification rate, while persisting in the same school for all four years of the study was associated with a 3.24 percentage point decrease, from 11.67 percent to 8.43 percent.

Table 8. Likelihood of being newly classified as requiring an individualized education program in Louisiana schools, by school type and years of persistence in the same school, 2010/11–2013/14

Factor	Effect on likelihood[a] (percentage points)	Predicted likelihood of being newly classified as requiring an individualized education program[b] (percent)
Enrollment in a traditional school[c]	0.00	11.67
Enrollment in a charter school	1.02	12.69
Years of persistence in the same school since 2010/11		
One year[c]	0.00	11.67
Two years	4.97*	16.64
Three years	–0.55	11.12
Four years	–3.24*	8.43

* Significant at $p < .05$.

a. Average change in percentiles associated with the factor.

b. Predicted likelihood based on the regression model for a student with average characteristics.

c. Reference category. A positive value in the effect on likelihood column indicates that students in a given category were newly classified more often than students in the reference category, and a negative value indicates that students in a given category were newly classified less often than students in the reference category.

Note: New classifications are identified starting in 2011/12 (see appendix C).

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

Enrollment in a charter school was associated with a 1.02 percentage point higher likelihood of being newly classified as requiring an individualized education program, but that association was not statistically significant

Table 9. Likelihood of being declassified from requiring an individualized education program in Louisiana schools, by school type and years of persistence in the same school, 2010/11–2013/14

Factor	Effect on likelihood[a] (percentage points)	Predicted likelihood of being declassified from requiring an individualized education program[b] (percent)
Enrollment in a traditional school[c]	0.00	0.58
Enrollment in a charter school	0.041**	0.62
Years of persistence in the same school since 2010/11		
One year[c]	0.00	0.58
Two years	–0.01**	0.57
Three years	0.21**	0.78
Four years	–0.15**	0.42

** Significant at $p < .01$.

a. Average change in percentiles associated with the factor.

b. Predicted likelihood based on the regression model for a student with average characteristics.

c. Reference category. A positive value in the effect on likelihood column indicates that students in a given category were declassified more often than students in the reference category, and a negative value indicates that students in a given category were declassified less often than students in the reference category.

Note: New declassifications are identified starting in 2011/12 (see appendix C).

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

Charter school enrollment remained statistically significantly associated with the likelihood of being declassified from requiring an individualized education program, after persistence of enrollment in the same school and initial grade were controlled for

The likelihood of being declassified from requiring an individualized education program was rare but was statistically significantly higher in charter schools than in traditional schools, after student enrollment persistence and initial grade were controlled for

Charter school enrollment remained statistically significantly associated with the likelihood of being declassified from requiring an individualized education program, after persistence of enrollment in the same school and initial grade were controlled for (table 9). The likelihood of being declassified was statistically significantly higher in charter schools (0.62 percent) than in traditional schools (0.58 percent), after persistence and initial grade were controlled for. Compared with students who switched schools immediately after 2010/11, students who persisted for two years were associated with a lower likelihood of declassification, whereas students who persisted for three years were associated with a higher likelihood. Persisting in the same school for the full four years of the study was associated with a lower likelihood of declassification. All of the associations were statistically significant.

Implications of the study findings

The exploratory analyses in this study provide the Louisiana Charter Schools Research Alliance with important data that its members can use as they continue to address the gap in the enrollment rate of students with an individualized education program between charter schools and traditional schools. While the gap fell from 2.5 percent in 2010/11 to 0.5 percent in 2013/14, students with an individualized education program were found to be underrepresented in charter schools serving grades K–5 and grades 6–8 in the four state educational regions covered by the study. The leaders of those charter schools may want to learn about and replicate the programs and practices for students with disabilities that are attracting and keeping young students in traditional schools. In addition, they might

want to more actively advertise their schools' offerings for students with disabilities. The enrollment gap was smallest in the Baton Rouge region in all four years and largest in the Ouachita region in three of the four years. Charter school leaders may want to examine closely the approach to special education in Baton Rouge charter schools and to sponsor more research to identify possible reasons for the smaller enrollment gap in Baton Rouge.

The special education enrollment gap of 0.5 percentage point that remained between charter schools and traditional schools as of 2013/14 also may be driven by students with low-incidence disabilities, who were less likely to be enrolled in a charter school than in a traditional school in most years. Students with low-incidence disabilities also tend to be more difficult to fully include in a general education program (Chambers, Kidron, & Spain, 2004). Charter schools might form collaborations with each other or with local traditional school districts to provide customized services to students with specific low-incidence disabilities. If charter schools are able to enroll more students with low-incidence disabilities, those students may be less isolated, and schools might also achieve economies of scale that would stretch resources farther.

The leaders of charter schools serving grades K–5 and grades 6–8 may want to learn about and replicate the programs and practices for students with disabilities that are attracting and keeping young students in traditional schools and more actively advertise their schools' offerings for students with disabilities

In all four years of the study charter schools enrolled a higher proportion of students with the high-incidence disability of emotional disturbance than traditional schools did. It is possible that charter schools, which tend to be smaller than traditional schools, are more attractive and less intimidating education environments for students who are emotionally challenged. Traditional schools enrolled a higher proportion of students with the high-incidence disability category of specific learning disability in the first three years of the study, but the enrollment rate of such students was similar in charter schools and traditional schools in the final year. Thus, charter schools in Louisiana appear to be becoming as attractive as traditional schools to students with high-incidence disabilities.

Charter schools and traditional schools also enrolled similar rates of students with other health impairments in 2012/13 and 2013/14 and students with speech/language impairments in all four years. Those categories of disabilities tend to be mild in severity and therefore do not necessarily require the provision of separate programs and specialized staff (Chambers et al., 2004; Chambers, Shkolnik, & Perez, 2003), thus fitting within the general tendency of charter schools to seek the full inclusion of students with disabilities into their general education program. Future research with more recent data could examine whether the results for 2013/14 marked the beginning of a trend or were an anomaly, especially given the additional supports provided to New Orleans charter schools after the study period (see below).

Students in the four Louisiana educational regions included in this study were newly classified as requiring an individualized education program at a statistically similar rate in charter schools (12.4 percent) and traditional schools (11.7 percent). New classification was most common for students who began the study in prekindergarten or kindergarten. This general pattern of new classification in the early grades is likely due to two factors. First, some disabilities, such as specific learning disabilities, become apparent once a child interacts with educational material in the early grades of school (Muschkin, Ladd, & Dodge, 2015). Second, once a student has been designated as requiring an individualized education program, that student cannot be newly classified, as the data do not signal changes in an individualized education program, only whether the student had one in specific years.

Declassification of students from requiring an individualized education program was uncommon, although students were more likely to be declassified if they were in a charter school than in a traditional school. Other research has found that such declassification is most likely to occur shortly after initial diagnosis, after the first program of treatment has been completed (Muschkin et al., 2015). Because initial diagnosis is most common in the early grades and much less common in the later grades, declassification also tends to occur in the early grades. Future research and practitioner discussions could focus on what charter schools and traditional schools are doing differently in terms of the education and evaluation of students with an individualized education program that has led to more Louisiana students with disabilities shedding the disability label while enrolled in charter schools.

The findings in this study also contribute to a broader understanding of the scope and nature of the special education enrollment gap between charter schools and traditional schools. Previous studies of the gap in New York City and Denver (Winters, 2013, 2014) have reported results consistent with the findings here that the gap appears to be closing over time, is largest in schools serving the elementary grades, and is partly mitigated by a greater likelihood of declassification among students in charter schools than among students in traditional schools. The current study also shows that charter schools in Louisiana enroll higher proportions of students with an individualized education program in the high school grades and with emotional disturbance than do traditional schools. Both of these exploratory findings are new for the special education research literature. Although this study also finds that charter schools declassify students from requiring an individualized education program at a higher rate than traditional schools do, declassification was rare, and the difference in the declassification rate was only 0.04 percentage point, indicating that the higher rate of declassification explained little, if any, of the 2 percentage point decline in the special education enrollment gap from 2010/11 to 2013/14.

Future research and practitioner discussions could focus on what charter schools and traditional schools are doing differently in terms of the education and evaluation of students with an individualized education program that has led to more Louisiana students with disabilities shedding the disability label while enrolled in charter schools

Concrete knowledge of the dimensions and sources of any gap in special education enrollment between charter schools and traditional schools in Louisiana in the past and present is an important first step to guide possible remediating actions, including more research on the gap.

Limitations of the study

This study is exploratory. Although it establishes the presence of special education enrollment gaps and variations in their size and direction over time and across Louisiana educational regions and grade ranges, the study cannot conclusively determine why any gaps exist. Many of the results, including the finding that charter schools declassify students from requiring an individualized education program at a higher rate than traditional schools do, are subject to interpretation and could signal either a success or a failure of the special education classification system.

The data for this study were limited to the 2010/11–2013/14 school years and the four educational regions in Louisiana with a substantial population of charter school students during those years. The proportion of the Louisiana charter school population outside the four sampled regions, and therefore excluded from the analysis study population, ranged from 17 percent in 2011/12 to 35 percent in 2010/11. The data were censored in that no information was available regarding conditions prior to 2010/11 or after 2013/14. For the longitudinal analysis that addressed the research questions about classification and declassification

rates, changes that took place between the start of school and the fall enrollment count in 2010 were not reflected in the data. It is possible that some of the findings from the analysis were particular to the conditions that students experienced in those years and regions of Louisiana and might not hold in other contexts.

The examination of student individualized education program classification rates by the grade ranges of K–5, 6–8, and 9–12 was also limited by the fact that most charter schools have unconventional grade ranges that extend into two, and sometimes even all three, of those categories. As a result, any association between a specific grade range and special education enrollments is likely imprecisely measured in this study.

Finally, in fall 2014, after the end of the period for this study, the Recovery School District of New Orleans began to provide charter schools in the city with special education support, including innovation grants and access to a citywide insurance fund to cover the costs of students with severe disabilities (Schnaiberg & Lake, 2015). The state also altered the funding of students in special education in all public schools in the state to account for variations in total weekly service minutes provided to those students within the various disability classifications (Dreilinger, 2014). The exploratory findings from this study do not reflect any results from Louisiana's new approach to funding and managing special education across the public school sectors.

The exploratory findings from this study do not reflect any results from the new approach to funding and managing special education across the public school sectors that the Recovery School District of New Orleans and the state introduced in fall 2014

Given the limitations of this exploratory study, policymakers and practitioners are cautioned to use this information as merely one among many sources of guidance regarding the patterns of special education enrollments in charter schools.

Appendix A. Literature review

Questions surrounding the intersection of charter schooling and special education persist across the United States as well as in Louisiana. They include concerns about the proportion of students in charter schools who have special education needs compared with the proportion of students in traditional schools who do; the extent to which those proportions vary by grade level, disability category, and school context; and whether differences in classification and certification practices and rates across charter and traditional schools explain much, if any, of the special education enrollment gap.

Charter schools were created to provide schools freedom from regulation and subject them to market forces that would inspire innovative methods for schooling students (Garda, 2012). Particularly in special education, charter schools have the potential to provide unique and creative models of education for students with special education needs in order to serve them more effectively than traditional schools can.

However, special education is guided by a series of federal laws that create a compliance model of accountability that requires schools to adhere to an extensive set of procedural regulations, setting the stage for a potential culture clash between the vision of charter schooling and the demands of special education (Wolf & Hassel, 2001).

Because of their reliance on public funding, charter schools must accept all students who apply. When applications exceed available seats, a random lottery must be conducted to determine admittance. Students with disabilities are just one of several groups who may find the charter school sector more or less appropriate given their education needs. Little is known about students with disabilities who attend charter schools and how they compare to students with disabilities who attend traditional schools. Review of this nascent literature highlights the contribution that this proposed study makes to the understanding of charter schooling and special education in Louisiana.

Charter schools have an incentive to maximize student learning, as "for more than a decade, the charter school sector has become more insistent on closing schools that do not meet certain academic performance benchmarks" (Center for Research on Education Outcomes, 2017, p. 1). Like all schools, charter schools need to operate with limited resources. Considering the cost and support structures that students with disabilities require, students with disabilities have the potential to hinder these two goals of maximizing student achievement while minimizing the expenditure of resources (McKinney, 1996). Given that charter schools are required to provide special education services to enrolled students with disabilities, a concern of many special education advocates is the possibility that charter schools will discriminate against students with disabilities in enrollment decisions or discourage them from enrolling in their schools. Early research into charter schools provided some qualitative accounts of incidents in which charter school personnel may have "counseled" students out of the school through conversation about inappropriate matches between school and student (Fiore, Harwell, Blackorby, & Finnigan, 2000; McKinney, 1996; McLaughlin & Henderson, 1998; Ramanthan & Zollers, 1999; Sullins & Miron, 2005).

Early descriptive studies of special education enrollment in charter schools raised concerns of a large enrollment gap for such students between charter schools and traditional

schools (McKinney, 1996; U.S. Department of Education, 1997). More recent studies have confirmed that the gap is shrinking (for example, Cremata et al., 2013; U.S. Government Accountability Office, 2012).

The U.S. Government Accountability Office (GAO) responded to the continued concern and lawsuits over the enrollment disparity of students with disabilities between charter schools and traditional schools by analyzing enrollment data from 2008/09 and 2009/10 for 41 states with charter schools at that time (Chang, 2010). It found that nationally the number of students with disabilities in charter schools was increasing but that the special education enrollment rate was still 3 percentage points lower in charter schools than in traditional schools (U.S. Government Accountability Office, 2012). Variations in the direction and size of the special education enrollment gap existed at the state level, with 3 states not reporting special education enrollment, 6 states enrolling a higher percentage of students with disabilities in charter schools than in traditional schools, 2 states enrolling the same percentage in both sectors, and the remaining 30 states enrolling a lower percentage of students with disabilities in charter schools than in traditional schools.[4] The special education enrollment gap between charter schools and traditional schools in Louisiana for 2009/10 was 4 percentage points in the GAO study, 1 percentage point above the national average, whereas a study drawing from 2010/11 data determined that the gap for Louisiana was 2 percentage points (Cremata et al., 2013). The GAO report found similar aggregate disparities in the enrollment of students with all categories of disabilities, both severe and nonsevere.

Researchers have also examined possible reasons for the special education enrollment gaps between charter schools and traditional schools. Rhim, Faukner, and McLaughlin (2006) analyzed data on the enrollment of students with disabilities in charter schools in California in 2003/04, 10 years after the state passed its charter school legislation. The gap in California that year was about 2.5 percentage points in favor of traditional schools. The researchers concluded that more than half of that disparity could be accounted for by the subgroup of students with disabilities receiving services in specialized settings, such as a separate school, residential facility, or hospital. Overwhelmingly, these students in such specialized settings were officially enrolled in a traditional school rather than a charter school when they were admitted to the specialized setting. Accounting for the much higher rate of such students in traditional schools compared with charter schools, charter schools in the state enrolled students with all other categories of disabilities at a rate that was within 1 percentage point of traditional schools.

Recent research has also analyzed special education enrollment in charter schools and traditional schools in New York and Denver. Lake, Gross, and Denice (2012) analyzed special education enrollment in charter schools in New York State disaggregated at the elementary, middle, and high school levels, as well as by region in the state and authorizer type. They found that charter middle and high schools had special education enrollment rates similar to those that traditional schools had but that charter elementary schools in the state underenrolled students with disabilities compared with traditional schools. They also concluded that the New York charter schools that were authorized by local departments of education tended to enroll students with disabilities at rates much more similar to those of district-run schools than did charter schools authorized by other entities, namely, the New York State Board of Regents and the State University of New York.

Winters (2013) used New York City charter and traditional elementary school data, including lotteries, to track student enrollment patterns from kindergarten through grade 3. He found that initial enrollment differences between charter schools and traditional schools were partly the result of lower application rates in charter schools for students with autism and speech or language impairments. This gap grew as students progressed through grade 3, because charter schools were less likely to classify students as requiring an individualized education program and more likely to declassify students from being in special education —in particular, for the disability categories of emotional disturbance and specific learning disabilities.

Of the students with disabilities enrolled in charter schools in year 1 of Winters's study, 16.3 percent were declassified from requiring special education services by year 4, compared with 11.1 percent of students with disabilities in traditional schools (Winters, 2013). Although the study did not report the exact basis for the declassifications in specific cases, under the federal Individuals with Disabilities Education Act (IDEA), such declassifications are supposed to be based on a determination that important educational and behavioral milestones contained in a student's individualized education program have been achieved. Some element of subjectivity is unavoidable in such determinations, however, particularly for students diagnosed with specific learning disabilities or emotional disturbance (Lyon et al., 2001; Wolf & Hassel, 2001), which were the student subgroups that experienced the highest rate of declassification. The remainder of the gap in enrollment was caused by transfers into charter schools after kindergarten, who were disproportionally general education students, decreasing the percentage of enrollment accounted for by students with disabilities.

Winters (2014) conducted a similar study of special education enrollment patterns in Denver, Colorado, but with a broader population of students in grades K–8. He reported that the gap in enrollment of students with disabilities in Denver charter schools started during the kindergarten and middle school application process and grew as students were declassified from requiring an individualized education program at a higher rate or newly classified at a lower rate than in traditional schools.

The Winters (2013, 2014) studies on special education enrollment in charter schools have called attention to the question of differential special education classification rates, standards, and practices across the charter and traditional school sectors. Although rigorous empirical research on that question is rare, Wolf, Witte, and Fleming (2012) studied special education in the Milwaukee Parental Choice Program, a school voucher program that has operated since 1990. Drawing on longitudinal data involving more than 2,700 voucher students, as well as an equal number of matched public school students, they found that students who switched from one school sector to the other were statistically significantly more likely to be designated as requiring an individualized education program when enrolled in the traditional school sector than when enrolled in a private school in the voucher program. Although Wolf et al. did not examine special education in the charter school sector, it was the first empirical study to indicate that different school sectors approach the issue of student disability in ways that lead to differences in the rates of student disability certification and decertification.

In summary, three empirical studies—conducted in New York City, Denver, and Milwaukee—identified gaps in the percentage of students formally classified as having

disabilities in schools of choice (charter or private voucher) compared with traditional public schools. They also uncovered descriptive evidence suggesting that most of the difference is driven by special education enrollment discrepancies in entry grades, possibly signaling that charter schools are less attractive to some parents of students with disabilities. Their research also suggests that differences in classification practices of students with disabilities might account for much of the remaining differences in enrollment rates. Winters (2014, p. 4) concludes the summary of the Denver results with the observation that "further research on the … special education gap in other cities … is warranted to determine if these factors are in fact common nationwide." Moreover, no empirical study prior to this one examined the special education enrollment gap between charter schools and traditional schools in nonurban areas.

Appendix B. Historical context on Louisiana and portfolio districts

Portfolio districts are public school organizations that provide oversight through performance contracts and support services—such as centralized enrollment lotteries, transportation, and food service—to a variety of autonomous and distinctive schools in their locality (Hill et al., 2013). Some portfolio school districts, such as Colorado's Board of Cooperative Education Services and California's Special Education Local Plan Area, coordinate the provision of special education services for the students in the schools in their portfolio (Ahearn, 1999).

Although the Recovery School District in New Orleans is a portfolio school district, it oversaw 58 charter schools as of 2013/14, which represented 81 percent of the New Orleans open-enrollment charter schools and 52 percent of all Louisiana charter schools in this study. During the period of the study (2010/11–2013/14), the provision of special education services was entirely the responsibility of individual charter schools, with no service coordination or funding supports from the Recovery School District (Schnaiberg & Lake, 2015). Starting immediately after the period covered in this study, in the fall of 2014, the Recovery School District launched policy reforms focused on special education, including a citywide insurance fund to finance high-cost students with disabilities and school-level innovation grants in the area of special education (Schnaiberg & Lake, 2015).

A charter school's legal status (that is, whether it is an independent local education agency or part of an existing local education agency) determines how it receives funding. Federal funds flow to states, and states use their own funding formulas to allocate money to local education agencies. Many charter schools do not have a clear understanding of how federal and state funding are allocated to them for special education (Rhim & McLaughlin, 2007). Charter schools that operate as their own local education agency generally receive 100 percent of their federal and state per-pupil special education dollars. However, schools that operate as part of a local education agency, such as the 14 Orleans Parish School Board charter schools in this study, generally do not receive 100 percent of federal or state per-pupil special education funds because the district in which the charter school is located typically withholds all or a portion of the federal and state funds and provides services (for example, special education personnel, professional development, child find, or evaluations) to the charter schools in its district (Rhim & McLaughlin, 2007).[5] In this study, 103 of the charter schools operated as their own local education agency for the purpose of special education funding and services, including all of the charter schools that are authorized by the Recovery School District.

During the entire period of this study's evaluation, 2010/11–2013/14, state statute in Louisiana determined the specific amount of additional state and federal funding that flowed to each student in a charter school based solely on the student's disability classification. The Recovery School District of New Orleans recently approved a plan to change the special education funding formula used by its charter schools to account for variations in total weekly service minutes provided to special education students within the various disability categories (Dreilinger, 2014). That change was implemented in the fall of 2014, after all of the data for this study were collected; therefore, it did not affect the analysis performed for this evaluation.

Appendix C. Data, study population, and methodology

This appendix describes the data collected to perform the analyses in this report, the analytic study population, and the methods used to answer each research question.

Data

The study uses both annual cross-sectional (for research question 1) and longitudinal (for research question 2) student enrollment data from the Louisiana Department of Education Student Information Systems file for the 2010/11–2013/14 school years.

The Student Information Systems file contains individual student identification numbers that follow students when they transfer between school sectors and indicate their grade level. It also includes information about whether a student has an active individualized education program and, if so, the specific disability category assigned to the student. By consolidating enrollment and student disability data for 2010/11–2013/14, the special education enrollment rates in Louisiana charter schools and traditional schools could be established, along with the rates for students with specific disability categories. Merging the four annual databases enabled the study team to identify students with new disability classifications and those whose disabilities had been declassified during the three years after 2010/11.

The individual-level student data from the Student Information Systems file were supplemented with school-level descriptive data publicly available from the Louisiana Believes website maintained by the Louisiana Department of Education (http://www.louisianabelieves.com/resources/library/data-center). Additional school-level variables were generated by aggregating the student-level data provided for the school in the Student Information Systems file. Data from both sources were used to answer all research questions.

Table C1 lists the key variables included in the study. Although the operational definitions of most of these variables should be clear from their labels, some variables require additional explanation. Many charter schools vary from both traditional schools and other charter schools in their grade configurations. Few charter schools could be included in the grade-range categories if the school were required to have the precise grade configurations typically found for traditional elementary (grades K–5), middle (grades 6–8), or

Table C1. Variables used in the study, by level of measurement

Level and variable	Range	Source
School level		
School identification number	String	SIS
Charter authorizer is local school board	0,1	Louisiana Believes
Charter authorizer is state Board of Education	0,1	Louisiana Believes
Charter authorizer is local charter authorizer	0,1	Louisiana Believes
Open-enrollment charter school	0,1	Louisiana Believes
Conversion charter school	0,1	Louisiana Believes
Serves any grade K–5	0,1	SIS

(continued)

Table C1. Variables used in the study, by level of measurement *(continued)*

Level and variable	Range	Source
Serves any grade 6–8	0,1	SIS
Serves any grade 9–12	0,1	SIS
Initial intake grade is K	0,1	SIS
Initial intake grade is 1	0,1	SIS
Initial intake grade is 2	0,1	SIS
Initial intake grade is 3	0,1	SIS
Initial intake grade is 4	0,1	SIS
Initial intake grade is 5	0,1	SIS
Initial intake grade is 6	0,1	SIS
Initial intake grade is 7	0,1	SIS
Initial intake grade is 8	0,1	SIS
Initial intake grade is 9	0,1	SIS
Located in Region 1 (New Orleans)	0,1	Louisiana Believes
Located in Region 3 (Jefferson)	0,1	Louisiana Believes
Located in Region 5 (Ouachita)	0,1	Louisiana Believes
Located in Region 8 (Baton Rouge)	0,1	Louisiana Believes
Student level		
School identification number	String	SIS
Student identification number	String	SIS
Year 2010/11	0,1	SIS
Year 2011/12	0,1	SIS
Year 2012/13	0,1	SIS
Year 2013/14	0,1	SIS
School name	String	SIS
Grade level	0–12	SIS
Persisted in school fall[a]	0,1	Determined from SIS
Currently classified as requiring an individualized education program	0,1	SIS
Newly classified as requiring an individualized education program	0,1	Determined from SIS
Newly declassified as requiring an individualized education program	0,1	Determined from SIS
General education consistently in database	0,1	Determined from SIS
Classified as having specific learning disability	0,1	SIS
Classified as having speech or language impairment	0,1	SIS
Classified as having intellectual disability	0,1	SIS
Classified as having emotional disturbance	0,1	SIS
Classified as having hearing impairment	0,1	SIS
Classified as having orthopedic impairment	0,1	SIS
Classified as having other health impairment	0,1	SIS
Classified as having visual impairment	0,1	SIS
Classified as having autism spectrum disorder	0,1	SIS
Classified as having developmental delay	0,1	SIS
Classified as having multiple disabilities	0,1	SIS
Classified as having deaf-blindness	0,1	SIS
Classified as having traumatic brain injury	0,1	SIS

SIS is Louisiana Department of Education Student Information Systems. Louisiana Believes is the Louisiana Department of Education website (http://www.louisianabelieves.com).

a. Variable generated from four years of data, yielding three indicator variables for two, three, or four years of persistent enrollment.

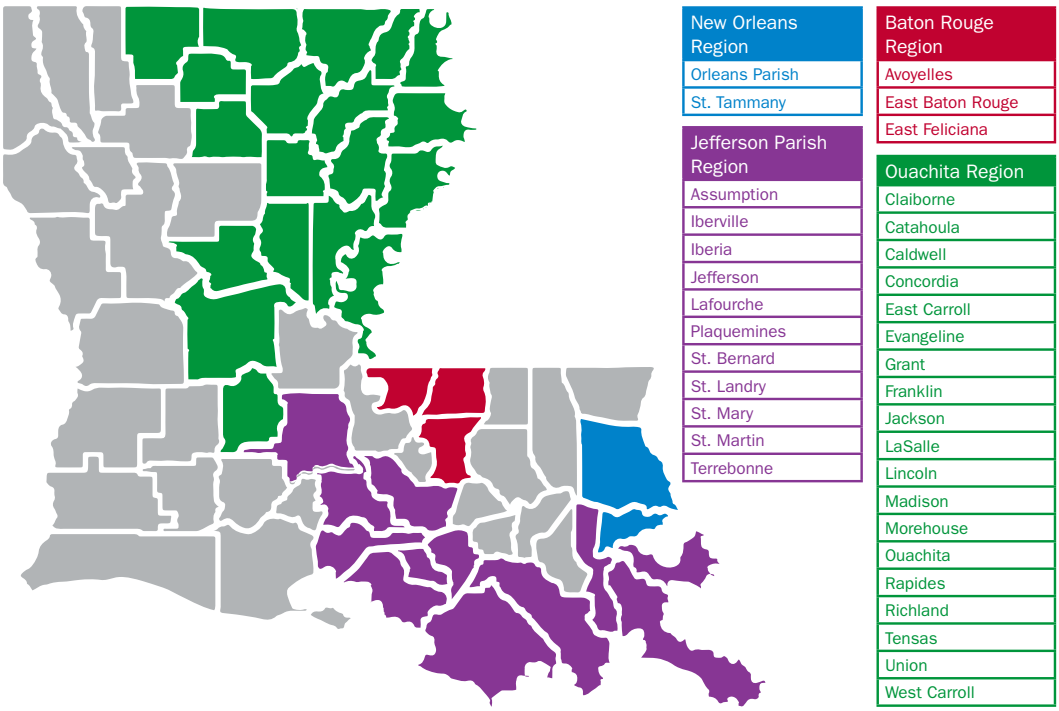
Source: Data dictionary for files provided by the Louisiana Department of Education.

high (grades 9–12) schools. Accordingly, the study team used a grade-range classification that is exhaustive but not mutually exclusive—schools serving grades 3–8 are classified as "1" for both K–5 and 6–8. Also, any student with multiple disabilities is classified in that category, and only that category, even if she or he has a primary disability that fits a different disability category. The state of Louisiana Department of Education subclassifies students with intellectual disabilities as having a mild, moderate, or severe impairment. For the comparison of special education enrollment based on whether the disabilities are high-incidence or low-incidence, the subclassifications of intellectual disability–mild and intellectual disability–moderate were combined into a single category of intellectual disability–nonsevere and assigned to the high-incidence category. The subclassification of intellectual disability–severe was assigned to the low-incidence category. Finally, the enrollment file was from the fall of the period of confirmed enrollment; thus, any student enrolled in a charter school in the fall who subsequently transferred to a traditional school was considered to be a charter school student for that year and vice versa.

Explanation of sampling choices

The four Louisiana educational regions with three or more charter schools between 2010/11 and 2013/14 were Region 1, which includes New Orleans; Region 3, which includes Jefferson Parish and five other parishes near New Orleans; Region 5, which includes Ouachita Parish and five surrounding parishes in the northeast corner of the state; and Region 8, which includes Baton Rouge (map C1).

Map C1. Map of Louisiana regions included in study population



Note: Regional boundaries are defined by the Louisiana Department of Education. Parishes in gray shading are excluded from the study because they are not part of any of the four educational regions with three or more charter schools.

Source: Authors' compilation based on information provided by the Louisiana Department of Education.

The number of charter schools included in the study varied across the four regions and the four years in the analyses (table C2). The New Orleans region had the most charter schools, with 40 in 2010/11, increasing to 72 in 2013/14. The Ouachita region had the fewest charter schools, with 3 in both 2010/11 and 2011/12, increasing to 4 in 2012/13 and 8 in 2013/14.

Table C2. Number of charter schools in the study population, by region, 2010/11–2013/14

Year	Baton Rouge	Jefferson	New Orleans	Ouachita
2010/11	10	4	40	3
2011/12	13	4	47	3
2012/13	16	10	65	4
2013/14	18	13	72	8

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

Table C3. Study population for research question 1, by region, 2010/11–2013/14

School year and region	All students	Charter schools	Students in charter schools	Traditional schools	Students in traditional schools	Students in special education	Students in special education in charter schools	Students in special education in traditional schools
2010/11								
Baton Rouge	62,282	10	2,510	94	59,772	5,579	157	5,422
Jefferson	141,970	4	1,868	193	140,102	14,750	138	14,612
New Orleans	59,756	40	15,246	19	44,510	7,860	1,344	6,516
Ouachita	10,2017	3	1,285	83	100,732	11,587	78	11,509
Total	366,025	57	20,909	389	345,116	39,776	1,717	38,059
2011/12								
Baton Rouge	65,567	13	3,632	89	61,935	5,484	205	5,279
Jefferson	143,814	4	2,173	191	141,641	14,666	142	14,524
New Orleans	64,703	47	20,107	7	44,596	8,369	1,917	6,452
Ouachita	102,629	3	1,393	83	101,236	11,630	80	11,550
Total	376,713	67	27,305	370	349,408	40,149	2,344	37,805
2012/13								
Baton Rouge	67,192	16	4,709	88	62,483	5,585	310	5,275
Jefferson	146,692	10	2,780	180	143,912	14,580	162	14,418
New Orleans	70,458	65	23,990	7	46,468	8,991	2,451	6,540
Ouachita	103,699	4	1,629	81	102,070	11,660	106	11,554
Total	388,041	95	33,108	356	354,933	40,816	3,029	37,787
2013/14								
Baton Rouge	69,651	18	5,074	82	64,577	5,790	363	5,427
Jefferson	149,223	13	3,761	169	145,462	14,916	250	14,666
New Orleans	75,371	72	29,065	6	46,306	9,762	3,241	6,521
Ouachita	103,855	8	2,255	80	101,600	11,698	130	11,568
Total	398,100	111	40,155	337	357,945	42,166	3,984	38,182
Total of all regions and years	1,528,879	330	121,477	1,452	1,407,402	162,907	11,074	151,833

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

All K–12 public school students, in charter or traditional schools, in the four study regions were included in the annual study population for research question 1. The charter school study population consisted of all Louisiana students enrolled in an open-enrollment charter school in Louisiana educational regions 1, 3, 5, and 8 (table C3). Students in Louisiana charter schools outside those regions were excluded from the study because they had fewer than three charter schools for some or all of the four years of the study. Regional Educational Laboratory Southwest's data-sharing agreement with the Louisiana Department of Education specified that data could not be displayed if they were generated by fewer than three schools or fewer than 10 students. Students enrolled in conversion charter schools also were excluded from the analysis. The traditional school study population consists of all Louisiana students enrolled in a traditional school in Louisiana educational regions 1, 3, 5, and 8 (the same regions that the charter school study population includes).

The proportion of the Louisiana charter school population excluded from the study population, as a result of being a conversion charter school or being located outside one of the four study regions, ranged from 17 percent in 2011/12 to 35 percent in 2010/11 (table C4). Louisiana Department of Education officials indicated that such fluctuations are normal, given that the number of charter schools that open and close in each region can vary from year to year.

The study population for research question 2a included all students who were enrolled in a charter or traditional school and had an individualized education program in 2010/11 (table C5).

The study population for research question 2b included all students who were enrolled in a charter school or traditional school, had an individualized education program in 2010/11, and did not experience a structural move during the four years for which data were collected (table C6). (A structural move is defined as changing schools due to a change of address or aging out of the offered grades.)

Analysis methods

The answers to research questions 1 (on how the enrollment rate of students with an individualized education program differed between charter schools and traditional schools overall and by educational region), 1a (on how the size of the enrollment gap varied across

Table C4. Louisiana charter schools and students excluded from the study population, 2010/11–2013/14

Year	Conversion charter schools	Students in conversion charter schools	Open-enrollment schools outside study regions	Students in open-enrollment schools outside study regions	Total excluded schools	Total excluded students	Excluded schools as a percentage of all Louisiana charter schools	Excluded students as a percentage of all Louisiana charter students
2010/11	5	3,341	18	9,149	23	12,490	29	35
2011/12	5	3,472	10	2,414	15	5,886	18	17
2012/13	6	4,309	25	11,014	31	15,323	25	34
2013/14	6	4,550	29	12,133	35	16,683	24	23

Source: Authors' calculations based on school- and student-level data provided by the Louisiana Department of Education.

Table C5. Study population for research question 2a, by years in special education and region, 2010/11–2013/14

Years in special education and region	All students in special education	Students in special education in charter schools	Students in special education in traditional schools
One year			
Baton Rouge	2,343	133	2,210
Jefferson	6,139	144	5,995
New Orleans	8,408	1,398	7,010
Ouachita	126	66	60
Total	17,016	1,741	15,275
Two years			
Baton Rouge	1,847	93	1,754
Jefferson	5,191	71	5,120
New Orleans	6,811	983	5,828
Ouachita	135	45	90
Total	13,984	1,192	12,792
Three years			
Baton Rouge	1,404	39	1,365
Jefferson	4,162	36	4,126
New Orleans	5,557	690	4,867
Ouachita	117	29	88
Total	11,240	794	10,446
Four years[a]			
Baton Rouge	2,768	50	2,718
Jefferson	7,653	36	7,617
New Orleans	10,621	659	9,962
Ouachita	112	19	93
Total	21,154	764	20,390
Total of all regions and years	63,394	4,491	58,903

Note: All students in this study population were classified as requiring special education services in 2010/11.

a. Observations of students with a special education classification all four years were included in the denominator each year in the statistical models estimating the association of various student factors with declassification over time.

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

Table C6. Study population for research question 2b, by years in special education, 2010/11–2013/14

Years in special education	All students in special education	Students in special education in charter schools	Students in special education in traditional schools
In same school one year before nonstructural move	16,202	392	15,810
In same school two years before nonstructural move	13,836	208	12,731
In same school three years before nonstructural move	7,437	149	6,630
In same school four years	10,896	6	9,423
Total of all persistence levels	48,371	755	44,594

Note: All students in this study population were classified as requiring special education services in 2010/11.

Source: Authors' calculations based on student-level data provided by Louisiana Department of Education.

grade spans), and 1b (on how the size of the enrollment gap varied across disability categories) were obtained by generating aggregate descriptive statistics to compare special education enrollment rates between charter schools and traditional schools for the student populations in the four regions across the four years, at conventional grade ranges and disaggregated by disability category. Each comparison included each of the four regions combined and was disaggregated when data counts were sufficient. For the combined study population the study team generated averages across the individuals in the study population, not averages of the rates across the four distinct regions.

Research question 2 (on whether the likelihood of a student being classified as or declassified from requiring an individualized education program was associated with enrollment in a charter school or a traditional school overall and after grade level and years of continuous enrollment in the same school were controlled for) involved the use of a longitudinal enrollment database to estimate Cox duration hazard likelihood models (for example, Howell, 2004), with results reported in tables 6–9 in the main text. The study team tracked a single baseline cohort, 2010/11, across outcome years 2011/12, 2012/13, and 2013/14 for the purpose of estimating the hazard events of new classification as requiring an individualized education program and new declassification. Student grade was for the baseline year of 2010/11. Because of the censored nature of the data, any effects of factors on student classification or declassification likelihoods that occurred before fall 2010 or after fall 2013 were not captured by the analysis.

Duration hazard models were ideal for this part of the analysis because they allowed explanatory variables to predict a change in condition, such as a classification as requiring an individualized education program, within a time series and also to predict whether the change tended to happen sooner or later, conditional on student baseline characteristics, such as initial grade. The general expression of the duration hazard model for students being declassified from requiring an individualized education program was

$$h(t, x_i) = \Pr(D_{it} = 0 | D_{it-1} = 1, x_i) = F(\gamma + x_i\beta)$$

where h represents the hazard of declassification over period t, given predictor variables x. The predictor variables in the models consistently included an indicator for being enrolled in a charter school. For the regression estimations that produced the results presented in tables 6 and 7 in the main text, a vector of indicator variables for initial student grade was included. For the regression estimations that produced the results presented in tables 8 and 9 in the main text, indicator variables for years of student persistence in their initial school were added to the vector of indicator variables for initial student grade. Observations on students who graduated from their school during the time period of the study were excluded from tables 8 and 9 in the main text. They had to change schools because they completed the final grade in their school while other students who changed schools did so for different reasons. The sample sizes was 302,631 for table 6 in the main text and 63,394 for table 7 in the main text. The sample sizes dropped to 287,608 for table 8 and 48,371 for table 9. Specifically, that hazard is the likelihood of the disability indicator variable D for student i in time t taking the value 0 given that D took the value 1 for that same student i in period $t - 1$, the determination of which will be a function of a constant value γ and the effects, β, of predictor variables x.

These analytic models also were estimated using newly classified as requiring an individualized education program in place of declassified as the hazard being predicted.

To explore research question 2a, the study introduced as the variables of interest a vector of indicator variables for the grade of the student, with prekindergarten as the omitted reference category, to examine the extent to which a student's likelihood of being classified as requiring an individualized education program varied by the student's initial grade at his or her school. To explore research question 2b, the study team added to the model the ordinal variable of student enrollment persistence as the variable of interest, making it possible to explore the extent to which a student's likelihood of being classified as requiring an individualized education program varied by how long the student remained enrolled in his or her baseline school.

The study team used standard significance tests on the coefficients of the variables of interest to determine which ones were consistently associated with variance in student disability classification or enrollment change. Given the complexity of hazard models, the meanings of the variable coefficients themselves were not readily interpretable. To aid in interpretation, the study team calculated the averaged effects of each indicator variable in terms of its predicted percentage change in the likelihood of being newly classified or declassified as requiring special education for the overall study population.

Appendix D. Detailed results

This appendix reports detailed results from this exploratory study.

Special education enrollment gap by educational region

In the Baton Rouge region the largest special education enrollment gap between charter schools and traditional schools was in schools serving the middle school grades (grades 6–8) in all four years of the study (table D1). The gap was the smallest in schools serving the elementary school grades, with schools serving the high school grades in the middle, across three of the four years of the study. The exception to this pattern was 2011/12, when the gap was the smallest in schools serving the high school grades. Measured as a proportion of the special education enrollment rate in traditional schools, from 2010/11 to 2013/14 the gap in schools serving the elementary school grades decreased from 20 percent to 9 percent, the gap in schools serving the middle school grades decreased from 51 percent to 24 percent, and the gap in schools serving the high school grades decreased from 29 percent to 12 percent.

In the Jefferson region the gap varied across both grade ranges and years (table D2). The gap was largest in schools serving the elementary school grades in 2012/13 and 2013/14 and smallest in schools serving the elementary school grades in 2010/11 and in schools serving the middle school grades in 2012/13 and 2013/14. In 2011/12 the gap was the same

Table D1. Special education enrollment rates in Baton Rouge region charter schools and traditional schools, by year and school grade range, 2010/11–2013/14

Year and school grade range	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)	Percent difference[b]
2010/11				
Grades K–5	7.5	9.5	1.9	20
Grades 6–8	4.9	9.9	5.0	51
Grades 9–12	5.3	7.4	2.1	29
2011/12				
Grades K–5	5.9	8.4	2.5	30
Grades 6–8	5.2	9.3	4.1	44
Grades 9–12	5.7	7.7	2.0	26
2012/13				
Grades K–5	7.1	8.1	1.0	13
Grades 6–8	6.6	9.2	2.6	28
Grades 9–12	6.1	8.0	1.9	23
2013/14				
Grades K–5	7.4	8.2	0.8	9
Grades 6–8	7.0	9.2	2.2	24
Grades 9–12	7.1	8.1	1.0	12

a. Calculated as the rate among students in traditional schools minus the rate among students in charter schools. The value may not equal the difference between the rates displayed in the table because of rounding.

b. Calculated as the gap divided by the rate among students in traditional schools.

Note: None of the gaps was statistically significant ($p < .05$; two-tailed t test).

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

Table D2. Special education enrollment rates in Jefferson region charter schools and traditional schools, by year and school grade range, 2010/11–2013/14

Year and school grade range	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)	Percent difference[b]
2010/11				
Grades K–5	8.3	11.5	3.2	28
Grades 6–8	6.2	10.7	4.5	42
Grades 9–12	[c]	8.9	[c]	[c]
2011/12				
Grades K–5	6.8	10.9	4.0	37
Grades 6–8	6.9	10.9	4.0	37
Grades 9–12	[c]	8.8	[c]	[c]
2012/13				
Grades K–5	5.8	10.5	4.7	45
Grades 6–8	7.4	10.9	3.5	33
Grades 9–12	[c]	8.7	[c]	[c]
2013/14				
Grades K–5	6.2	10.6	4.3	41
Grades 6–8	8.3	11.1	2.7	25
Grades 9–12	5.7	8.5	2.8	33

a. Calculated as the rate among students in traditional schools minus the rate among students in charter schools. The value may not equal the difference between the rates displayed in the table because of rounding.

b. Calculated as the gap divided by the rate among students in traditional schools.

c. Value not available because of insufficient study population size.

Note: None of the gaps was statistically significant ($p < .05$; two-tailed t test).

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

size—4 percentage points—in both schools serving the elementary school grades and schools serving the middle school grades. Data privacy rules governing small cell frequencies of fewer than three schools or fewer than 10 students (see appendix C) prevented the display of the special education enrollment rate for charter schools in the high school grades in 2010/11–2012/13. Measured as a proportion of the special education enrollment rate in traditional schools, from 2010/11 to 2013/14 the gap in schools serving the elementary school grades increased from 28 percent to 41 percent, and the gap in schools serving the middle school grades dropped from 42 percent to 25 percent.

In the New Orleans region the special education enrollment gap differed across grade ranges with a pattern that was consistent across the four years of the study (table D3). In every year of the study the gap was largest and statistically significant in schools serving the elementary school grades, in the middle in schools serving the middle school grades, and smallest in schools serving the high school grades. In schools serving the high school grades the special education enrollment rate was higher in charter schools than in traditional schools. In 2013/14 the special education enrollment gap favoring charter schools over traditional schools in schools serving the high school grades was statistically significant. The high school grades in the New Orleans region are the only region–grade range combination in this study in which the special education enrollment gap was negative, indicating a higher special education enrollment rate in charter schools than in traditional schools. Measured as a proportion of the special education enrollment rate in traditional

Table D3. Special education enrollment rates in New Orleans region charter schools and traditional schools, by year and school grade range, 2010/11–2013/14

Year and school grade range	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)	Percent difference[b]
2010/11				
Grades K–5	7.8	17.2	9.3**	55
Grades 6–8	9.5	14.0	4.4*	32
Grades 9–12	11.5	11.4	–0.1	–1
2011/12				
Grades K–5	8.4	16.7	8.3**	50
Grades 6–8	11.0	14.6	3.6*	25
Grades 9–12	12.1	10.8	–1.4	–13
2012/13				
Grades K–5	9.2	16.0	6.7**	42
Grades 6–8	11.4	14.0	2.6	18
Grades 9–12	12.6	11.1	–1.5	–13
2013/14				
Grades K–5	9.6	15.7	6.0**	39
Grades 6–8	13.2	14.7	1.5	10
Grades 9–12	14.3	11.1	–3.2*	–28

* Significant at $p < .05$; ** significant at $p < .01$.

a. Calculated as the rate among students in traditional schools minus the rate among students in charter schools. The value may not equal the difference between the rates displayed in the table because of rounding.

b. Calculated as the gap divided by the rate among students in traditional schools.

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

schools, from 2010/11 to 2013/14 the gap in schools serving the elementary school grades decreased from 55 percent to 39 percent, the gap in schools serving the middle school grades decreased from 32 percent to 10 percent, and the gap in schools serving the high school grades (which involved a higher special education enrollment rate in charter schools than in traditional schools) increased from 1 percent to 28 percent.

In the Ouachita region the special education enrollment gap varied across both grade ranges and study years (table D4). The gap was largest in schools serving the high school grades in 2013/14 and in schools serving the middle school grades in all other years. The gap was smallest in schools serving the elementary school grades in 2010/11, 2011/12, and 2012/13 and in schools serving the middle school grades in 2013/14. Measured as a proportion of the special education enrollment rate in traditional schools, the gap in schools serving the elementary school grades increased from 40 percent in 2010/11 to 47 percent in 2013/14, the gap in schools serving the middle school grades decreased from 66 percent in 2010/11 to 47 percent in 2013/14, and the gap in schools serving the high school grades increased from 49 percent in 2012/13 to 67 percent in 2013/14.

Special education enrollment gap by disability category

For the entire study population the special education enrollment gap by disability category tended to be larger in the earlier years of the study and smaller in the later years (table D5). For example, in charter schools the enrollment gap for students with specific

Table D4. Special education enrollment rates in Ouachita region charter schools and traditional schools, by year and school grade range, 2010/11–2013/14

Year and grade range	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)	Percent difference[b]
2010/11				
Grades K–5	7.2	11.9	4.8	40
Grades 6–8	4.1	12.2	8.1	66
Grades 9–12	[c]	10.2	[c]	[c]
2011/12				
Grades K–5	7.0	11.7	4.7	40
Grades 6–8	4.3	12.1	7.9	65
Grades 9–12	[c]	10.5	[c]	[c]
2012/13				
Grades K–5	7.6	11.6	4.1	35
Grades 6–8	5.3	12.0	6.6	55
Grades 9–12	5.4	10.6	5.2	49
2013/14				
Grades K–5	6.3	11.9	5.6	47
Grades 6–8	6.3	11.8	5.5	47
Grades 9–12	3.5	10.4	6.9	67

a. Calculated as the rate among students in traditional schools minus the rate among students in charter schools. The value may not equal the difference between the rates displayed in the table because of rounding.

b. Calculated as the gap divided by the rate among students in traditional schools.

c. Value not available because of insufficient study population size.

Note: None of the gaps was statistically significant ($p < .05$; two-tailed t test).

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

Table D5. Special education enrollment rates in Louisiana charter schools and traditional schools, by disability category and year, 2010/11–2013/14

Disability category and year	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)
Autism spectrum disorder			
2010/11	0.30	0.53	0.23**
2011/12	0.39	0.60	0.21**
2012/13	0.49	0.63	0.14**
2013/14	0.59	0.67	0.08**
Deaf-blindness			
2010/11	[b]	[b]	[b]
2011/12	[b]	[b]	[b]
2012/13	[b]	[b]	[b]
2013/14	[b]	[b]	[b]
Developmental delay			
2010/11	0.30	1.10	0.80**
2011/12	0.30	1.20	0.90**
2012/13	0.50	1.20	0.70**
2013/14	0.60	1.20	0.60**
Emotional disturbance			
2010/11	0.43	0.25	–0.18 **
2011/12	0.58	0.23	0.25**
2012/13	0.58	0.21	–0.37**
2013/14	0.61	0.20	–0.41**

(continued)

Table D5. Special education enrollment rates in Louisiana charter schools and traditional schools, by disability category and year, 2010/11–2013/14 *(continued)*

Disability category and year	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)
Hearing impairment (severe)			
2010/11	0.02	0.04	0.02**
2011/12	0.01	0.04	0.02**
2012/13	0.01	0.04	0.03**
2013/14	0.02	0.04	0.03**
Intellectual disability (severe)			
2010/11	0.02	0.06	0.04**
2011/12	0.04	0.06	0.02**
2012/13	0.03	0.05	0.02**
2013/14	0.02	0.05	0.03**
Multiple disabilities			
2010/11	[b]	[b]	[b]
2011/12	[b]	[b]	[b]
2012/13	[b]	[b]	[b]
2013/14	[b]	[b]	[b]
Orthopedic impairment			
2010/11	0.20	0.20	0.00
2011/12	0.20	0.20	0.00
2012/13	0.10	0.20	0.10**
2013/14	0.10	0.20	0.10**
Other health impairment			
2010/11	1.04	1.40	0.36**
2011/12	1.21	1.40	0.19**
2012/13	1.32	1.41	0.09
2013/14	1.43	1.40	–0.03
Specific learning disability			
2010/11	2.55	3.22	0.68**
2011/12	2.63	3.25	0.62**
2012/13	2.89	3.20	0.31**
2013/14	3.11	3.20	0.09
Speech/language impairment			
2010/11	2.72	2.83	–0.11
2011/12	2.56	2.58	0.02
2012/13	2.32	2.41	0.10
2013/14	2.38	2.33	–0.05
Traumatic brain injury			
2010/11	0.00	0.00	0.00
2011/12	0.00	0.00	0.00
2012/13	0.00	0.00	0.00
2013/14	0.00	0.00	0.00
Visual impairment (severe)			
2010/11	0.00	0.02	0.02**
2011/12	0.01	0.02	0.01**
2012/13	0.02	0.03	0.01**
2013/14	0.02	0.03	0.01**

** Significant at $p < .01$.

a. Calculated as the rate among students in traditional schools minus the rate among students in charter schools. The value may not equal the difference between the rates displayed in the table because of rounding.

b. Value not available because of insufficient study population size.

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

learning disabilities declined from 0.7 percentage point in 2010/11 to 0.1 percentage point in 2013/14. Likewise, the gap for students with speech/language impairments was 0.1 percentage point in favor of traditional schools in 2010/11 but changed to 0.1 percentage point in favor of charter schools in 2013/14. Students with developmental delay were an exception to this pattern, as the enrollment gap of 0.8 percentage point in 2010/11 remained at 0.6 percentage point in 2013/14.

The Baton Rouge region was distinctive in that it had the lowest special education enrollment rate in both traditional and charter schools for students with many disability categories (table D6). In 2013/14 the gap that most favored traditional schools was for students with developmental delay, where it was 0.9 percentage point, and the gap that most favored charter schools was for students with other health impairments, where it was 0.2 percentage point.

Table D6. Special education enrollment rates in Baton Rouge region charter schools and traditional schools, by disability category and year, 2010/11–2013/14

Disability category and year	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)
Autism spectrum disorder			
2010/11	[b]	0.4	[b]
2011/12	[b]	0.4	[b]
2012/13	0.3	0.5	0.2
2013/14	0.4	0.5	0.1
Deaf-blindness			
2010/11	[b]	[b]	[b]
2011/12	[b]	[b]	[b]
2012/13	[b]	[b]	[b]
2013/14	[b]	[b]	[b]
Developmental delay			
2010/11	0.4	1.0	0.6
2011/12	0.3	1.1	0.8
2012/13	0.3	1.1	0.8
2013/14	0.3	1.2	0.9
Emotional disturbance			
2010/11	[b]	0.2	[b]
2011/12	[b]	0.2	[b]
2012/13	0.2	0.1	–0.1
2013/14	0.2	0.2	0.0
Hearing impairment (severe)			
2010/11	[b]	0.1	[b]
2011/12	[b]	0.1	[b]
2012/13	[b]	0.1	[b]
2013/14	[b]	0.1	[b]
Intellectual disability (severe)			
2010/11	[b]	0.8	[b]
2011/12	[b]	0.8	[b]
2012/13	0.2	0.8	0.6
2013/14	0.3	0.8	0.5

(continued)

Table D6. Special education enrollment rates in Baton Rouge region charter schools and traditional schools, by disability category and year, 2010/11–2013/14 *(continued)*

Disability category and year	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)
Multiple disabilities			
2010/11	[b]	[b]	[b]
2011/12	[b]	[b]	[b]
2012/13	[b]	[b]	[b]
2013/14	[b]	[b]	[b]
Orthopedic impairment			
2010/11	[b]	0.2	[b]
2011/12	[b]	0.2	[b]
2012/13	[b]	0.2	[b]
2013/14	[b]	0.2	[b]
Other health impairment			
2010/11	0.7	0.8	0.1
2011/12	0.6	0.9	0.3
2012/13	1.0	0.9	–0.1
2013/14	1.1	0.9	–0.2
Specific learning disability			
2010/11	1.9	2.4	0.5
2011/12	2.0	2.3	0.3
2012/13	2.2	2.3	0.1
2013/14	2.4	2.3	–0.1
Speech/language impairment			
2010/11	2.7	2.9	0.2
2011/12	2.1	2.4	0.3
2012/13	2.1	2.2	0.1
2013/14	2.2	2.1	–0.1
Traumatic brain injury			
2010/11	[b]	0.0	[b]
2011/12	[b]	0.0	[b]
2012/13	[b]	0.0	[b]
2013/14	[b]	0.0	[b]
Visual impairment (severe)		0.0	
2010/11	[b]	0.0	[b]
2011/12	[b]	0.0	[b]
2012/13	[b]	0.0	[b]
2013/14	[b]	0.0	[b]

a. Calculated as the rate among students in traditional schools minus the rate among students in charter schools.

b. Value not available because of insufficient study population size.

Note: None of the gaps was statistically significant ($p < .05$; two-tailed t test).

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

The Jefferson region also was distinctive in that its special education enrollment gap was relatively stable across the study period (table D7). In 2013/14 the gap that most favored traditional schools was for students with specific learning disabilities, where it was 2 percentage points, and there was no gap for students with speech/language impairments or other health impairments.

Table D7. Special education enrollment rates in Jefferson region charter schools and traditional schools, by disability category and year, 2010/11–2013/14

Disability category and year	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)
Autism spectrum disorder			
2010/11	[b]	0.7	[b]
2011/12	[b]	0.7	[b]
2012/13	[b]	0.7	[b]
2013/14	0.0	1.0	1.0
Deaf-blindness			
2010/11	[b]	[b]	[b]
2011/12	[b]	[b]	[b]
2012/13	[b]	[b]	[b]
2013/14	[b]	[b]	[b]
Developmental delay			
2010/11	[b]	0.7	[b]
2011/12	[b]	0.7	[b]
2012/13	0.4	0.8	0.4
2013/14	[b]	1.0	[b]
Emotional disturbance			
2010/11	[b]	0.2	[b]
2011/12	[b]	0.2	[b]
2012/13	[b]	0.2	[b]
2013/14	[b]	0.0	[b]
Hearing impairment (severe)			
2010/11	[b]	0.2	[b]
2011/12	[b]	0.2	[b]
2012/13	[b]	0.2	[b]
2013/14	[b]	0.0	[b]
Intellectual disability (severe)			
2010/11	[b]	1.1	[b]
2011/12	[b]	1.1	[b]
2012/13	[b]	1.0	[b]
2013/14	0.0	1.0	1.0
Multiple disabilities			
2010/11	[b]	[b]	[b]
2011/12	[b]	[b]	[b]
2012/13	[b]	[b]	[b]
2013/14	[b]	[b]	[b]
Orthopedic impairment			
2010/11	[b]	0.2	[b]
2011/12	[b]	0.2	[b]
2012/13	[b]	0.2	[b]
2013/14	[b]	0.0	[b]
Other health impairment			
2010/11	0.9	1.3	0.4
2011/12	1.0	1.3	0.3
2012/13	1.0	1.3	0.3
2013/14	1.0	1.0	0.0
Specific learning disability			
2010/11	2.4	2.8	0.4
2011/12	2.0	2.8	0.8
2012/13	1.5	2.8	1.3
2013/14	1.0	3.0	2.0

(continued)

Table D7. Special education enrollment rates in Jefferson region charter schools and traditional schools, by disability category and year, 2010/11–2013/14 *(continued)*

Disability category and year	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)
Speech/language impairment			
2010/11	2.9	3.0	0.1
2011/12	2.9	2.8	–0.1
2012/13	2.2	2.6	0.4
2013/14	3.0	3.0	0.0
Traumatic brain injury			
2010/11	[b]	0.0	[b]
2011/12	[b]	0.0	[b]
2012/13	[b]	0.0	[b]
2013/14	[b]	0.0	[b]
Visual impairment (severe)			
2010/11	[b]	0.1	[b]
2011/12	[b]	0.1	[b]
2012/13	[b]	0.1	[b]
2013/14	[b]	0.0	[b]

a. Calculated as the rate among students in traditional schools minus the rate among students in charter schools.

b. Value not available because of insufficient study population size.

Note: None of the gaps was statistically significant ($p < .05$; two-tailed t test).

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

The New Orleans region had the highest special education enrollment rate in both traditional and charter schools (table D8). In 2013/14 the gap that most favored traditional schools was for students with other health impairments, where it was 1.1 percentage points, and the gap that most favored charter schools was for students with intellectual disabilities or emotional disturbance, where it was 0.4 percentage point.

Table D8. Special education enrollment rates in New Orleans region charter schools and traditional schools, by disability category and year, 2010/11–2013/14

Disability category and year	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)
Autism spectrum disorder			
2010/11	0.3	0.6	0.3
2011/12	0.4	0.7	0.3
2012/13	0.5	0.7	0.2
2013/14	0.7	0.8	0.1
Deaf-blindness			
2010/11	[b]	[b]	[b]
2011/12	[b]	[b]	[b]
2012/13	[b]	[b]	[b]
2013/14	[b]	[b]	[b]
Developmental delay			
2010/11	0.3	1.6	1.3
2011/12	0.3	1.7	1.4
2012/13	0.5	1.7	1.2
2013/14	0.7	1.7	1.0

(continued)

Table D8. Special education enrollment rates in New Orleans region charter schools and traditional schools, by disability category and year, 2010/11–2013/14 *(continued)*

Disability category and year	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)
Emotional disturbance			
2010/11	0.5	0.6	0.1
2011/12	0.6	0.5	–0.1
2012/13	0.7	0.4	–0.3
2013/14	0.8	0.4	–0.4
Hearing impairment (severe)			
2010/11	[b]	0.2	[b]
2011/12	0.1	0.2	0.1
2012/13	0.1	0.2	0.1
2013/14	0.1	0.2	0.1
Intellectual disability (severe)			
2010/11	1.0	0.8	–0.2
2011/12	1.1	0.8	–0.3
2012/13	1.1	0.7	–0.4
2013/14	1.2	0.8	–0.4
Multiple disabilities			
2010/11	[b]	[b]	[b]
2011/12	[b]	[b]	[b]
2012/13	[b]	[b]	[b]
2013/14	[b]	[b]	[b]
Orthopedic impairment			
2010/11	0.2	0.2	0.0
2011/12	0.1	0.2	0.1
2012/13	0.1	0.2	0.1
2013/14	0.1	0.2	0.1
Other health impairment			
2010/11	1.1	2.6	1.5
2011/12	1.3	2.8	1.5
2012/13	1.4	2.7	1.3
2013/14	1.6	2.7	1.1
Specific learning disability			
2010/11	2.6	3.9	1.3
2011/12	2.8	3.9	1.1
2012/13	3.1	3.9	0.8
2013/14	3.4	3.9	0.5
Speech/language impairment			
2010/11	2.6	3.8	1.2
2011/12	2.6	3.5	0.9
2012/13	2.4	3.3	0.9
2013/14	2.5	3.2	0.7
Traumatic brain injury			
2010/11	[b]	0.0	[b]
2011/12	[b]	0.0	0.0
2012/13	0.1	0.0	–0.1
2013/14	0.0	0.0	0.0
Visual impairment (severe)			
2010/11	[b]	0.1	[b]
2011/12	[b]	0.1	[b]
2012/13	0.0	0.1	0.1
2013/14	0.0	0.0	0.0

a. Calculated as the rate among students in traditional schools minus the rate among students in charter schools.

b. Value not available because of insufficient study population size.

Note: None of the gaps was statistically significant ($p < .05$; two-tailed t test).

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

The special education enrollment gap in the Ouachita region was the largest among the four regions in the later years of the study (table D9). In 2013/14 the gap that most favored traditional schools was for students with specific learning disabilities, where it was 1.9 percentage points, and there was no gap for students with speech/language impairments.

Table D9. Special education enrollment rates in Ouachita region charter schools and traditional schools, by disability category and year, 2010/11–2013/14

Disability category and year	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)
Autism spectrum disorder			
2010/11	[b]	0.4	[b]
2011/12	[b]	0.4	[b]
2012/13	[b]	0.5	[b]
2013/14	[b]	0.5	[b]
Deaf-blindness			
2010/11	[b]	[b]	[b]
2011/12	[b]	[b]	[b]
2012/13	[b]	[b]	[b]
2013/14	[b]	[b]	[b]
Developmental delay			
2010/11	[b]	1.5	[b]
2011/12	[b]	1.6	[b]
2012/13	[b]	1.7	[b]
2013/14	0.5	1.9	1.4
Emotional disturbance			
2010/11	[b]	0.2	[b]
2011/12	[b]	0.1	[b]
2012/13	[b]	0.1	[b]
2013/14	[b]	0.1	[b]
Hearing impairment (severe)			
2010/11	[b]	0.1	[b]
2011/12	[b]	0.1	[b]
2012/13	[b]	0.1	[b]
2013/14	[b]	0.1	[b]
Intellectual disability (severe)			
2010/11	[b]	1.3	[b]
2011/12	[b]	1.3	[b]
2012/13	[b]	1.3	[b]
2013/14	[b]	1.2	[b]
Multiple disabilities			
2010/11	[b]	[b]	[b]
2011/12	[b]	[b]	[b]
2012/13	[b]	[b]	[b]
2013/14	[b]	[b]	[b]
Orthopedic impairment			
2010/11	[b]	0.1	[b]
2011/12	[b]	0.1	[b]
2012/13	[b]	0.1	[b]
2013/14	[b]	0.2	[b]

(continued)

Table D9. Special education enrollment rates in Ouachita region charter schools and traditional schools, by disability category and year, 2010/11–2013/14 *(continued)*

Disability category and year	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)
Other health impairment			
2010/11	0.9	1.3	0.4
2011/12	[b]	1.3	[b]
2012/13	[b]	1.3	[b]
2013/14	0.5	1.3	0.8
Specific learning disability			
2010/11	1.2	4.0	2.8
2011/12	1.1	4.2	3.1
2012/13	1.8	4.1	2.3
2013/14	2.2	4.1	1.9
Speech/language impairment			
2010/11	3.4	2.2	–1.2
2011/12	3.2	2.0	–1.2
2012/13	3.0	1.9	–1.1
2013/14	1.8	1.8	0.0
Traumatic brain injury			
2010/11	[b]	0.0	[b]
2011/12	[b]	0.0	[b]
2012/13	[b]	0.0	[b]
2013/14	[b]	0.0	[b]
Visual impairment (severe)			
2010/11	[b]	0.1	[b]
2011/12	[b]	0.1	[b]
2012/13	[b]	0.1	[b]
2013/14	[b]	0.1	[b]

a. Calculated as the rate among students in traditional schools minus the rate among students in charter schools.

b. Value not available because of insufficient study population size.

Note: None of the gaps was statistically significant ($p < .05$; two-tailed t test).

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

Number of students with disabilities, disaggregated by region, year, grade range, and disability category

Tables D10–D13 present frequencies of students with disabilities for charter and traditional schools, disaggregated by region, year, grade range, and disability category, which can be presented only for ranges of schools that are greater than three and for ranges of students that are greater than 10, consistent with the privacy rules governing the Regional Educational Laboratory Southwest data-sharing agreement with the state (see appendix C).

The Louisiana Department of Education provides students classified as having an intellectual disability with a subclassification depending on whether their disability is mild, moderate, or severe. Thus, the study team could examine whether the enrollment gap between charter schools and traditional schools varied by severity of disability, within a specific student disability category, and whether any variance in the gap by disability severity was constant or varied across the years in the study.

Table D10. Complete disaggregation of students with disability frequencies by year, grade range, and disability category for the Baton Rouge region, 2010/11–2013/14

Category	2010/11		2011/12		2012/13		2013/14	
	Charter schools	Traditional schools	Charter schools	Traditional schools	Charter schools	Traditional schools	Charter schools	Traditional schools
All special education	157	5,422	205	5,279	310	5,275	363	5,427
Grades K–5	91	2,747	88	2,535	121	2,418	124	2,489
Grades 6–8	21	1,246	43	1,243	77	1,261	90	1,320
Grades 9–12	45	1,124	73	1,183	112	1,276	148	1,323
Specific learning disability	48	1,450	72	1,418	104	1,445	123	1,484
Speech/language impairment	68	1,753	75	1,512	100	1,401	110	1,373
Developmental delay	11	615	10	674	15	682	17	751
Intellectual disability	[a]	482	[a]	478	11	500	17	536
Autism spectrum disorder	[a]	248	[a]	267	14	300	18	317
Emotional disturbance	[a]	112	[a]	114	11	90	11	111
Other health impairment	18	507	22	547	47	581	56	600
Hearing impairment	[a]	80	[a]	92	[a]	90	[a]	81
Multiple disabilities	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Orthopedic impairment	[a]	109	[a]	110	[a]	119	[a]	109
Visual impairment	[a]	25	[a]	27	[a]	31	[a]	29
Deaf-blindness	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Traumatic brain injury	[a]	18	[a]	17	[a]	13	[a]	15

a. Value not available because of insufficient study population size.

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

Table D11. Complete disaggregation of students with disability frequencies by year, grade range, and disability category for the Jefferson region, 2010/11–2013/14

Category	2010/11		2011/12		2012/13		2013/14	
	Charter schools	Traditional schools	Charter schools	Traditional schools	Charter schools	Traditional schools	Charter schools	Traditional schools
All special education	138	14,612	142	14,524	162	14,418	250	14,666
Grades K–5	99	7,585	99	7,209	106	7,144	162	7,268
Grades 6–8	36	3,198	42	3,397	54	3,419	72	3,577
Grades 9–12	[a]	3,193	[a]	3,218	[a]	3,173	14	3,143
Specific learning disability	45	3,880	43	3,995	42	3,965	55	4,051
Speech/language impairment	54	4,159	62	3,932	62	3,697	100	3,670
Developmental delay	[a]	992	[a]	984	10	1,083	[a]	1,148
Intellectual disability	[a]	1,527	[a]	1,496	[a]	1,452	11	1,458
Autism spectrum disorder	[a]	912	[a]	972	[a]	1,029	10	1,119
Emotional disturbance	[a]	337	[a]	333	[a]	327	[a]	310
Other health impairment	16	1,838	21	1,835	27	1,893	46	1,947
Hearing impairment	[a]	254	[a]	255	[a]	235	[a]	257
Multiple disabilities	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Orthopedic impairment	[a]	257	[a]	262	[a]	265	[a]	262
Visual impairment	[a]	90	[a]	96	[a]	98	[a]	93
Deaf-blindness	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Traumatic brain injury	[a]	40	[a]	41	[a]	46	[a]	47

a. Value not available because of insufficient study population size.

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

Table D12. Complete disaggregation of students with disability frequencies by year, grade range, and disability category for the New Orleans region, 2010/11–2013/14

Category	2010/11		2011/12		2012/13		2013/14	
	Charter schools	Traditional schools	Charter schools	Traditional schools	Charter schools	Traditional schools	Charter schools	Traditional schools
All special education	1,344	6,516	1,917	6,452	2,451	6,540	3,241	6,521
Grades K–5	667	3,315	923	3,230	1,172	3,259	1,520	3,226
Grades 6–8	418	1,382	585	1,511	767	1,491	1,018	1,541
Grades 9–12	224	1,559	375	1,453	476	1,525	626	1,503
Specific learning disability	397	1,755	562	1,746	751	1,798	980	1,814
Speech/language impairment	389	1,683	525	1,574	571	1,536	730	1,489
Developmental delay	47	715	64	746	127	788	214	777
Intellectual disability	157	365	215	349	274	345	343	355
Autism spectrum disorder	49	281	80	300	123	345	189	350
Emotional disturbance	82	246	120	215	167	199	218	189
Other health impairment	169	1,173	270	1,235	345	1,243	456	1,267
Hearing impairment	[a]	96	15	91	16	91	18	87
Multiple disabilities	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Orthopedic impairment	24	78	27	76	28	74	35	71
Visual impairment	[a]	23	[a]	25	11	24	14	23
Deaf-blindness	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Traumatic brain injury	[a]	16	[a]	11	12	11	10	11

a. Value not available because of insufficient study population size.

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

Table D13. Complete disaggregation of students with disability frequencies by year, grade range, and disability category for the Ouachita region, 2010/11–2013/14

Category	2010/11		2011/12		2012/13		2013/14	
	Charter schools	Traditional schools	Charter schools	Traditional schools	Charter schools	Traditional schools	Charter schools	Traditional schools
All special education	78	11,509	80	11,550	106	11,554	130	11,568
Grades K–5	59	5,684	60	5,560	75	5,502	75	5,633
Grades 6–8	10	2,711	13	2,782	18	2,804	43	2,714
Grades 9–12	[a]	2,656	[a]	2,758	13	2,817	12	2,774
Specific learning disability	15	4,044	16	4,205	30	4,177	50	4,130
Speech/language impairment	44	2,183	45	2,029	49	1,913	40	1,825
Developmental delay	[a]	1,554	[a]	1,648	[a]	1,780	11	1,907
Intellectual disability	[a]	1,342	[a]	1,303	[a]	1,278	[a]	1,255
Autism spectrum disorder	[a]	393	[a]	444	[a]	460	[a]	489
Emotional disturbance	[a]	167	[a]	138	[a]	125	[a]	121
Other health impairment	11	1,306	[a]	1,267	[a]	1,304	12	1,310
Hearing impairment	[a]	140	[a]	136	[a]	133	[a]	143
Multiple disabilities	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Orthopedic impairment	[a]	143	[a]	146	[a]	141	[a]	155
Visual impairment	[a]	70	[a]	65	[a]	70	[a]	74
Deaf-blindness	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Traumatic brain injury	[a]	48	[a]	49	[a]	45	[a]	35

a. Value not available because of insufficient study population size.

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

The special education enrollment gap varied by severity of intellectual disability (table D14). Charter schools and traditional schools enrolled students with mild intellectual disabilities at a similar rate in both 2010/11 and 2011/12. In 2012/13 and 2013/14, charter schools enrolled students with mild intellectual disabilities at a statistically significant higher rate than traditional schools did, with a gap favoring charter schools of 0.16 percentage point in 2012/13 and 0.21 percentage point in 2013/14. The enrollment rate of students with mild intellectual disabilities in charter schools increased from 0.63 percent in 2010/11 to 0.85 percent in 2013/14.

For students with moderate intellectual disabilities the gap of 0.11–0.16 percentage point favored traditional schools and was statistically significant in all four years. Severe intellectual disabilities were a low-incidence disability category. The enrollment gap for such students ranged from 0.02 percentage point to 0.04 percentage point and was statistically significant only in 2010/11 (0.04 percentage point) and 2013/14 (0.03 percentage point).

Table D14. Special education enrollment rates in Louisiana charter schools and traditional schools, by year and severity of intellectual disability, 2010/11–2013/14

Year and severity	Charter schools (percent)	Traditional schools (percent)	Gap[a] (percentage points)
2010/11			
Mild	0.63	0.67	0.04
Moderate	0.19	0.34	0.15**
Severe	0.02	0.06	0.04*
2011/12			
Mild	0.72	0.70	–0.02
Moderate	0.23	0.34	0.11**
Severe	0.04	0.06	0.02
2012/13			
Mild	0.82	0.66	–0.16**
Moderate	0.19	0.34	0.15**
Severe	0.03	0.05	0.02
2013/14			
Mild	0.85	0.64	–0.21**
Moderate	0.20	0.36	0.16**
Severe	0.03	0.05	0.03*

* Significant at $p < .05$; ** significant at $p < .01$.

a. Calculated as the rate among students in traditional schools minus the rate among students in charter schools. The value may not equal the difference between the rates displayed in the table because of rounding.

Source: Authors' calculations based on student-level data provided by the Louisiana Department of Education.

Notes

1. Core Alliance members represent Andrew H. Wilson Charter School, Audubon Charter School/L'Ecole Franco-Americaine, Benjamin Franklin High School, Cypress Academy, Eastbank Collaborative of Charter Schools, Einstein Elementary Charter School, Hynes Charter School, International School of Louisiana, Lake Forest Elementary School, Louisiana Association of Public Charter Schools, Louisiana Department of Education, Lusher Charter School, Morris Jeff Community School, New Beginnings Schools Foundation, New Orleans Charter Science and Mathematics High School, Robert Russa Moton Charter School, School Leadership Center of Greater New Orleans, Tulane University, University of New Orleans, Warren Easton Charter School, and Xavier University.
2. Since 2012/13, Louisiana has operated a statewide private school voucher program (Mills & Wolf, 2017). A total of 412 students with an individualized education program were awarded a voucher in the first year of the program, compared with more than 5,000 students without an individualized education program (Tuchman & Wolf, 2017). Louisiana also has a voucher initiative called the School Choice Program for Certain Students with Exceptionalities, which is limited to students with an individualized education program covering developmental delay, other health impairment, specific learning disability, autism, mental disability, emotional disturbance, and traumatic brain injury. The program enrolled 342 students during the 2015/16 school year (EdChoice, 2017). Since enrollment in both of these private school choice programs is modest, it is unlikely that private school options for Louisiana parents are substantially affecting the special education enrollment gaps described in this report.
3. The special education enrollment gap for the entire study population, 0.5 percentage point, is lower than the rate for any of the four regions. Although this may seem mathematically impossible, the special education enrollment gap in the entire study population is not the weighted average of the gap for the four regions; it is the special education rate for the entire study population in charter schools minus the special education rate for the entire study population in traditional schools. Charter school students came disproportionately from regions, like New Orleans, with relatively high special education enrollment rates, while traditional public school students came disproportionately from regions, like Baton Rouge, with relatively low special education enrollment rates.
4. New York, Tennessee, and Utah did not report special education enrollment. Counting the District of Columbia as a state, in order from largest charter school enrollment advantage for students with disabilities to largest charter school deficit, in percentage points, the states were Virginia, +11; Iowa, +6; Wyoming, +4; Ohio and Pennsylvania, +2; Nevada, +1; Minnesota and New Mexico, 0; North Carolina, Texas, and Wisconsin, –1; Arizona, Hawaii, Idaho, Georgia, Maryland, and Mississippi, –2; Colorado, Connecticut, the District of Columbia, Massachusetts, Michigan, and Rhode Island –3; Alaska, California, Florida, Indiana, Louisiana, Oregon, and South Carolina, –4; Arkansas and Missouri, –5; Kansas, New Jersey, and Oklahoma, –6; New Hampshire, –7; Delaware, –8; Illinois, –13.
5. Only public entities are allowed to receive federal funds under the Individuals with Disabilities Education Act. Public charter schools that are operated directly by a for-profit education management organization, absent an independent board of trustees, are not permitted to receive those funds (Office of Inspector General, 2004). Because the Orleans Parish School Board charter schools are operated by education management organizations, the district itself receives all of the special education funding and provides special education services to students with disabilities in Orleans Parish School Board charter schools.

References

Ahearn, E. M. (1999). *Charter schools and special education: A report on state policies*. Alexandria, VA: National Association of State Directors of Special Education. http://eric.ed.gov/?id=ED429416

Americans with Disabilities Act of 1990, Pub. L. No. 101–336, § 1, 104 Stat. 328 (1990).

Baker, B. D. (2014). *Review of* Charter funding: Inequity expands. Boulder, CO: National Education Policy Center. Retrieved September 2, 2017, from http://nepc.colorado.edu/thinktank/review-charter-funding-inequity.

Batdorff, M., Maloney, L., May, J. F., Speakman, S. T., Wolf, P. J., & Cheng, A. (2014). *Charter school funding: Inequity expands*. Fayetteville, AR: School Choice Demonstration Project. Retrieved February 8, 2017, from http://www.uaedreform.org/wp-content/uploads/charter-funding-inequity-expands.pdf

Center for Research on Education Outcomes. (2013). *Charter school performance in Louisiana*. Stanford, CA: Stanford University.

Center for Research on Education Outcomes. (2017). *Lights off: Practice and impact of closing low-performing schools*. Volume I. Stanford, CA: Stanford University. Retrieved September 5, 2017, from http://credo.stanford.edu/pdfs/Closure_FINAL_Volume_I.pdf

Chambers, J. G., Kidron, Y., & Spain, A. K. (2004). *Characteristics of high-expenditure students with disabilities, 1999–2000* (Report 8). Washington, DC: U.S. Department of Education, Office of Special Education Programs. http://eric.ed.gov/?id=ED522071

Chambers, J. G., Shkolnik, J., & Perez, M. (2003). *Total expenditures for students with disabilities, 1999–2000: Spending variation by disability* (Report 5). Washington, DC: U.S. Department of Education, Office of Special Education Programs. http://eric.ed.gov/?id=ED481398

Chang, C. (2010, October 29). New Orleans special needs students file federal lawsuit against Louisiana Department of Education. *The Times-Picayune*. Retrieved February 8, 2017, from http://www.nola.com/education/index.ssf/2010/10/new_orleans_special_needs_stud.html

Cremata, E., Davis, D., Dickey, K., Lawyer, K., Negassi, Y., Raymond, M. E., et al. (2013). *National charter school study: 2013*. Stanford, CA: Stanford University, Center for Research on Education Outcomes. http://eric.ed.gov/?id=ED544744

Dreilinger, D. (2014, March 19). Recovery School District charter schools to have new special education funding rules. *The Times-Picayune*. Retrieved February 8, 2017, from http://www.nola.com/education/index.ssf/2014/03/recovery_school_district_chart.html

EdChoice. (2017). *The ABCs of school choice*. Indianapolis, IN: EdChoice. Retrieved November 16, 2017, from https://www.edchoice.org/research/the-abcs-of-school-choice/

Fiore, T. A., Harwell, L. M., Blackorby, J., & Finnigan, K. S. (2000). *Charter schools and students with disabilities: A national study.* Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement. http://eric.ed.gov/?id=ED452657

Garda, Jr., R. A. (2012). Disabled students' rights of access to charter schools under the IDEA, Section 504 and the ADA. *Journal of the National Association of Administrative Law Judiciary*, *32*, 516–899.

Hill, P., Jochim, A., & Campbell, C. (2013). *Portfolio strategies, relinquishment, the urban school system of the future, and smart districts.* Seattle, WA: University of Washington, Center on Reinventing Public Education. Retrieved on April 8, 2016, from http://www.crpe.org/sites/default/files/pub_portfolio_governance_feb13.pdf

Howell, W. G. (2004). Dynamic selection effects in means-tested, urban school voucher programs. *Journal of Policy Analysis and Management, 23*(2), 225–250. http://eric.ed.gov/?id=EJ759276

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.

Lake, R., Gross, B., & Denice, P. (2012). *New York state special education enrollment analysis.* Seattle, WA: University of Washington, Center on Reinventing Public Education. http://eric.ed.gov/?id=ED537477

Louisiana Believes. (2013). *Expanding quality options: Louisiana type 2, 4 and 5 charter schools 2013–2014 annual report.* Baton Rouge, LA: Louisiana Department of Education.

Louisiana State Legislature. 2015. Charter school funding. RS 17:3995. Retrieved February 8, 2017, from http://www.legis.la.gov/Legis/Law.aspx?d=80980.

Lyon, G. R., Fletcher, J. M., Shaywitz, S. E., Shaywitz, B. A., Torgesen, J. K., Wood, F. B., et al. (2001). Rethinking learning disabilities. In C. E. Finn, Jr., A. J. Rotherham, & C. R. Hokanson, Jr. (Eds.), *Rethinking special education for a new century* (pp. 259–288). Washington, DC: Thomas B. Fordham Foundation and Progressive Policy Institute. http://eric.ed.gov/?id=ED454636

Maloney, L. D., & Wolf, P. J. (2017). *Charter school funding: Inequity in New York City.* Fayetteville, AR: School Choice Demonstration Project. Retrieved September 2, 2017, from http://www.uaedreform.org/wp-content/uploads/charter-school-funding-inequity-in-new-york-city.pdf.

McKinney, J. R. (1996). Charter schools: A new barrier for children with disabilities. *Educational Leadership, 54*(2), 22–25. http://eric.ed.gov/?id=EJ534011

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. http://eric.ed.gov/?id=EJ571860

Mills, J. N., & Wolf, P. J. (2017). Vouchers in the bayou: The effects of the Louisiana scholarship program on student achievement after two years. *Education Evaluation and Policy Analysis, 20* (10), 1–21. Retrieved November 1, 2017, from http://journals.sagepub.com/stoken/default+domain/rny5Jru8VdKdTrgeRBkd/full.

Muschkin, C. G., Ladd, H. F., & Dodge, K. A. (2015). *Impact of North Carolina's early childhood initiatives on special education placements in third grade*. Washington, DC: National Center for Analysis of Longitudinal Data in Education Research, Working Paper 121, February. http://eric.ed.gov/?id=EJ1084495

Office of Inspector General. (2004). *Charter schools' access to Title I and IDEA, Part B funds in the State of Arizona* (ED-OIG/A09-D0033). Sacramento, CA: Author.

Palmaffy, T. (2001). The evolution of the federal role. In C. E. Finn, Jr., A. J. Rotherham, & C. R. Hokanson, Jr. (Eds.), *Rethinking special education for a new century*. Washington, DC: Thomas B. Fordham Foundation and Progressive Policy Institute. http://eric.ed.gov/?id=ED454636

Ramanthan, A. K., & Zollers, N. J. (1999). For-profit schools continue to skimp on special education: A response to Naomi Zigmond. *Phi Delta Kappan*, *81*(4), 284–290. http://eric.ed.gov/?id=EJ599104

Rhim, L. M., Faukner, J., & McLaughlin, M. J. (2006). *Research report #5: Access and accountability for students with disabilities in California charter schools*. College Park, MD: University of Maryland, Institute for the Study of Exceptional Children and Youth). Retrieved February 15, 2017, from http://www.education.umd.edu/EDSP/Projectintersect.

Rhim, L. M., & McLaughlin, M. (2007). Students with disabilities in charter schools: What we now know. *Focus on Exceptional Children*, *39*(5), 1. http://eric.ed.gov/?id=EJ779766

Schnaiberg, L., & Lake, R. (2015). *Special education in New Orleans: Juggling flexibility, reinvention, and accountability in the nation's most decentralized school system*. Seattle, WA: University of Washington, Center on Reinventing Public Education.

Special Education Guide. (2017). *Special education dictionary*. Retrieved February 8, 2017, from http://www.specialeducationguide.com/special-education-dictionary/.

Sullins, C., & Miron, G. (2005). *Challenges of starting and operating charter schools: A multicase study*. Kalamazoo, MI: The Evaluation Center. Retrieved February 8, 2017, from http://homepages.wmich.edu/~miron/publics/cs_challenges_exec_summary.pdf.

Tuchman, S., & Wolf, P. J. (2017). *Special education identification in the Louisiana Scholarship Program*. Fayetteville, AR: University of Arkansas, School Choice Demonstration Project. Retrieved June 23, 2017, from http://www.uaedreform.org/special-education-identification-in-the-louisiana-scholarship-program/.

U.S. Department of Education. (1997). *A study of charter schools: First year report* Emeryville, CA: Center for Applied Research and Educational Improvement.

U.S. Government Accountability Office. (2012). *Charter schools: Additional federal attention needed to help protect access for students with disabilities* (GAO-12–543). Washington, DC: Government Printing Office. http://eric.ed.gov/?id=ED533002

Winters, M. A. (2013). *Why the gap? Special education and New York City charter schools*. Seattle, WA: University of Washington, Center on Reinventing Public Education.

Winters, M. A. (2014). *Understanding the charter school gap: Evidence from Denver, CO*. Seattle, WA: University of Washington, Center on Reinventing Public Education. http://eric.ed.gov/?id=ED546765

Wolf, P. J., & Hassel, B. C. (2001). Effectiveness and accountability (part 1): The compliance model. In C. E. Finn, Jr., A. J. Rotherham, & C. R. Hokanson, Jr. (Eds.), *Rethinking special education for a new century*. Washington, DC: Thomas B. Fordham Foundation and Progressive Policy Institute. http://eric.ed.gov/?id=ED454636

Wolf, P. J., Witte, J., & Fleming, D. J. (2012). *Special education and the Milwaukee Parental Choice Program*. Fayetteville, AR: University of Arkansas, School Choice Demonstration Project. http://eric.ed.gov/?id=ED530070

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