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K-12 EDUCATION

Charter Schools That
Received Federal
Funding to Open or
Expand Were
Generally Less Likely
to Close Than Other
Similar Charter
Schools

GAO Highlights

Highlights of [GAO-23-105616](#), a report to congressional committees

Why GAO Did This Study

Charter schools are publicly funded, semi-autonomous schools of choice. In fiscal years 2006–2020, Education awarded 6,023 CSP grants to eligible state entities, developers, and charter management organization to help open charter schools across the nation. These grants represented about \$2.5 billion in federal CSP funding. Questions have been raised about the effectiveness of CSP grants.

House Report 116-450 includes a provision for GAO to report on CSP grants, with a particular focus on charter schools that eventually closed or never opened. This report examines the extent to which CSP-recipient schools stayed open or closed compared to non-recipient charter schools in fiscal years 2006–2020 (the most recently available comparable data) and how much CSP funding went to schools that closed or never opened during this period. GAO reviewed the three Education CSP grants that are intended to create or expand charter schools: CSP State Educational Agencies/State Entities, CSP Charter Management Organizations, and CSP Non-State Educational Agencies/Developers.

GAO conducted a multivariate statistical analysis to match CSP-recipient charter schools with similar charter schools that did not receive CSP awards and compared closure rates for these two groups. GAO analyzed CSP awards data to describe funding levels for charter schools that closed or never opened. GAO reviewed relevant federal laws, regulations, and documents and interviewed federal, state, and national education organization officials. GAO incorporated technical comments from Education as appropriate.

View [GAO-23-105616](#). For more information, contact Jacqueline M. Nowicki at (617) 788-0580 or nowickij@gao.gov.

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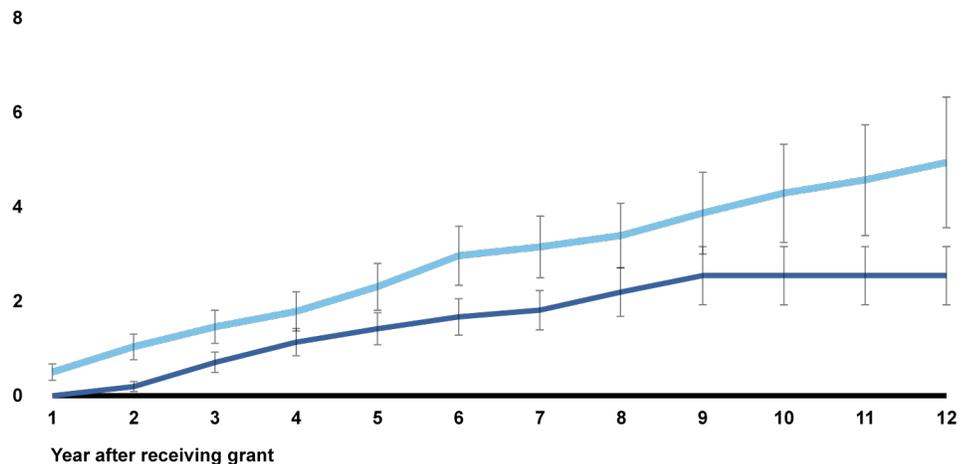
Charter Schools That Received Federal Funding to Open or Expand Were Generally Less Likely to Close Than Other Similar Charter Schools

What GAO Found

The Department of Education awards Charter Schools Program (CSP) grants to help open new charter schools or replicate and expand high-quality charter schools, among other things. While few charter schools closed overall, charter schools that received CSP awards closed at lower rates than similar charter schools that did not receive an award between fiscal years 2006 and 2020. GAO's analysis found, for example, that within five years after receiving CSP awards, CSP-recipient charter schools were about 1.5 times less likely to close than similar non-CSP charter schools—with an estimated 1.4 percent and 2.3 percent closing, respectively. Within 12 years of receiving CSP grants, the same pattern generally held. The pattern also generally held for CSP-recipient charter schools regardless of the schools' grade level, locale, student body racial and ethnic composition, or percentage of students receiving free or reduced-price lunch.

Probability of Charter Schools Program (CSP) Charter Schools and Non-CSP Charter Schools Closing within 12 Years of Receiving an Award

Percentage closing prior to year



— Confidence interval
— Non-CSP charter schools
— CSP-grant recipient charter schools

Source: GAO matched comparison analysis of the Department of Education's CSP awards data and school-level characteristics from the Common Core of Data. | [GAO-23-105616](#)

Note: GAO examined data for charter schools that received a CSP award in fiscal years 2006–2020 and matched them to similar, non-CSP charter schools. Error bars display 95 percent confidence interval for estimates.

About 14 percent of charter schools (638 schools) that received CSP State Educational Agencies/State Entities (CSP State) awards—the largest CSP grant program—closed or never opened, according to GAO's analysis of Education's CSP awards data. These 638 schools received about \$152 million (8 percent) of the approximately \$2 billion provided in CSP State awards during fiscal years 2006–2020.

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Abbreviations

CCD	Common Core of Data
CMO	Charter Management Organization
CSP	Charter Schools Program
CSP CMO	Charter Schools Program Charter Management Organizations
CSP Developers	Charter Schools Program Non-State Educational Agencies/Developers
CSP SE	Charter Schools Program State Entities
CSP SEA	Charter Schools Program State Educational Agencies
CSP State	Charter Schools Program State Educational Agencies/State Entities
Education	Department of Education
ESEA	Elementary and Secondary Education Act of 1965
ESSA	Every Student Succeeds Act
FY	Fiscal Year
NCES	National Center for Education Statistics
NIA	Notices Inviting Applications

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October 11, 2022

The Honorable Patty Murray
Chair

The Honorable Roy Blunt
Ranking Member

Subcommittee on Labor, Health and Human Services, Education, and
Related Agencies
Committee on Appropriations
United States Senate

The Honorable Rosa DeLauro
Chair

The Honorable Tom Cole
Ranking Member

Subcommittee on Labor, Health and Human Services, Education, and
Related Agencies
Committee on Appropriations
House of Representatives

Since 1995, the Department of Education has supported the creation of charter schools across the nation through its Charter Schools Program (CSP) grants. Funded at about \$440 million in fiscal year (FY) 2020, these grants are generally designed to help create new charter schools; replicate high-quality charter schools; disseminate best practices to charter schools; and expand opportunities for traditionally underserved students to attend charter schools, among other things. The effectiveness of and funding for charter schools are debated topics. Questions have also been raised about the effectiveness of CSP grants.

A committee report accompanying the House bill for the Departments of Labor, Health and Human Services, and Education, and Related Agencies Appropriations Act, 2021 includes a provision for GAO to report on CSP grants, with a particular focus on charter schools that eventually closed or never opened.¹ This report, the first of two, examines the extent to which certain CSP grant-recipient charter schools have stayed open or closed compared to similar charter schools that did not receive CSP

¹H.R. Rep. No. 116-450, at 246 (2021).

grants, and how much CSP funding went to charter schools that closed or never opened in FYs 2006–2020.²

What are charter schools?

Charter schools are publically funded schools typically governed by a group or organization under a contract—a charter—with the state, the district, or another entity authorized under state law to grant charters to schools. Charter schools are exempt from significant state or local regulations related to operation and management but otherwise adhere to regulations of public schools. For example, charter schools cannot charge tuition.

As of May 2022, 42 states, the District of Columbia, Puerto Rico, and Guam have charter schools. From fall 2009 to fall 2019, overall charter school enrollment increased from 1.6 million students to 3.4 million students and the number of charter schools increased from approximately 5,000 to 7,500.

Source: GAO analysis of Department of Education's documents and Education Commission of the States. | GAO-23-105616

To complete our work, we combined Education's CSP awards data for FYs 2006 through 2020, the most recent years for which reliable data were available, with school characteristics data from the Common Core of Data (CCD).³ We assessed the reliability of these data by reviewing existing documentation about the data, comparing Education's restricted data file to the public use file, conducting our own electronic data tests, reviewing technical documentation, and interviewing federal officials knowledgeable about the CSP awards data and CCD. We determined they were sufficiently reliable for the purposes of our analysis.

We used the combined dataset to analyze charter school operating status (e.g., open, closed, never opened) and funding trends during this period. We analyzed three of Education's grants—CSP State Educational Agencies/State Entities, CSP Non-State Educational Agencies/Developers, and CSP Charter Management Organizations—that are designed to help create and expand charter schools. We also used a multivariate statistical method (matched comparison analysis) to estimate differences in closure rates between CSP grant-recipient charter schools and similar non-CSP charter schools. In addition, we reviewed relevant federal laws, regulations, and guidance and interviewed state and federal officials. See appendix I and II for more information on our methodology.

We conducted this performance audit from December 2021 to October 2022 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to

²We examined the three Education CSP grants that support the expansion and creation of charter schools—CSP State Educational Agencies/State Entities, CSP Non-State Educational Agencies/Developers, and CSP Charter Management Organization grants. Our second report will cover student enrollment trends for CSP grant-recipient charter schools compared to charter schools that did not receive the grants and traditional public schools. We will also provide information on how many charter schools expanded enrollment after receiving a CSP grant.

³Prior to FY 2006, Education did not systematically collect information on subgrantees (e.g., charter schools that received CSP subgrant awards). Education now collects self-reported information from CSP grantees, including names of charter schools that received funding, award amount, and school status. Education's CCD is a comprehensive, annual, national database of all public elementary and secondary schools and school districts. Using the school identification number, we combined CSP award data with select CCD data for our analyses.

obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Education awarded 6,023 CSP grants—representing about \$2.5 billion—to state entities, developers, and charter management organizations between FYs 2006 and 2020 (see table 1). The CSP State Entities grant replaced the CSP State Education Agencies grant (the term CSP State refers to both in this report).⁴ CSP State grants are awarded to eligible state entities, which then award subgrants to eligible applicants, e.g., developers that have applied for a charter. In addition, Education awards grants to charter management organizations and developers through the CSP Charter Management Organization (CSP CMO) grants⁵ and CSP Non-State Educational Agencies/Developers (CSP Developers) grants.⁶

⁴The CSP State Entities program is authorized under the Elementary and Secondary Education Act of 1965 (ESEA), as amended by the Every Student Succeeds Act (ESSA). Pub. L. No. 89-10, 79 Stat. 27 (1965), as amended by Pub. L. No. 114-95, 129 Stat. 1802 (2015) (codified as amended at 20 U.S.C. §§ 7221-7221j). Prior to the enactment of ESSA, this program was called the CSP State Educational Agencies (CSP SEA) program. Under the CSP SEA program, Education was authorized to make awards to state educational agencies to enable them to conduct charter school subgrant programs in their states. The CSP State Entities program under ESSA has broadened the types of entities that can apply for the grant, including state educational agencies, state charter school boards, state governors, and charter school support organizations. It also has different authorized activities, priorities, definitions, application requirements, and selection criteria.

⁵See 20 U.S.C. §§ 7221-7221j. A charter management organization, or CMO, is a nonprofit organization that operates or manages a network of charter schools linked by centralized support, operations, and oversight. 20 U.S.C. § 7221i(3).

⁶See 20 U.S.C. §§ 7221-7221j. A developer is an individual or group of individuals (including a public or private nonprofit organization), which may include teachers, administrators and other school staff, parents, or other members of the local community in which a charter school project will be carried out. 20 U.S.C. § 7221i(5).

Table 1: Department of Education Charter Schools Program (CSP) Grant Funding, Fiscal Years 2006–2020

CSP grant	Amount awarded	Number of unique grant awards	Number of awards to charter schools
Total	\$2.49 billion	563	6,023
CSP State Educational Agencies/State Entities ^a 3- to 5-year grants to state entities, which award subgrants to eligible applicants to open new charter schools or to replicate and expand high-quality charter schools.	\$1.97 billion	91	4,616
CSP Charter Management Organizations (CMO) ^b 3- to 5-year grants awarded to CMOs on a competitive basis to enable them to replicate or expand high-quality charter schools.	\$425 million	237	1,172
CSP Non-State Educational Agencies/Developers (Developers) ^c 1- to 5-year grants to developers to support opening charter schools, or to replicate and expand high-quality charter schools.	\$105 million	235	235

Source: GAO analysis of the Department of Education’s CSP awards data. | GAO-23-105616

Note: CSP grant recipients report charter school operating status to Education twice a year. We analyzed Education’s CSP awards data as of May 2022.

^aUnder the Elementary and Secondary Education Act of 1965 (ESEA), as amended by the No Child Left Behind Act of 2001 (NCLB), CSP SEA subgrants were authorized for planning, program design, and initial implementation of a charter school. In contrast, CSP SE subgrants under the ESEA, as amended by the Every Student Succeeds Act (ESSA), may support the opening and preparation for opening of new charter schools as well as the replication and expansion of high-quality charter schools. In addition, the CSP State Entities program broadened eligible entities to include state educational agencies, state charter school boards, state governors, and charter school support organizations. Our analysis consolidates both CSP State Educational Agencies/State Entities grants.

^bA CMO is an organization that operates or manages a network of charter schools linked by centralized support, operations, and oversight. 20 U.S.C. § 7221i(3). Charter schools receive funds through CSP CMO grants. CMOs often award funding to more than one school in their network.

^cA developer is an individual or group of individuals in the community in which a charter school project will be carried out. 20 U.S.C. § 7221i(5). CSP Developers grants are awarded directly to eligible applicants. Under the ESEA, as amended by NCLB, CSP Non-SEA grants were authorized for planning, program design, and initial implementation of a charter school. In contrast, Developer Grants under the ESEA, as amended by the ESSA, may support the opening and preparation for opening of new charter schools as well as the replication and expansion of high-quality charter schools.

Charter Schools That Received CSP Awards Were Generally Less Likely to Close Compared to Similar Charter Schools That Did Not

According to our matched comparison analysis, CSP grant-recipient charter schools were generally less likely to close compared to similar charter schools that did not receive an award between FYs 2006 and 2020 (see fig. 1).⁷ For example, within 5 years after receiving a CSP award, CSP grant-recipient charter schools were about 1.5 times less likely to have closed than other similar charter schools—an estimated 1.42 percent and 2.31 percent, respectively.⁸ Within 12 years after receiving a CSP award, CSP grant-recipient charter schools were about two times less likely to have closed than other similar charter schools—an estimated 2.55 percent and 4.94 percent, respectively.⁹

⁷Our analysis matched charter schools that received CSP awards with similar non-CSP charter schools, based on several characteristics measured in the CCD. These include state, grade level, population density, student demographics, and school size, among others. However, we could not measure some characteristics that may have varied between the two groups and that may have been associated with closure. For example, CSP charter schools may have been more likely to have the necessary administrative skills or resources to seek and receive CSP awards. These same characteristics could allow CSP schools to remain open longer. Because our matched comparison cannot ensure that both groups of schools are similar on all relevant characteristics, differences in closure rates should not be attributed only to award receipt. See Appendix II for more details.

⁸These differences between CSP grant-recipient charter schools and similar non-CSP charter schools are statistically significant at the $p < 0.05$ level.

⁹These differences between CSP grant-recipient charter schools and similar non-CSP charter schools are statistically significant at the $p < 0.05$ level.

Matched Comparison Analysis

We matched charter schools that received Charter Schools Program (CSP) awards to similar charter schools that did not receive grants. We matched the charter schools based on:

- (Group 1) Year opened, state, locale (urban, suburban, and rural), and grade level (elementary, middle, and high schools).
- (Group 2) Year opened, state, school district, and grade level.
- (Group 3) Year opened, state, and grade level.

In each analysis, paired schools that received the CSP awards were as similar as possible to schools not receiving the awards on a set of variables including student demographics, number of students in the school, free or reduced-price lunch rates, and exact geographic location.

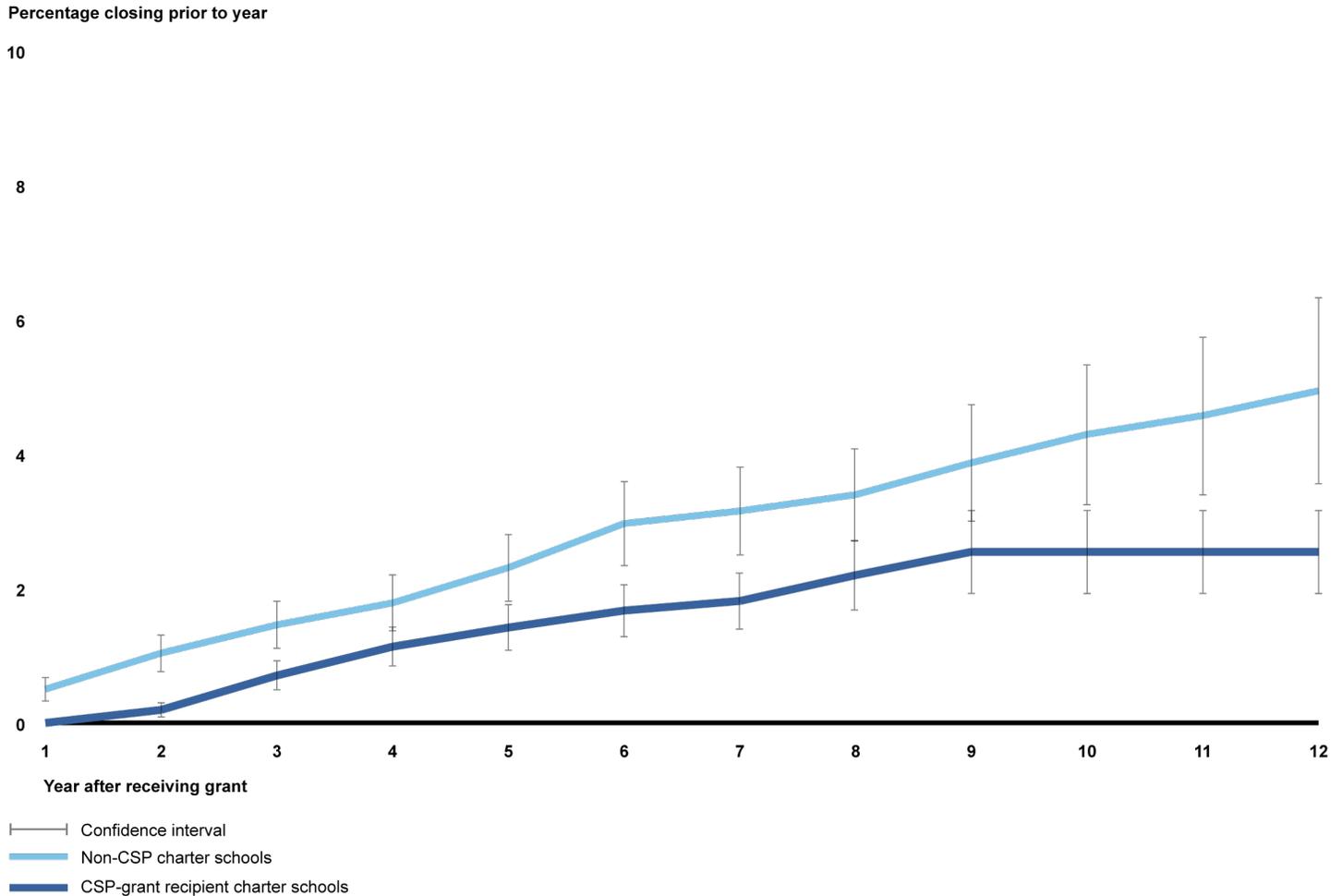
We reported on results from the first group. For all three analyses we conducted, we found that charter schools that received CSP awards were generally less likely to close than similar non-CSP charter schools.

Where are Charter Schools receiving CSP awards located?

Charter schools that received CSP awards were more likely to be located in rural or urban areas, and had higher proportions of Black or Hispanic students and students eligible for free or reduced-price lunch. In our recent report, we found that more than a third (41 percent) of all charter schools were predominately same-race/ethnicity (75 percent of the students or more) and the majority were predominately Black or Hispanic charter schools (see [GAO-22-104737](#)). The Department of Education's Notices Inviting Applications include priorities for awarding CSP grants. Priority areas for funding among the three CSP grant types have included funding schools in economically distressed communities, schools in urban and rural areas, and schools that serve high-need students.

Source: GAO matched comparison analysis of the Department of Education's CSP award and selected elements of Common Core of Data. | GAO-23-105616

Figure 1: Probability of Charter Schools Program (CSP) Charter Schools and Non-CSP Charter Schools Closing within 12 Years of Receiving an Award



Source: GAO matched comparison analysis of the Department of Education’s CSP awards data and school-level characteristics from the Common Core of Data. | GAO-23-105616

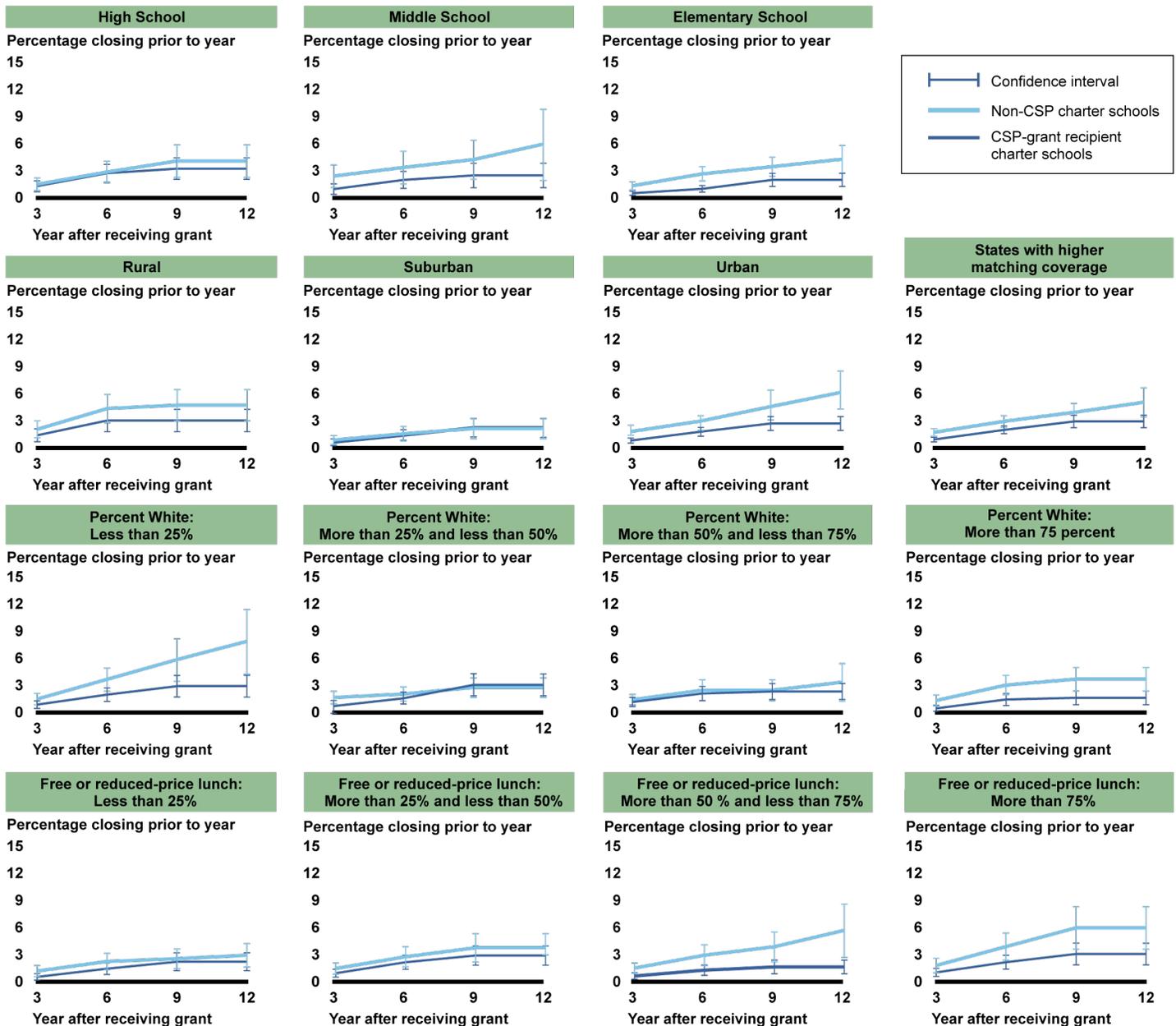
Note: GAO examined data for charter schools that received a CSP award between fiscal years 2006 and 2020 and matched them to similar, non-CSP charter schools. Error bars display 95 percent confidence interval for estimates. We analyzed Education’s CSP awards data as of May 2022.

When we compared closure rates separately by grade level, locale (urban/suburban/rural), race/ethnicity, and percentage of students who receive free or reduced-price lunch, that same pattern generally held, with lower rates of closures for charter schools that received CSP grants (see

fig. 2).¹⁰ For example, elementary charter schools that received CSP awards were generally less likely to close compared to similar non-CSP charter schools.

¹⁰Charter schools that received CSP grants, regardless of breakdowns, generally had lower closure rates than non-CSP charter schools; however, these differences were generally not statistically significant.

Figure 2: Probability of Charter Schools Program (CSP) Charter Schools and Non-CSP Charter Schools Closing, by Selected Characteristics, within 12 Years of Receiving an Award

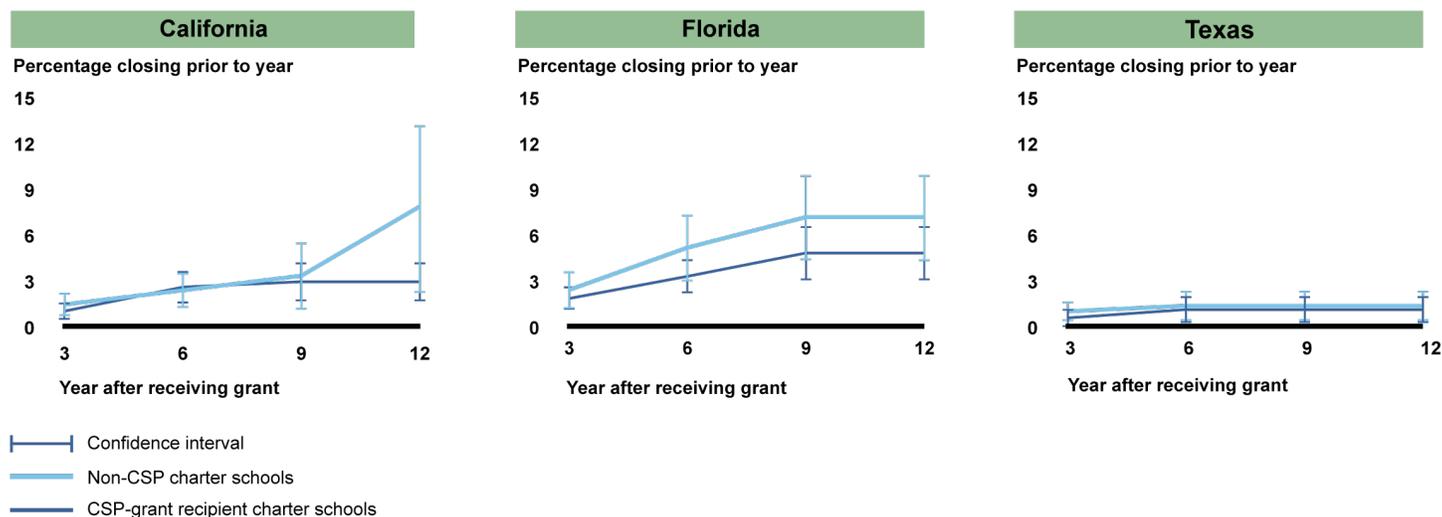


Source: GAO matched comparison analysis of the Department of Education's CSP awards data and school-level characteristics from the Common Core of Data. | GAO-23-105616

Note: GAO examined data for charter schools that received a CSP award between fiscal years 2006 and 2020 and matched them to similar, non-CSP charter schools. Error bars display 95 percent confidence interval for estimates. We analyzed Education's CSP awards data as of May 2022.

Further, when we compared closure rates separately in the three states that received the most CSP awards and funding—California, Florida, and Texas—we found similar patterns (see fig. 3).

Figure 3: Probability of Charter Schools Program (CSP) Charter Schools and Non-CSP Charter Schools Closing in California, Florida, and Texas within 12 Years of Receiving an Award



Source: GAO matched comparison analysis of the Department of Education’s CSP awards data and school-level characteristics from the Common Core of Data. | GAO-23-105616

Note: GAO examined data for charter schools that received a CSP award between fiscal years 2006 and 2020 and matched them to similar, non-CSP charter schools. Error bars display 95 percent confidence interval for estimates. We analyzed Education’s CSP awards data as of May 2022

What are some reasons for charter schools closing or never opening?

Officials from seven state education agencies we interviewed cited the following reasons for charter schools closing or never opening:

- Difficulty securing facilities
- Low enrollment
- Financial or business mismanagement
- Lack of community support
- Competition from other schools
- Charter is not reauthorized
- Poor academic outcomes

Source: GAO analysis of interviews with state education officials. | GAO-23-105616

Finally, our matched comparison analyses showed that the probability of charter schools having closed, regardless of whether they received CSP awards, generally increased over time. Officials we interviewed from seven state education agencies noted various reasons for charter schools closing (see textbox). However, CSP grant-recipient schools closed at lower rates, even 12 years post-award.

CSP Grant-Recipient Charter Schools that Closed or Never Opened Received Over \$150 Million

States Awarded \$152 Million in CSP State Grants to Charter Schools that Closed or Never Opened

What happens to Charter Schools Program State subgrant funding awarded to charter schools that closed or never opened?

According to state education agency officials we interviewed from five states, they recover funds, reallocate funds to future charter schools, and redistribute purchases made by the charter school authorizer to other charter schools.

Source: GAO analysis of interviews with officials from state education agencies. | GAO-23-105616

Of the 4,616 charter schools that received CSP State subgrant awards, 638 charter schools—or about 14 percent—closed or never opened, according to our analysis of Education’s CSP FYs 2006–2020 awards data (see table 2).¹¹ These 638 charter schools received about \$152 million (about 8 percent) of the total \$1.97 billion in CSP State funding awarded during this period. Figure 4 shows CSP State awards and funding levels for charter schools that closed or never opened across the United States. Figure 5 shows overall CSP State awards by state between FYs 2006 and 2020.

¹¹We analyzed Education’s CSP award data, which has information on charter schools’ operating status. We used Education’s charter school operating status variables, and, when appropriate, recoded categories into “open,” “future,” “closed,” and “never opened.” We defined “open” to mean a school is currently in operation. We defined “future” as a charter schools that is planned to be opened. We considered a charter school as “closed” if it was no longer operating. We considered a charter school as “never opened” if it did not open after being awarded CSP funding. We looked up school operating status in CCD for missing data for multiple CSP State awards. There were three CSP State award records for which we did not find a charter school operating status. These awards account for .06 percent of total CSP State awards and \$1,750,000 of funding.

Table 2: Operating Status of Charter Schools That Received Charter Schools Program State Educational Agencies/State Entities (CSP State) Awards, Fiscal Years 2006–2020

	Total CSP State awards^a	Open	Future^c	Closed	Never opened
Number of awards to charter schools (Percentage of totals)	4,616 ^b	3,747 (81%)	228 (5%)	429 (9%)	209 (5%)
Amount awarded (Percentage of totals)	\$1.97 billion	\$1.7 billion (88%)	\$86 million (4%)	\$132 million (7%)	\$20 million (1%)

Source: GAO analysis of the Department of Education’s CSP awards data. | GAO-23-105616

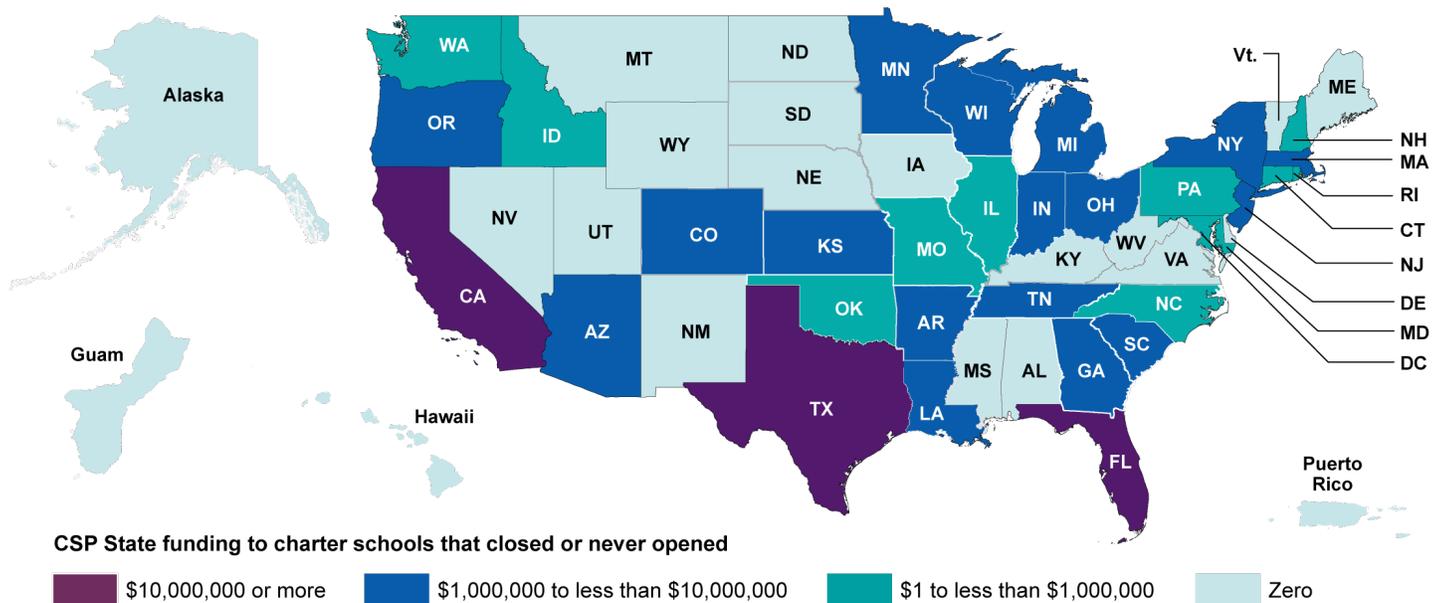
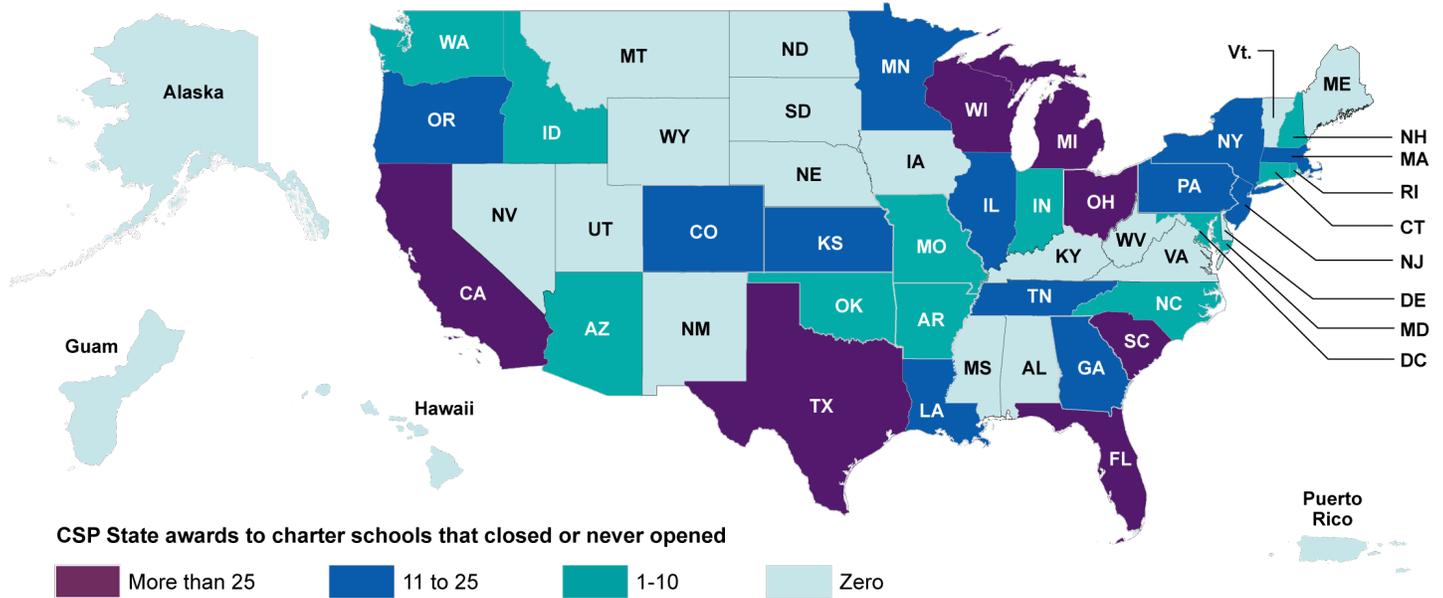
Note: CSP State Entities grant recipients report charter school operating status to Education twice a year. We analyzed Education’s CSP awards data as of May 2022.

^aAs of its effective date in 2017, the Elementary and Secondary Education Act of 1965, as amended by the Every Student Succeeds Act, broadened eligible entities under the CSP State Entities program to include state educational agencies, state charter school boards, state governors, and charter school support organizations. Our analysis consolidates both CSP State Educational Agencies/State Entities grants.

^bThree charter schools that received CSP State awards did not have a school operating status in Education’s CSP awards data. As a result, the sum of open, future, closed, and never opened does not equal 4,616.

^cA charter school is considered “future” if it is not yet open but plans to open at a later date.

Figure 4: Charter Schools Program State Educational Agencies/State Entities (CSP State) Awards and Funding Levels for Charter Schools That Closed or Never Opened, Fiscal Years 2006–2020

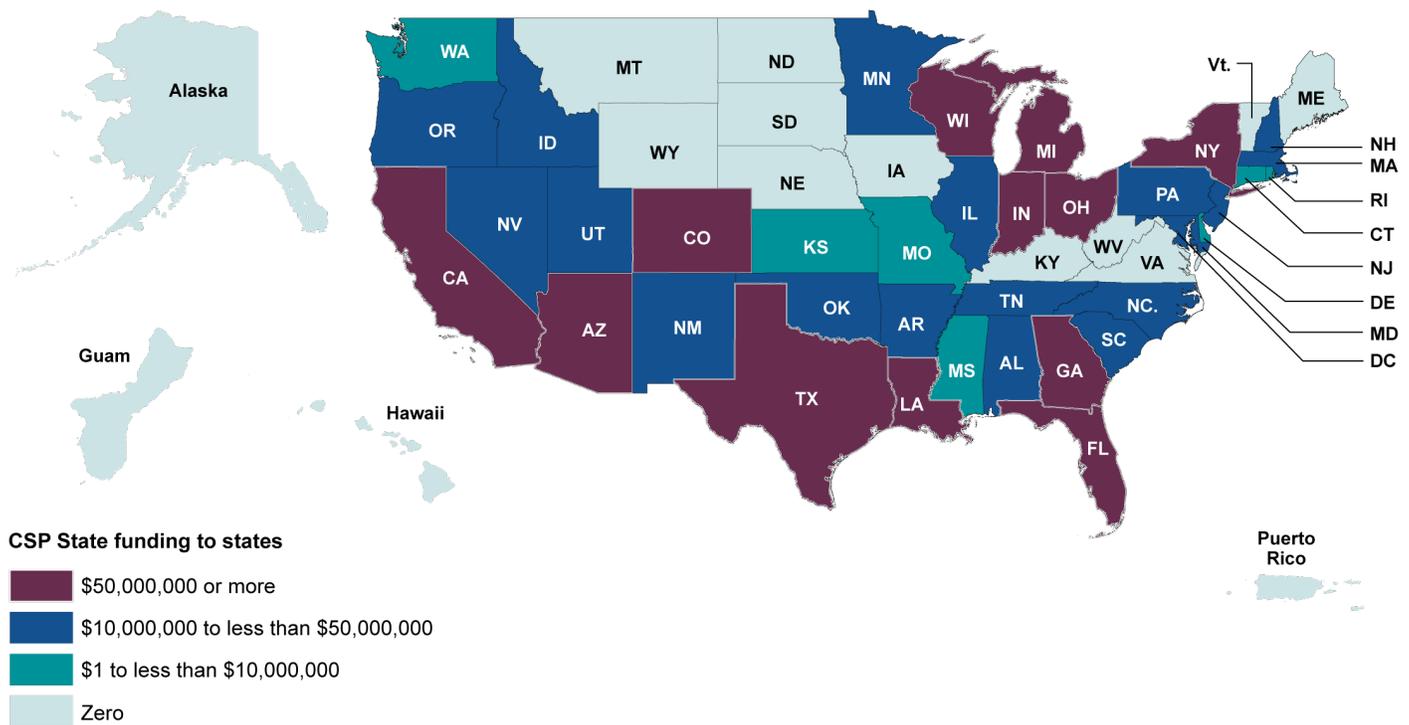


Source: GAO analysis of the Department of Education’s CSP awards data. | GAO-23-105616

Note: As of its effective date in 2017, the Elementary and Secondary Education Act of 1965, as amended by the Every Student Succeeds Act, broadened eligible entities under the CSP State Entities program to include state educational agencies, state charter school boards, state governors,

and charter school support organizations. Our analysis consolidates both CSP State Educational Agencies/State Entities grants. CSP state grant recipients report charter school operating status to Education twice a year. We analyzed Education's CSP awards data as of May 2022.

Figure 5: Overall Charter Schools Program State Educational Agencies/State Entities (CSP State) Awards, Fiscal Years 2006–2020



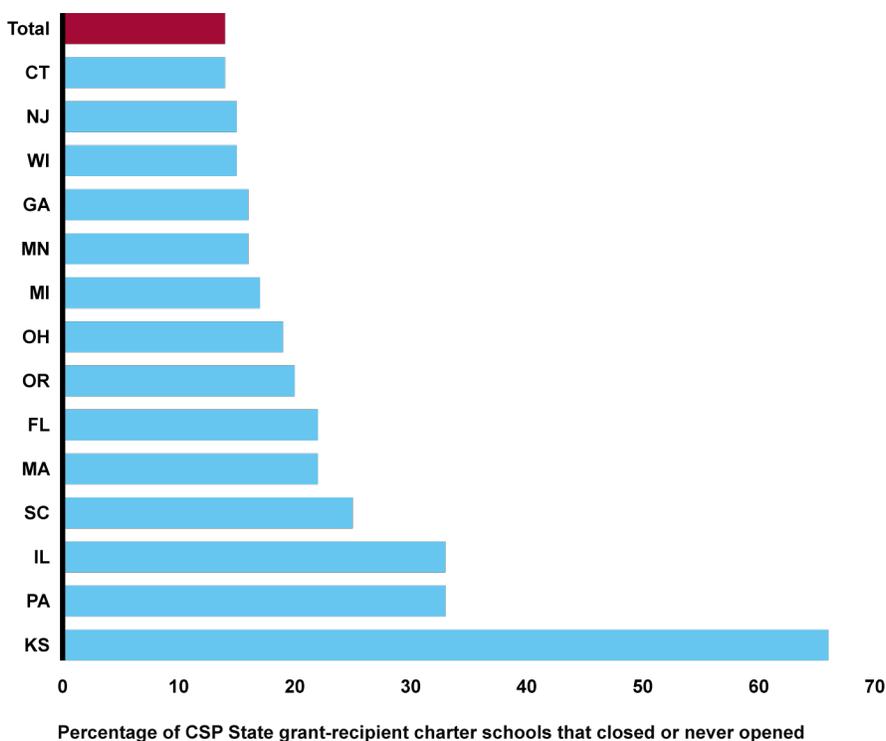
Source: GAO analysis of the Department of Education's CSP awards data. | GAO-23-105616

Note: As of its effective date in 2017, the Elementary and Secondary Education Act of 1965, as amended by the Every Student Succeeds Act, broadened eligible entities under the CSP State Entities program to include state educational agencies, state charter school boards, state governors, and charter school support organizations. Our analysis consolidates both CSP State Educational Agencies/State Entities grants. CSP state grant recipients report charter school operating status to Education twice a year. We analyzed Education's CSP awards data as of May 2022.

California, Florida, Texas, Wisconsin, and Louisiana accounted for more than half of CSP State awards funding that went to charter schools that closed or never opened, while Kansas, Pennsylvania, Illinois, South Carolina, Massachusetts, and Florida had the highest rates of charter schools that closed or never opened (see fig. 6). Further, while about 14 percent of CSP State subgrant recipient charter schools across all states closed or never opened, over 30 percent of these schools in Pennsylvania and Illinois, and over 60 percent in Kansas closed or never opened. The five states with the highest rates of CSP State grant-

recipient charter schools that closed or never opened accounted for about 19 percent (about \$29 million of \$152 million) of CSP State award funding that went to charter schools that closed or never opened.

Figure 6: States with the Highest Proportion of Charter Schools Program State Educational Agencies/State Entities (CSP State) Subgrant-Recipient Schools That Closed or Never Opened, Fiscal Years 2006–2020



Source: GAO analysis of the Department of Education's CSP awards data. | GAO-23-105616

Note: As of its effective date in 2017, the Elementary and Secondary Education Act of 1965, as amended by the Every Student Succeeds Act, broadened eligible entities under the CSP State Entities program to include state educational agencies, state charter school boards, state governors, and charter school support organizations. Our analysis consolidates both CSP State Educational Agencies/State Entities grants. CSP state grant recipients report charter school operating status to Education twice a year. We analyzed Education's CSP awards data as of May 2022.

Our analysis showed that the average CSP State subgrant award for charter schools that closed was \$308,000 compared to \$96,000 for charter schools that never opened. A majority of charter schools (390 of 638) that closed or never opened received less than \$250,000 in CSP State subgrant funding, while eight charter schools received more than \$750,000 (see table 3). Over 1,600 CSP State subgrant-recipient charter schools that remained open received at least \$500,000 in CSP State

subgrant funding, compared to 83 charter schools that closed or never opened. See the text box for additional information on CSP State awards.

Table 3: Distribution of Charter Schools Program State Educational Agencies/State Entities (CSP State) Subgrant Awards to Charter Schools by Operating Status, Fiscal Years 2006–2020

	All CSP State subgrant awards	\$250,000 or less	\$250,001 to \$500,000	\$500,001 to \$750,000	\$750,001 to \$1,000,000	More than \$1,000,000
All schools	4,616	1,417	1,438	1,269	411	81
Closed	429	194	159	74	2	0
Never opened	209	196	6	1	6	0
Open	3,747	898	1,247	1,166	367	69
Future	228	129	24	27	36	12

Source: GAO analysis of the Department of Education’s CSP awards data. | GAO-23-105616

Note: As of its effective date in 2017, the Elementary and Secondary Education Act of 1965, as amended by the Every Student Succeeds Act, broadened eligible entities to include state educational agencies, state charter school boards, state governors, and charter school support organizations. Our analysis consolidates both CSP State Educational Agencies/State Entities grants. CSP state grant recipients report charter school operating status to Education twice a year. We analyzed Education’s CSP awards data as of May 2022.

Overall Department of Education’s Charter Schools Program State Educational Agencies/State Entities (CSP State) Awards, Fiscal Years 2006–2020

Education awarded 91 grants to 35 states and the District of Columbia through CSP State grants between FYs 2006 and 2020, according to our analysis of Education’s CSP awards data. Five states received about half of the \$1.97 billion in CSP State awards during this time period.

- California: \$318 million
- Florida: \$186 million
- Texas: \$171 million
- New York: \$146 million
- Wisconsin: \$108 million

On average, charter schools received \$426,854 in CSP State subgrant funding. States awarded the most funding per charter school include:

- Alabama: \$1.4 million
- Oklahoma: \$900,000
- Mississippi: \$859,754
- Nevada: \$825,236
- Maryland: \$609,133

Oregon awarded the least funding to charter schools, averaging about \$231,047 per charter school.

Source: GAO analysis of the Department of Education’s CSP awards data. | GAO-23-105616

About \$2.7 Million in CSP Charter Management Organizations and Developers Awards Went to Schools that Closed or Never Opened

Of the 1,172 charter schools that received funds through CSP CMO awards, 96 percent (1,123) were open or planned to open, according to our analysis of Education's CSP awards data for FYs 2006 through 2020 (see table 4).¹² Three charter schools that received funds through CSP CMO grants and closed or never opened were awarded \$1 million of the total \$425 million. Of the 235 charter schools that received CSP Developers awards, 83 percent (196) were open or planned to open, according to our analysis of Education's CSP awards data for FYs 2006 through 2020 (see table 5).¹³ Ten charter schools that received \$1.7 million of \$105 million in CSP Developer funding closed or never opened. See the text boxes for additional information on CSP CMO and CSP Developer awards.

Department of Education's Charter Schools Program Charter Management Organizations (CSP CMO) Awards, Fiscal Years (FY) 2006–2020

Seventy-one charter management organizations received CSP CMO awards in 31 states and the District of Columbia, according to our analysis of Education's CSP awards data for FYs 2006 through 2020. On average, charter schools funded through CSP CMO awards received \$365,987. Five CMOs received about 51 percent of \$425 million in CSP CMO award funding:

- KIPP Foundation: \$106 million
- IDEA Public Schools: \$63 million
- Uncommon Schools Incorporated: \$20 million
- Aspire Public Schools: \$14 million
- Success Academy: \$13 million

Source: GAO analysis of the Department of Education's CSP awards data. | GAO-23-105616

Department of Education's Charter Schools Program Non-State Educational Agencies/Developers (CSP Developers) Awards, Fiscal Years (FY) 2006–2020

Charter school developers in 32 states, Guam, and Puerto Rico, received CSP Developer awards, according to our analysis of Education's CSP awards data for FYs 2006 through 2020. On average, charter schools that received CSP Developer award funding received \$445,252. Five states accounted for about 54 percent of about \$104 million in CSP Developers funding during this time period:

- Pennsylvania: \$14 million
- Missouri: \$12 million
- Illinois: \$11 million
- Arizona: \$10 million
- New Jersey: \$9 million

Source: GAO analysis of the Department of Education's CSP awards data. | GAO-23-105616

¹²There were 46 CSP CMO award records that did not have a charter school operating status. These awards account for 4 percent of CSP CMO awards and \$2,030,508 of funding.

¹³There were 29 CSP Developers award records that did not have a charter school operating status. These awards account for 6 percent of CSP Developers awards and \$6,500,584 of funding.

Table 4: Operating Status of Charter Schools That Received Funding Through Charter Schools Program Charter Management Organization (CSP CMO) Awards, Fiscal Years 2006–2020

	CSP awards ^a	Open	Future ^b	Closed	Never opened
Number of awards to charter schools (Percentage of totals)	1,172	685 (58%)	438 (37%)	2 (0.2%)	1 (0.1%)
Amount awarded (Percentage of totals)	\$ 425,277,116	\$342,448,841 (81%)	\$79,792,158 (19%)	\$1,005,608 (0.2%)	\$0 (0%)

Source: GAO analysis of the Department of Education’s CSP awards data. | GAO-23-105616

Note: CSP CMO grant recipients report charter school operating status to Education twice a year. We analyzed Education’s CSP awards data as of May 2022. While one charter school that received a CSP CMO award never opened, it did not receive funding, which accounts for the \$0 in the never open category.

^aForty six charter schools that received CSP CMO awards did not have a school operating status in Education’s CSP awards dataset. As a result, the sum of open, future, closed, and never opened does not equal 1,172.

^bA charter school is considered “future” if it is not yet open but plans to open at a later date.

Table 5: Operating Status of Charter Schools That Received Charter Schools Program Non-State Educational Agencies/Developers (CSP Developers) Awards, Fiscal Years 2006–2020

	CSP awards ^a	Open	Future ^b	Closed	Never opened
Number of awards to charter schools (Percentage of totals)	235	181 (77%)	15 (6%)	6 (3%)	4 (2%)
Amount awarded (Percentage of totals)	\$104,634,258	\$92,405,567 (88%)	\$3,995,431 (4%)	\$1,401,215 (1%)	\$331,461 (0.3%)

Source: GAO analysis of the Department of Education’s CSP awards data. | GAO-23-105616

Note: CSP Developers grant recipients report charter school operating status to Education twice a year. We analyzed Education’s CSP awards data as of May 2022.

^aTwenty-nine charter schools that received CSP Developers award did not have a school operating status in Education’s CSP awards dataset. As a result, the sum of open, future, closed, and never opened does not equal 235.

^bA charter school is considered “future” if it is not yet open but plans to open at a later date.

Agency Comments

We provided a draft of this report to the Department of Education for review and comment. Education provided written technical comments, which we incorporated as appropriate.

We are sending copies of this report to the appropriate congressional committees and the Secretary of Education. In addition, the report is available at no charge on the GAO website at <https://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (617) 788-0580 or nowickij@gao.gov. Contact points for our Office

of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix III.

A handwritten signature in black ink, reading "Jacqueline M. Nowicki". The signature is written in a cursive style with a large initial "J" and "M".

Jacqueline M. Nowicki, Director
Education, Workforce, and Income Security Issues

Appendix I: Objective, Scope, and Methodology

Overview

This report examines the extent to which Charter Schools Program (CSP) grant-recipient charter schools stayed open or closed compared to similar non-CSP charter schools between fiscal years (FY) 2006 and 2020, and how much CSP funding has gone to CSP grant-recipient charter schools that stayed open, closed or never opened during this period.

To conduct this work, we used the Department of Education's CSP awards data for FYs 2006 through 2020—the most recent available comparable data—and school-level characteristics from the Common Core of Data (CCD). We analyzed Education's CSP awards data as of May 2022.

- **CSP awards data.** The CSP awards data provides information on charter schools that received CSP State Educational Agencies/State Entities (CSP State), CSP Non-State Educational Agencies/Developers (CSP Developers), and CSP Charter Management Organization (CSP CMO) awards, including award amounts, school identification numbers, and operating status.¹
- **CCD.** Education's CCD is a comprehensive, annual, national database of all public elementary and secondary schools and school districts. Using the school identification number, we combined CSP award data with CCD data for our analyses.

We conducted a multivariate matching analysis (matched comparison analysis) and descriptive analysis of the CSP awards data and CCD. For the matched comparison analysis, we used the combined dataset to examine whether school closure rates differed between CSP grant-recipient charter schools and non-CSP charter schools between FYs 2006 and 2020. (Appendix II provides more information on our matched comparison analysis.) We also analyzed Education's CSP data on the number of awards and funding amounts granted across three CSP grant types.

We reviewed relevant federal laws, regulations, and guidance, such as Education's CSP Notices Inviting Applications. Furthermore, we interviewed federal Education officials about the CSP and CCD datasets

¹Education's data contractor for the CSP—WestEd—has collected data on CSP award subgrantees on behalf of Education since FY 2006. WestEd collects data from grantees (state entities, developers, and charter management organizations) twice a year and conducts data checks on the self-reported data. For example, Education officials told us that WestEd uses CCD to check reported CSP grant-recipient charter schools' statuses.

used in our analyses.² We sent a structured question set to the top 15 states that received the most CSP State funding, and received 8 responses. We asked them to provide information on their states' eligibility criteria for awarding sub grants, reasons CSP grant-recipient charter schools closed, and the recovery of funds when a CSP grant-recipient charter school closes. We also interviewed representatives from nonfederal entities such as research entities and education advocacy organizations that were knowledgeable and had researched key topics covered under this study.

We conducted this performance audit from December 2021 through October 2022 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Analysis of Education's CSP Awards Data and Charter School Operating Status

We conducted a descriptive analysis of Education's most recently available CSP awards data on CSP State, CSP Developers, and CSP CMO grants for FYs 2006 through 2020. We determined the number of awards and funding amounts, and analyzed CSP data on school operating status (e.g., remained open, closed, or never opened) for this time period. We also analyzed CSP awards and funding by state and by charter management organization. For example, we examined the number of CSP awards that went to charter schools that closed or never opened.

Using variables listed in Education's 2019 public-facing dataset on CSP awards, we requested current data on the three CSP grants from Education.³ Education provided current data on CSP award and funding

²Education publishes notices inviting applications (NIA) in the Federal Register for the CSP grants. NIAs include priorities, requirements, definitions, and selection criteria for CSP grants. We reviewed these NIAs to better understand Education's priorities in awarding grants and in designing a structured question set for states.

³We reviewed Education's public-facing FY 2015 and 2019 CSP awards data, and accompanying analyses to help determine our data request from Education. While the two public-facing datasets have information on CSP grantees and subgrantees, the information lags information we obtained directly from Education. For example, the public-facing FY 2019 CSP awards data contains data through the end of 2018. By contrast, the current CSP awards data provided by Education contains data on CSP awards through FY 2020.

including from its G5 grants management system.⁴ Among other variables, we requested information for FYs 2006 through 2020 on:

- **Grant type.** CSP State, CSP Developers, CSP CMO grants.
- **Grantee name.** Name of entity that received CSP grant.
- **Award number.** Unique grant award number.
- **Charter school name.** Name of the school that received CSP funding.
- **National Center for Education Statistics (NCES) school identification number.** Unique school identification number, which we used to link to elements of select CCD variables.
- **Charter school location.** State and city location of grantee and charter school.
- **Funding awards.** The amount of funding awarded to each charter school.
- **Charter school operating status.** Charter school statuses coded as open, future, closed, and never opened, among others.⁵

We requested information on CSP grant and subgrant recipients for FYs 2006 through 2020. Education did not systematically start collecting information from CSP grantees on subgrantees until FY 2006. Education officials told us that their contractor—WestEd—contacted CSP grantees that received an award prior to FY 2006, but it is likely that some subgrantees from FYs 1995 through 2005 closed or never opened. As a result, data from FYs 1995 through 2005 are incomplete.

We took steps to clean and recode Education’s CSP awards data for FYs 2006 through 2020. To further understand the extent to which CSP grant-recipient charter schools remained open, closed, or never opened, we manually identified the operating status of schools that had “blank” listed as their operating status in Education’s internal CSP awards dataset. To do this, we used Education’s NCES school ID numbers to find the

⁴G5 is Education’s Grants Management system. G5 replaces the former e-Grants, Grant Administration and Payment systems. G5 is available to applicants, grantees, payees, as well as internal Education staff.

⁵If a charter school is listed as “future,” then the charter school has been selected for an award but has not opened yet.

operating status of these schools in the NCES Public School Locator.⁶ We then recoded schools listed as “blank” to their correct operating status, including open, closed, or never opened. We identified the operating status of 129 CSP grant-recipient charter schools previously listed as “blank.” We were unable to identify the operating status of 78 CSP grant-recipient charter schools. For these cases, we noted that the data do not include the operating status.

We examined CSP State grantee and subgrantee (the charter school) information, including checking whether they were both located in the same state. We found two instances in Education’s CSP award data where the grantee and proposed charter school were in different states. Education officials told us that two schools were planned to open in South Carolina and Florida; however, because they never secured facilities in these states, the address of their Virginia charter management organization was used instead. We corrected those data to reflect that these schools planned to open originally in South Carolina and Florida.

⁶The NCES Public School locator was created to enable school officials and the public to find the correct name, address, telephone number, NCES school ID number, locale, and school operating status, among other school characteristics. The school locator pulls information from Education’s most recent CCD.

Appendix II: Multivariate Matching Analysis

Multivariate Matching Analysis Comparing the Closure Rates of CSP Grant-Recipient and Non-CSP Charter Schools Closing

We conducted a multivariate matching analysis to examine whether school closure rates differed between Charter Schools Program (CSP) grant-recipient and similar non-CSP charter schools, using Education’s CSP award data joined to its Common Core of Data (CCD) from 2006 through 2020.¹ We identified comparison groups of non-CSP charter schools that closely resembled CSP grant-recipient charter schools on various characteristics measured in the CCD. We chose these covariates based on their potential to be associated with the receipt of grants and with school closure. We also sent a structured question set to the 15 states with the greatest dollar amount awarded through the CSP State Educational Agencies/State Entities (CSP State) grant. The question set addressed how these states distributed CSP grants to subgrantee charter schools, which helped confirm our choice of covariates.

Each comparison group required that some covariates match exactly between CSP grant-recipient charter schools and non-CSP charter schools. These exact covariates included:

- **Year charter school first opened.** The year when the charter school was first measured as a new school in the CCD.
- **State.**
- **Grade level.** Elementary, middle, high school, or combination of these.
- **Locale.** Urban, suburban, or rural.
- **School district.**

From these exact covariates, we created three matched comparison groups, using different combinations of the exact covariates:

- **Group 1.** Year opened, state, grade level, and school district.
- **Group 2.** Year opened, state, locale, and grade level.
- **Group 3.** Year opened, state, and grade level.

Requiring an exact match on more covariates limited our analysis sample to a smaller portion of the original population of interest, as shown in table 6. Exactly matching on fewer covariates increased the coverage of our

¹Our matching analysis used school status data from the CCD, which uses school years. In contrast, our analysis of CSP funding trends generally used school status data from the CSP, because this source measured school status for fiscal years.

analysis sample, but increased the chance that the comparison schools would be dissimilar.

Table 6: Population Coverage Rates by Group for Multivariate Matching Analysis of Charter Schools Program (CSP) Grants, Based on Data for Fiscal Years 2006–2020

State	Population	State-grade-year-district exact match	State-grade-year-locale exact match	State-grade-year exact match
AK	1	0 (0.00%)	0 (0.00%)	0 (0.00%)
AL	2	0 (0.00%)	1 (50.00%)	1 (50.00%)
AR	38	1 (2.63%)	9 (23.68%)	16 (42.11%)
AZ	111	0 (0.00%)	48 (43.24%)	65 (58.56%)
CA	538	86 (15.99%)	429 (79.74%)	470 (87.36%)
CO	114	13 (11.40%)	28 (24.56%)	72 (63.16%)
CT	7	0 (0.00%)	0 (0.00%)	0 (0.00%)
DC	31	1 (3.23%)	8 (25.81%)	8 (25.81%)
DE	9	0 (0.00%)	2 (22.22%)	3 (33.33%)
FL	338	101 (29.88%)	206 (60.95%)	286 (84.62%)
GA	46	2 (4.35%)	8 (17.39%)	17 (36.96%)
HI	4	2 (50.00%)	2 (50.00%)	2 (50.00%)
ID	24	0 (0.00%)	2 (8.33%)	4 (16.67%)
IL	40	3 (7.50%)	6 (15.00%)	7 (17.50%)
IN	71	0 (0.00%)	27 (38.03%)	32 (45.07%)
KS	17	0 (0.00%)	5 (29.41%)	7 (41.18%)
LA	46	3 (6.52%)	18 (39.13%)	23 (50.00%)
MA	40	0 (0.00%)	1 (2.50%)	1 (2.50%)
MD	28	3 (10.71%)	3 (10.71%)	5 (17.86%)
ME	4	0 (0.00%)	0 (0.00%)	1 (25.00%)
MI	110	2 (1.82%)	63 (57.27%)	89 (80.91%)
MN	49	0 (0.00%)	25 (51.02%)	35 (71.43%)
MO	29	1 (3.45%)	22 (75.86%)	23 (79.31%)
MS	5	0 (0.00%)	1 (20.00%)	1 (20.00%)
NC	30	0 (0.00%)	9 (30.00%)	10 (33.33%)
NH	26	0 (0.00%)	0 (0.00%)	0 (0.00%)
NJ	58	0 (0.00%)	6 (10.34%)	14 (24.14%)
NM	49	4 (8.16%)	8 (16.33%)	13 (26.53%)
NV	12	9 (75.00%)	6 (50.00%)	9 (75.00%)
NY	250	0 (0.00%)	72 (28.80%)	75 (30.00%)
OH	120	0 (0.00%)	68 (56.67%)	75 (62.50%)

Appendix II: Multivariate Matching Analysis

State	Population	State-grade-year-district exact match	State-grade-year-locale exact match	State-grade-year exact match
OK	10	1 (10.00%)	4 (40.00%)	4 (40.00%)
OR	32	0 (0.00%)	3 (9.38%)	5 (15.62%)
PA	58	0 (0.00%)	25 (43.10%)	29 (50.00%)
PR	1	0 (0.00%)	0 (0.00%)	0 (0.00%)
RI	23	0 (0.00%)	1 (4.35%)	4 (17.39%)
SC	61	3 (4.92%)	5 (8.20%)	10 (16.39%)
TN	77	8 (10.39%)	25 (32.47%)	31 (40.26%)
TX	214	36 (16.82%)	203 (94.86%)	211 (98.60%)
UT	23	0 (0.00%)	4 (17.39%)	5 (21.74%)
WA	6	0 (0.00%)	0 (0.00%)	0 (0.00%)
WI	112	5 (4.46%)	29 (25.89%)	53 (47.32%)
Total	2864	284 (9.92%)	1382 (48.25%)	1716 (59.92%)

Source: GAO matched comparison analysis of the Department of Education's CSP awards data and school-level characteristics from the Common Core of Data. | GAO-23-105616

Note: Entries are counts of charter schools with row percentages in parentheses. We examined data for the CSP State Educational Agencies/State Entities, CSP Charter Management Organizations, and CSP Non-State Educational Agencies/ Developers grants. We analyzed Education's CSP awards data as of May 2022.

For each CSP grant-recipient charter school, we selected the non-recipient school that was most similar on several continuous covariates:

- **Number of students.**
- **Student racial and ethnic demographics.** The percentage of Asian, Black, Hawaiian/Pacific Islander, Hispanic, Native American, Non-Hispanic White, and more than one race students.
- **Free or reduced-price lunch eligibility rate.**

We matched charter schools on these continuous covariates within the groups formed by cross-classifying the exact covariates, such as state by grade level. We identified the closest non-CSP school on the continuous covariates using the Mahalaobis distance metric, without requiring a maximum distance, and we reused non-CSP schools as needed to

achieve the best match. In the statistics literature, this method is known as one-to-one Mahalanobis distance matching with replacement.²

Although we were able to perform a combination of exact and distance-based matching on key characteristics, we could not measure some characteristics that may have varied between the two groups and that may have been associated with closure. For example, CSP grant-recipient charter schools may have been more likely to have the necessary administrative skills or resources to seek and receive CSP awards. These same characteristics could allow CSP grant-recipient charter schools to remain open longer. Because our matched comparison could not ensure that both groups of charter schools were similar on all relevant characteristics, differences in closure rates should not be attributed only to award receipt.

We used Kaplan-Meier statistical models for duration data to estimate differences in closure rates between the matched and unmatched charter schools prior to various follow-up years. These methods accounted for charter schools that remained open at the end of our observation period (i.e., “right-censoring”) and estimated 95 percent confidence intervals to quantify uncertainty. We weighted the estimation by the inverse of the number of times that the matching method re-used each comparison charter school. We stratified the models by CSP grant-recipient versus non-CSP recipient status and various subpopulations to make separate estimates for each group.

Scope of Analysis

We defined CSP grant-recipient schools as those receiving CSP State Educational Agencies/State Entity, CSP Non-State Educational Agency/Developers, or CSP Charter Management Organizations grants.³

²For more information on the Mahalanobis method, see Guido W. Imbens and Donald B. Rubin, *Causal Inference for Statistics, Social, and Biomedical Sciences: An Introduction* (New York, NY: Cambridge University Press, 2015), Chapter 15, “Matching to Improve Balance in Covariate Distributions.”

³The CSP State Entities program is authorized under the Elementary and Secondary Education Act of 1965 (ESEA), as amended by the Every Student Succeeds Act (ESSA). Pub. L. No. 89-10, 79 Stat. 27 (1965), as amended by Pub. L. No. 114-95, 129 Stat. 1802 (2015) (codified as amended at 20 U.S.C. §§ 7221-7221j). Prior to the enactment of ESSA, this program was called the CSP State Educational Agencies program. Education was authorized to make awards to state educational agencies to enable them to conduct charter school subgrant programs in their states. The CSP State Entities program under ESSA has broadened the types of entities that can apply for the grant, including state educational agencies, state charter school boards, state governors, and charter school support organizations. It also has different authorized activities, priorities, definitions, application requirements, and selection criteria.

We did not have adequate sample sizes to compare closure rates separately by grant type. We defined cohorts of CSP grant-recipient charter schools using only the first grant awarded within our time frame. Grant-recipient charter schools may have received additional CSP grants during the follow-up period when we measured closure.

Our analysis applied to only a selected subpopulation of CSP grant-recipient charter schools, as shown in table 7. Of the 4,494 charter schools in the CCD receiving grants from school year 2006 through 2020, 3,643 had students and were not run by the Bureau of Indian Education (see table 7). We defined this group as our target population of interest. We further limited this group to the 2,596 schools that: (1) opened; (2) could be observed in the CCD as “new” in the year prior to receiving its first grant; or (3) and had complete data on all covariates. Charter schools that satisfied all three screens made up about 71 percent of the original target population. Among charter schools that met the first two screens, 85 percent had operating status reported in the CCD for only one year prior to receiving grants, and 86 percent of these charter schools were “new” in that year. It should be noted that although we looked at data over a 14-year period from fiscal years (FY) 2006 through 2020, the maximum period of time we could assess closure probability was 12 years. This is because we (1) required schools in the matched comparison analysis to be new in the year prior to receiving a grant and (2) designated schools’ first year of operation as the year following receipt of a grant.

Table 7: Scoping Decisions to Arrive at Final Population for Multivariate Matching Analysis for Charter Schools Program (CSP) Grants, Based on Data for Fiscal Years 2006–2020

Number of schools	Description
4,494	All charter schools in the Common Core of Data (CCD), receiving 1 or more grants
3,643	Only K-12 charter schools with students, not run by the Bureau of Indian Education
3,349	Only charter schools that opened (first CCD status new or open)
2,868	Only charter schools that were first observed in new status in the year prior to receiving grant
2,596	Only charter schools with complete covariate data

Source: GAO matched comparison analysis of the Department of Education’s CSP awards data and school-level characteristics from the Common Core of Data. | GAO-23-105616

Note: We examined data for the CSP State Educational Agencies/State Entities, CSP Charter Management Organizations, and CSP Non-State Educational Agencies/ Developers grants. We analyzed Education’s CSP awards data as of May 2022.

Our matched samples achieved coverage rates of 9–60 percent of the target population, depending on the exact covariates used, as shown previously in table 6. Coverage rates exceeded 90 percent for California, Florida, and Texas and exceeded 50 percent for several additional states.

Data Reliability

We took steps to assess the reliability of the CSP awards and CCD datasets. For example, we interviewed Education officials, and we reviewed charter school status data in the CSP awards data and compared it to status data in the National Center for Education Statistics (NCES) school locator.⁴ Specifically, we:

- compared Education’s restricted data file to the public use file, which includes additional context for variables such as school status, and verified that our results using the public use file were similar;
- conducted our own electronic data testing to assess the accuracy and completeness of the data used in our analyses;
- reviewed technical documentation, including data collection forms, on the data elements included in the CSP awards dataset; and
- interviewed federal and state officials knowledgeable about the CSP awards data and CCD, and consulted these officials periodically throughout the course of our study.

Matching Results

Table 8 shows various quantiles of the unmatched sample and for the sample matched exactly by state, opening year, grade level, and locale. Generally, the quantiles were similar between CSP grant-recipient and non-CSP charter schools.

⁴The NCES Public School Locator is a publicly available website with a search tool for accessing CCD public school data for school year 2020-21.

Appendix II: Multivariate Matching Analysis

Table 8: Unmatched Sample and Comparison Group Matched Exactly on State, Year, Grade, and Locale for Charter Schools Program (CSP), Based on Data for Fiscal Years 2006–2020

Covariate	Treatment	Unmatched percentile					Matched percentile				
		10	25	50	75	95	10	25	50	75	95
Location: latitude by longitude	CSP grant-recipient charter schools	-4397.39	-3989.37	-3352.09	-2986.51	-2140.33	-4550.94	-4022.62	-	-	-2102.80
								3434.74	2901.59		
Location: latitude by longitude	Non-CSP charter schools	-4603.91	-4053.87	-3498.95	-3003.16	-2179.31	-4593.04	-4025.03	-	-	-2093.45
								3477.80	2895.05		
Location: latitude	CSP grant-recipient charter schools	28.51	33.13	37.36	40.73	44.07	27.78	30.30	34.14	39.74	42.88
Location: latitude	Non-CSP charter schools	28.81	32.76	36.15	40.65	44.94	26.70	30.26	34.23	39.75	42.95
Location: longitude	CSP grant-recipient charter schools	-118.45	-111.80	-88.42	-80.52	-73.88	-121.29	-117.67	-95.53	-82.65	-74.22
Location: longitude	Non-CSP charter schools	-120.86	-112.11	-95.37	-83.00	-76.54	-121.11	-117.74	-95.51	-82.12	-75.10
Number students	CSP grant-recipient charter schools	44.00	79.00	121.00	210.00	511.60	51.00	81.00	127.00	221.75	533.85
Number students	Non-CSP charter schools	25.00	53.00	115.00	236.00	605.80	37.00	74.25	140.00	232.00	486.95
Percent students on free or reduced-price lunch	CSP grant-recipient charter schools	0.07	0.31	0.65	0.84	0.97	0.08	0.35	0.68	0.86	0.97
Percent students on free or reduced-price lunch	Non-CSP charter schools	0.00	0.10	0.46	0.78	0.96	0.05	0.36	0.67	0.85	0.97
Race: percent Native American	CSP grant-recipient charter schools	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03
Race: percent Native American	Non-CSP charter schools	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.02

Appendix II: Multivariate Matching Analysis

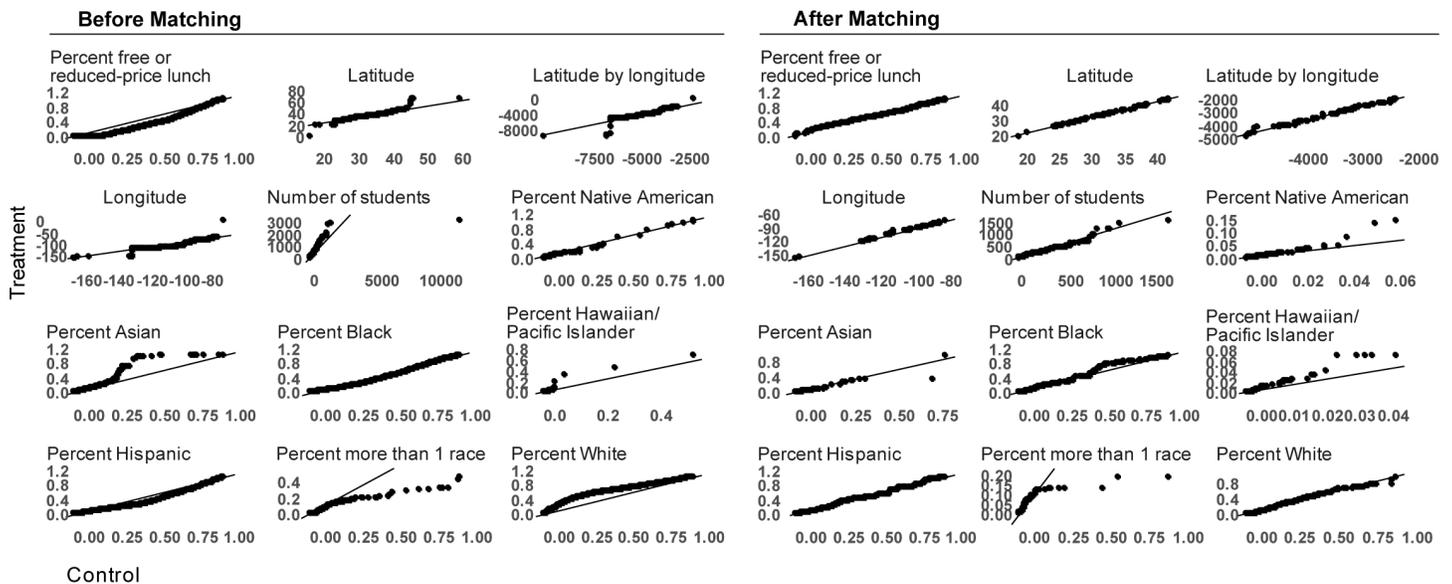
Covariate	Treatment	Unmatched percentile					Matched percentile				
		10	25	50	75	95	10	25	50	75	95
Race: Percent Asian	CSP grant-recipient charter schools	0.00	0.00	0.01	0.03	0.12	0.00	0.00	0.01	0.03	0.14
Race: Percent Asian	Non-CSP charter schools	0.00	0.00	0.00	0.02	0.11	0.00	0.00	0.01	0.03	0.09
Race: Percent Black	CSP grant-recipient charter schools	0.00	0.03	0.18	0.62	0.98	0.00	0.03	0.15	0.55	0.97
Race: Percent Black	Non-CSP charter schools	0.00	0.02	0.11	0.48	0.98	0.00	0.04	0.16	0.52	0.98
Race: Percent Hawaiian/Pacific Islander	CSP grant-recipient charter schools	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01
Race: Percent Hawaiian/Pacific Islander	Non-CSP charter schools	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01
Race: Percent Hispanic	CSP grant-recipient charter schools	0.00	0.04	0.17	0.51	0.92	0.01	0.07	0.27	0.65	0.95
Race: Percent Hispanic	Non-CSP charter schools	0.00	0.02	0.11	0.33	0.90	0.01	0.07	0.29	0.66	0.95
Race: Percent non-Hispanic White	CSP grant-recipient charter schools	0.00	0.02	0.15	0.56	0.91	0.00	0.02	0.11	0.42	0.83
Race: Percent non-Hispanic White	Non-CSP charter schools	0.00	0.04	0.33	0.72	0.95	0.00	0.02	0.13	0.47	0.81
Race: Percent 2 or more races	CSP grant-recipient charter schools	0.00	0.00	0.01	0.04	0.11	0.00	0.00	0.01	0.04	0.12
Race: Percent 2 or more races	Non-CSP charter schools	0.00	0.00	0.00	0.01	0.08	0.00	0.00	0.01	0.04	0.12

Source: GAO matched comparison analysis of the Department of Education’s CSP awards data and school-level characteristics from the Common Core of Data. | GAO-23-105616

Note: We examined data for the CSP State Educational Agencies/State Entities, CSP Charter Management Organizations, and CSP Non-State Educational Agencies/Developers grants. We analyzed Education’s CSP awards data as of May 2022

Figures 7 through 9 show the distributions of covariates in grant-recipient charter schools and non-CSP charter schools, before and after matching. In a completely balanced design, each point in each plot would sit directly on the diagonal line, representing that the quantiles of each sample's distribution are the same. As seen below, matching generally improved the similarity of the covariate distributions, but imbalances remained for school size in some of the matched samples and for some race and ethnic groups (e.g., Native American, more than one race, Asian, and Hawaiian/Pacific Islander).

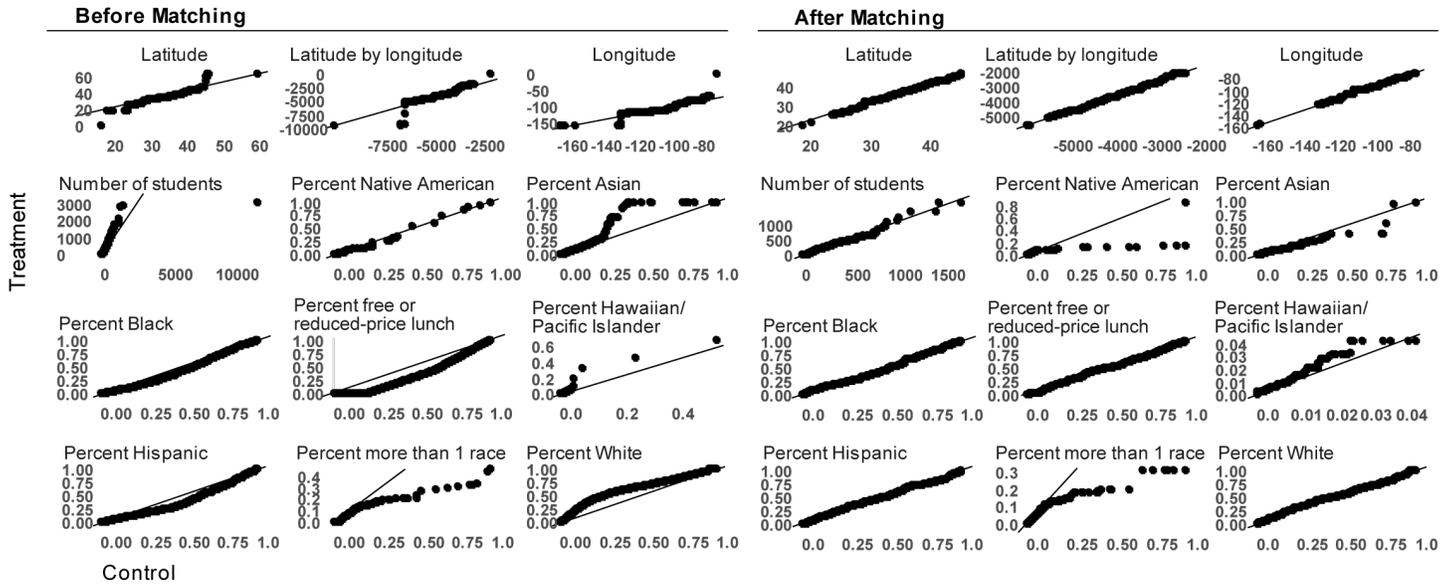
Figure 7: Covariate Distributions among Charter Schools Programs (CSP) and Comparison Charter Schools, Matched Exactly on State, Grade, Year, and District, Based on Data for Fiscal Years 2006–2020



Source: GAO matched comparison analysis of the Department of Education's CSP awards data and school-level characteristics from the Common Core of Data. | GAO-23-105616

Note: Points are quantiles of the sample distributions, overlain with a 45-degree line (empirical quantile-quantile plots). The sample distributions are identical if the quantiles fall on the line. We examined data for the CSP State Educational Agencies/State Entities, CSP Charter Management Organizations, and CSP Non-State Educational Agencies/Developers grants. We analyzed Education's CSP awards data as of May 2022.

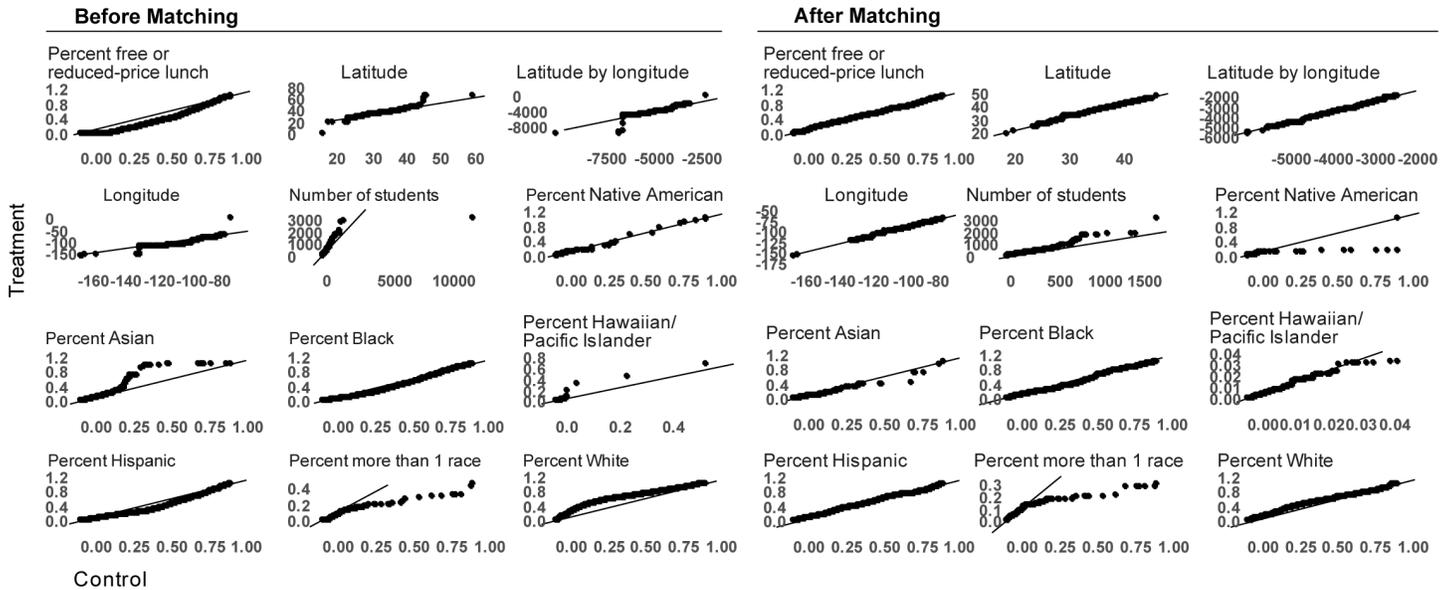
Figure 8: Covariate Distributions among Charter Schools Programs (CSP) and Comparison Charter Schools Matched Exactly on State, Grade, Year, and Locale, Based on Data for Fiscal Years 2006–2020



Source: GAO matched comparison analysis of the Department of Education's CSP awards data and school-level characteristics from the Common Core of Data. | GAO-23-105616

Note: Points are quantiles of the sample distributions, overlaid with a 45-degree line (empirical quantile-quantile plots). The sample distributions are identical if the quantiles fall on the line. We examined data for the CSP State Educational Agencies/State Entities, CSP Charter Management Organizations, and CSP Non-State Educational Agencies/Developers grants. We analyzed Education's CSP awards data as of May 2022.

Figure 9: Covariate Distributions among Charter Schools Programs (CSP) and Comparison Charter Schools Matched Exactly on State, Grade, and Year, Based on Data for Fiscal Years 2006–2020



Source: GAO matched comparison analysis of the Department of Education’s CSP awards data and school-level characteristics from the Common Core of Data. | GAO-23-105616

Note: Points are quantiles of the sample distributions, overlain with a 45-degree line (empirical quantile-quantile plots). The sample distributions are identical if the quantiles fall on the line. We examined data for the CSP State Educational Agencies/State Entities, CSP Charter Management Organizations, and CSP Non-State Educational Agencies/Developers grants. We analyzed Education’s CSP awards data as of May 2022.

Table 9 shows the mean difference on each covariate between grantees and nongrantees, divided by the standard deviation of the grantee observations and multiplied by 100. Generally, matching reduced these differences to less than 10 (0.1 standard deviations).

Table 9: Standardized Mean Difference Before and After Matching for Multivariate Matching Analysis for Charter Schools Program (CSP), Based on Data for Fiscal Years 2006–2020

Variable	State-grade-year-district exact match		State-grade-year-locale exact match		State-grade-year exact match	
	Standardized difference before	Standardized difference after	Standardized difference before	Standardized difference after	Standardized difference before	Standardized difference after
Location: Latitude	8.96	0.34	8.96	-1.84	8.96	-2.31
Location: Longitude	25.13	-0.47	25.13	-0.40	25.13	-0.25
Race: percent Asian	-2.62	6.70	-2.62	8.96	-2.62	7.76

Appendix II: Multivariate Matching Analysis

Variable	State-grade-year-district exact match		State-grade-year-locale exact match		State-grade-year exact match	
	Standardized difference before	Standardized difference after	Standardized difference before	Standardized difference after	Standardized difference before	Standardized difference after
Race: percent Hispanic	18.5	-0.30	18.50	-1.27	18.50	2.08
Race: percent Black	10.37	-5.78	10.37	1.07	10.37	-0.82
Race: percent non-Hispanic White	-27.55	1.84	-27.55	-5.34	-27.55	-6.80
Race: percent Native American	5.97	-16.63	5.97	6.15	5.97	6.43
Percent of students on free or reduced-price lunch	34.91	-5.78	34.91	1.64	34.91	2.11
Race: percent Hawaiian/Pacific Islander	0.32	-21.61	0.32	-9.70	0.32	3.09
Race: percent more than one race	24.49	7.16	24.49	9.39	24.49	8.13
Number students	-3.37	8.92	-3.37	1.11	-3.37	-10.80
Location: latitude by longitude	14.33	-0.61	14.33	1.30	14.33	1.86

Source: GAO matched comparison analysis of the Department of Education's CSP awards data and school-level characteristics from the Common Core of Data. | GAO-23-105616

Note: Entries are the mean differences on each covariate between grantees and non-grantees, divided by the standard deviation of the grantee observations and multiplied by 100. We examined data for the CSP State Educational Agencies/State Entities, CSP Charter Management Organizations, and CSP Non-State Educational Agencies/Developers grants. We analyzed Education's CSP awards data as of May 2022.

Finally, table 10 shows the results of Kolmogorov-Smirnov tests before and after matching. Kolmogorov-Smirnov tests assess the probability that two samples are drawn from the same distribution. Tests generally showed p-values that exceeded .05. This implies we generally could not reject the hypothesis that the covariate samples were drawn from the same distribution.

Table 10: Kolmogorov-Smirnov p-Values Before and After Matching for Charter Schools Program (CSP) Multivariate Comparison Analysis, Based on Data for Fiscal Years 2006–2020

Variable	State-grade-year-district exact match		State-grade-year-locale exact match		State-grade-year exact match	
	Before matching	After matching	Before matching	After matching	Before matching	After matching
Location: latitude	0.000	0.758	0.000	0.428	0.000	0.158
Location: longitude	0.000	0.983	0.000	0.375	0.000	0.281
Race: percent Asian	0.000	0.009	0.000	0.014	0.000	0.018
Race: percent Hispanic	0.000	0.823	0.000	0.135	0.000	0.115
Race: percent Black	0.000	0.549	0.000	0.047	0.000	0.007
Race: percent non-Hispanic White	0.000	0.103	0.000	0.038	0.000	0.027
Race: percent Native American	0.000	0.758	0.000	0.767	0.000	0.845
Percent of students on free or reduced-price lunch	0.000	0.823	0.000	0.124	0.000	0.053
Race: percent Hawaiian/Pacific Islander	0.001	0.927	0.001	0.853	0.001	0.956
Race: Percent more than one race	0.000	0.482	0.000	0.428	0.000	0.513
Number students	0.000	0.419	0.000	0.011	0.000	0.002
Location: latitude by longitude	0.000	0.758	0.000	0.103	0.000	0.053

Source: GAO matched comparison analysis of the Department of Education’s CSP awards data and school-level characteristics from the Common Core of Data. | GAO-23-105616

Note: We examined data for the CSP State Educational Agencies/State Entities, CSP Charter Management Organizations, and CSP Non-State Educational Agencies/Developers grants. We analyzed Education’s CSP awards data as of May 2022.

Figures 6 through 8 and tables 9 and 10 show that matching improved covariate balance between the CSP grant-recipient charter school and non-CSP charter school groups. However, less restrictive comparison groups have worse balance than more restrictive comparison groups. Moreover, balance between CSP grant-recipient charter school and non-CSP charter school was generally worse for some racial and ethnic groups than for other covariates.

Outcome Results

We found that CSP grant-recipient charter schools were generally less likely to close than similar non-CSP charter schools, regardless of which matched comparison group we used (see table 11).

Appendix II: Multivariate Matching Analysis

Table 11: Estimated Rates of Closure, by Follow-Up Time and Matched Comparison Group for Multivariate Matching Analysis for Charter Schools Program (CSP), Based on Data for Fiscal Years 2006–2020

Years open	State-grade-year-district exact match		State-grade-year-locale exact match		State-grade-year exact match	
	Non-CSP charter schools	CSP grant-recipient charter schools	Non-CSP charter schools	CSP grant-recipient charter schools	Non-CSP charter schools	CSP grant-recipient charter schools
1	0.73 (0.17–1.29)	0.00 (0.00–0.00)	0.50 (0.33–0.68)	0.00 (0.00–0.00)	0.50 (0.33–0.67)	0.00 (0.00–0.00)
2	1.78 (0.91–2.65)	0.14 (0.00–0.33)	1.04 (0.77–1.31)	0.19 (0.09–0.30)	1.01 (0.76–1.27)	0.31 (0.19–0.42)
3	2.35 (1.31–3.37)	0.80 (0.30–1.30)	1.46 (1.11–1.81)	0.71 (0.49–0.92)	1.47 (1.15–1.79)	0.81 (0.61–1.01)
4	3.07 (1.75–4.36)	1.11 (0.50–1.71)	1.79 (1.37–2.20)	1.13 (0.85–1.42)	1.79 (1.42–2.17)	1.22 (0.95–1.48)
5	4.02 (2.40–5.60)	1.50 (0.75–2.24)	2.31 (1.81–2.81)	1.42 (1.08–1.76)	2.24 (1.80–2.67)	1.53 (1.22–1.83)
6	4.85 (2.96–6.71)	1.66 (0.85–2.47)	2.97 (2.34–3.59)	1.67 (1.29–2.06)	2.86 (2.30–3.41)	1.78 (1.43–2.13)
7	6.04 (3.77–8.25)	2.12 (1.09–3.14)	3.15 (2.50–3.80)	1.81 (1.4–2.23)	3.25 (2.61–3.89)	1.93 (1.55–2.30)
8	7.83 (4.87–10.69)	3.09 (1.59–4.57)	3.40 (2.71–4.08)	2.20 (1.68–2.71)	3.46 (2.79–4.12)	2.22 (1.78–2.67)
9	7.83 (4.87–10.69)	3.09 (1.59–4.57)	3.87 (3.00–4.73)	2.55 (1.93–3.16)	3.72 (2.96–4.48)	2.49 (1.98–3.01)
10	7.83 (4.87–10.69)	3.09 (1.59–4.57)	4.29 (3.25–5.33)	2.55 (1.93–3.16)	4.07 (3.17–4.97)	2.49 (1.98–3.01)
11	7.83 (4.87–10.69)	3.09 (1.59–4.57)	4.57 (3.39–5.74)	2.55 (1.93–3.16)	4.3 (3.29–5.30)	2.49 (1.98–3.01)
12	7.83 (4.87–10.69)	3.09 (1.59–4.57)	4.941 (3.56–6.3)	2.55 (1.93–3.16)	4.3 (3.29–5.30)	2.49 (1.98–3.01)

Source: GAO matched comparison analysis of the Department of Education’s CSP awards data and school-level characteristics from the Common Core of Data. | GAO-23-105616

Note: Entries are the estimated chance that a school will close prior to each follow-up time, with 95 percent confidence intervals in parentheses. We examined data for the CSP State Educational Agencies/State Entities, CSP Charter Management Organizations, and CSP Non-State Educational Agencies/Developers grants. We analyzed Education’s CSP awards data as of May 2022.

Appendix III: GAO Contacts and Staff Acknowledgments

GAO Contacts

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Staff Acknowledgments

In addition to the contact named above, Sherri Doughty (Assistant Director), Manuel Valverde (Analyst in Charge), Michael Alleyne, Elizabeth Calderon, Gretel Clarke, Denise Cook, Holly Dye, Jessica Mausner, Jean McSween, John Mingus, Mimi Nguyen, Samuel Portnow, Almeta Spencer, and Jeff Tessin made key contributions to this report.

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