TEXAS CHARTER AUTHORIZER ACCOUNTABILITY REPORT

2020–2021

Executive Summary

e first charter schools were established in the United States in 1991 to provide students with a tuition-free alternative to traditional public schools. eir purpose: to create additional flexibility and innovation in education. Minnesota was the first state to usher in charter schools, and other states quickly followed; charter schools now operate in 44 states and the District of Columbia. e number of operating charter schools across the nation has more than doubled over the past 14 years—from approximately 3,700 in the 2005–06 academic year to approximately 7,500 in 2019–20. Student enrollment has also experienced marked growth, increasing from about 1 million students in 2005–06 to about 3.5 million students in 2019–20 (National Alliance for Public Charter Schools, 2022).

Texas charter schools were first established in 1995 by the 74th Texas Legislature with the addition of Texas Education Code (TEC) Chapter 12. e state proposed charter schools as a means to improve student learning, increase the choice of learning opportunities within the public school system, create professional opportunities to attract new teachers to the public school system, and encourage different and innovative learning methods (TEC § 12.001, 2022). Texas charter schools are subject to fiscal and academic accountability, though they have fewer regulations than traditional public schools to encourage innovation and flexibility.

Four subchapters within TEC Chapter 12 (2022) codify the different types of charter schools in Texas:

- (TEC Chapter 12, Subchapter B, 2022), which are not in existence to date;
- (TEC Chapter 12, Subchapter C, 2022), which are authorized by Texas Independent School District (ISD) school boards and serve students within the district;
- (TEC Chapter 12, Subchapter D, 2022), which are authorized by the commissioner of education (COE), are operated by 501(c)(3) tax-exempt organizations or governmental entities, and can enroll students from any school districts in their approved geographic boundaries; and
- (TEC Chapter 12, Subchapter E, 2022), which are authorized by the COE, are operated by institutions of higher education, and can enroll students from any school districts in their approved geographic boundaries.

Contemporary charter school legislation demonstrates the state's effort to balance quality with growing charter school demand. In 2013, the 83rd Texas Legislature (regular session) passed Senate Bill (SB) 2, which made significant changes to the state's charter school legislation. e bill added TEC § 12.115 (a)-(d) (2022)—Charter Revocation or Modification of Governance—to the TEC, which placed charter schools under strictder lO hool sD0de'ere first esmB70Lhe 74th 0-69 (unit)-68.9 (rtequido2aPlli)O hhture mea byr2s

the most part, at lower rates than matched traditional public school campuses. e most common way to demonstrate CCMR is by meeting Texas Success Initiative (TSI) criteria in ELA/reading and mathematics: SBOE-authorized charter school campuses and their matched traditional public school campuses had 41% of students demonstrating CCMR through this pathway. Relatively few graduates at SBOE-authorized charter school campuses demonstrated CCMR through earning additional certifications and credits, including earning college prep course credit, an associate's degree, or industry-based and workforce education certifications, both overall and in comparison with matched traditional public schools.[7]

Generally, graduates of ISD-authorized charter school campuses demonstrated CCMR at higher rates than their matched traditional public school campuses. Notably, 40% of graduates satisfied TSI college readiness benchmarks in both ELA/reading and mathematics compared with 35% at matched traditional public school campuses, and 30% earned college credit through the completion of dual credit courses compared with 22% at matched traditional public school campuses. While the percentage of graduates was small, ISD-authorized charter school campuses and matched traditional public school campuses had equal proportions of students completing an industry-based certification (13%), earning a Level I or Level II certificate in any workforce education area (1%), and earning credit for an ELA college prep course (7%).

Aggregate outcome measures related to attrition were reported for COE-authorized charter school campuses and matched traditional public school campuses. STAAR results were also reported, although without comparisons with matched traditional public school campuses due to differences in testing requirements between schools. Because of the small number of COE-authorized charter school campuses, aggregate outcome measures related to graduation rates and CCMR outcomes were not reported.

e attrition rate for COE-authorized charter school campuses was 36%, compared with 25% at their matched traditional public school campuses.

Analyzed in this report are the percentages of students achieving the Approaches Grade Level standard and Masters Grade Level standard on STAAR-Reading and STAAR-Mathematics exams taken by elementary school and middle school students in Grades 3–8, the STAAR-Algebra I EOC exam taken by middle and high school students, and the STAAR-English I and English II EOC exams taken by middle and high school students.

Fifty-nine percent of students taking the STAAR-Mathematics exams and 71% of students taking the STAAR-Algebra I EOC exam met the Approaches Grade Level standard, while 12% of students taking the STAAR-Mathematics exams and 17% of students taking the STAAR-Algebra I EOC exam met the Masters Grade Level standard. For students taking the Reading/ ELA exams, 70% taking STAAR-Reading exams, 74% taking the STAAR-English I EOC exam, and 75% taking the STAAR-English II EOC exam met the Approaches Grade Level standard. Twenty-two percent of students taking STAAR-Reading exams, 12% of students taking the STAAR-English I EOC exam, and 12% of students taking the STAAR-English II EOC exam met the Masters Grade Level standard.

is report provides a detailed description of charter school campuses and matched traditional public school campuses intended for comparison of school types. While a combination of sampling techniques

7 Per the TEA Accountability Manual for 2021 (page 10, PDF e-page 16): Due to discrepancies between annual enlistment counts for Texas military enlistees aged 17-19 released by the United States Department of Defense and the Texas Student Data System Public Education Information Management System's military enlistment data for 2017 and 2018 annual graduates, military enlistment data is excluded from accountability calculations until such data can be obtained directly from the United States Armed Forces (TEA, 2021a).

was used to identify demographically similar traditional public school campuses as the matched set for comparison, inferences regarding the performance of charter schools relative to traditional public schools cannot be made using this report. In order to suggest the performance of one type of school is consistently better or worse than another, statistical tools controlling for observed and unobserved characteristics influencing performance would need to be in place and inferential statistical analysis employed. Additionally, careful interpretation of the comparisons with COE-authorized and ISD-authorized charter school campuses provided in this report is necessary because of the small numbers of campuses in each category.

Because of the award of new charters and the expansion of existing charters, this report should be carefully compared with previously published Texas Charter Authorizer Accountability reports. Since 2012, the state of Texas has phased in a new standardized test, STAAR, and performance standards and created a new accountability rating system. e gradual phase-in of the new test and the current accountability system should be taken into consideration when comparing the results of this report to previous reports. Additionally, each year, new charter schools are authorized and new charter school campuses are opened and closed. us, Texas Charter Authorizer Accountability reports from two different years contain different subsets of charter schools, and results should be compared with caution. As a final note, although the passage of SB 2 in 2013 resulted in a policy process change in charter school authorization, the reader is cautioned against attributing differences presented in this report solely to this change. Rather, differences may be attributable to other changes occurring over time, such as differences in the charter school applicant makeup, other process changes, and/or changes in leadership at the charter schools—none of which could be accounted for within the scope of this report.

Beginning in the spring of 2020, public health and safety circumstances caused by the coronavirus disease (COVID-19) pandemic led to the closure of schools during the state's testing window and inhibited the state's ability to measure district and campus performance accurately. e COVID-19 pandemic continued to interrupt education into the 2020–21 school year and influenced some participation in STAAR testing. For the 2021 accountability cycle, TEA received approval to waive accountability requirements under the Every Student Succeeds Act. erefore, all districts and campuses were labeled , and domain scores and overall ratings were not calculated and therefore not included in this report. STAAR performance outcomes are reported for charter schools but not compared with STAAR performance for matched traditional public schools due to possible differences in STAAR test participation. Outcomes available for this report pertaining to attrition, graduation, and CCMR are reported for charter schools and matched traditional public schools.

Section 1: Introduction

e first charter schools were established in the United States in 1991 to provide students with a tuition-free alternative to traditional public schools. eir purpose: to create additional flexibility and innovation in education. Minnesota was the first state to usher in charter schools, and other states quickly followed; charter schools now operate in 44 states and the District of Columbia. e number of operating charter schools across the nation has more than doubled over the past 14 years—from approximately 3,700 in the 2005–06 academic year to approximately 7,500 schools in 2019–20. As shown in Figure 1.1, student enrollment has also experienced marked growth, increasing from about 1 million students in 2005–06 to about 3.5 million students in 2019–20 (National Alliance for Public Charter Schools, 2022).

1.1

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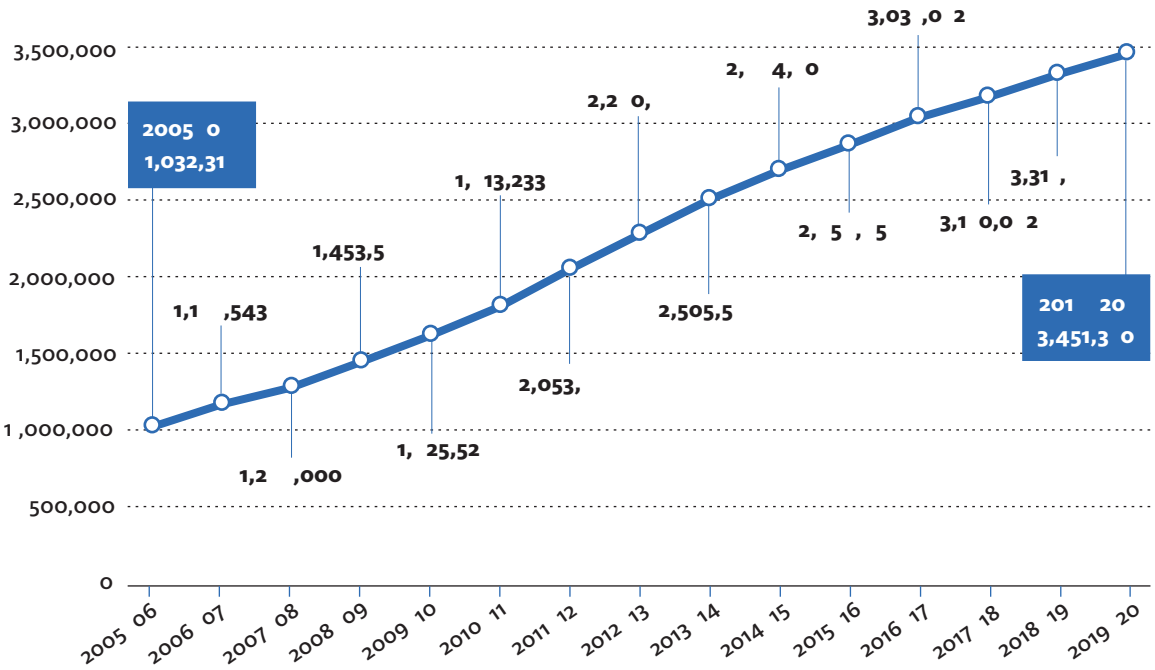


Source. N . A . P . C S , 2022.

Note. T 2019 20 N . A . P . C S .

e literature documenting the contribution of charter schools to the quality of the public school system is mixed (Betts & Tang, 2019; Zimmer et al., 2012). Conducted both nationally and within specific states, there are studies indicating that charter schools are efficient producers of public education outcomes (Wolf et al., 2014), studies that demonstrate the increased learning gains of students enrolled in charter schools (Center for Research on Education Outcomes, 2017; Hoxby & Rockoff, 2004), studies that report the increased performance of nearby traditional public schools following the introduction of charter school competition (Booker et al., 2008; Winters, 2012), and studies that demonstrate improvement in the overall performance of the charter school sector over time (Baude et al., 2020). In contrast, there are also national and state-specific studies that demonstrate little or no significant outcomes for charter school

Texas charter schools grew to serve 428,259 students in 952 campuses in the 2020–21 school year (Tables 2.1 and 2.2). In order to ensure quality in charter schools, the Texas Legislature has increased performance regulations over the years. It has also mandated the closure of charter schools for poor performance and encouraged growth by providing them with access to facilities funding.

Contemporary charter school legislation demonstrates the state's effort to balance quality with growing charter school demand. In 2013, the 83rd Texas Legislature passed Senate Bill (SB) 2, which made significant changes to the state's charter school legislation. e bill added Section 12.115 (a)-(d)—Charter Revocation or Modification of Governance—to the TEC, which placed charter schools under stricter financial and academic accountability expectations and enacted the requirement that the commissioner revoke a school's charter should it fail to meet the stated accountability benchmarks for three consecutive years. Since the passage of SB 2 in 2013, 45 charter schools have closed, and due to the increased selectivity of the commissioner's process for awarding charters combined with the SBOE's veto authority, the number of charters granted annually has decreased.[8] SB 2 also increased the cap on the maximum possible number of open-enrollment charter schools granted from 215 to 305 by September 2019 (TEC § 12.101, 2022). Another significant change introduced in SB 2 was the transfer of authority to grant open-enrollment charters from the SBOE to the COE (TEC § 12.101 (a), 2022). e commissioner must still submit notification to the SBOE regarding which charters are proposed, and the SBOE may veto any new charter proposed within 90 days of the commissioner's decision (TEC § 12.101(b-0), 2022). Along with this change, the legislature added a requirement (TEC § 12.1013 (a)-(d), 2022) for a report on the performance of open-enrollment charter school campuses by authorizer type that compares results of each with matched traditional public school campuses.

In 2017, the 85th Texas Legislature (regular session) passed SB 1882, providing incentives to school districts to partner with open-enrollment charter schools and certain eligible entities to open campuses within their district.[9] e bill provided two incentives to promote district partnerships with open-enrollment charter schools and eligible entities. e first was a two-year relief from campus sanctions imposed at schools with low academic performance; the second was access to potentially increased state funding. Both of these benefits incentivized districts to enter into partnerships with outside entities. Also in 2017, the Texas Legislature passed House Bill 21, allowing public charter schools, for the first time in Texas, to receive up to $60 million in state funding annually for facilities (TEC § 12.106(d)-(2), 2022).

In accordance with TEC § 12.1013(a)-(d) (2022), the Texas Education Agency (TEA) selected the University of Houston Education Research Center (UH ERC) to prepare a report that compares the performances of the following types of schools: charter school campuses operating under charter schools granted by the SBOE (SBOE-authorized), charter school campuses granted by ISDs (ISD-authorized), charter school campuses operating under charter schools granted by the COE (COE-authorized), and matched traditional public school campuses. is report includes performance data for all charter school campuses operating in the 2020–21 school year, including those operated by charters granted between 1996 and 2012 (Generations 1 through 17) by the SBOE, those granted between 2013 and 2019 (Generations 18 through 24) by the COE, and all charter school campuses authorized by ISDs.[10]

Beginning in the spring of 2020, public health and safety circumstances caused by the coronavirus disease (COVID-19) pandemic led to the closure of schools during the state's testing window and inhibited the state's ability to measure district and campus performance accurately. e COVID-19 pandemic con-

8 For a detailed list of charters granted and closed, see the Summary of Charter Awards and Closures report.

9 SB 1882 Texas partnership schools are classi ed as ISD-authorized charter schools for the purposes of this report.

10 Though charter schools were granted in 2020 and 2021 (Generations 25 and 26), they were not in operation for the 2020–21 school year and thus not included in this report.

campuses have a modified graduation rate calculation for accountability ratings.

Alternative performance measures for campuses serving at-risk students were first implemented in the 1995–96 academic year. Over time, these measures have expanded to include charter schools that serve large populations of at-risk students. Accountability advisory groups consistently recommend evaluating these types of campuses by separate AEA provisions because of the large number of students served in alternative education programs on campuses and to ensure these unique campus settings are appropriately evaluated for accountability. To register to be considered under AEA provisions, campuses must meet specific criteria listed in the 2021 Accountability Manual (TEA, 2021a) or qualify as community-based dropout recovery campuses established in accordance with TEC § 29.081(e) (2022).[12]

Charter school campuses are reported by the authorizer that granted the original charter school.

students enrolled in the fall of 2020 who did not return to the same campus in the fall of 2021.[16]

e attrition rates for this report were calculated using student-level data provided by TEA.

ese are the standardized exams given in Grades 3–8. STAAR-Reading and STAAR-Mathematics exams are administered in Grades 3–8; STAAR-Science exams are administered in Grades 5 and 8; the STAAR-Social Studies exam is administered in Grade 8; and STAAR-Writing exams are administered in Grades 4 and 7. Specifically, this report analyzed the STAAR exams included in the 2020–21 Texas Academic Performance Reports.

( ) STAAR EOC exams are standardized exams administered after the completion of Algebra I, English I, English II, U.S. History, and Biology courses. Typically administered in high school grades, these exams can be given to students below Grade 9 if the student has taken the course. It should be noted that some students could have taken both an EOC exam and a STAAR grade-level exam, as local district policy dictates student action. For example, an eighth-grade student taking Algebra I could have taken both the STAAR-Algebra I EOC exam and the STAAR-Mathematics exam for Grade 8. Specifically, this report analyzed the STAAR EOC exams included in the 2020–21 Texas Academic Performance Reports.

e STAAR performance-level descriptor indicating that the student is likely to succeed in the next grade or course with targeted academic intervention. It serves as the state's passing standard.[17]

e STAAR performance-level descriptor indicating that the student is expected to succeed in the next grade or course with little or no academic intervention.[18]

e graduation rate in this report is the class of 2020 longitudinal four-year graduation rate calculated for state accountability purposes, which follows a cohort of first-time Grade 9 students into the fall after their expected graduation (or, in cases of extended rates, the fall one or two years after their expected graduation date) (TEA, 2021b).[19] For schools evaluated under the standard accountability system, the total number of graduates is divided by the total number of graduates, continuers, Texas Certificate of High School Equivalency recipients, and dropouts in the class. For schools evaluated under the AEA system, the sum of the total number of graduates, continuers, and Texas Certificate of High School Equivalency recipients is divided by the total number of graduates, continuers, Texas Certificate of High School Equivalency recipients, and dropouts in the class.

Under TEC § 39.053(c) (2019), graduates can demonstrate CCMR for state accountability purposes in several ways. For this report, the following CCMR outcomes are reported for 2020 graduates:[20]

- Meeting Texas Success Initiative (TSI) criteria in English Language Arts (ELA)/reading and mathematics
- Meeting criteria on the Advanced Placement (AP) or International Baccalaureate (IB) examination
- Earning dual course credits
- Earning an industry-based certification
- Earning a Level I or Level II certificate
- Completing and earning credit for an ELA college prep course
- Completing and earning credit for a mathematics college prep course
- Completing an OnRamps dual enrollment course
- Earning an associate's degree
- Completing an Individualized Education Program (IEP) and demonstrating workforce readiness
- Being identified as a current special education student with an advanced diploma plan

16 See Appendix A for a detailed description of the attrition analysis.

17 See STAAR Performance Labels and Policy De nitions

In order to fulfill the legislative requirements of this report, several analytic methods were employed. Under TEC § 12.1013(a)-(d) (2022), the Texas Charter Authorizer Accountability Report must provide an opportunity for the public to compare the performance of SBOE-authorized, ISD-authorized, and COE-authorized charter schools with the performance of matched traditional public school campuses. Specific performance metrics codified under TEC § 39.053(c) (2019) and attrition rates are required to be included in the report, disaggregated by grade level served. Each method is briefly described below and in detail in Appendix A.

S M P

In order to fulfill the statutory requirement of identifying a matched group of traditional public school campuses for charter school performance comparison (TEC § 12.1013(b), 2022), TEA selected a combination of sampling techniques as the preferred matching procedure. By identifying traditional public school campuses similar in size, teaching staff, and student characteristics, the matching technique is intended to eliminate bias in performance comparisons due to observed covariates. Appendix A details the matching procedure variables and specifications, and Appendix D details the performance results for each charter school included in the report. RTFs, JJAEPs, and DAEPs were not included in the matching procedure, nor in the performance analyses. RTFs were excluded because the unique student populations served in instructional settings are far different from other schools. JJAEPs and DAEPs were excluded because the performance of their student populations is attributed back to the students' home campuses.

A A

For the purposes of this report, the attrition rate is defined as the percentage of students enrolled in the fall of 2020 who did not return to the same campus in the fall of 2021. e attrition rates for this report were calculated using student-level data provided by TEA. ose data included a unique identifier, grade level, and the campus for each student enrolled in Texas public schools for the 2020–21 and 2021–22 academic years. Students enrolled in the fall of 2020 were cross-referenced to their fall enrollment in 2021. Students whose fall 2020 campus was different from their fall 2021 campus were considered attritted and counted in the numerator of the attrition rate calculation. e denominator of the attrition rate calculation comprised all students enrolled in the 2020–21 academic year at a particular campus. is calculation was adjusted to account for the grade levels available to students at each campus as well as additional factors. Appendix A details the reasons students were excluded from attrition rate calculations.

O I M C

For attrition rates, STAAR performance, graduation rates, and CCMR rates, results were calculated using the number of students at each campus in the group that contributed to the outcome measure. Rather than averaging the campus-level rates for all campuses in a group for each metric, numerators and denominators for each metric were summed and then divided to provide an overall rate for the group. is prevents results from being significantly influenced by extreme performance results for very small campuses.

is report provides a detailed description of charter school campuses and matched traditional public school campuses intended for public comparison of school types. While a combination of sampling techniques was used to identify demographically similar traditional public school campuses as the matched set for comparison, inferences regarding the performance of charter schools relative to traditional public schools cannot be made using this report. In order to suggest the performance of one type of school is consistently better or worse than another, statistical tools controlling for observed and unobserved characteristics influencing performance would need to be in place and inferential statistical analysis employed. Additionally, careful interpretation of the comparisons with COE-authorized and ISD-authorized charter school campuses provided in this report is necessary because of the small numbers of campuses in each category. Interpretation of results for COE-authorized charter school campuses should take into consideration that all COE-authorized charters in this report were authorized between 2013 and 2019 and thus may have been operating for a shorter amount of time compared with other charter school campuses. As a

final note of caution, although the passage of SB 2 in 2013 resulted in the policy process change in charter school authorization, the reader is cautioned against attributing differences presented in this report solely to this change. Rather, differences may be attributable to other changes occurring over time, such as differences in the charter school applicant makeup, other process changes, and/or changes in leadership—none of which could be accounted for within the scope of this report.

Because of the differences in STAAR performance standards, the Texas Accountability Rating System, the award of new charters, and the expansion of existing charters, comparisons with previously published Texas Charter Authorizer Accountability reports should be made with caution. In 2012, the state of Texas began the phase-in of the STAAR standardized test and the associated performance standards. In addition, a new accountability rating system has also developed over the course of the same period. e gradual phase-in of the new test and the current accountability system should be taken into consideration when comparing the results of this report to previous reports. Additionally, each year, new charter school campuses are opened, low-performing charter school campuses are closed, and existing charters are expanded. us, Texas Charter Authorizer Accountability reports from two different years contain different subsets of charter schools, and results should be compared with caution.[21]

As previously mentioned, beginning in spring 2020, public health and safety circumstances caused by the COVID-19 pandemic led to the closure of schools during the state's testing window and inhibited the state's ability to measure district and campus performance accurately. e pandemic continued to interrupt education into the 2020–21 school year. For the 2021 accountability cycle, TEA received approval to waive accountability requirements under the Every Student Succeeds Act (U.S. Department of Education, April 6, 2021). All districts and campuses were labeled [illegible] and domain scores and overall ratings were not calculated and therefore not included in this report. In 2020–21, statewide STAAR test participation was lower than years before the COVID-19 pandemic and test participation rates varied widely across schools.[22] With wide variance in test participation, aggregate campus-level test results could reflect less than the entire student population served at a campus. As such, this report displays STAAR performance outcomes for charter schools but does not display the STAAR performance for matched traditional public schools in order to limit inaccurate comparisons among school types. Outcomes available for this report pertaining to attrition, graduation, and college, career, and military readiness (CCMR) are reported for charter schools and matched traditional public schools.

[illegible]

e rest of the report is organized into five sections. Section 2 provides a description of the charter school and traditional public school campuses disaggregated by school type and school level. Section 3 presents the aggregate performance of SBOE-authorized and ISD-authorized charter school campuses compared with matched traditional public school campuses. Section 4 disaggregates the performance comparisons presented in Section 3 by school level. Section 5 provides a comparison of COE-authorized charter school campuses and matched traditional public school campuses. Finally, Section 6 discusses the findings of previous sections and presents a summary of results with a review of the limitations of the study.

Following the main body of the report, several appendices provide detailed information. Appendix A describes the analytical methods used in the creation of the report. Appendix B displays tables comparing charter school campuses evaluated under AEA provisions. Performance on STAAR-Writing, STAAR-Science/Biology, and STAAR-Social Studies/U.S. History exams can be found in Appendix C. Appendix Dthe report.68. 4led infor

Section 2: Description of Charter School Campuses and Traditional Public Schools

is section of the report describes the distribution of Texas public schools by school type and school level. Table 2.1 displays the types of Texas public school campuses that were in operation during the 2020–21 academic year. ere were a total of 8,840 public schools in operation during the year, 11% (952) of which

Table 2.2 describes enrollment in Texas public schools by school type. In the 2020–21 academic year, 428,259 students were enrolled in charter school campuses, and 4,943,097 students were enrolled in traditional public schools. Charter school enrollment accounted for approximately 8% of the total public school population. Following the same patterns of distribution identified in Table 2.1, SBOE-authorized charter schools enrolled the overwhelming majority of charter school students.

2.2

, 2020 21

	215,411	67,705	67,371	350,487
	29,236	13,440	19,653	62,329
	8,951	2,265	1,506	12,722
	81	286	1,905	2,272
	0	101	348	449
	2,315,036	1,112,861	1,511,419	4,939,316
	21	130	1,349	1,500
	0	15	449	464
	282	64	1,471	1,817

Source. T A , P R , T E , A , 2020 21.

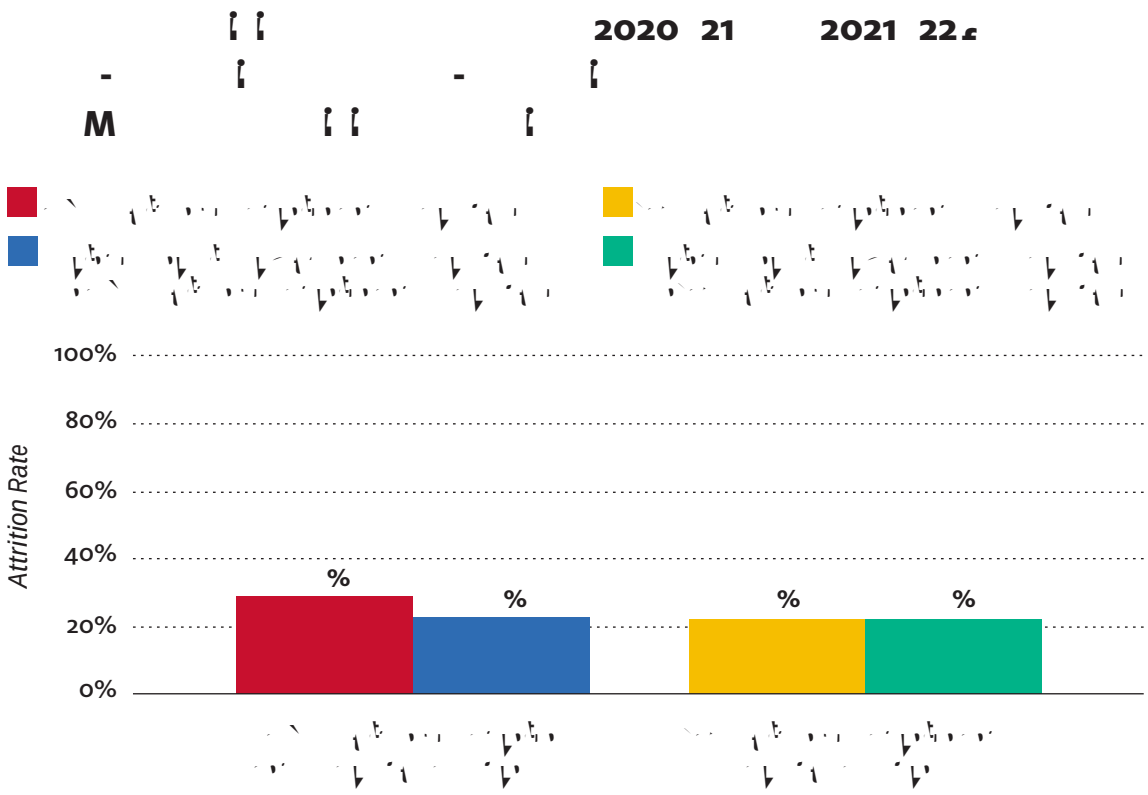
Note. T ISD-

Key. SBOE = S B E ; ISD = I S D ; COE = ; DAEP = D A E P ; JJAEP = J J A E P .

Table 2.3 summarizes the demographic characteristics of students enrolled in charter school campuses and traditional public school campuses in 2020–21. In traditional public school campuses, Hispanic students were the largest racial or ethnic group (52%), followed by White students (28%), African American students (12%), Asian students (5%), students identified as two or more races (3%), American Indian or Alaska Nativn Ame8 (racteristics of students enrolled in cha)-68.7 (rter school ca)-68.8 (mpuses)mics of studWn2n2nrtivs Tampus

For the purposes of this report, the attrition rate is defined as the percentage of students enrolled in the fall of 2020 who did not return to the same campus in the fall of 2021. Student attrition rates between the 2020–21 and 2021–22 academic years are displayed for SBOE-authorized and ISD-authorized charter school campuses and matched traditional public school campuses in Figure 3.1. e attrition rate for SBOE-authorized charter school campuses was 29%, compared with 23% at matched traditional public school campuses. e attrition rate for ISD-authorized charter school campuses and their matched traditional public school campuses was the same at 22%.

3.1



Sources. T A , P R , T E , A , 2020 21; P , E , I , M S , T E , A , 2020 21 2021 22.

Note. A 731 S B E , (SBOE)- , 2,018 , SBOE- , 117 I S D, (ISD)- , 2,723 , ISD- , .

is subsection of the analysis provides details on 2020–21 STAAR exam performance for SBOE-authorized and ISD-authorized charter school campuses. Figures in this section detail the percentage of students achieving the Approaches Grade Level standard and Masters Grade Level standard on STAAR-Reading and STAAR-Mathematics exams (Grades 3–8) and STAAR-English I, English II, and Algebra I EOC exams. e Approaches Grade Level standard serves as the state's passing standard.[23] A more difficult achievement level to attain, the Masters Grade Level standard, is a STAAR performance-level descriptor indicating the student is expected to succeed in the next grade or course with little or no academic intervention.[24] Performance on STAAR-Writing, STAAR-Science/Biology, and STAAR-Social Studies/U.S. History exams can be found in Appendix C.

Figure 3.2 displays the percentage of students achieving the Approaches Grade Level standard on the STAAR-Reading/ELA exams by charter authorizer type. Approximately two-thirds (65%) of students at SBOE-authorized charter school campuses in Grades 3–8 achieved the Approaches Grade Level standard on the STAAR-Reading exams, and 57% of students in Grades 3–8 at ISD-authorized charter school campuses met the standard. For the STAAR-English I EOC exam, 64% met the Approaches Grade Level standard at SBOE-authorized charter school campuses, and 66% of students at ISD-authorized charter

Figure 3.4 displays the percentage of students achieving the Masters Grade Level standard on the STAAR-Reading/ELA exams by charter authorizer type. For STAAR-Reading, 18% of students in Grades 3–8 at SBOE-authorized charter school campuses met the Masters Grade Level standard, and 15% of students did so at ISD-authorized charter school campuses. For the STAAR-English I EOC exam, 9% of students at SBOE-authorized charter school campuses and 10% at ISD-authorized charter school campuses met the standard. For the STAAR-English II EOC exam, 8% of students at SBOE-authorized charter school campuses and 9% at ISD-authorized charter school campuses met the standard.

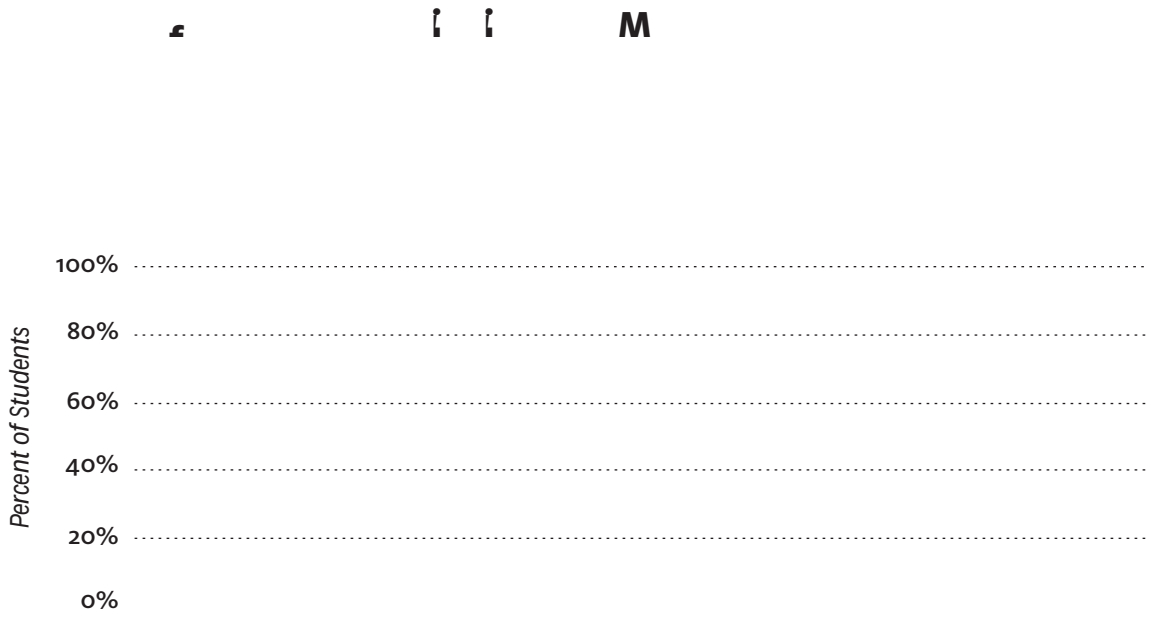


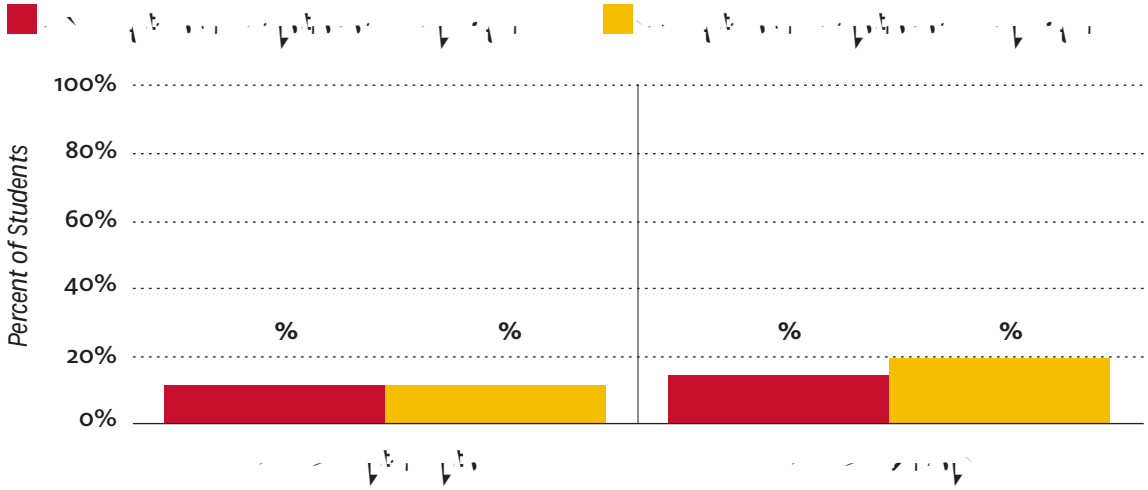
Figure 3.5 shows the percentage of students achieving the Masters Grade Level standard on the STAAR-Mathematics exams by charter authorizer. For STAAR-Mathematics, both SBOE-authorized charter school campuses and ISD-authorized charter school campuses had 11% of students achieve the Masters Grade Level standard. In STAAR-Algebra I, 14% of students at SBOE-authorized charter school campuses and 19% of students at ISD-authorized charter school campuses met the Masters Grade Level standard.

3.5

M

-M

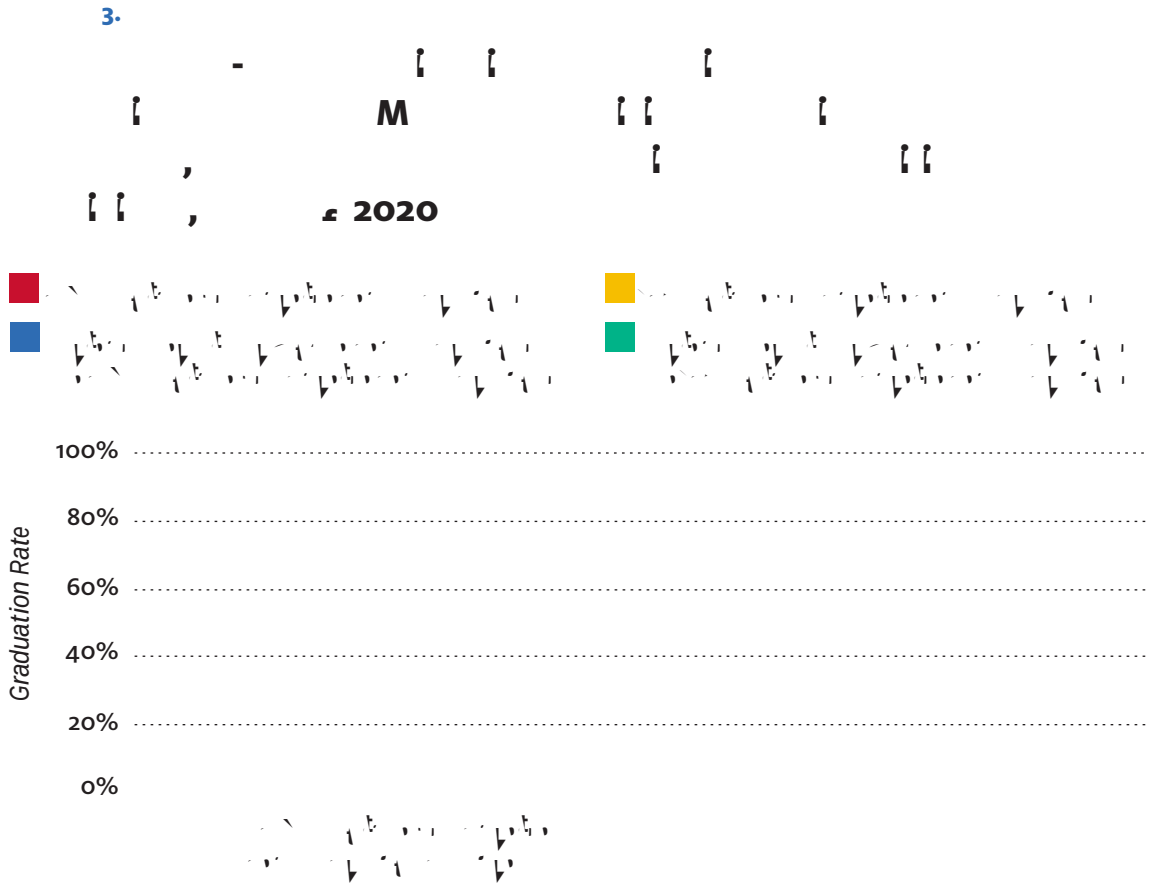
, 2020 21



Source. T A , P R , T E , A , 2020 21.

Note. A 571 S B E , (SBOE)- 88 I S D, (ISD)- S T A A R, (STAAR)-M . . A 398 SBOE- 56 ISD- STAAR-A I -(EOC) , .

Figure 3.7 shows the four-year longitudinal graduation rates at SBOE-authorized and ISD-authorized charter school campuses and their matched traditional public school campuses evaluated under AEA provisions. (See Table B.4 in Appendix B for the demographic characteristics of students attending campuses evaluated under AEA provisions included in this analysis.) For schools evaluated under AEA provisions, the graduation rate calculation includes graduates, continuing students, and Texas Certificate of High School Equivalency recipients. As shown in the figure, AEA SBOE-authorized charter school campuses had a 72% four-year longitudinal graduation rate, while the matched traditional public school campuses had an 89% four-year longitudinal graduation rate.[25]



Source. T A , P R , T E , A , 2020 21.

Note. A 89 S B E , (SBOE)- 40 , SBOE-

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e following subsection compares the percentage of CCMR outcomes at SBOE-authorized and ISD-authorized charter school campuses and their matched traditional public school campuses for graduates in 2020. Table 3.2 displays the performance for each of the CCMR outcomes defined under TEC § 39.053(c) (2019).[26, 27]

- Meeting TSI criteria in ELA/reading and mathematics
- Meeting criteria on the AP or IB examination
- Earning dual course credits
- Earning an industry-based certification
- Earning a Level I or Level II certificate
- Completing and earning credit for an ELA college prep course
- Completing and earning credit for a mathematics college prep course
- Completing an OnRamps dual enrollment course
- Earning an associate's degree
- Completing an IEP and demonstrating workforce readiness
- Being identified as a current special education student with an advanced diploma plan

Table 3.2 shows the percentage of CCMR outcomes at SBOE-authorized and ISD-authorized charter school campuses and their matched traditional public school campuses. Forty-one percent of graduates in both SBOE-authorized charter school campuses and matched traditional public school campuses met TSI criteria in ELA/reading and mathematics. At ISD-authorized charter school campuses, 40% of graduates met the TSI college readiness benchmarks in ELA/reading and mathematics compared with 35% at matched traditional public school campuses.

SBOE-authorized charter school campuses had more graduates meeting the criteria on AP or IB exams than matched traditional public school campuses (29% vs. 17%). At ISD-authorized charter school campuses, 17% met the AP or IB criteria compared with 18% at matched traditional public school campuses.

Seventeen percent of graduates at SBOE-authorized charter school campuses earned college credit through the completion of dual credit courses compared with 30% at matched traditional public school campuses. At ISD-authorized charter school campuses, 30% earned college credit through the completion of dual credit courses compared with 22% at matched traditional public school campuses.

e percentage of graduates at SBOE-authorized charter school campuses earning an industry-based certification was 6% compared with 15% at matched traditional public school campuses. ISD-authorized charter school campuses and their matched traditional public school campuses had equal proportions of TJT[*(c theetraditwPm5r)]TJT[*(sch(uthocT pes. Fontified as a)-68.9 (curreS07ppyo (rter school ca)-68.8 ge of gradua)(c thee% ea)-6

Section 4: Aggregate Performance of Charter School Campuses by School Level and Authorizer Type Compared with Matched Traditional Public School Campuses

Presented in this section of the report are aggregate academic outcomes of SBOE-authorized and ISD-authorized charter school campuses by school type. For attrition rates, graduation rates, and CCMR, SBOE-authorized and ISD-authorized aggregate outcomes are compared with matched traditional public school campuses. SBOE-authorized and ISD-authorized aggregate outcomes for performance on STAAR exams are reported without matched traditional school performance due to possible differences in participation resulting from COVID-19.

For the purposes of this report, the attrition rate is defined as the percentage of students enrolled in the fall of 2020 who did not return to the same campuses in the fall of the 2021–22 academic year. In Figure 4.1, student attrition rates between the 2020–21 and 2021–22 academic years are displayed by school level for SBOE-authorized and ISD-authorized charter school campuses and their matched traditional public school campuses. SBOE-authorized elementary schools had a higher attrition rate than matched traditional public schools (27% to 24%), as did middle schools (23% vs. 19%) and high schools (38% vs. 25%). ISD-authorized elementary schools had a lower attrition rate than their matched traditional public schools (23% vs. 24%) and a higher attrition at the middle school (19% vs. 18%) and high school (24% vs. 21%) levels.

4.1

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Sources. A , P R , E , A , 2020 21; P , E , I , M S , E , A , 2020 21 2021 22.

Note. S B E , (SBOE)- (=395); (=149); (=186). SBOE- (=1,405); (=360); (=253). I S D, (ISD)- (=69); (=24); (=24). ISD- (=1,804); (=569); (=350).

Figure 4.4 displays the percentage of students in middle schools meeting the Approaches Grade Level standard on the STAAR English I, English II, and Algebra I EOC exams. At SBOE-authorized charter middle school campuses, 70% of students met the Approaches Grade Level standard in English I, 77% in English II, and 66% in Algebra I. At ISD-authorized charter middle school campuses, 88% of students met the Approaches Grade Level standard in Algebra I.

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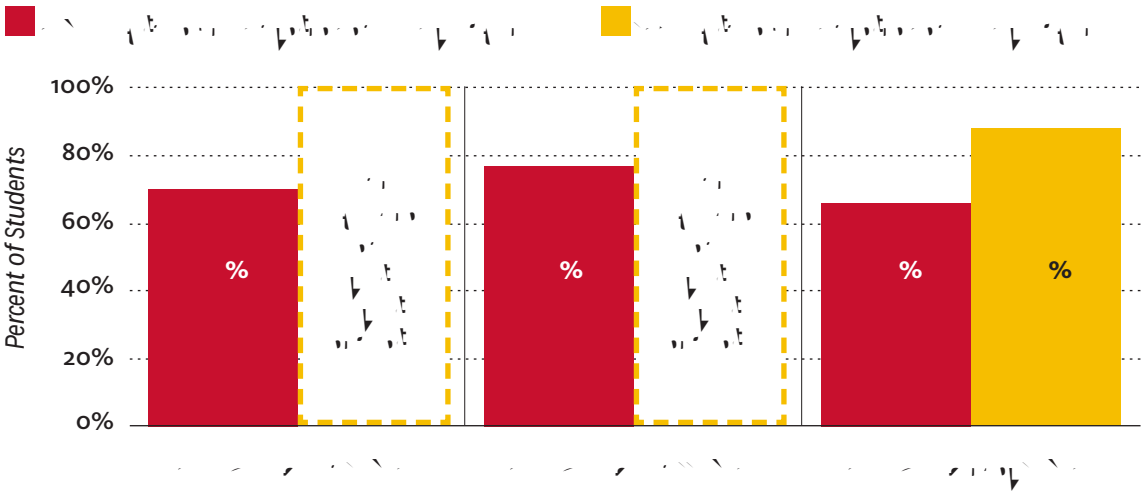

Source. T A , P R , T E , A , 2020 21.

Note. A 57 S B E , (SBOE)- S T A A R)-E , I - (EOC) . A 39 SBOE- STAAR-E , II EOC . A 116 SBOE- 20 ISD- STAAR-A , I EOC .

Figure 4.5 displays the percentage of students in high schools meeting the Approaches Grade Level standard on the STAAR English I, English II, and Algebra I EOC exams. At SBOE-authorized charter high school campuses, 60% of students met the Approaches Grade Level standard on the STAAR-English I EOC exam, 64% on the English II EOC exam, and 54% on the Algebra I EOC exam. ISD-authorized charter high school campuses had 65% of students achieving the Approaches Grade Level standard on the STAAR-English I EOC exam, 70% achieving the standard in English II, and 62% achieving the standard in Algebra I.

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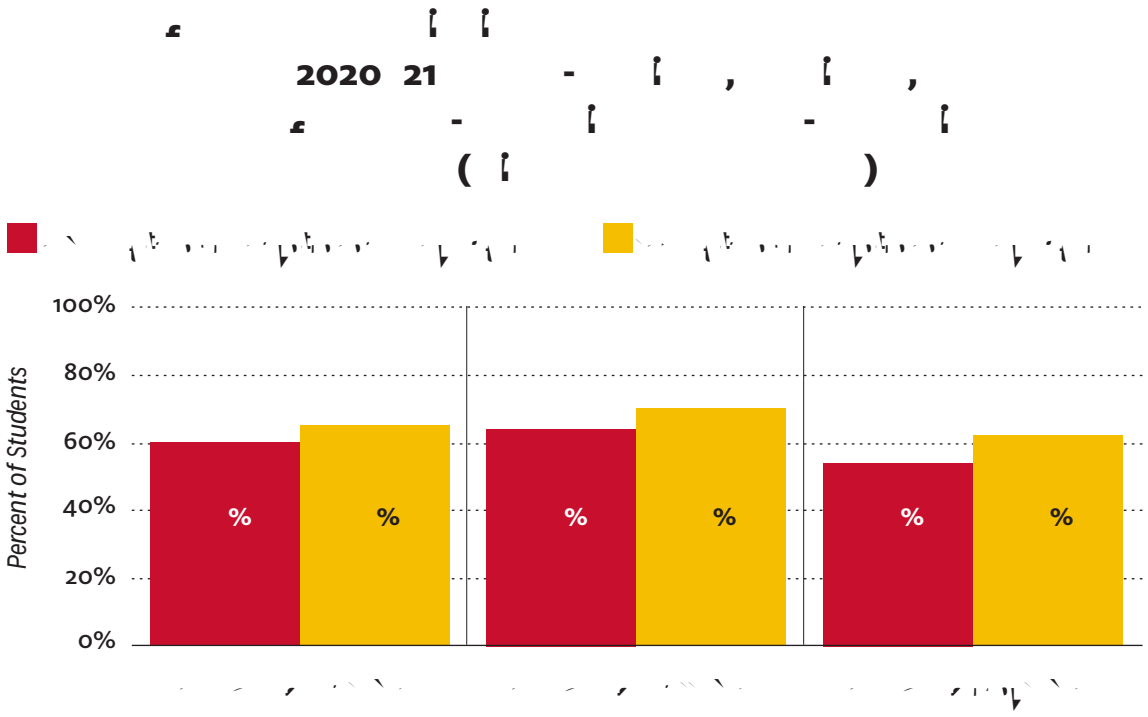

Sources. T A , P R , T E , A , 2020 21.

Note. A 185 S B E , (SBOE)- 24 I S D, (ISD)- S T A A , R , (STAAR)- E , I -(EOC) . A 184 SBOE- 24 ISD- STAAR-E , II EOC . A 185 SBOE- 23 ISD- STAAR-A I EOC .

Figure 4.7 shows the percentage of students in middle schools scoring at the Masters Grade Level standard in STAAR-Reading and STAAR-Mathematics. At the middle school level, SBOE-authorized charter school campuses had 17% of students meeting the Masters Grade Level standard on STAAR-Reading and 9% meeting the standard on STAAR-Mathematics. ISD-authorized charter middle school campuses had 15% of 10 ( )]TJ7h919 g18.the Masters Grade Level standa-1.2ing the standard on hool caen-C 2T/P <0D 2515Master51 k/G6031_1011 Tc 1

Figure 4.8 shows the percentage of students in middle schools scoring at the Masters Grade Level standard on the STAAR English I, English II, and Algebra I EOC exams. At SBOE-authorized charter middle school campuses, 12% achieved the Masters Grade Level standard in English I, 11% in English II, and 15% in Algebra I. At ISD-authorized charter middle school campuses, 34% achieved the Masters Grade Level standard in Algebra I.

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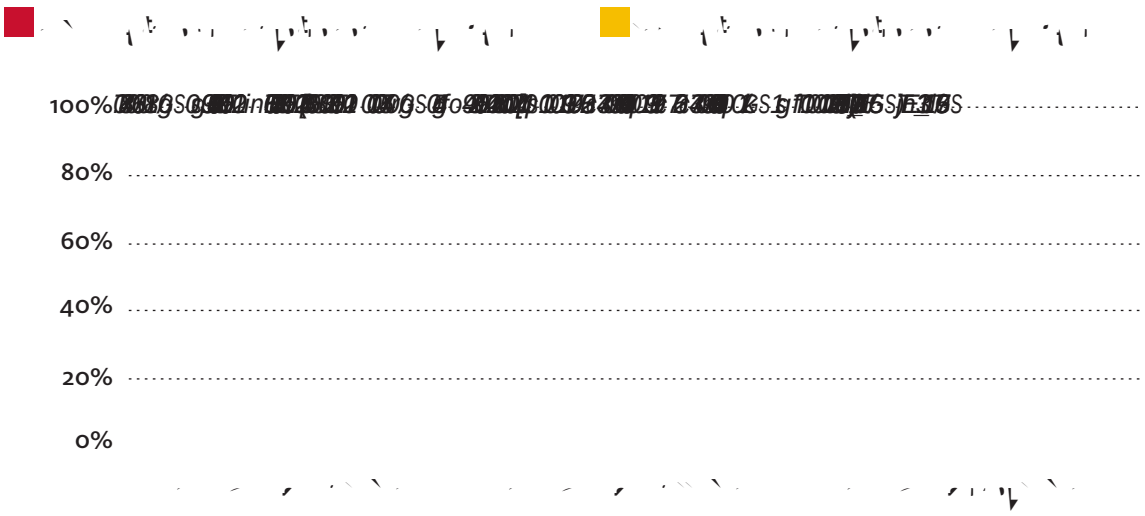

Source. T A . P R , T E . A , 2020 21.

Note. A 56 S B E , (SBOE)- S T A A R , R , (STAAR)-E I - (EOC) . A 38 SBOE- STAAR-E II EOC . A 112 SBOE- 21 ISD- STAAR-A I EOC .

Figure 4.9 shows the percentage of students in high schools scoring at the Masters Grade Level standard on the STAAR English I, English II, and Algebra I EOC exams. At SBOE-authorized charter high school campuses, 7% of students achieved the Masters Grade Level standard in English I, 6% in English II, and 9% in Algebra I. At ISD-authorized charter high school campuses, 9% achieved the Masters Grade Level in English I, 8% in English II, and 12% in Algebra I.

Section 5: Aggregate Performance of COE-Authorized Charter School Campuses Compared with Matched Traditional Public School Campuses

Presented in this section of the report is a comparison of the aggregate academic outcomes of COE-authorized charter school campuses. For attrition rates, COE-authorized aggregate outcomes are compared with matched traditional public school campuses. COE-authorized aggregate outcomes for STAAR exam performance are reported without matched traditional school performance due to possible differences in participation resulting from COVID-19. Due to the small number of campuses, aggregate outcome measures related to graduation rates are not displayed and performance is not disaggregated by school type.

Table 5.1 shows the demographic characteristics of students enrolled at COE-authorized charter school campuses and matched traditional public school campuses. After application of the purposive sampling technique described in detail in Appendix A to narrow the subset of traditional public schools to those most closely matched to the demographics of COE-authorized charter schools in the study, the demographic characteristics of students in both types of schools were similar. COE-authorized charter schools enrolled a lower percentage of African American (16% vs. 20%), Asian (4% vs. 6%) , and Hispanic (46% vs. 49%) students compared with matched traditional public schools and a higher percentage of White students (29% vs. 21%). Additionally, COE-authorized charters had lower proportions of students at risk of dropping out of school (42% vs. 52%), economically disadvantaged students (48% vs. 65%), emergent bilingual students/English learners (13% vs. 27%), and special education students (8% vs. 12%) compared with matched traditional public schools.

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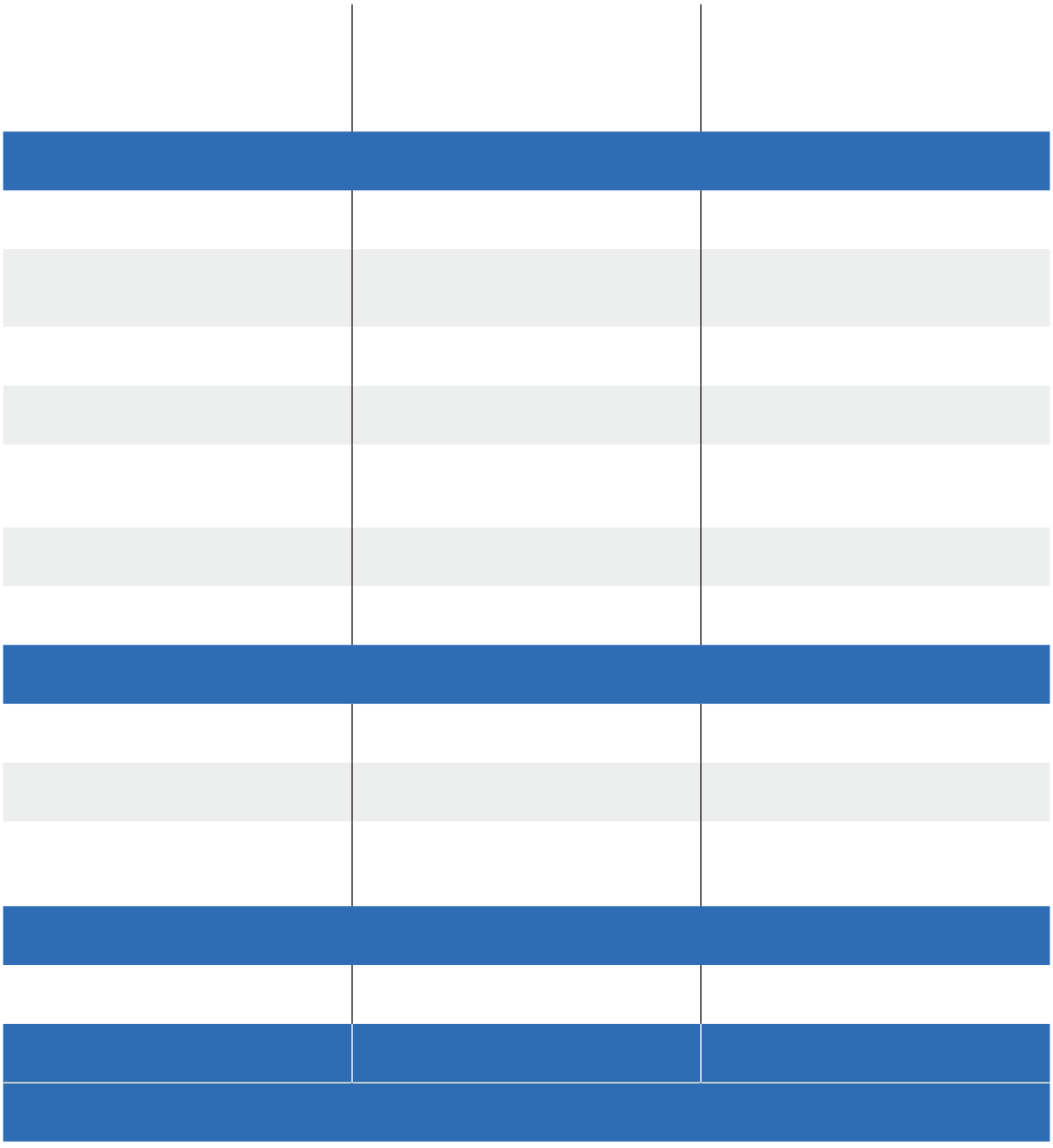

For the purposes of this report, the attrition rate is defined as the percentage of students enrolled in the fall of 2020 who did not return to the same campus in the fall of 2021. Student attrition rates between the 2020–21 and 2021–22 academic years are displayed for COE-authorized charter school campuses and matched traditional public school campuses in Figure 5.1. COE-authorized charter school campuses had a 36% attrition rate, compared with 25% at matched traditional public school campuses.

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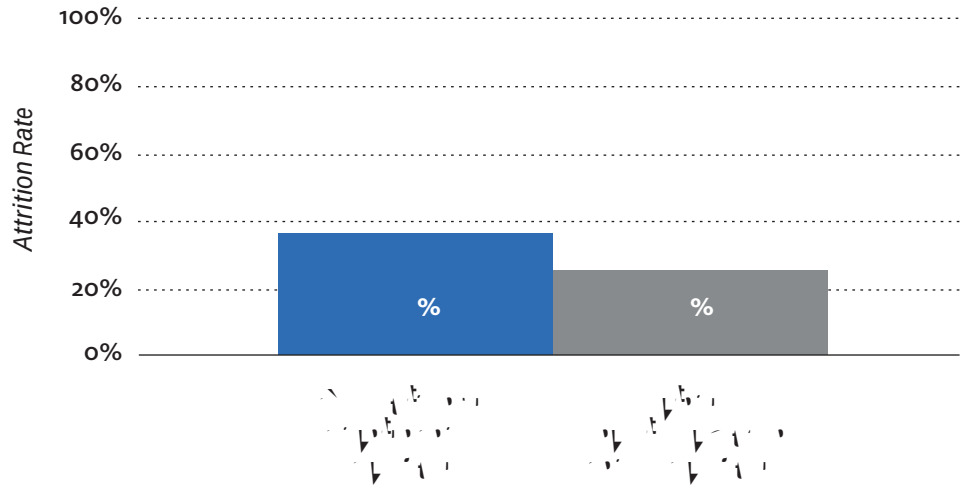

Sources. T A , P R , T E , A , 2020 21; P , E , I , M S , T E , A , 2020 21 2021 22.

Note. A 39 , (COE)- 798 , COE-

Analyzed in this report are the percentages of students achieving the Approaches Grade Level standard and Masters Grade Level standard on STAAR-Reading and STAAR-Mathematics exams taken by elementary school and middle school students in Grades 3–8, the STAAR-Algebra I EOC exam taken by middle and high school students, and the STAAR-English I and English II EOC exams taken by middle and high school students.

Figure 5.2 displays the percentage of students achieving the Approaches Grade Level standard on the STAAR-Reading/ELA exams for COE-authorized charter schools. For the STAAR-Reading exams administered to Grades 3–8 at COE-authorized charter school campuses, 70% of students scored at the Approaches Grade Level standard. For the middle and high school EOC exams, 74% of students in English I and 75% in English II scored at the Approaches Grade Level standard.

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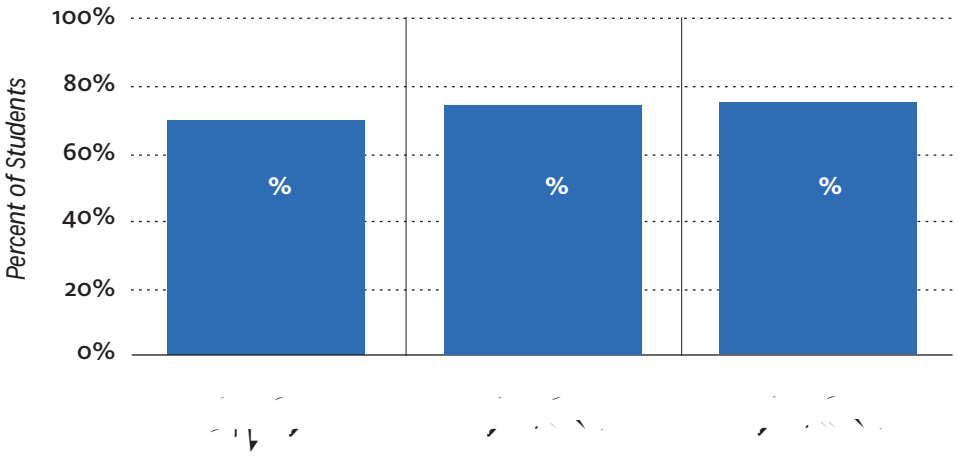

Source. T A , P R , T E , A , 2020-21.

Note. A 29 , (COE)- S T A A , R (STAAR)-R , . A 15 COE- STAAR-E I - (EOC) , . A 14 COE- STAAR-E II EOC , .

Figure 5.3 displays the percentage of students achieving the Approaches Grade Level standard on the STAAR-Mathematics exams for COE-authorized charter schools. For the STAAR-Mathematics exams administered to Grades 3–8, 59% of students scored at the Approaches Grade Level standard. In the case of the middle school and high school STAAR-Algebra I EOC exam, 71% of students met the Approaches Grade Level standard.

Figure 5.4 shows the percentage of students achieving the Masters Grade Level standard on the STAAR-Reading/ELA exams for COE-authorized charter schools. e sample included is the same as that in Figure 5.2. For the STAAR-Reading exams administered to Grades 3–8 at COE-authorized charter school campuses, 22% scored at the Masters Grade Level standard. For the middle and high school EOC exams, 12% of students scored at the Masters Grade Level standard in both English I and English II.

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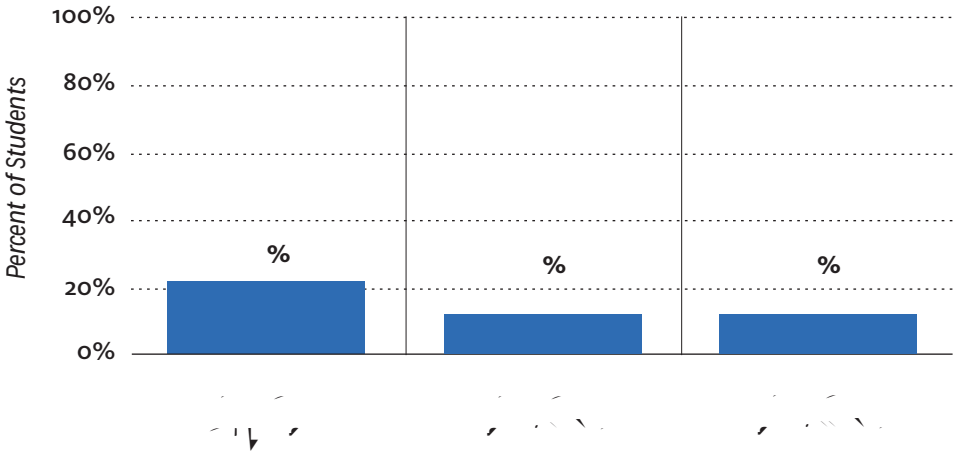

Source. T A , P R , T E , A , 2020-21.

Note. A 29 , , (COE)- S T A A , R (STAAR)-R , . A 15 COE- STAAR-E I EOC , . A 14 COE- STAAR-E II EOC , .

Figure 5.5 shows the percentage of students achieving the Masters Grade Level standard on the STAAR-Mathematics exams for COE-authorized charter schools. e sample is the same as in Figure 5.3. For the STAAR-Mathematics exams administered to Grades 3–8, 12% scored at the Masters Grade Level standard. In the case of the middle school and high school STAAR-Algebra I EOC exam, 17% of students met the Masters Grade Level standard.

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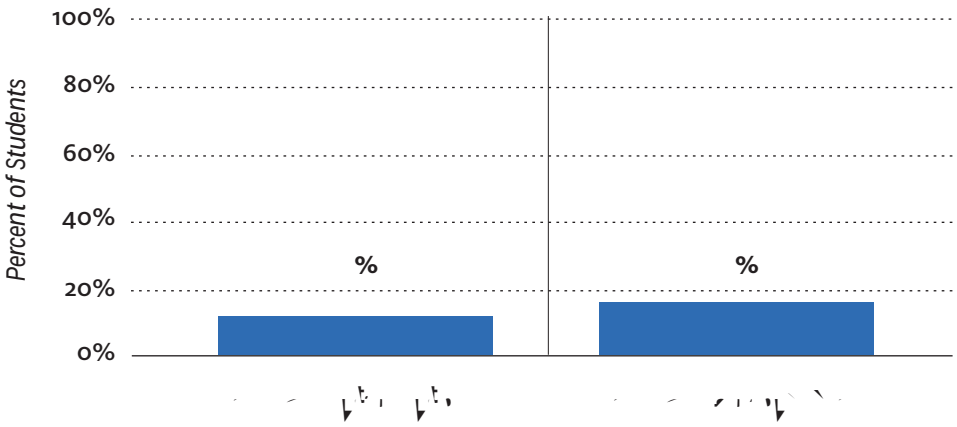

Source. T A , P R , T E , A , 2020-21.

Note. A 29 , (COE)- (STAAR)-M , . A 18 COE- S T A A R , (STAAR-A I -(EOC) , .

Section 6: Discussion of Findings

e number of operating charter schools nationally has increased from about 3,700 to approximately 7,500 between the academic years 2005–06 and 2019–20. Student enrollment in charter schools also experienced substantial growth during that time period, rising from about 1 million students in 2005–06 to 3.5 million students in 2019–20 (National Alliance for Public Charter Schools, 2022). In Texas, 952 charter schools enrolled 428,259 students in the 2020–21 academic year. Approximately 83% of charter school campuses operating in Texas that year (788) were classified as SBOE-authorized charter school campuses; almost 13% (121) were ISD-authorized charter school campuses; and almost 5% (43) were COE-authorized charter school campuses.

e analyses included in this report compare overall campus-level performance metrics across the three classifications of charter school campuses and, where appropriate, their matched traditional public school campuses. e matching techniques employed in these analyses ensured the selection of traditional public school campuses with similar student enrollment characteristics to examine and compare the descriptive statistics across different measures of campus performance. Appendix A includes a detailed description of the matching process.

e overall campus-level performance results were examined across several outcomes: attrition rates; STAAR performance outcomes; four-year longitudinal graduation rates for schools evaluated under alternative and standard accountability provisions; and CCMR outcomes for ISD- and SBOE-authorized charter schools.

COE-authorized and SBOE-authorized charter school campuses had higher attrition rates than their matched traditional public schools. COE-authorized charter school campuses had a 36% attrition rate, compared with 25% at matched traditional public school campuses. SBOE- authorized charter school campuses had an attrition rate of 29%, compared with 23% at matched traditional public school campuses. ISD-authorized charter school campuses and matched traditional public schools both had a 22% attrition rate.

At SBOE-authorized charter schools, 55% of students taking the STAAR-Mathematics exams and 62% of students taking the STAAR-Algebra I EOC met the Approaches Grade Level standard, while 11% of students taking the STAAR-Mathematics exams and 14% of students taking the STAAR-Algebra I EOC exam met the Masters Grade Level standard. For students taking the Reading/ELA exams, 65% taking the STAAR-Reading exams, 64% taking the STAAR-English I EOC exam, and 68% taking the STAAR-English II EOC exam met the Approaches Grade Level standard. Eighteen percent of students taking STAAR-Reading exams met the Masters Grade Level standard—the most achieving that level across all tests and grade levels; 9% of students taking the STAAR-English I EOC exam and 8% of students taking the STAAR-English II EOC exam met the Masters Grade Level standard.

At ISD-authorized charter schools, 49% of students taking the STAAR-Mathematics exams and 70% of students taking the STAAR-Algebra I EOC exam met the Approaches Grade Level standard, while 11% of students taking the STAAR-Mathematics exams and 19% of students taking the STAAR-Algebra I EOC exam met the Masters Grade Level standard. For students taking the Reading/ELA exams, 57% taking the STAAR-Reading exams, 66% taking the STAAR-English I EOC exam, and 71% taking the STAAR-English II EOC exam met the Approaches Grade Level standard. Fifteen percent of students taking STAAR-Reading exams, 10% of students taking the STAAR-English I EOC exam, and 9% of students taking the STAAR-English II EOC exam met the Masters Grade Level standard.

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Appendix A: Detailed Methods Description

is appendix provides a detailed description of the different methodological approaches employed to fulfill the statutory requirements of this annual report. Under Texas Education Code (TEC) § 12.1013 (b) (2022), the Texas Charter Authorizer Accountability Report must provide an opportunity for the public to compare the performance of State Board of Education (SBOE)-authorized, Independent School District (ISD)-authorized, and commissioner of education (COE)-authorized charter schools with the performance of matched traditional public school campuses. Specific performance metrics codified under TEC § 39.053(c) (2019) and attrition rates are required to be included in the report, disaggregated by grade level served.

e purpose of creating a matched set of traditional public schools for comparison is to optimize the covariate balance between the two comparison groups. In the education literature, several covariates, or those elements of the population that influence outcomes, are well documented to influence school outcomes (Aitkin & Longford, 1986; Hill & Rowe, 1996; McCaffrey et al., 2004). In order for this study to create matched groups for comparison, the covariate balance between groups is of utmost importance (Greevy et al., 2004; Raudenbush & Willms, 1995). e procedure used to create a matched sample of traditional public schools for comparison to charter schools is described in detail below.

e expansive research conducted in the field of education and the comparative nature of this study allow for the use of purposive sampling to select the matched set of traditional public schools. In purposive sampling, the researcher uses education literature to guide the selection of covariates of the population important to the study (Bryman, 2016). Specifically in the examination of school outcomes, literature has documented several important covariates for consideration: geographic location (Wong et al., 2013), school size (Fowler & Walberg, 1991), grade levels served (Fowler & Walberg, 1991; Heck, 2000), teacher experience (Clotfelter et al., 2007), concentrations of economically disadvantaged students (Fowler & Walberg, 1991; Heck, 2000), special education students served (Heck, 2000; McCaffrey et al., 2004), historically marginalized student group enrollment (Darling-Hammond, 2004), and proportion of English learners served (Abedi & Gándara, 2006). Guided by this vast array of literature, this study creates a systematic sample (Bryman, 2016) of matched traditional public schools by optimizing important covariate balances between the charter and traditional public school groups. e selection of the systematic sample begins with defining the sampling frame.

e sampling frame is the subset of the population from which the sample, or in this case, the matched set, is drawn (Bryman, 2016). e sampling frame is defined as the population of traditional public school campuses located within cities with at least one charter school campus. By defining the sampling frame in this way, the study controls for exogenous characteristic influence (Wong et al., 2013) on outcome variables. Texas has public schools in 1,091 cities.[29] Of those, 913 cities have only traditional public school campuses, 164 have both traditional public school and charter school campuses, and 15 have only charter school campuses. When the total population of 7,888 traditional public school campuses was narrowed to include only those located in cities with charter school campuses, 4,672 traditional public school campuses remained as the sampling frame.

Once the sampling frame was defined, the frame was stratified into three distinct groups (strata) by grade levels served. e school level (elementary, middle, or high school) was assigned to each school based upon the proportion of students served in each grade. Within each of the three strata, the sampling process was

29 The city in which each school was located was reported as the ARC city variable in the Texas school nder ArcGIS data downloaded February 15, 2022: https://schoolsdata2-tea-texas.opendata.arcgis.com/

conducted independently to ensure robust matching and to ensure the matched set of traditional public schools were representative of school level.

All schools were categorized as "primarily" elementary school (kindergarten through Grade 5), middle school (Grades 6 through 8), or high school (Grades 9 through 12). Percentages of students served in elementary, middle, and high school grades were calculated for each school. To calculate the percentage of students served in each grade level group, grade level counts for elementary, middle, and high schools were summed and divided by total enrollment. Schools were labeled as an elementary, middle, or high school based upon the highest percentage. Schools with the highest equal proportions of students in two grade-level groups were labeled with the highest option. For example, if a school served equal percentages of elementary and middle school students, the school was labeled as a middle school; if a school served equal percentages of middle and high school students, the school was labeled as a high school.

Because this report compares the performance of charter schools by authorizer, matched sets of traditional public schools for SBOE-authorized, ISD-authorized, and COE-authorized charter school campuses were created independently. e sampling techniques described below were conducted three times—once for each of the three authorizer types. e sampling occurred with replacement, meaning that the same sampling frame within each stratum was used for each of the charter school authorizer groups. Sampling each independently ensured that the matched set of traditional public schools was representative of the charter schools by authorizer.

Beginning with the sampling frame for each school-level stratum, covariates not controlled for in the stratification or independent sampling were balanced first using t-tests to determine significant difference (covariates are displayed below). If the t-test revealed no significant difference in the distributions of the variable among charter schools and traditional public schools, the variable was considered balanced. If the t-test yielded a significant difference, outliers in the traditional public school data were trimmed (Ghosh & Vogt, 2012). An outlier was trimmed from the data if the standard deviation from the mean exceeded the standard deviation of the fifth and 95th percentile means. After data were trimmed, t-tests were conducted to evaluate differences between the two groups. e specific order of the covariate balancing was selected based upon the degree of difference in group means. e covariates with the largest differences were trimmed first. T-tests were conducted again, and the process was repeated. In total, eight distinct covariates were balanced:

- Total number of students enrolled
- Average teacher years of experience
- Percentage of African American students enrolled
- Percentage of Hispanic students enrolled
- Percentage of enrolled students receiving special education services
- Percentage of emergent bilingual students/English learners enrolled
- Percentage of enrolled students identified as economically disadvantaged
- Percentage of enrolled students at risk of dropping out of school[30]

Appendix D details the performance results for each charter school included in the report. Residential treatment facilities (RTFs), juvenile justice alternative education programs (JJAEPs), and disciplinary alternative education programs (DAEPs) were not included in purposive sampling, nor in performance analyses. RTFs were excluded because the unique student populations served in instructional settings are far different from other schools. JJAEPs and DAEPs were excluded because the performance of their student populations is attributed back to the students' home campuses. e charter school campuses listed in Appendix D are those reported in the academic performance metrics in this report.

30 All covariates are from the Texas Academic Performance Report, Texas Education Agency, 2020-21.

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For attrition rates, graduation rates, and college, career, and military readiness (CCMR) indicator rates, results were calculated using the number of students at each campus in the group that contributed to the outcome measure. Rather than averaging the campus-level rates for all campuses in a group for each metric, numerators and denominators for each metric were summed then divided to provide an overall rate for the group. is prevents results from being significantly influenced by extreme performance results for very small campuses.

For the purposes of this report, the attrition rate is defined as the percentage of students enrolled in the fall of 2021 who did not return to the same campus in the fall of 2022. e attrition rates for this report were calculated using student-level data provided by the Texas Education Agency (TEA). ose data included a unique identifier, grade level, and the campus for each student enrolled in Texas public schools for the 2020–21 and 2021–22 academic years. Students enrolled in the fall of 2021 were cross-referenced to their fall enrollment in 2022. Students whose fall 2021 campus was different from their fall 2022 campus were considered attritted and counted in the numerator of the attrition rate calculation. e denominator of the attrition rate calculation comprised all students enrolled in the 2020–21 academic year at a particular campus. is calculation was adjusted to account for the grade levels available to students at each campus.

Students were excluded completely from the attrition rate calculations if the school did not offer the next grade level for the student. For example, students whose 2022 expected grade level was less than the lowest or greater than the highest grade level of students enrolled at their 2021 campus of enrollment were excluded from the attrition rate calculation. Students in Grade 12 in the 2020–21 academic year who were not retained in the 2021–22 school year were excluded from the attrition rate calculation. Students attending campuses in the fall of 2021 that closed in the 2021–22 school year were excluded from attrition rate calculations, as well as students enrolled in the fall of 2022 but not found in the fall 2021 data.

In a few cases, students were reported as enrolled by more than one school in 2020–21 and 2021–22. When students were reported as enrolled by two schools in 2020–21, the duplicate student was left in the data set, and the 2021–22 campus of enrollment reported or lack thereof for the student was matched with both student records. If students were reported by two schools in 2020–21, no duplicate record was created. For both schools of enrollment reported in 2020–21, the school of enrollment in 2021–22 was given preference. If the school of enrollment for 2020–21 was not reported as a school of enrollment in 2021–22, one of the schools was chosen at random.

Attrition rates were calculated for all active campuses of accountability for the 2020–21 school year, with the exception of RTFs, JJAEPs, and DAEPs. To be determined as an “active” campus, the campus had to have a status of active reported in the Public Education Information Management Sn the Public riTGhe fa0nator of

For schools rated under alternative accountability provisions, the rate is the sum of graduates, continuers,

program.[34]

. To achieve this, a graduate must earn credit for an ELA college preparatory course defined in TEC § 28.014 (2019).

. To achieve this, a graduate must earn credit for a mathematics college preparatory course defined in TEC § 28.014 (2019).

. To achieve this, a graduate must complete an OnRamps dual enrollment course and qualify for at least three hours of university or college credit in any subject area.

. is means a graduate has earned an associate's degree prior to their graduation from high school.

( ) . To achieve this, a graduate must complete his/her IEP and demonstrate either self-employment with self-help skills to maintain employment or mastery of specific employability and self-help skills that do not require public school services.

. To achieve this, a student graduates under an advanced diploma plan and is identified as

.2

, , 2020 21

	*	M		
	0	963	18,583	19,546
	0	0	474	474
	0	0	681	681
	0	49	1,736	1,785
	0	0	173	173
	0	179	14,637	14,816
	0	0	0	0
	0	0	0	0
	0	57	1,361	1,418

Source. T A , P R , T E , A , 2020 21.

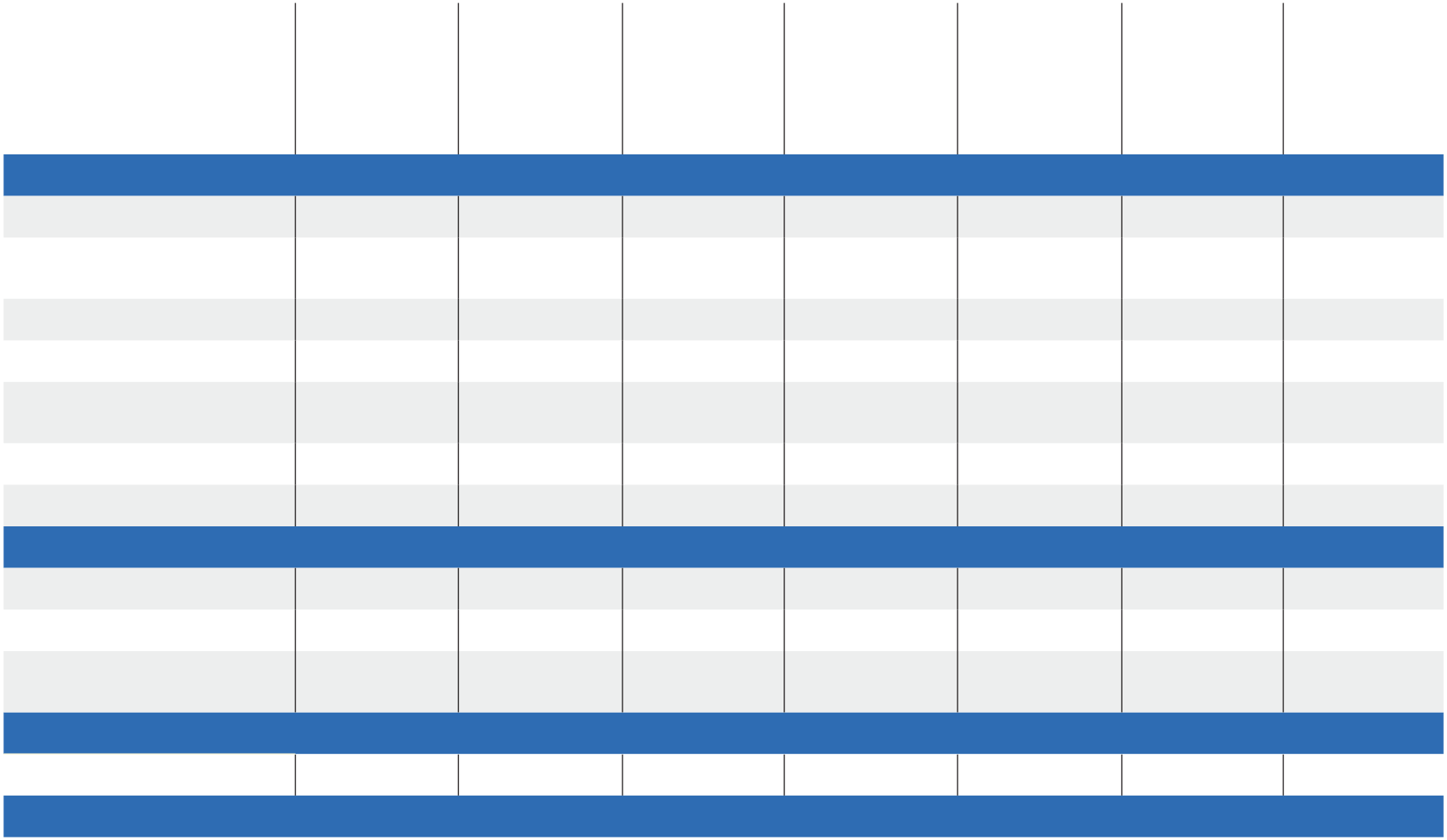
Note. T ISD- .

Key. SBOE = S B E ; ISD = I S D ; COE = ;
DAEP = D, A E P ; JJAEP = J J A E P .

* R PK 12 50% AEA

.3

, 2020 21



.4

M

, 2020 21

	-	M -	-	M -	-	M -
	18%	17%	15%	15%	20%	29%
	<1%	<1%	<1%	<1%	1%	1%
	<1%	<1%	1%	1%	3%	1%
	63%	64%	76%	66%	62%	50%
	<1%	<1%	0%	<1%	<1%	1%
	2%	2%	3%	2%	1%	3%
	16%	24%	5%	15%	13%	16%
	92%	88%	94%	91%	100%	93%
	75%	77%	91%	74%	90%	68%
	19%	15%	16%	15%	25%	16%
	11%	9%	14%	8%	2%	7%

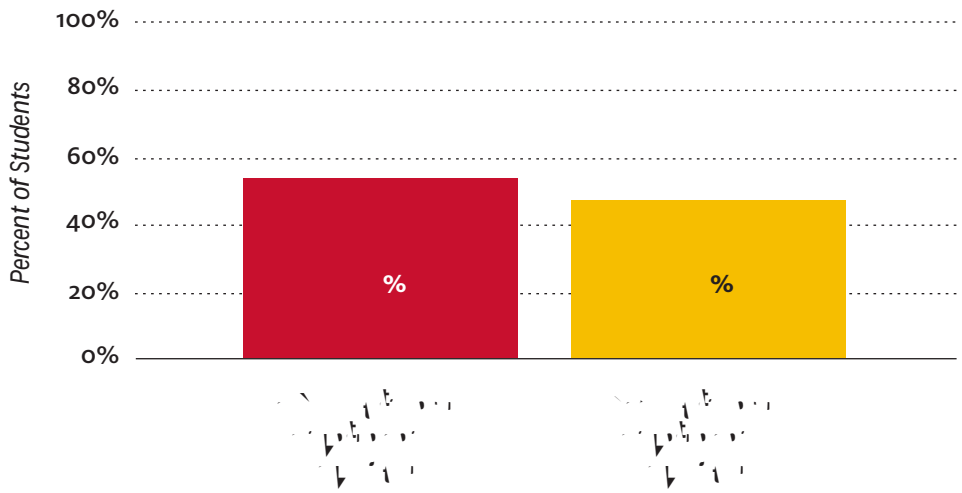
Source. T A , P R , T E , A , 2020 21.

Note. T S B E , (SBOE)- (ISD)- , .

Appendix C: Aggregate Performance on Additional STAAR Exams for Charter School Campuses by Authorizer Type

.1

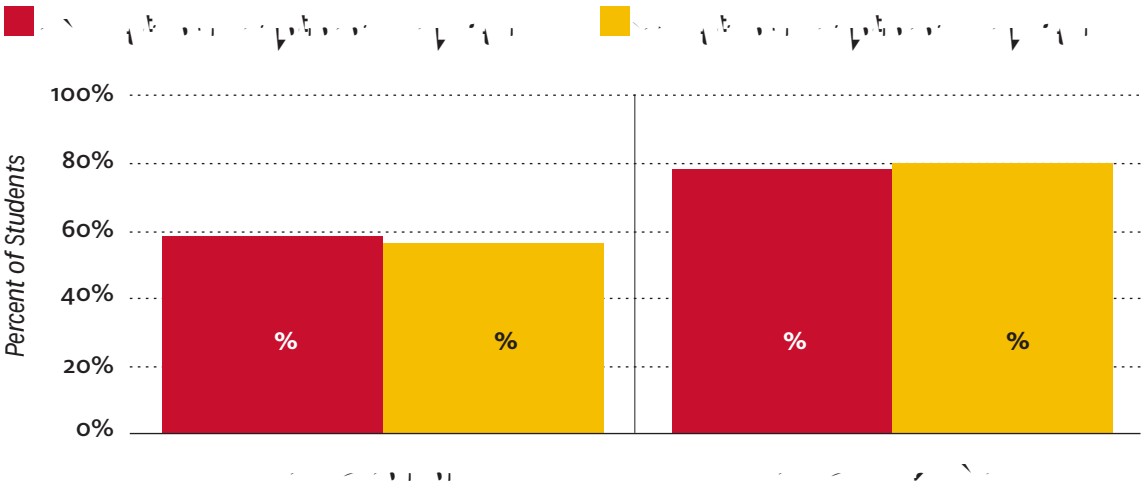
(4) , 2020 21



Source. T A , P R , T E , A , 2020 21.

Note. A 531 S B E , (SBOE)- 88 I S D, (ISD)- S T A A , R , (STAAR)- .

.2



Source. T A , P R , T E , A , 2020 21.

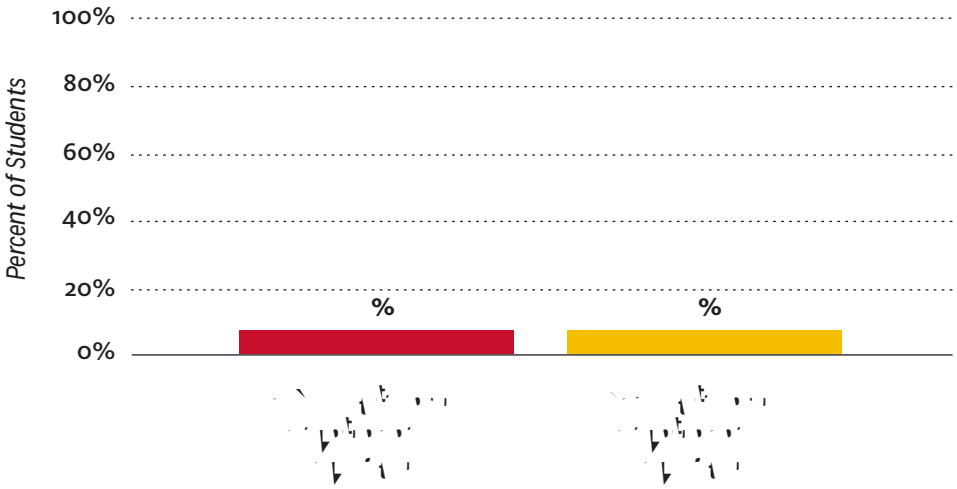
Note. A 496 S B E , (SBOE)- 84 I S D, (ISD)- S T A A R)- S . A 299 SBOE- 31 ISD- STAAR-B, -(EOC) .

.4

M

- (4

) , 2020 21



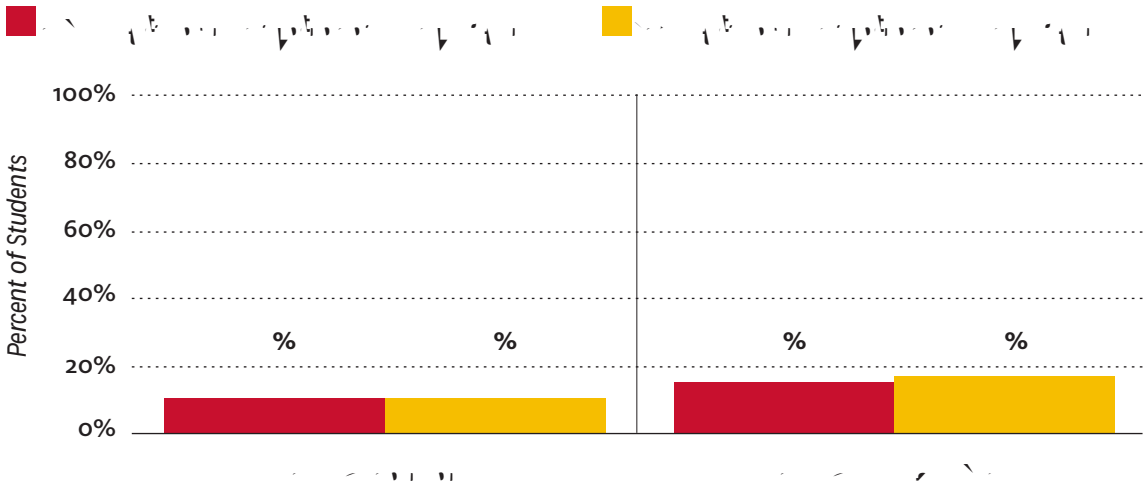
Source. T A , P R , T E , A , 2020 21.

Note. A 531 S B E , (SBOE)- S D, (ISD)- A , R , (STAAR)- .

·5

M

, 2020 21



Source. A , P R , E , A , 2020 21.

Note. A 496 S B E , (SBOE)- 84 I S D, (ISD)- S T A A R)- S . A 299 SBOE- 31 ISD- STAAR-B, -(EOC) .


100%
80%
60%
40%
20%
0%
Percent of Students

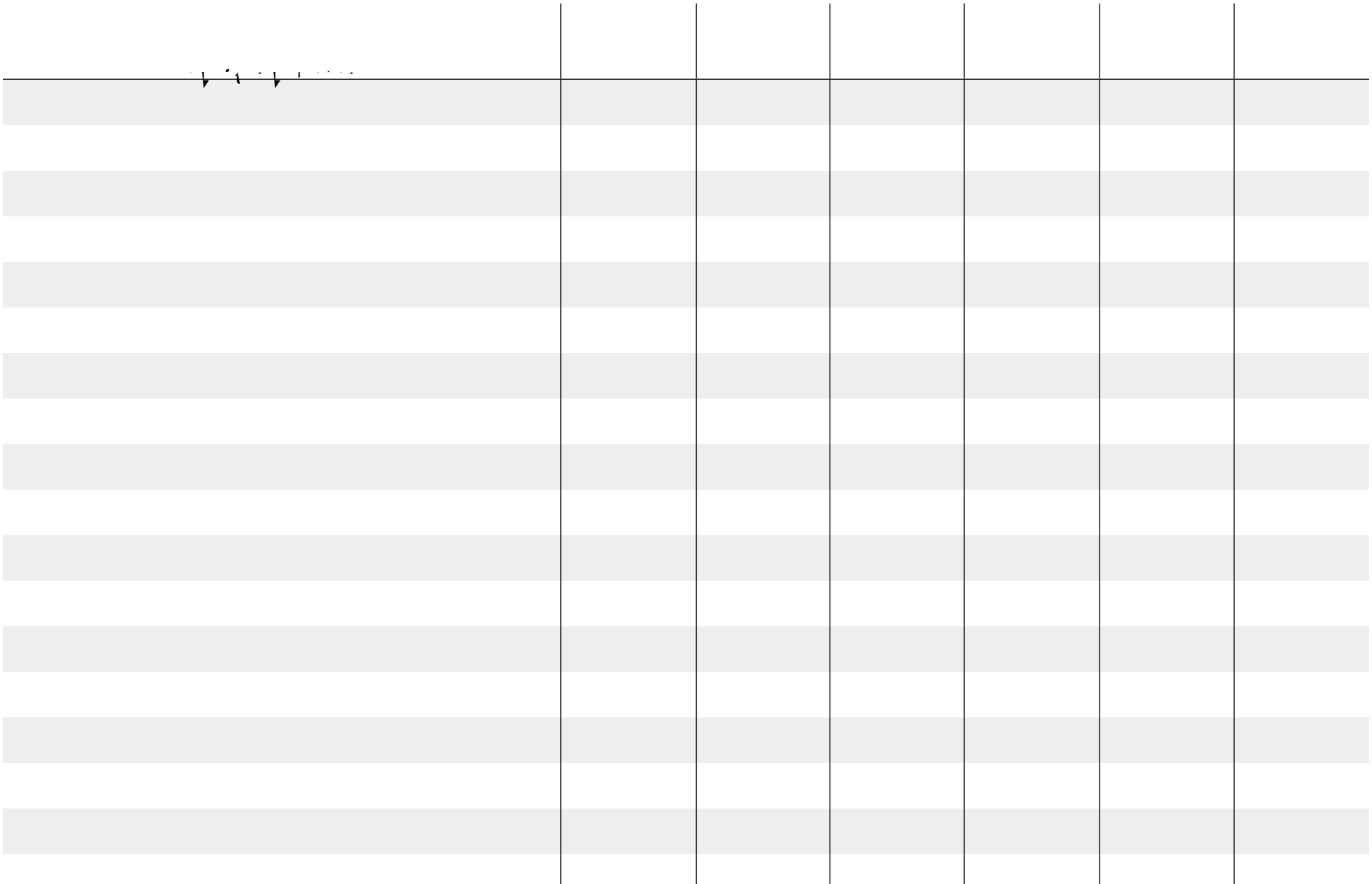
.1

	15%	62%	10%	71%	21%	ISD
	14%	43%	4%	47%	7%	SBOE
	99%	53%	12%	47%	11%	SBOE
	45%	41%	5%	20%	1%	SBOE
	26%	62%	16%	54%	19%	SBOE
	14%	71%	21%	51%	6%	ISD
	37%	42%	9%	29%	4%	SBOE
	20%	61%	16%	64%	11%	ISD
	35%	49%	8%	54%	13%	ISD
	22%	84%	29%	74%	15%	SBOE
	20%	46%	9%	45%	7%	ISD

Key. STAAR = S T A A R ; SBOE = S B E ; ISD = I S D ; COE = ; (-) . (*) . 2 (A).

	25%	90%	31%	84%		

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-) , , (*) , , - , 2 (A , A ,).



Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-) , (*) , - 2 (A A).

	29%	61%	11%	56%	8%	ISD
	11%	81%	27%	80%	20%	SBOE
	41%	40%	7%	25%	1%	COE
	38%	21%	4%	18%	2%	COE
	34%	84%	37%	76%	25%	SBOE
	22%	72%	28%	47%	3%	SBOE
	43%	60%	13%	33%	6%	SBOE
	15%	65%	21%	53%	11%	SBOE
	20%	38%	5%	18%	1%	ISD
	30%	83%	23%	68%	30%	SBOE
	15%	SBOE	3%	28%	84%	28%

Key. STAAR = S T A A R ; SBOE = S B E ; ISD = I S D ; COE = (-) (*) 2 (A).

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-) , (*) , - 2 (A ,).

	71%	-	-	-	-	SBOE
	19%	68%	17%	86%	33%	SBOE
	39%	61%	12%	34%	3%	COE
	20%	80%	24%	77%	23%	SBOE
	18%	88%	40%	85%	33%	SBOE
	17%	85%	38%	77%	29%	SBOE
	25%	77%	26%	74%	18%	SBOE
	13%	88%	39%	88%	42%	SBOE
	13%	90%	31%	86%	25%	SBOE
	25%	75%	21%	68%	19%	SBOE
	27%	55%	12%	62%	15%	ISD
	26%	75%	26%	70%	23%	SBOE
	43%	74%	33%	69%	26%	SBOE
	26%	52%	10%	31%	4%	SBOE
	19%	59%	12%	53%	12%	SBOE
	20%	62%	53%	53%		

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-), , (*), , -2 (A, A,).

	20%	70%	16%	57%	11%	SBOE
	18%	56%	11%	51%	9%	SBOE
	29%	49%	5%	34%	2%	SBOE
	25%	66%	19%	48%	14%	SBOE
	26%	64%	15%	55%	7%	SBOE
	26%	55%	10%	36%	7%	SBOE
	16%	45%	8%	36%	4%	SBOE
	32%	57%	6%	40%	4%	SBOE
	30%	69%	18%	64%	19%	SBOE
	31%	72%	27%	68%	20%	SBOE
	28%	70%	19%	63%	13%	SBOE
	22%	55%	13%	50%	7%	SBOE
	20%	42%	5%	40%	4%	SBOE
	24%	37%	8%	36%	3%	SBOE
	24%	47%	11%	40%	5%	SBOE
	33%	49%	7%	47%	4%	SBOE
	47%	75%	32%	75%	35%	SBOE

Key. STAAR = S T A A R ; SBOE = S B E ; ISD = I S D ; COE = ; (-) . (*) . 2 (A).

	26%	71%	20%	62%	11%	SBOE
	18%	61%	13%	48%	5%	SBOE
	24%	61%	15%	48%	8%	SBOE
	29%	54%	17%	54%	8%	SBOE
	31%	56%	9%	45%	4%	SBOE
	14%	57%	12%	54%	8%	SBOE
	31%	61%	16%	39%	6%	SBOE
	20%	62%	13%	53%	11%	SBOE
	18%	62%	18%	52%	12%	SBOE
	17%	77%	27%	64%	22%	SBOE
	12%	81%	31%	83%	34%	SBOE
	18%	57%	10%	43%	3%	ISD
	17%	39%	5%	34%	4%	ISD
	33%	62%	25%	59%	13%	SBOE
	27%	66%	20%	62%	11%	COE
	35%	57%	9%	40%	7%	COE
	36%	56%	13%	58%	13%	ISD
	31%	62%	15%	57%	9%	SBOE

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-) , (*) , 2 (A ,).

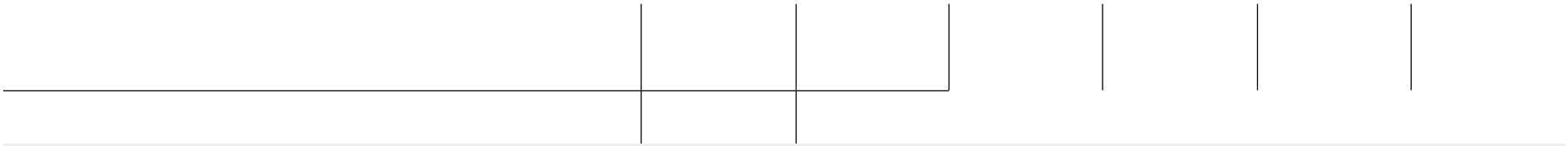
Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-) , (*) , - , 2 (A ,).

	23%	63%	12%	38%	5%	SBOE
	26%	57%	10%	51%	9%	SBOE
	17%	81%	27%	69%	21%	SBOE
	28%	-	-	-	-	SBOE
	24%	83%	32%	83%	26%	SBOE
	43%	-	-	-	-	SBOE
	32%	48%	15%	32%	7%	SBOE
	21%	64%	24%	66%	19%	SBOE
	21%	71%	15%	54%	7%	SBOE
	21%	64%	16%	53%	12%	SBOE
	21%	72%	17%	54%	5%	SBOE
	16%	77%	21%	64%	17%	SBOE
	20%	63%	15%	50%	13%	SBOE
	23%	-	-	-	-	SBOE
	39%	81%	21%	69%	13%	SBOE
	36%	52%	10%	46%	11%	SBOE
	34%	-	-	-	-	SBOE
	25%	62%	21%	50%	12%	SBOE

Key. STAAR = S T A A R ; SBOE = S B E ; ISD = I S D ; COE = ; (-) . (*) . 2 (A).

	26%	84%	27%	79%	18%	SBOE
	25%	69%	16%	47%	8%	SBOE
	19%	59%	17%	56%	11%	SBOE
	20%	-	-	-	-	SBOE
	19%	86%	34%	90%	26%	SBOE
	18%	73%	20%	63%	11%	SBOE
	36%	-	-	-	-	SBOE
	23%	67%	17%	49%	6%	SBOE
	15%	73%	20%	53%	16%	SBOE
	35%	57%	15%	50%	8%	SBOE
	18%	77%	21%	55%	8%	SBOE
	21%	64%	16%	54%	15%	SBOE
	43%	-	-	-	-	SBOE
	28%	44%	14%	43%	7%	SBOE
	29%	48%	10%	36%	7%	SBOE
	22%	72%	28%	67%	23%	SBOE
	21%	64%	13%	50%	5%	SBOE
	28%	62%	12%	37%	5%	SBOE

Key. STAAR = S T A A R ; SBOE = S B E ; ISD = I S D ; COE = ; (-) (*) 2 (A).



Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , , ; (-) , , (*) , , -2 (A , A).

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-) , , (*) , , -2 (A A, A).

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , , ; (-) , , , (*) , , , -, 2 (A , A).

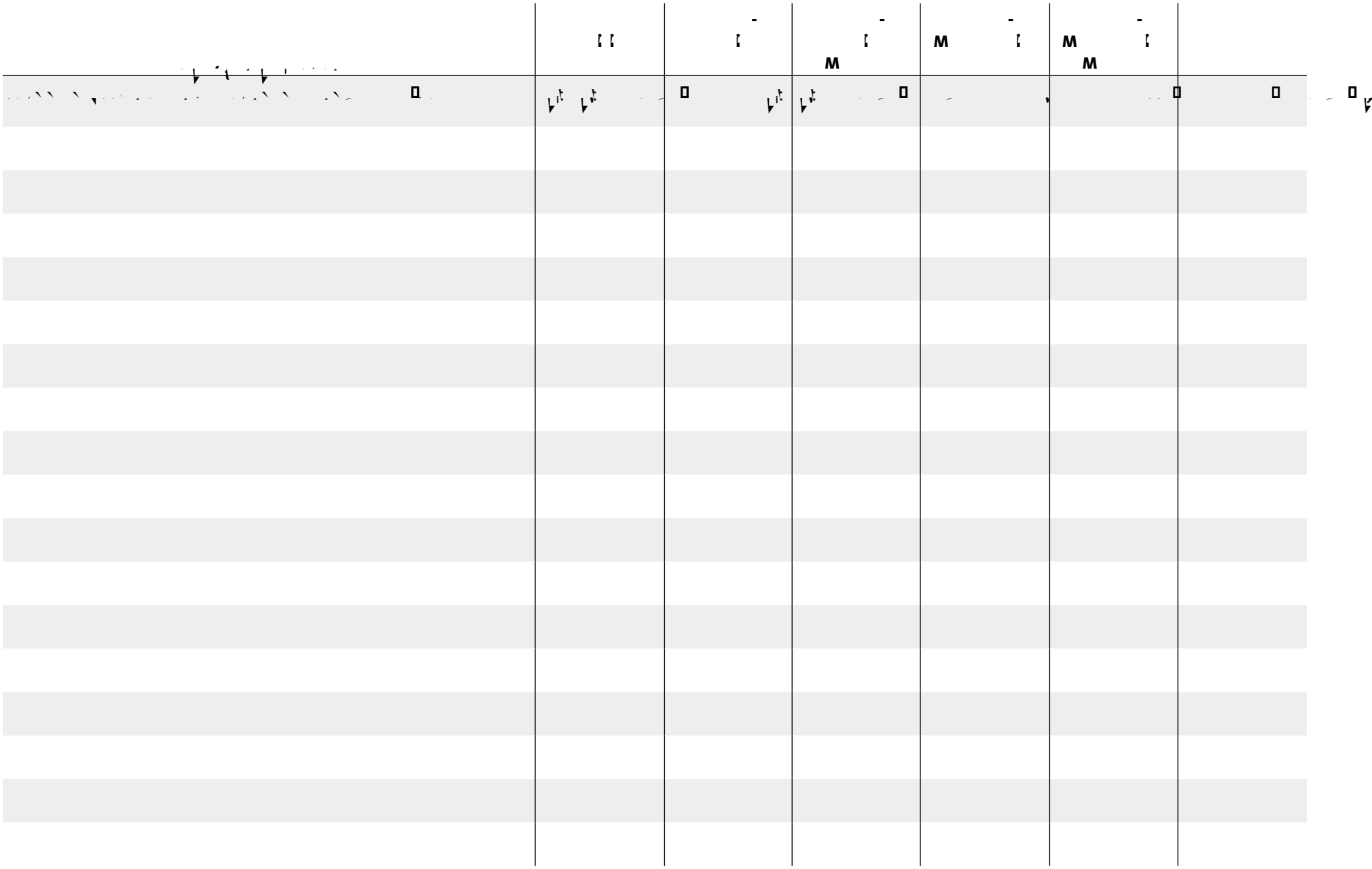
	53%	33%	67%	13%	13%	SBOE
	30%	72%	20%	63%	9%	SBOE
	26%	74%	19%	54%	7%	SBOE
	47%	82%	22%	76%	14%	SBOE
	16%	-	-	-	-	SBOE
	31%	67%	22%	58%	12%	SBOE
	43%	77%	22%	57%	25%	SBOE
	19%	58%	10%	66%	16%	SBOE
	35%	57%	7%	71%	4%	SBOE
	48%	58%	0%	17%	17%	SBOE
	25%	60%	9%	47%	6%	SBOE
	10%	78%	27%	75%	16%	SBOE
	24%	40%	5%	36%	3%	SBOE
	27%	60%	20%	53%	13%	SBOE
	23%	51%	10%	38%	3%	SBOE
	26%	31%	3%	18%	1%	ISD
	25%	37%	5%	33%	5%	ISD

Key. STAAR = S T A A R ; SBOE = S B E ; ISD = I S D ; COE = ; (-) (*) 2 (A).

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-) , , (*) , , , -, 2 (A, A,).

	16%	40%	5%	35%	2%	SBOE
	23%	93%	25%	92%	31%	SBOE
	38%	-	-	-	-	ISD
	25%	-	-	-	-	ISD
	15%	57%	10%	45%	7%	ISD
	27%	71%	22%	64%	15%	ISD
	27%	83%	35%	86%	39%	COE
	15%	71%	33%	77%	28%	SBOE
	9%	100%	75%	100%	64%	ISD
	23%	71%	19%	61%	10%	SBOE
	30%	68%	17%	45%	6%	SBOE
	30%	59%	15%	37%	5%	SBOE
	19%	65%	15%	49%	8%	SBOE
	30%	59%	14%	46%	8%	SBOE

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-) , (*) , -2 (A ,).



Key. STAAR = S T A A R ; SBOE = S B E ; ISD = I S D ; COE = (-) (*) (A A).

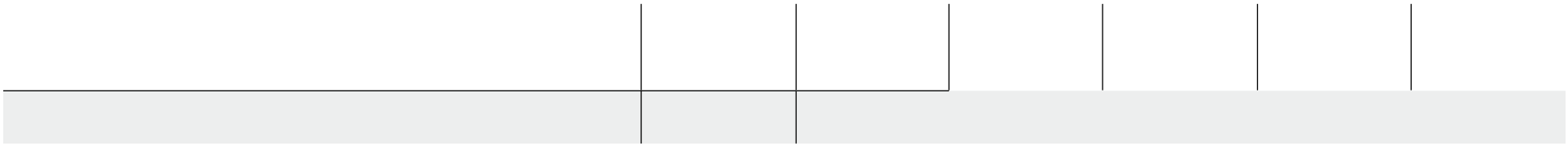
	32%	74%	24%	66%	17%	SBOE
	26%	63%	11%	46%	9%	SBOE
	11%	97%	60%	97%	58%	SBOE
	28%	21%	3%	21%	1%	ISD
	53%	12%	0%	6%	0%	SBOE
	46%	23%	7%	10%	0%	SBOE
	40%	57%	11%	45%	6%	SBOE
	28%	-	-	-	-	SBOE
	24%	66%	16%	65%	12%	SBOE
	39%	62%	8%	46%	4%	SBOE
	24%	48%	6%	47%	9%	SBOE
	24%	74%	18%	62%	8%	SBOE
	53%	41%	14%	30%	3%	SBOE
	52%	72%	21%	54%	8%	SBOE
	27%	81%	30%	63%	11%	SBOE
	31%	65%	12%	53%	8%	SBOE
	100%*	55%	5%	65%	10%	SBOE
	21%	62%	6%	38%	0%	SBOE

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-) , (*) , -2 (A ,).

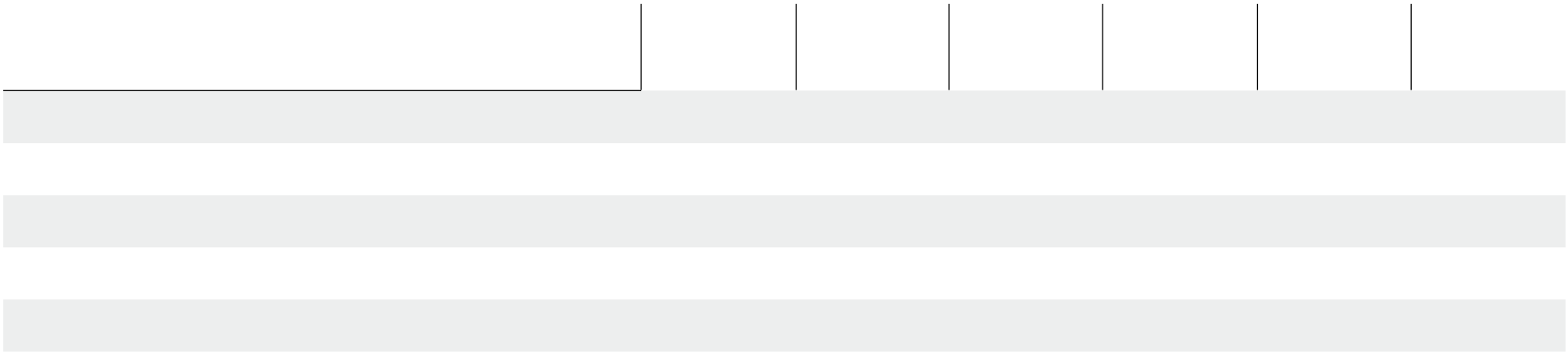
Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-) , (*) , , -2 (A ,).

	24%	49%	11%	55%	11%	SBOE
	33%	35%	6%	28%	3%	SBOE
	17%	50%	11%	37%	6%	SBOE
	32%	36%	9%	30%	3%	SBOE
	16%	59%	17%	55%	9%	SBOE
	19%	50%	10%	38%	7%	SBOE
	21%	57%	13%	53%	8%	SBOE
	13%	44%	10%	40%	9%	SBOE
	15%	95%	52%	88%	46%	SBOE
	24%	80%	33%	72%	17%	SBOE
	26%	83%	33%	76%	17%	SBOE
	17%	74%	21%	67%	12%	COE
	26%	82%	43%	75%	28%	COE
	20%	84%	35%	76%	20%	COE
	17%	74%	24%	57%	9%	SBOE
	14%	61%	14%	39%	5%	SBOE
	39%	52%	12%	43%	3%	SBOE
	22%	70%	20%	45%	7%	SBOE

Key. STAAR = S T A A R ; SBOE = S B E ; ISD = I S D ; COE = ; (-) (*) 2 (A).



Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-) , , (*) , , -2 (A , A).



Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , , ; (-) , , (*) , , - , 2 (A , A ,).

	26%	43%	6%	39%	4%	-	-	-	-	76%	11%	ISD
	8%	60%	13%	39%	3%	-	-	-	-	81%	14%	SBOE
	18%	53%	11%	43%	4%	-	-	-	-	87%	30%	ISD
	17%	48%	10%	48%	1%	-	-	-	-	81%	4%	COE
	15%	64%	14%	49%	5%	-	-	-	-	93%	25%	ISD
	17%	64%	15%	37%	2%	-	-	-	-	97%	54%	ISD
	26%	59%	18%	57%	7%	-	-	-	-	-	-	COE
	10%	58%	12%	43%	4%	-	-	-	-	-	-	ISD
	12%	59%	11%	81%	22%	-	-	-	-	-	-	ISD
	18%	53%	9%	34%	3%	92%	4%	-	-	77%	16%	ISD

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D ; COE = , ; (-) , (*) , -2 (A ,).

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , , ; (-) , , (*) , , - 2 (A , A).

	10%	58%	10%	51%	9%	-	-	-	-	80%	27%	SBOE

Key. STAAR = S T A A R ; SBOE = S B E ; ISD = I S D ; COE = ; (-) . (*) . 2 (A).

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , , ; (-) , , (*) , , - 2 (A , A).

	21%	71%	16%	63%	12%	-	-	-	-	-	-	SBOE
	31%	71%	14%	81%	14%	-	-	-	-	-	-	SBOE
	15%	77%	22%	70%	16%	67%	13%	87%	20%	89%	25%	SBOE
	21%	81%	28%	70%	19%	75%	20%	89%-	8L261EB18	8L261EB18	Td(70)Tj/MCID 20 BDC	

Key. STAAR = S T A A R ; SBOE = S B E ; ISD = I S D ; COE = ; (-) . (*) . 2 (A A).

	11%	80%	28%	74%	18%	-	-	-	-	78%	19%	SBOE
	14%	63%	15%	42%	4%	-	-	-	-	42%	4%	SBOE
	24%	49%	7%	39%	4%	-	-	-	-	49%	2%	SBOE
	20%	64%	11%	47%	3%	-	-	SBOE	49%			

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-), , (*), , -, 2 (A, A,).

	17%	55%	10%	38%	4%	-	-	-	-	-	-	SBOE
	99%	66%	7%	55%	2%	-	-	-	-	-	-	SBOE
	54%	45%	7%	34%	2%	-	-	-	-	-	-	COE
	20%	92%	40%	88%	17%	-	-	-	-	95%	43%	SBOE
	13%	69%	15%	65%	6%	-	-	-	-	90%	33%	SBOE
	28%	29%	3%	14%	0%	-	-	-	-	60%	0%	ISD
	14%	55%	11%	56%	7%	-	-	-	-	-	-	ISD
	10%	100%	50%	94%	6%	-	-	-	-	-	-	SBOE
	35%	53%	8%	21%	0%	-	-	-	-	-	-	SBOE
	33%	51%	8%	26%	2%	63%	0%	82%	0%	32%	0%	SBOE
	30%	48%	6%	28%	1%	-	-	-	-	-	-	SBOE
	25%	63%	13%	45%	3%	-	-	-	-	90%	24%	SBOE
	10%	64%	13%	39%	1%	-	-	-	-	94%	18%	SBOE
	100%*	72%	15%	54%	6%	-						ISD
	11%	59%	12%	49%	6%					59%	4%	SBOE

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-) , (*) , 2 (A, A).

				M		M		M	
	13%	93%	63%	5%	63%	6%	74%	28%	ISD

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-) , , (*) , , -2 (A , A).

				M		M		M	
	38%	100%	67%	4%	67%	7%	38%	0%	SBOE
	14%	-	84%	21%	86%	15%	54%	13%	SBOE
	40%	-	77%	16%	84%	13%	42%	8%	SBOE
	29%	100%	51%	4%	62%	5%	52%	5%	SBOE
	28%	99%	61%	2%	76%	6%	54%	6%	SBOE
	22%	-	44%	1%	56%	4%	30%	1%	SBOE
	20%	-	63%	4%	79%	12%	53%	4%	SBOE
	23%	100%	67%	5%	84%	9%	52%	6%	SBOE
	25%	-	49%	5%	67%	2%	78%	10%	SBOE
	16%	97%	44%	2%	48%	2%	51%	1%	SBOE
	27%	100%	98%	24%	98%	13%	93%	9%	SBOE
	18%	99%	98%	31%	97%	15%	90%	19%	SBOE
	33%	-	89%	25%	83%	25%	82%	33%	SBOE
	20%	93%	50%	5%	52%	5%	60%	8%	ISD
	58%	79%	73%	20%	63%	0%	67%	8%	SBOE
	9%	-	58%	5%	64%	4%	35%	2%	SBOE
	4%	97%	67%	9%	69%	6%	39%	9%	SBOE

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-), , (*), , -, 2 (A, A,).

	21%	100%	-	-	100%	30%	-	-	SBOE
	16%	100%	75%	12%	76%	4%	61%	4%	SBOE
	15%	100%	77%	8%	78%	9%	77%	35%	SBOE
	14%	97%	45%	5%	57%	4%	48%	9%	ISD
	18%	98%	-	-	-	-	-	-	SBOE
	13%	100%	84%	14%	79%	3%	85%	19%	ISD
	24%	100%	68%	5%	86%	3%	56%	8%	SBOE
	35%	85%	41%	0%	53%	0%	33%	0%	SBOE
	26%	100%	70%	4%	87%	8%	49%	0%	ISD
	16%	100%	29%	5%	45%	0%	10%	0%	SBOE
	49%	74%	84%	18%	86%	14%	68%	14%	ISD
	26%	93%	64%	7%	56%	0%	17%	0%	SBOE
	20%	98%	45%	0%	-	-	38%	0%	SBOE
	11%	100%	89%	17%	97%	22%	53%	4%	ISD
	12%	100%	68%	6%	74%	5%	34%	0%	SBOE
	16%	100%	95%	51%	99%	37%	50%	4%	SBOE
	20%	-	62%	1%	82%	10%	55%	5%	SBOE

Key. STAAR = S T A A , R ; SBOE = S B E , ; ISD = I S D, ; COE = , ; (-) , (*) , 2 (A , A).

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Key. SBOE = S B E ; ISD = I S D ; COE = (-)

	0%	-	-	0%	-	-	-	-	0%	0%	9%	SBOE
	20%	2%	26%	0%	1%	-	-	-	0%	0%	1%	SBOE
	13%	29%	16%	0%	2%	-	-	-	0%	0%	6%	SBOE
	47%	19%	30%	0%	-	57%	45%	-	0%	0%	2%	ISD
	33%	-	43%	56%	18%	-	-	-	11%	0%	3%	ISD
	94%	-	53%	41%	-	47%	50%	-	0%	6%	9%	ISD
	60%	36%	10%	0%	-	-	-	-	0%	2%	4%	SBOE
	-	-	-	-	-	-	-	-	-	-	-	SBOE
	84%	34%	73%	26%	-	20%	13%	19%	0%	0%	4%	ISD
	78%	-	100%	0%	-	-	-	-	51%	-	-	SBOE
	54%	2%	67%	0%	5%	35%	19%	5%	0%	-	-ISD	13% SBOE

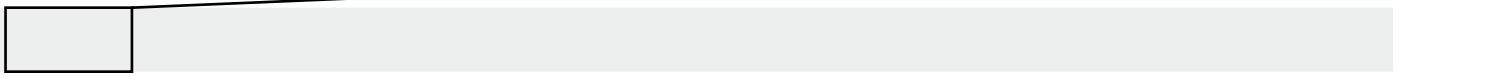
Key. SBOE = S B E ; ISD = I S D ; COE = (-)

	7%	-	33%	0%	-	-	-	-	0%	0%	33%	COE
	62%	-	16%	0%	-	-	-	-	0%	0%	3%	SBOE
	98%	78%	0%	0%	-	-	-	-	0%	-	-	SBOE

98%

Key. SBOE = S B E ; ISD = I S D ; COE = (-)

Key. SBOE = S B E , ; ISD = I S D, ; COE = , , ; (-) , , , .



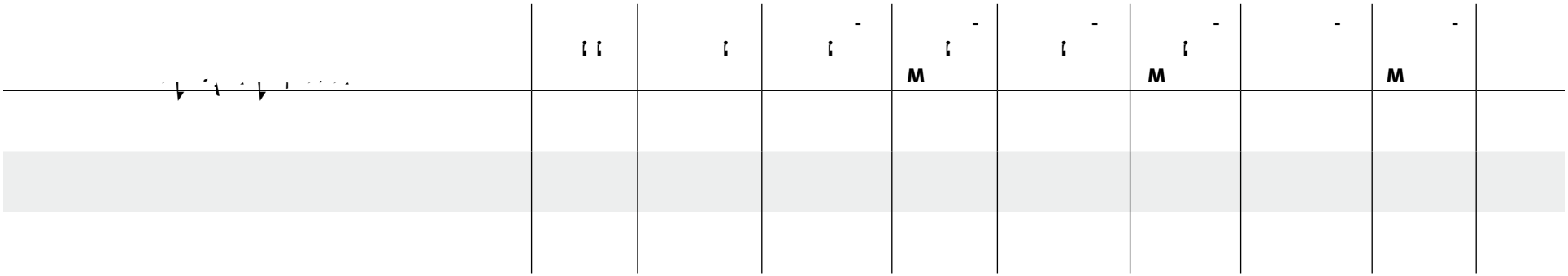
Key. SBOE = S B E , ; ISD = I S D, ; COE = , , ; (-) , , , .

	28%	11%	47%	13%	-	-	-	8%	12%	0%	6%	ISD
	27%	0%	27%	0%	-	-	-	-	0%	0%	0%	SBOE
	0%	-	-	21%	-	-	-	-	0%	0%	0%	ISD
	48%	24%	6%	3%	-	0%	1%	-	0%	0%	4%	ISD
	56%	46%	2%	0%	-	-	-	-	0%	7%	0%	SBOE
	79%	-	100%	0%	7%	-	-	-	50%	-	-	SBOE
	56%	3%	74%	9%	-	-	-	68%	6%	3%	6%	SBOE
	26%	-	68%	7%	2%	-	-	-	39%	0%	5%	SBOE
	36%	-	84%	21%	14%	0%	66%	-	0%	0%	7%	ISD
	82%	33%	100%	0%	-	-	-	-	70%	-	-	SBOE
	97%	-	97%	41%	-	16%	25%	-	66%	0%	3%	ISD
	70%	46%	9%	0%	-	-	-	1%	0%	0%	9%	SBOE
	27%	-	55%	0%	-	0%	23%	-	0%	0%	5%	SBOE

Key. SBOE = S B E ; ISD = I S D ; COE = (-)

				M		M		M	
	59%	95%	79%	7%	73%	13%	75%	13%	SBOE
	53%	100%	60%	0%	88%	0%	50%	13%	SBOE
	68%	98%	33%	0%	75%	0%	-	-	SBOE
	63%	98%	67%	17%	50%	9%	33%	0%	SBOE
	68%	-	56%	6%	81%	13%	69%	23%	SBOE
	47%	100%	63%	6%	67%	11%	50%	0%	SBOE
	59%	100%	43%	0%	65%	0%	50%	0%	SBOE
	54%	57%	42%	3%	34%	0%	27%	4%	SBOE

				M		M		M	
	55%	42%	37%	0%	42%	0%	78%	2%	SBOE
	52%	68%	32%	2%	36%	1%	24%	2%	SBOE
	54%	49%	45%	2%	31%	1%	30%	0%	SBOE
	59%	42%	27%	0%	40%	0%	50%	4%	SBOE
	53%	73%	36%	0%	35%	0%	50%	2%	SBOE
	52%	59%	47%	2%	51%	0%	63%	0%	SBOE
	66%	60%	30%	0%	24%	0%	26%	0%	SBOE
	53%	56%	34%	0%	45%	0%	41%	2%	SBOE
	52%	55%	29%	0%	36%	0%	31%	0%	SBOE
	50%	54%	39%	1%	44%	0%	64%	2%	SBOE
	53%	59%	40%	1%	40%	0%	50%	2%	SBOE



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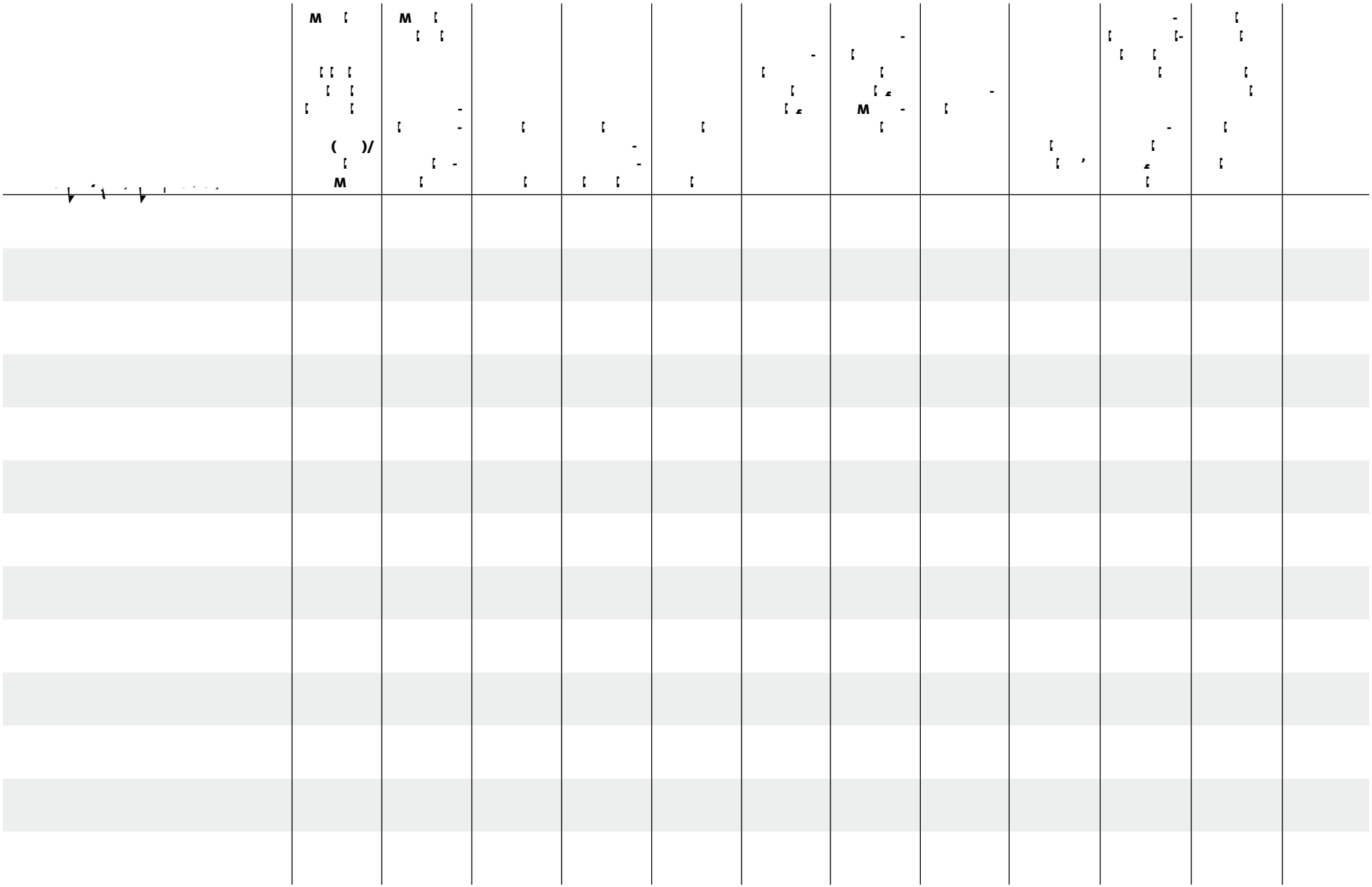
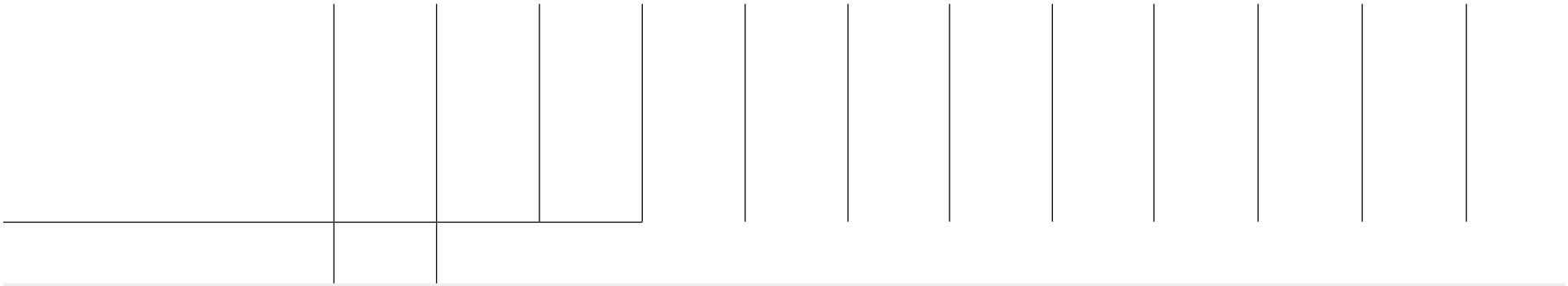
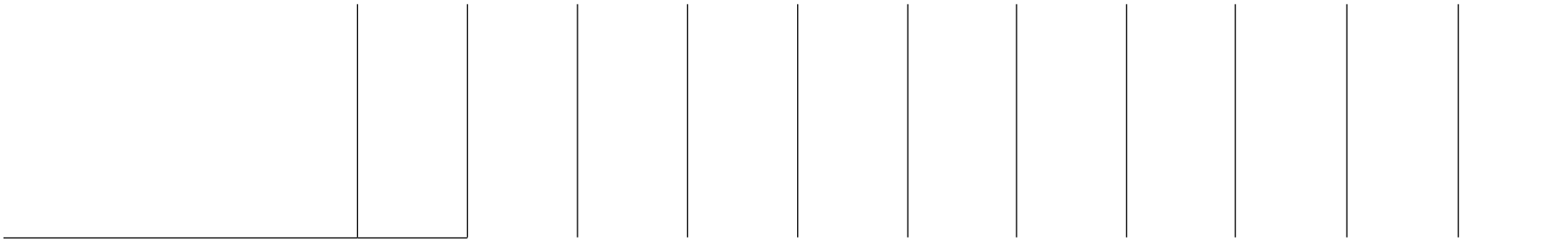
Key. SBOE = S B E ; ISD = I S D, ; COE = (-)



Key. SBOE = S B E ; ISD = I S D, ; COE = ; (-),



Key. SBOE = S B E , ; ISD = I S D, ; COE = , ; (-) , , , .



Key. SBOE = S B E , ; ISD = I S D, ; COE = , , ; (-) , , , .

Key. SBOE = S B E , ; ISD = I S D, ; COE = , ; (-) , .

	0%	10%	0%	3%	-	-	-	-	0%	0%	2%	SBOE
	2%	2%	4%	2%	-	-	-	-	0%	0%	7%	SBOE
	6%	0%	9%	0%	-	2%	17%	-	0%	0%	8%	SBOE
	8%	0%	1%	12%	-	8%	6%	-	0%	1%	6%	SBOE
	2%	4%	-	2%	-	-	-	-	0%	2%	6%	SBOE
	9%	5%	2%	5%	-	-	-	-	0%	0%	10%	SBOE
	38%	13%	13%	13%	-	-	-	-	0%	-	-	SBOE
	3%	0%	1%	0%	-	-	-	-	0%	5%	1%	SBOE
	5%	7%	0%	2%	-	-	-	-	0%	2%	7%	SBOE
	14%	0%	8%	0%	-	6%	6%	-	0%	3%	9%	SBOE

Key. SBOE = S B E ; ISD = I S D, ; COE = ; (-)