Texas Open-Enrollment Charter Schools: Linking Conditions and Practices to Student Achievement

Kelly S. Shapley, Ph.D.
Aprile D. Benner, M.S.
Texas Center for Educational Research

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Thirty-six states, the District of Columbia, and Puerto Rico have enacted charter schools laws. Approximately 1,700 charter schools are serving over 430,000 of the nation's students. In the 1999-00 school year, five states had over 100 charter schools in operation – Arizona (348), California (234), Michigan (175), Texas (168), and Florida (112) (USCS, 2001). Most charter schools are small; in 1999-00, the median student enrollment was 137, compared with 475 in traditional public schools (Nelson, B. et al., 2000).

Student achievement in charter schools is a pivotal concern as the movement continues to grow nationally. In general, states rarely exempt charter schools from state student assessments, and most states hold charter schools to the same accountability standards (based on student outcome measures) as traditional public schools (Anderson, L., et al., 2000; CER, 2001). Because of the diverse assessment practices and educational programming philosophies of charter schools, however, it is difficult to compare student academic performance across charter schools (Powell, J. et al., 1997; Vanourek, et al., 1997; Henig, J.R. et al., 1999). Assessments used in charter schools include student demonstrations, student portfolios, performances, teacher-developed tests, writing samples, and standardized tests (Nelson, B. et al., 2000; Powell, J. et al., 1997; Gifford, M., Phillips, K., & Ogle, M., 2000; CER, 2001). In a study by the Hudson Institute, the majority of students and parents reported higher academic achievement in charter schools compared with the school the students had previously attended (Vanourek, et al., 1997). In Colorado, student scores on state assessments significantly exceed state averages (Fitzgerald, J. et al., 2001). In contrast, charter schools in Michigan and Texas have lower state assessment test scores and higher dropout rates (Horn, J. & Miron, G., 1999; TCER, 2001). Few studies, however, have attempted to link student performance and charter school characteristics. A University of Southern California study (Wohlstetter & Griffin, 1998) found that successful charter schools, those operating as "high performing learning communities," had more autonomy in fiscal and curriculum decisions, sought support from state charter school groups or other support networks, and had parents who supported the school both during the start-up phase and long term.

Texas Charter Schools

In 1995, the Texas Legislature authorized the creation of 20 open-enrollment charter schools, public schools substantially released from state education regulations. Subsequent legislative modifications allowed an additional 100 open-enrollment charters and an unlimited number of open-enrollment charter schools with a declared intention to serve 75 percent or more students at risk of failure or dropping out of school (75 Percent Rule charter schools). Over time and with changes to state statute, the Texas charter school movement has grown to more than 200 charters granted by the Texas State Board of Education. In the 1999-00 school year, 142 charter schools[1] served more than 25,000

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[1] 142 charter schools served students for the majority of the school year, and 141 submitted student and staff data to the state education agency. Several charter schools operated multiple campuses.

Texas students (TEA, 2001). As required by Texas statute, researchers conduct an annual evaluation of open-enrollment charter schools, including explorations of school characteristics and student performance.

Considering the need for knowledge relative to the academic effectiveness of charter schools, this study describes Texas charter school student achievement and changes in student achievement over time, as well as the characteristics of schools and instructional practices that can be linked to student performance. In particular, the study addresses the following questions: (1) what are the characteristics of charter schools and the students enrolled, (2) how are charter school students performing on achievement and other measures in relation to students in traditional public schools, (3) how does staying in or moving between charter and traditional public schools impact student performance, and (4) what charter school conditions and instructional practices support high levels of student achievement?

Methodology

This study centers on 141 charter schools operating for the entire 1999-00 school year with state-level demographic and performance data; of these, 44 were 75 Percent Rule charter schools. The 141 charter schools served 25,593 students, with an average of 182 students per school and enrollments ranging from 6 to 823 students.

Data Sources

The study uses school- and student-level data to examine the performance of Texas charter schools and traditional public schools. Quantitative data were obtained through two Texas Education Agency (TEA) data systems: the Academic Excellence Indicator System (AEIS) and the Public Education Information Management System (PEIMS). Data from these sources include Texas Assessment of Academic Skills (TAAS) results, accountability ratings, other student performance measures, demographics, staffing, and financial information. Charter school applications provided qualitative information.

TAAS. The TAAS is a series of criterion-referenced tests with three primary subtests: reading, mathematics, and writing. Students in grades 3-8 and 10 currently take TAAS reading and mathematics subtests; writing is administered at grades 4, 8, and 10. TAAS data, drawn from AEIS and PEIMS, were analyzed at both the school and student level.

Accountability ratings. In Texas, districts and campuses receive annual accountability ratings based primarily on standardized test results and dropout rates. Charter schools may be rated using the primary system that includes TAAS performance and dropout rate standards for the following ratings: Exemplary, Recognized, Acceptable, and Low-Performing. Schools may also petition to be rated under the alternative education (AE) system. This system has lower TAAS and dropout standards; however, schools under this rating system must also meet additional performance standards. AE ratings are Commended, Acceptable, and Needs Peer Review.

Other measures. Quantitative analyses were also completed on the following AEIS data elements: student attendance rates, dropout rates, advanced course completion rates, and end-of-course examination passing rates. Additional analyses involved demographic, staffing, and financial indicators.

Charter school applications. In Texas, charter schools complete an extensive application rated by a team of external evaluators, with application scores informing charter awards. Information on educational plans was derived from a qualitative analysis of charter school applications. Evaluators reviewed applications of 23 charter schools (15 successful and 8 struggling charter schools) that had operated for two or more years.

Procedures

Four primary issues are explored in this study—school characteristics, school-level performance, performance of student cohort groups, and school characteristics supporting achievement.

School characteristics. Charter schools are described relative to student demographics, staffing information, and revenues and instructional expenditures. Comparisons are made between charter schools and traditional public schools in the state and by types of charter schools (i.e., characteristics of students served).

School-level performance. Comparisons in student performance are made between charters and traditional public schools. Performance measures examined include accountability ratings, TAAS scores, end-of-course and advanced course performance, school attendance, and dropout rates. Performance, and changes in performance, for charter school students and traditional public school students are compared and contrasted. Where appropriate, student risk factors and ethnicity are used to ensure fair comparisons.

Student cohort group performance. Longitudinal student-level data for all students who have attended a Texas charter school at any time in the past four years reveal the achievement of students who remain in charter schools as well as those who leave charter schools to return to traditional public schools. Analyses focus on TAAS performance and incorporate the use of Texas Learning Index (TLI) scores. Analyses involve matched students contrasting performance over two years—1998-99 (*N*=3,516) and 1999-00 (*N*=8,384).

School characteristics supporting achievement. Analyses of school characteristics were completed for 23 charter schools established for at least two years. Based on AEIS accountability ratings and TAAS performance, charter schools were categorized as successful or struggling. Applications of these charters were reviewed, with comparative analyses (Bogden & Biklen, 1992) focused on educational programs and organizational structures.

Characteristics of Charter Schools

Of the 141 charter schools operating in 1999-00 with AEIS data, 44 had 75 Percent Rule charters. A total of 97 had general open-enrollment charters, 28 of which enrolled 75 percent or more at risk students. Table 1 presents information on the types of charter schools and number of students served. Overall, the number of schools serving primarily at-risk populations (72) was similar to the number with predominantly non-at-risk students (69); student enrollments were comparable.

Table 1
Charter School Type Classification

Charter School Type	Number of Schools	Number of Students
75% Rule	44	5,949
General ≥ 75%	28	5,581
General < 75%	69	14,063
Total	141	25,593

Student Demographics

Numerous studies reinforce the linkage between student and campus demographics and performance levels; thus, demographic data serve as a contextual backdrop for the examination of student performance. Race/ethnicity information on 141 charter schools in Figure 1 shows that, compared to Texas traditional public schools, charter school students are more racially/ethnically diverse. Charter schools have a higher percentage of African American students (39 percent versus 14 percent) and a lower percentage of White students (22 percent versus 43 percent), whereas the percentage of Hispanic students (38 percent) is roughly the same as the state average.
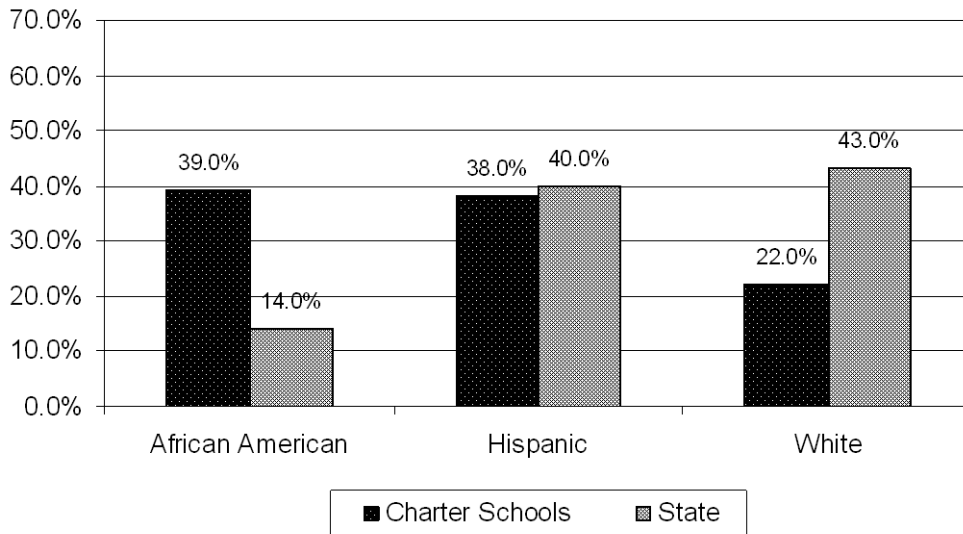

Figure 1. Student Demographic Information, 1999-00 School Year

Compared to traditional public schools in Texas, charter schools also serve slightly more economically disadvantaged students (52 percent versus 49 percent) and are less likely to enroll students identified for special services such as limited-English proficient (4 percent versus 14 percent) and special education (7 percent versus 12 percent).

Figure 2 presents student demographic information by charter school type. Clear differences emerge in the populations of students served by each type of charter school.
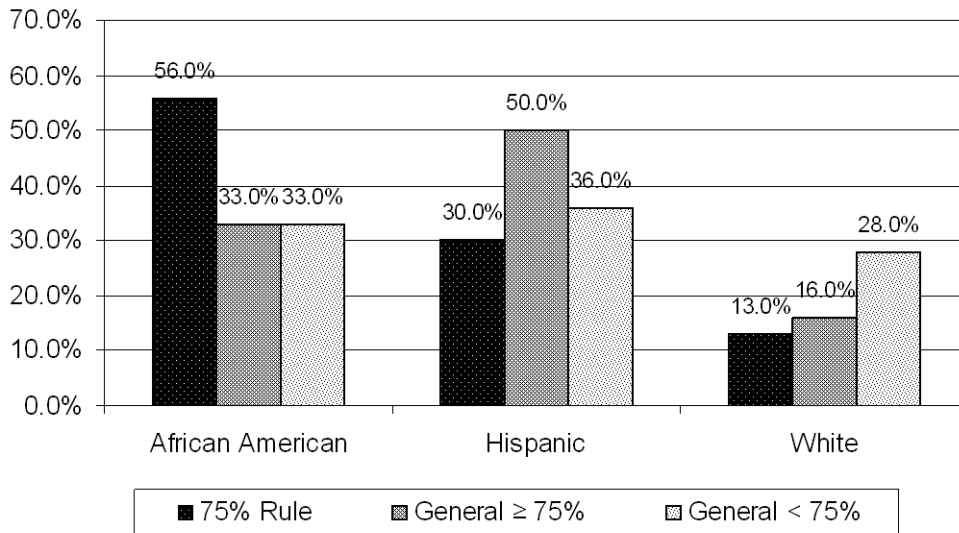
Figure 2. Student Demographics by School Type, 1999-00 School Year

Overall, 75 Percent Rule schools enroll significantly higher percentages of African American students than general open-enrollment charter schools, whereas general charter schools serving 75 percent or more at-risk students enroll higher percentages of Hispanic students. The enrollment of White students in 75 Percent Rule and general charter schools serving primarily at-risk students is comparatively low. General charter schools serving less at-risk students have an almost even split among the three racial/ethnic categories.

Staff Information

Staffing data are compared in Table 2 for charter schools and for Texas public schools. Salaries for both administrators and teachers are lower in charter schools than average salaries statewide. Part of the difference in teacher salaries may be accounted for by the relative inexperience of charter school teachers. The percentage of beginning teachers in charter schools is significantly higher than the state average (39 percent versus 8 percent). Similarly, the percentage of charter school teachers with one to five years experience is higher than the state average (41 percent and 27 percent, respectively). In general, charter school teachers have about half as many years of experience as teachers statewide. Charter school faculty also have more minority teachers (44 percent) compared to the state (26 percent).

Table 2
Staff Information, 1999-00 School Year

Type of Staff Information	Charter Schools (*N* varies)	State Average
Average central administrator salary	$51,984	$67,463
Average teacher salary	$27,434	$37,567
Minority teachers	44%	26%
Student-teacher ratio	17:1	15:1
Beginning teachers	39%	8%
Teachers with 1 to 5 years experience	41%	27%
Teacher average years of experience	5.3	11.9
Teacher turnover rate	49%	15%

The average student-teacher ratio in charter schools (17 to 1) is somewhat higher than the ratio in Texas traditional public schools (15 to 1); however, these are school-level rather than classroom-level ratios. The average turnover rate for teachers in charter schools—49 percent—is much higher than the state average of 15 percent.

Revenue and Expenditures

Information regarding 1999-00 revenue and expenditures for charter and traditional public schools in Table 3 shows that charter schools have no taxable property and are funded almost entirely by the state. Thus, it is not surprising that the percentage of charter school funding from state sources (96 percent) far exceeds the state average (46 percent). Total operating expenditures per pupil for charter schools ($5,671) are somewhat less than the state average for public schools ($6,354). Similar trends emerge for dollars for instruction.

The percentage of charter school expenditures for regular education (95 percent) is greater than the state average for all districts (71 percent), whereas the percentage of expenditures for special education is less (6 percent versus 12 percent). This is expected given the small percentage of students in charter schools receiving special education services. Charter schools report a 5 percent fund balance compared to the state average of 14 percent. While more experienced charter schools maintain larger balances, the small fund balances overall indicate that little money is available for unexpected expenses.

Table 3
Revenue and Expenditures, 1999-00 School Year

Type of Revenue or Expenditure	Charter Schools	State Average
State aid per pupil, percent supplied	96.3%	46.1%
Total operating expenditure per pupil	$5,671	$6,354
Dollars for instruction per pupil	$3,045	$3,376
Dollars for instruction	54.2%	58.2%
Expenditure regular education	94.9%	70.9%
Expenditure special education	5.8%	12.4%
Fund balance	4.7%	13.6%

Academic Effectiveness of Charter Schools

School Performance

School ratings. Texas districts and campuses receive annual accountability ratings based primarily on TAAS performance and dropout rates. A summary of the 1999-00 performance standards for the four primary ratings categories follows. Each performance standard must be met by each of five student groups: all students, African American, Hispanic, White, and economically disadvantaged.

- Exemplary – 90% or more passing TAAS, dropout rate of 1% or less
- Recognized – 80% or more passing TAAS, dropout rate of 3.5% or less
- Acceptable – 50% or more passing TAAS, dropout rate of 6% or less
- Low-Performing – less than 50% passing TAAS, dropout rate more than 6%

In addition to the ratings describe above, a campus serving primarily at-risk students may apply to be rated under alternative education (AE) accountability procedures. AE ratings utilize the categories to follow. To receive AE ratings, performance standards must be met for all five student groups.

- Commended – 30% or more passing TAAS, 85% increasing TLI scores, dropout rate of 6% or less
- Acceptable – 30% or more passing TAAS, dropout rate of 10% or less
- Needs Peer Review – less than 30% passing TAAS, dropout rate more than 10%

Schools may also receive a "not rated" label due to grade levels served without outcome data, status as a new school, or when too few students are reported to calculate a rating.

Primary and AE accountability ratings for charter school campuses and for traditional public schools over the past two years are presented in Table 4. As previously noted, the number of charter schools has increased over time. Of all campuses in the state, 93 percent were rated using the four primary ratings (e.g., Exemplary). About 67 percent of charter schools received these primary ratings.

As Table 4 indicates, traditional public schools outperform charter schools on both primary and AE accountability ratings. Of the 66 charter schools rated under the primary system in 2000, the majority received Acceptable (52 percent) or Low-Performing (30 percent) ratings, and the percentage of Low-Performing charter schools increased across years. In contrast, most traditional public schools received either Exemplary (20 percent), Recognized (32 percent), or Acceptable (46 percent) ratings, and the percentages receiving Low-Performing ratings remained consistently low (1 percent to 2 percent). For the 33 charter schools rated in 2000 under the AE system, all received either Acceptable (27 percent) or Needs Peer Review (73 percent) ratings. Conversely, most traditional public schools were rated as Commended (2 percent) or Acceptable (88 percent).

Table 4
Charter and Traditional Public School Performance, Primary and
Alternative Education Accountability Ratings

	1999		2000	
Rating	Charter	Public	Charter	Public
Primary	(*N*=15)		(*N*=66)	
Exemplary	13%	18%	8%	20%
Recognized	20%	30%	11%	32%
Acceptable	47%	51%	52%	46%
Low-Performing	20%	2%	30%	2%
Alternative Education	(*N*=6)		(*N*=33)	
Commended	n/a	n/a	0%	2%
Acceptable	83%	--	27%	88%
Needs Review	17%	--	73%	11%

Note: The Commended rating was instituted in 1999-00. 2000 AE public average does not include charter schools. Schools are rated as campuses.

TAAS. The Texas Assessment of Academic Skills (TAAS), a series of criterion-referenced tests, is used to rate campuses and districts for the statewide accountability system and to inform individual student-level instructional decisions. "Passing" a TAAS subtest has generally meant scoring correctly on 70 percent of items. However, as TAAS has changed, the Texas Learning Index (TLI) is used to set actual percent correct corresponding to a TLI of 70, defined as passing. Table 5 compares 1999-00 charter school and statewide TAAS performance data.

Table 5
2000 TAAS Performance for All Charter Schools and State Average

	Charter Schools	State Average	Difference
Percent of Students Passing TAAS			
Reading	64.2%	87.4%	23.2
Writing	58.4%	88.2%	29.8
Mathematics	52.5%	87.4%	34.9
All tests taken	43.1%	79.9%	36.8
Percent of Students Passing All Tests			
African American	39.4%	68.0%	28.6
Hispanic	43.4%	71.8%	28.4
White	60.4%	89.3%	28.9
Economically disadvantaged	41.4%	70.0%	28.6

As shown in Table 5, TAAS performance in charter schools is lower than the state average in all subjects—particularly in mathematics and writing. Moreover, lower performance rates are consistent across all student comparison groups. The gap between minority and economically disadvantaged students and White students (about 17 to 20 percentage points) is comparable to the state.

Table 6 compares charter schools with their public school comparison groups or "peer groups" as determined by TEA. For each Texas campus, TEA provides a peer group

consisting of 40 similar schools, based primarily on demographic characteristics, such as percentage of minority and economically disadvantaged students and student mobility rates. Peer groups allow for comparisons of campus performance for similar schools. Overall, peer groups outperform charter schools on TAAS. Performance differences between charter schools and peer groups are large across all school types, with the greatest TAAS performance disparities emerging in mathematics.

Table 6
Charter Schools and TEA Peer Groups, Comparison of 2000 TAAS Performance

	All Charter Schools		75% Rule (N=9)		General ≥ 75% (N=8)		General <75% (N=36)	
	Charter	Peers	Charter	Peers	Charter	Peers	Charter	Peers
All tests	43.1%	76.6%	34.9%	72.8%	41.4%	73.6%	50.4%	78.2%
Reading	64.2%	86.2%	56.6%	84.1%	56.6%	83.1%	71.2%	87.5%
Math	52.5%	84.5%	45.0%	81.8%	45.0%	83.6%	58.9%	85.4%

Other measures of student performance. Table 7 includes non-TAAS student performance information from AEIS—advanced course completion rates and end-of-course (EOC) examination passing rates. Advanced course completion data is calculated by dividing the number of students who complete at least one advanced academic course by the number of students who completed at least one course during the school year. Advanced courses include higher-level core content area courses (e.g. Calculus, Physics) as well as advanced elective courses (e.g., Computer Science, French IV, Music Theory). Students completing Algebra I, Biology, English II, or U.S. History are required to take an EOC examination.

Table 7
2000 Advanced Course and End-of-Course Examination Performance

Outcome Measure	75% Rule and General ≥ 75%	State Eco-Dis Students	General < 75%	State All Students
Advanced course completion	14.0%	11.3%	24.9%	17.5%
Passing Biology EOC	57.8%	68.2%	63.8%	80.3%
Passing Algebra I EOC	20.1%	31.3%	28.2%	43.9%
Passing English II EOC	55.5%	68.6%	59.6%	77.7%
Passing U.S. History EOC	43.3%	54.9%	61.0%	72.1%

Compared to analogous state comparison group averages, charter school students have higher percentages of advanced course completions but lower passing rates on EOC examinations. Interestingly, districts set standards for course completions, while EOC exams are administered and scored by TEA.

School attendance and dropout rates. Student attendance reflects students' perception of their school's value and of how well their school meets their needs. For most students, being present in the classroom is critical to academic success. Although many circumstances affect student attendance, it still may serve as a reflection of the appropriateness of instruction.

Measures of successful public school completion are also important outcomes. The measure of completion used in this study is the annual dropout rate, defined as the number of students in grades 7 through 12 who dropped out during a school year divided by the number of students in those grades who were in membership at any time during that school year. As shown in Table 8, charter schools had lower attendance rates and higher dropout rates than state comparison groups.

Table 8
Student Attendance and Dropout Rates for 1999

Outcome Measure	75% Rule and General ≥ 75%	State Eco-Dis Students	General < 75%	State All Students
Attendance	90.1%	95.1%	90.9%	95.4%
Annual dropout rate	5.7%	1.5%	5.3%	1.6%

Performance of Continuing and Moving Students

An additional analysis compared the academic performance of students who were continuously enrolled in charter schools with student cohorts who moved between the traditional public school system and charter schools. Analysis involved matched students with TAAS reading and mathematics Texas Learning Index (TLI) scores for 1998-99 and 1999-00. Traditional public school students included were enrolled in charter schools some time between 1996-97 and 1999-00. The analysis is limited by a number of factors. Foremost, new charter schools open each year, so the numbers of students enrolled has increased dramatically across years. Other limitations include student survivorship, small numbers in comparison groups, the limited number of students with TAAS scores, and uncertainty about students' reasons for moving between charter and traditional schools. Tables 9 and 10 compare results for charter schools serving primarily at-risk students and schools serving mostly non-at-risk students.

Table 9
Percent Passing TAAS Reading, by School Type over Two Years

1998-99	1999-00	Reading			
		N Students	1999	2000	Difference
75% Rule and General ≥ 75%					
Charter	Charter	368	77.7%	89.4%	11.7
Public	Charter	896	63.1%	62.3%	-0.8
Charter	Public	110	78.1%	84.5%	6.4
Public	Public	25	56.0%	72.0%	16.0
General < 75%					
Charter	Charter	1,248	72.6%	79.5%	6.9
Public	Charter	1,729	75.6%	74.9%	-0.7
Charter	Public	446	78.4%	83.1%	4.7
Public	Public	81	86.4%	90.1%	9.0

Note. Public-public includes students in traditional public schools who attended charter schools some time between 1996-97 and 1999-00.

Table 10
Percent Passing TAAS Mathematics, by School Type over Two Years

| | | Mathematics | | | |
1998-99	1999-00	N Students	1999	2000	Difference
75% Rule and General ≥ 75%					
Charter	Charter	409	70.9%	81.4%	10.5
Public	Charter	1,033	52.2%	56.7%	4.5
Charter	Public	114	72.8%	80.7%	7.9
Public	Public	25	57.6%	65.3%	7.7
General < 75%					
Charter	Charter	1,288	62.2%	71.3%	9.1
Public	Charter	1,786	70.1%	69.6%	-0.5
Charter	Public	472	67.3%	82.8%	15.5
Public	Public	87	70.3%	84.6%	14.3

Note. Public-public includes students in traditional public schools who attended charter schools some time between 1996-97 and 1999-00.

Overall, results suggest that continuous student enrollment in schools makes a difference—students who remained in charter schools for two years showed positive academic gains in reading and mathematics (about 7 to 12 percentage points). Likewise, students formerly in charter schools who were enrolled for two years in traditional public schools had positive reading and mathematics gains (about 8 to 16 percentage points). Students who remained in charter schools serving primarily at-risk students for two years had high passing rates (71 to 89 percent) and strong academic gains in TAAS reading and mathematics (11 to 12 percentage points).

Students who moved from traditional public schools to charter schools had small losses in percentage passing rates (less than one percentage point) in reading and mixed results for mathematics by school type. Students who moved from charter schools to traditional public schools had strong achievement gains. Students formerly in charter schools showed strong gains for TAAS reading (5 to 6 percentage points) and mathematics (8 to 16 percentage points) after returning to traditional public schools.

Conditions and Practices Supporting Achievement in Charter Schools

Based on 1999, 2000, and 2001 AEIS data, researchers identified 15 charter schools as examples of schools achieving the greatest academic success and compared those to 8 academically low-performing charter schools. School identification was a multi-step process. First, selected charter schools must have been established for at least two years, and schools could not be designated by TEA as exclusively serving special populations (i.e., adjudicated or residential treatment). Next, researchers used academic performance indicators to classify schools as "successful" or "struggling." Successful schools had at least three performance indicators (i.e., TAAS passing rates for reading and mathematics) of 80 percent or above as well as Exemplary, Recognized, or Acceptable accountability ratings. In contrast, struggling schools had three performance indicators of 55 percent or lower along with Low-Performing or Needs Peer Review accountability ratings. Schools with inconsistent academic performance were eliminated. Once schools were categorized,

researchers conducted additional AEIS data analyses and reviewed schools' charter applications to explore conditions and practices in selected charter schools.

Characteristics of Selected Schools and Students

Successful schools, as shown in Table 11, achieved ratings of Acceptable, Recognized, or Exemplary in both 2000 and 2001; none were rated under the alternative education (AE) system. In contrast, struggling schools received Low-Performing ratings or Needs Peer Review ratings under the AE system.

Table 11
Primary and Alternative Education Accountability Ratings,
By School Effectiveness

	Successful		Struggling	
Rating	2000	2001	2000	2001
Primary				
Exemplary	3	3	0	0
Recognized	3	6	0	0
Acceptable	6	5	0	0
Low-Performing	0	0	3	6
Alternative Education				
Commended	0	0	0	0
Acceptable	0	0	0	0
Needs Review	0	0	3	2

Note. The Commended rating was instituted in 1999-00. 3 successful and 3 struggling charter schools were not rated in 2000. 1 successful charter school was not rated in 2001.

TAAS performance also informed the selection process. As presented in Table 12, successful charter schools have TAAS passing rates similar to or exceeding state averages for both 2000 and 2001, while struggling charter schools perform significantly lower on TAAS.

Table 12
Percent Passing TAAS, by School Effectiveness over Two Years

	2000		2001	
Rating	Charter	State	Charter	State
Successful Schools				
Reading	90.7%	87.4%	91.4%	88.9%
Mathematics	85.0%	87.4%	87.3%	90.2%
All Tests	79.3%	79.9%	80.5%	82.1%
Struggling Schools				
Reading	43.3%	87.4%	40.4%	88.9%
Mathematics	27.7%	87.4%	33.8%	90.2%
All Tests	22.3%	79.9%	23.7%	82.1%

The selected charter schools, displayed in Table 13, served more than 5,000 students in the 2000-01 school year. The majority of successful schools (13) serve less than 75 percent at risk students. In contrast, six of the eight struggling charter schools serve 75 percent or more at-risk students. Successful schools have an average student enrollment of 208 (range: 23-683), while struggling schools average 251 students (range:104-441).

Table 13
Charter School Type Classification, by School Effectiveness

	Successful Schools		Struggling Schools	
	n Schools	n Students	n Schools	n Students
75% Rule	1	70	4	1,029
General ≥ 75%	1	683	2	437
General < 75%	13	2,449	2	545
Total	15	3,202	8	2,011

Figure 3 shows that race/ethnicity distributions differ for successful and struggling charter schools. Compared to successful charter schools, struggling schools serve a higher percentage of African American students (61 percent versus 29 percent) and a lower percentage of White students (6 percent versus 35 percent). The percentage of Hispanic students is similar across charter schools (31 to 32 percent).
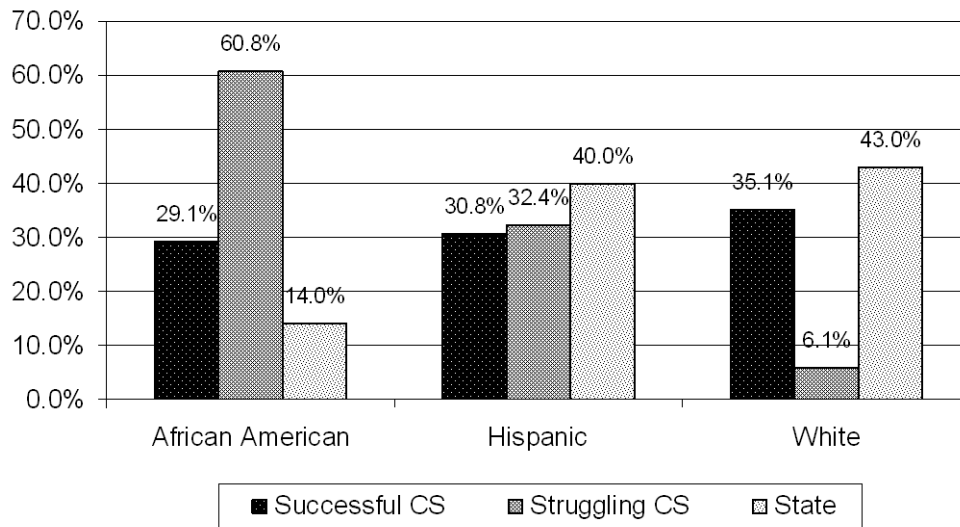

Figure 3. Student Demographics by School Effectiveness

Further examination of the racial/ethnic concentrations in charter schools reveals that several schools enroll a majority of students (75 percent or more) in one racial/ethnic group. Three successful schools enroll a majority of White students (M=87%), three enroll a majority of African American students (M=94%), and two enroll primarily Hispanic students (M=88%). In contrast, no struggling schools serve primarily White students, one enrolls a majority of Hispanic students (92%), and four enroll primarily African American students (M=91%).

Additionally, successful charter schools enroll less economically disadvantaged students than struggling charter schools (41 percent versus 65 percent). However, successful charter schools serve more limited-English proficient students (5 percent compared to less than 1 percent) and students receiving bilingual instruction (3 percent versus less than 1 percent). Successful and struggling charter schools serve comparable percentages of students receiving special education services (approximately 6 percent).

Texas Charter School Application Process

While the SBOE oversees the charter application process, the TEA Charter Schools Division has been responsible for application development and revisions. Over time, applications have required more detailed descriptions of features such as the school vision and goals, educational program, human resources, governance, and community support (Benner, 2000). For this study, comparative qualitative analyses were completed for 23 charter schools to identify prevailing trends that might be linked to student achievement. Distinguishing factors emerging for schools' educational programs and organizational structures are summarized in Tables 14 and 15, respectively. It is important to understand that these findings represent applicants' educational plans and that some proposals were submitted as early as 1996. Reported information, thus, may or may not reflect what was actually implemented at startup or the educational plan that currently exists.

Educational Plans for Successful and Struggling Schools

Educational program. Table 14 contrasts educational practices that distinguish successful and struggling charter schools. The school types, in general, have distinctive approaches to school curricula, technology use, student learning experiences, student roles, and views on accountability.

Core curriculum. In compliance with Texas state statute, charter schools almost always report curricular alignment with the Texas Essential Knowledge and Skills (TEKS), the required standards-based curriculum. Successful schools, however, often see the TEKS as a starting point, adding other elements to enhance the state standards. Applicants frequently describe an integrated or interdisciplinary curriculum, with some supplementing the curriculum with E.D. Hirsch's *Core Knowledge Sequence.* In general, successful schools are committed to project-based learning, concrete experiences, authentic problems, and learning relevant to the real world rather than a particular set of materials or textbooks. Furthermore, successful charter schools are more likely to explicitly describe how learning will be enriched through foreign language, art, music, dance, or theatrical performances. Rigorous college preparatory coursework, such as Advanced Placement (AP) courses, are also a priority for secondary students in successful schools. Struggling charter schools, conversely, describe a curriculum focused on the TEKS, basic skills, vocational skills, GED preparation, and course credit accrual. Two schools planned to implement *Direct Instruction* and *Saxon* programs.

Table 14
Charter Schools' Educational Program

	Successful Schools *n*=15	Struggling Schools *n*=8
Core curriculum	Standards-based curriculum (TEKS), interdisciplinary or integrated curriculum, *Core Knowledge*, Montessori, project-based learning, visual and performing arts, foreign language, Advanced Placement (AP) coursework	Standards-based curriculum (TEKS), basic skills, vocational skills, GED, credit accrual, *Direct Instruction*, *Saxon*
Extended curriculum	Character education (citizenship, leadership, virtues), service learning projects (recycling, environment), extracurricular activities (clubs, athletics, student government, scouts), field trips (museum, library, zoo)	Life and social skills (banking, taxes, work and personal attitudes, career goals), job preparation (job choices, trades, internship)
Technology use	Technology as a tool for learning, Internet, online resources, research, applications, communication	Computer-assisted instruction or learning systems (CCC, Plato 2000), acquisition of computer skills, TAAS tutorials
Learning approach	Learner-centered, individualization, learning styles, authentic experiences, acceleration, multi-sensory, multiple intelligences, college preparation	Teacher-directed, self-paced individualization, independence, completion of modules, skill mastery, individual learning plan, tracking
Student discipline and behavior	Self-responsibility, goal setting, ownership, confidence, motivation, effort, self-monitoring	Explicit discipline plan or code of conduct, rules, behavior modification
Accountability	Clearly-defined, measurable goals and outcomes, TAAS benchmarks, norm-referenced assessments, alternative assessments (portfolios, student-led conferences, demonstrations, profiles, ongoing tests)	Vague or unmeasured goals, diagnostic tests, curricular-aligned tests, management system reports, occasional use of norm-referenced or alternative assessments

Extended curriculum. Applications of successful schools extend the core curriculum in a number of ways. Character education, involving moral, ethical, social, and personal concerns, and community services projects, such as recycling and volunteering, are priorities for the majority of schools. Extracurricular activities and fields trips are also mechanisms to strengthen student engagement. Struggling schools, conversely, frequently cite social and learning problems faced by their at-risk students. Life and social skills are added to many curricula to address students' needs, and school-to-work programs focus on student job preparation.

Technology use. In successful schools, applicants typically describe technology as an instructional tool to enhance, reinforce, and extend learning. Students use technology for graphic art, simulations, multimedia projects, presentations, databases, research, accessing the Internet, email, global communication, and assessment. On the other hand, struggling schools frequently propose using computer-assisted instruction or self-paced learning systems with a linear progression of lessons, such as those provided by the Computer Curriculum Corporation (CCC) or Plato 2000 (The Roach Organization, Inc.).

Some struggling schools stress the importance of students learning computer skills or using computers for TAAS tutorials.

Learning approach. Descriptions of charter school learning experiences reveal applicants' theoretical orientations toward student learning, and in many cases, perceived differences with traditional public schools. All successful schools characterize learning as student-centered, with individualization accommodating diverse abilities and interests. Applicants often draw from research and educational literature, citing the importance of authentic experiences, constructivism, acceleration, multisensory activities, multiple intelligences, learning styles, cooperative learning, teacher-student interaction, and brain-based learning. In struggling schools, conversely, learning is typically described as either highly teacher centered or as self-paced individualization. Teacher-directed learning ensures "explicit" and "efficient" instruction as well as student "mastery" of objectives before proceeding to the next level. In some schools, computer-based instruction is the vehicle that allows students to progress at their own pace and achieve "mastery" before progressing to the next level of difficulty. Struggling schools propose using individual learning plans, workbooks, lesson modules, drills, and directing students toward either academic or vocational tracks.

Student discipline and behavior. Descriptions of educational plans, disciplinary procedures, and student codes of conduct reveal applicants beliefs about the importance of internal or external influences on student behavior. Applicants for successful schools value student self-regulation of behavior and propose ways to foster student ownership by setting learning goals, self-monitoring progress, assuming responsibility, participating in governance and decision making, problem solving, teamwork, self-discovery, and developing disciplined habits of mind (i.e., critical, creative, and self-regulated thinking). All of these contribute to a democratic education and students becoming productive members of society. Many cite the importance of educating the "whole child." Applicants for struggling schools, likewise, value qualities such as responsibility, cooperation, effort, honesty, diligence, and community, but they take a different approach. Proposals for these schools often include detailed disciplinary procedures listing behaviors and consequences, extensive standards for student conduct, a merit system to reward accomplishments, or a behavior modification approach.

Accountability. In Texas, charter schools are held to state accountability standards—thus, applicants are expected to establish student performance benchmarks on state assessments, along with additional charter-selected performance measures. Within the common application guidelines, important differences surface. Successful schools provide more clearly defined, measurable goals and outcomes and establish explicit and challenging TAAS performance benchmarks. These schools are also more likely to augment state requirements with norm-referenced assessments and alternative assessments, such as portfolios, student-led conferences, demonstrations, profiles, and ongoing assessment. Struggling schools' student performance goals are often vague or unmeasured—when established, TAAS benchmarks tend to be low. Schools, especially those with computer-assisted instruction, rely on curriculum-aligned tests, diagnostic

tests, and management system reports. Struggling schools less frequently mention using norm-referenced or alternative assessments.

Organizational structures. Table 15 contrasts organizational structures arising from the comparative analysis that differentiate successful and struggling schools, including grade levels, organizational arrangements, teacher qualifications and roles, parent involvement, and characteristics of sponsoring entities.

Table 15
Charter Schools' Organizational Structures

	Successful Schools *n*=15	Struggling Schools *n*=8
Grade levels	Developmental grade span: Grades PK, K, 1...3, 5, 6, 7, 8, 10, 12 (12 schools), Grades 5, 6…10, 12 (3 schools)	Varied grade configurations: Grades K…5, 6 (3 schools), Grades K…12 (1 school), Grades 6…12; 9…12 (3 schools), Nongraded (1 school)
Organizational arrangements	Multiage, nongraded, student and teacher teams, low student-teacher ratio, extended school time (day, week, year)	Open-entry/open-exit, high student-teacher ratio
Teacher qualifications and roles	Degree/certification requirements (almost all), professional development and continuing education expectations (majority), collaboration, student support (tutorials, advising, mentoring, homework assistance, parent contact)	Degree/certification requirements (half), professional development required (majority)
Parent involvement	Parent compacts (almost all), committees, volunteers, conferences, meetings, surveys, newsletters, parent training and support	Parent compact (one), seldom mention parent outreach efforts
Sponsoring entity—nature of school-to-community connection	Communities with a school vision—public, private, and campus charter school conversions (4), startup charters at universities, near parents' workplace, for student performance, in church (7), startups serving a particular neighborhood (4)	Schools seeking a community or an at-risk population to serve—management company startups (3), trade school conversion (1), startups within support center (1), for at-risk intervention (2), in church (1)

Grade levels. In the majority of successful charter school applications, a vertically-aligned grade span supports a developmental educational plan, with the foundation laid in the primary grades (pre-kindergarten, kindergarten, and first grade) and instruction continuing through upper elementary, middle, or high school. One might expect this grade-level continuum to support greater continuity in program implementation and student learning experiences. Grade-level configurations in struggling schools are mixed.

Some charter schools serve elementary grades, one serves all grades, three serve secondary, and one is a nongraded school.

Organizational arrangements. Charter schools use unique organizational arrangements to support the school vision. A number of successful schools cite the use of multiage classes, flexible student classes or groups, or a nongraded approach. In addition, student and teacher teams often contribute to smaller schools within schools. For struggling schools, applicants seldom describe organizational arrangements, with the exception of two schools using open-entry and open-exit enrollments. Extended school time also distinguishes successful and struggling schools. About half of successful schools describe ways to extend the school day, week, and/or year to allow students to achieve mastery, accelerate learning, explore subject matter more deeply, or participate in extracurricular activities. Struggling schools rarely extend school time. In fact, one "alternative" high school allocates only two hours per day for academics compared to five for vocational education. Finally, successful schools identify lower student-teacher ratios than struggling schools.

Teacher qualifications and roles. One controversial aspect of Texas charter school statutes is charter school exemption from teacher degree and certification requirements. To examine charter schools' views on teachers, researchers reviewed proposed qualifications, roles, and responsibilities of professional employees. Almost all successful charter schools require bachelor's degrees, and in some cases, teacher certification. The majority of applicants also require extensive teacher professional development or continuing education, especially to support knowledge acquisition connected to the school vision (e.g., gifted and talented, brain-based research, AP training, cooperative learning, learning styles). For successful schools, applicants frequently state that teachers will be expected to work collaboratively, maintain parent contact, and support students beyond the classroom (e.g., through tutorials, advising, mentoring, homework assistance, and home visits). In contrast, only about half of struggling schools establish degree or certification requirements for teachers. Professional development is usually required, but applicants seldom describe approaches for teacher capacity building. Student support beyond the classroom is not mentioned.

Parent involvement. Since parental choice is a hallmark of charter schools, close parent-to-school ties are expected. Consistent with expectations, almost all successful schools note that parents will be required to sign compacts, or agree, to become involved in children's education. That involvement generally means serving on committees, volunteering in the school, attending parent-teacher conferences, and supporting children academically at home. In addition, some applicants describe classes for parents on topics such as parenting skills, homework assistance, or literacy. In contrast, applications for struggling schools seldom describe parent outreach efforts, and only one school requires a parent compact.

Sponsoring entities. The characteristics of charter school founders provide evidence regarding connections between the charter school and the community in which it is located. Key differences emerge between the establishment of successful and struggling

charter schools. Successful charter schools' founders are typically civic or educational leaders in Texas communities with a vision and clear goals for the charter school. Successful schools include a public school, two private schools, and a campus charter school that converted existing schools to open-enrollment charter schools. Seven successful startup charter schools are either affiliated with universities, located near parents' corporate workplaces, or serve students pursuing artistic or athletic performances. An additional four schools are designed to meet student needs in a particular neighborhood. In contrast, three struggling schools are management company startups located in urban, economically disadvantaged neighborhoods. Other schools' missions are tied to serving specific at-risk populations. For example, one struggling school converted from an existing vocational trade school to a charter school, while another charter school was established within an existing crisis support center. Overall, it seems the strength of community connections may influence the extent of parent commitment, availability of resources, access to professional staff, as well as school leadership and governance.

Additional School Quality Measures

To further explore characteristics of successful and struggling charter schools, researchers examined 1999-00 AEIS staffing, financial, and other academic performance indicators.

Staff information. For almost all staffing categories presented in Table 16, clear differences emerge between successful and struggling charter schools.

Table 16
Staff Information, 1999-00 School Year

Type of Staff Information	Successful Schools	Struggling Schools	State Average
Average central administrator salary	$40,951	$64,323	$67,463
Average teacher salary	$30,930	$25,324	$37,567
Minority teachers	49.7%	68.1%	26.1%
Student-teacher ratio	15:1	20:1	15:1
Beginning teachers	21.3%	38.2%	7.6%
Teachers with 1 to 5 years experience	46.4%	43.6%	27.0%
Teacher average years of experience	5.3	3.8	11.9
Teachers with no degree	8.6%	45.0%	1.2%
Teachers with Bachelor's degree	70.3%	48.0%	74.1%
Teacher turnover rate	38.8%	59.3%	15.0%

The salaries of central administrators in struggling charter schools average $20,000 more than administrators in successful charter schools. Compared with successful charter schools, struggling charter schools employ more minority teachers (68 percent versus 50 percent), more beginning teachers (38 percent versus 21 percent), and teachers with fewer years of experience (3.8 years versus 5.3 years). In addition, a higher percentage of teachers at struggling schools lack college degrees (45 percent versus 9 percent). These teachers are paid lower salaries (approximately $5,500 less than successful teachers) and

are placed in classrooms with higher student-to-teacher ratios (20:1 versus 15:1). Not surprisingly, the teacher turnover rate in struggling charter schools is almost 60 percent, compared with 39 percent for successful charter schools and 15 percent for the state overall.

Revenue and expenditures. Information on revenue and expenditures in Table 17 reveals differences between successful and struggling charter schools. Total operating expenditures per pupil for charter schools are similar; however, successful charter schools average approximately $500 more for instruction per pupil, and these schools contribute 10 percent more dollars for instruction. In addition, the percentage of successful charter school expenditures for regular education (96 percent) is greater than the average for struggling schools (90 percent), while the percentage of expenditures for special education is similar (3 percent versus 2 percent).

Table 17
Revenue and Expenditures, 1999-00 School Year

Type of Revenue or Expenditure	Successful Schools	Struggling Schools	State Average
Total operating expenditures per pupil	$5,801	$5,869	$6,354
Dollars for instruction per pupil	$3,186	$2,644	$3,376
Dollars for instruction	55.7%	45.6%	58.2%
Expenditure regular education	96.3%	89.5%	70.9%
Expenditure special education	2.7%	1.5%	12.4%

Other performance indicators. Tables 18 and 19 include additional student performance data—advanced course completion rates, end-of-course (EOC) examination passing rates, attendance rates, and dropout rates. Overall, students enrolled in successful charter schools achieve course completion and EOC passing rates that surpass both struggling charter schools and state averages.

Table 18
Advanced Course and End-of-Course Examination Performance for 2000

Outcome Measure	Successful CS	Struggling CS	State
Advanced course completion	19.7%	13.3%	17.5%
Passing Biology EOC	93.1%	46.2%	80.3%
Passing Algebra I EOC	63.7%	2.8%	43.9%
Passing English II EOC	84.4%	31.8%	77.7%
Passing U.S. History EOC	90.0%	22.3%	72.1%

For successful charter schools, advanced course completion rates (20 percent) are six percent higher than rates for struggling schools. Even greater differences emerge in EOC examination passing rates – for all subjects, successful charter schools have passing rates higher than struggling charter schools (between 47 and 68 percentage points) and state averages (between 7 and 20 percentage points). In addition, successful charter schools, as shown in Table 19, have higher attendance rates and lower dropout rates than both struggling charter schools and state averages.

Table 19
Student Attendance and Dropout Rates for 2000

Outcome Measure	Successful CS	Struggling CS	State
Attendance	96.4%	91.9%	95.4%
Annual dropout rate	0.8%	1.6%	1.6%

Conclusions

The Texas charter school movement has developed within the context of the growth of charter schools throughout the United States. The 1999-00 school year marked Texas' fourth year of experience with open-enrollment charter schools. In Texas, charter schools serve a relatively small proportion of public school students, but the numbers of charter schools and students has climbed steadily since the first charter school opened in 1996.

Characteristics of Charter Schools

Charter schools in Texas vary widely in terms of enrollment, ethnicity, grade span, and educational mission. Compared to traditional public schools, charter schools have a much higher proportion of African American students, a lower proportion of White students, and a similar share of Hispanic students. Moreover, data show that many charter school campuses enroll predominantly one racial/ethnic group, with these campuses predominantly serving African American and Hispanic students (Weiher, 2001). Other evidence indicates that Texas parents and students tend to choose charter schools with higher concentrations of their ethic group. This may be because most choosers hear about charters from family and friends (Weiher, 2001; Weiher & Tedlin, 2002). An additional explanation may be state policy, which has now been amended, allowing an unlimited number of 75 Percent Rule charters.

Compared to traditional public schools, Texas charter schools have less experienced teachers, lower teacher salaries, and higher teacher turnover. Part of the difference in salaries may be accounted for by the relative inexperience of charter schoolteachers. The teacher turnover rate in charter schools, which is two to three times the state average, is also a major concern. Given that teachers are the heart of any educational system, high turnover must adversely affect the performance of students. The reason for teacher inexperience and instability in charter schools is unknown, but one possible explanation is lower salaries and benefits. The lack of teacher degree and certification requirements for charter schools may be another factor. Only 40 percent of charter school teachers are certified compared with the vast majority in traditional public schools. In light of evidence showing that student performance depends substantially on effective teaching by qualified, committed teachers who possess content knowledge and pedagogical skills (Darling-Hammond, Berry, Haselkorn, & Fideler, 1999), greater attention to charter school teacher quality is warranted.

Academic Effectiveness of Charter Schools

Traditional public schools in Texas outperform charter schools on student academic performance indicators, even when adjustments are made to create comparable comparison groups. Based on annual accountability ratings, traditional public schools outperform charter schools on both primary and alternative education rating categories. The percentage of Low-Performing charter schools has increased, while traditional public schools percentages have remained consistently low (1 to 2 percent), and traditional schools are more frequently rated as Exemplary or Recognized. Charter school students' TAAS performance is also lower than the state average in all areas, with lower performance rates consistent across all student comparison groups.

Student cohort analyses for students with matched TAAS reading and mathematics scores suggest that continuous student enrollment in charter schools makes a difference, and in particular, charter school students who stay in charter schools serving at-risk students show high academic performance. Unfortunately, little is known about the characteristics of charter schools that produce positive student achievement outcomes. However, a recent data analysis (D. Stamman, personnal communication, November 2001) shows that the greatest proportion of at-risk students with assessment outcomes for multiple years is enrolled in one Exemplary charter school, so positive findings regarding the performance of schools serving 75 percent or more at-risk students may be misleading.

Overall, student performance results raise questions about the academic effectiveness of charter schools. Nevertheless, results for particular types of schools are encouraging, and as accountability ratings show, there is wide variance among charter schools in terms of student learning. Student outcomes suggest that some schools, particularly those serving at-risk students, improve over time, and continuous student enrollment in charter schools seems to make a difference (Benner, Shapley, & Stamman, 2001). Clearly, accountability for student performance should be a major consideration when renewing charters.

Characteristics Supporting Achievement in Charter Schools

This study was a first step in linking educational conditions and practices in charter schools with student achievement, and in particular, with high and low-performing charter schools. Evidence from AEIS data and the content analysis of charter school applications provide potential explanations for why students in some charter schools perform better than others. Moreover, the study confirms that assessing the effectiveness of charter schools by examining aggregate student outcomes clouds the true picture. In fact, some charter schools, like traditional public schools, are far more effective than others. When examined collectively, Texas traditional public schools outperform charter schools on various achievement measures. This study, however, shows that successful charter schools have student achievement outcomes similar to or exceeding state averages, even though successful charter schools have a larger proportion of minority students. Student performance in struggling charter schools, however, is dismal.

Successful and struggling charter schools serve different student populations. Successful schools generally serve less than 75 percent at-risk students, with comparable percentages of African American (29 percent), Hispanic (31 percent), and White (35 percent) students. In contrast, struggling charter schools typically serve 75 percent or more at-risk students (four are 75 Percent Rule charters). Students are predominantly African American (61 percent) and Hispanic (32 percent). Although differences in student populations served by comparison-group schools partially explain student outcomes, it is still informative to understand how founders of struggling charter schools conceptualized the educational plan for their particular student population. Themes emerging from findings, to follow, suggest charter school attributes that may foster student academic success.

Enriched curriculum and instruction. Successful schools have high expectations for all students. The state standards-based curriculum is considered a minimum, so schools enrich learning through an interdisciplinary curriculum, project-based learning, field trips, foreign language, visual and performing arts, advanced college preparatory coursework, character education, community service projects, and extracurricular activities. Struggling schools, on the other hand, express high expectations for students, but curriculum and instruction typically focus on basic or vocational skills, GED preparation or course credit accrual, job preparation, and remediation of student deficiencies.

Curricular integration of technology. Successful and struggling charter schools have vastly different approaches to technology use. Consistent with the *Texas Long-Range Plan for Technology*, successful schools describe using technology as a tool to enhance learning. Curricular integration of technology allows students to use technology for simulations, projects, presentations, research, communication, and more. In contrast, struggling charter schools are more likely to view technology as a way to deliver the curriculum (i.e., computer-assisted learning systems) or to prepare students for the state assessment (i.e., TAAS tutorials).

Supportive organizational structures, particularly extended learning time. Successful charter schools typically have a grade span supporting a developmental educational continuum, with the foundation for learning laid in primary grades. Instructional arrangements allow individualization, reduce student-to-teacher ratios, or promote closer student-teacher relationships (e.g., multiage, flexible groups, school within a school). In addition, many successful schools extended the school day, week, or year to reinforce or enrich student learning. In contrast, struggling charter schools use more conventional structures (except for open-entry and open-exit enrollment), and schools rarely extend learning time beyond the school day.

Student self-regulation of learning and behavior. Applicants for successful and struggling charter schools hold divergent views on student discipline and behavior. Successful charter schools, consistent with social-cognitive learning theory (Bandura, 1986; Zimmerman, 1994), value student self-regulation of learning and behavior, and they create school environments allowing student ownership of behavior through goal-setting,

self-monitoring progress, assuming responsibility, and decision making, among others. Struggling schools value student self-responsibility, diligence, and effort, but adopt a behavioristic approach to student control through detailed codes of conduct and disciplinary procedures, merit reward systems, and behavior modification.

Philosophical and pedagogical coherence. Successful charter schools more commonly rely on research and educational literature to shape programs and the school environment, and proposed structures and practices are generally consistent with professed beliefs. For example, all successful charter schools are strongly committed to student-centered learning. Accordingly, applicants operationalized beliefs through structures such as multiage classes, schools within schools, and smaller classes. In contrast, struggling schools believe in individualized student learning but practices, such as whole group, teacher-directed instruction and large classes, seem incongruent with stated beliefs. Approaches to discipline, as cited above, further illustrate incoherence in struggling charter schools.

Teacher quality. Teachers in successful charter schools are more experienced, more likely to have college degrees, and are paid higher salaries. In contrast, struggling charter schools employ more beginning and inexperienced teachers and teachers are less likely to hold college degrees. Student-to-teacher ratios are also lower in successful charter schools. These factors partially explain the 60 percent teacher turnover rate in struggling charter schools, compared with 39 percent for successful schools. Interestingly, guidelines for teachers described in charter school applications foreshadow actual teacher characteristics. Most successful charter schools require bachelor's degrees along with extensive teacher professional development connected with the school's educational vision. Conversely, only half of struggling schools establish teacher degree requirements, and teacher professional development receives minor consideration. Findings suggest that a state charter school policy requiring a teacher degree, especially in core content areas, might improve student achievement in charter schools.

Financial resources supporting student learning. Successful charter schools invest more resources in student learning. A greater proportion of expenditures (56 percent) is allocated for instruction, with approximately $500 more for instruction per pupil. Additionally, teachers are paid higher salaries (approximately $5,500 more than teachers in struggling schools). More importantly, the salaries of central administrators in struggling charter schools, which average $20,000 more than administrators in successful charter schools, raise serious questions about leaders' priorities.

Strong parental involvement and community connections. Parental involvement is recognized as a key to improving children's academic performance. For successful charter schools, parent involvement is not only expected, it is almost always required. Parents agree to be involved in children's education, including supporting children academically at home. Strong community connections are also important. Successful charter schools in Texas are founded by civic or educational leaders in communities with a vision and clear goals for the school. Successful schools typically include conversions of existing schools and startup schools with strong community associations (e.g,

universities, parents' work place, neighborhoods). In contrast, for-profit management companies, an existing trade school, a crisis intervention center, and other entities more commonly sponsored struggling schools. In a few words, struggling schools are more closely tied to organizations than communities.

In conclusion, the examination of successful and struggling charter schools adds to the understanding of conditions and practices associated with student achievement in Texas charter schools. The study is one step toward opening the "black box" of charter school instructional practices that support achievement in at-risk student populations (Gill, B.P. et al, 2001). Additional, more statistically rigorous longitudinal student achievement analyses and in-depth case studies of charter schools are needed to provide more valid and reliable information on programs and practices that are "actually" implemented in charter schools and the links with student achievement. Attributes associated with successful and struggling charter schools identified through this study, however, suggest a framework for examining charter school quality.

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