

SCHOOL MOBILITY: A GROWING AND INEQUITABLE HEADWIND TO EDUCATIONAL ACHIEVEMENT

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School mobility – the probability of students changing schools unrelated to grade promotion, school closures, or changes in attendance zones and school feeder patterns – is associated with low student outcomes and campus performance. This UTSA Urban Education Institute analysis of public schools in Bexar County (comprised of both traditional public schools and public charters) found evidence suggesting that mobility contributes to instability within school systems and can harm the learning and development of students.

KEY FINDINGS

- **One in five Bexar County students changes schools annually.** That's an 18.3% probability of school mobility.
- School mobility had negative impacts on local high school graduation rates, college enrollment, and college degree completion – **with the most severe effects felt by students considered economically disadvantaged.**
- **Students at public charter schools were at the highest risk of changing schools.** Their overall mobility rate of 29.5% was almost double that of their traditional public school counterparts' of 17.9%.
- **At the next highest risk of changing schools were public school students who received school disciplinary reports.** Those students' overall mobility rate was 26.8%, compared to those who received no school disciplinary action, at 16.9%.
- **The subgroup of charter students most likely to change schools was comprised of those receiving disciplinary reports.** When these students were written up for disciplinary actions, their probability of changing schools increased from 27.5% to 41.3%.
- **Receiving special education services was associated with a small rise in public school mobility.** Those with special education services changed schools at a slightly higher rate (19.4%), compared with students without such a designation (18.2%).
- Students not receiving special education services in a given year but receiving them the following year had a predicted school mobility rate of 31.3% at charter schools and 22.0% at traditional public schools. This suggests **students who need special education services are needing to change schools to receive them.**



A CLOSER LOOK: CHARTER SCHOOLS & SPECIAL EDUCATION

Public charter schools in Bexar County were more likely to declassify and less likely to classify mobile students needing special education services than traditional public schools.

- Students changing schools faced a 19.2% probability of **losing** special education services if they moved to charters.
- But change their destination – students moving to a traditional public school – and the risk of **losing** services decreased to 10.5%.
- Students changing schools had a 1.1% probability of **gaining** special education services if they moved to charters.
- Change the destination – students moving to a traditional public school – and their chance of **gaining** special education services increased to 1.8%.

INTRODUCTION



Each time children change schools, they leave behind friends and must adapt to a new environment. This new environment may include not only a new school, but also a new home, a new neighborhood, a new part of town, and, potentially, a new family arrangement. In this transition, there are many changes and effects that determine if the move causes overall benefit or harm to a student's educational achievement. Consequently, when analyzing the causes and effects of school mobility, one must consider multiple factors that occur before and after a student relocates to a new school.

The negative consequences of school mobility are most likely to be felt by our most vulnerable children: children in need of special education services, those from economically disadvantaged families, or those experiencing social-emotional challenges.

Untangling the various causes of school mobility will help marshal the attention of policymakers to address school mobility from multiple perspectives—not just education, but also housing, neighborhood safety, juvenile justice reform, and disability rights. Equity in education cannot be attained without addressing the various causes that push students out of their school communities.

In Bexar County, the evidence suggests that educational achievement declines when students change schools unrelated to structural factors outside of their control (i.e. changes in school feeder patterns, school closures, grade structure). The negative effects grow with each change in schools and follow students into their college years. The negative consequences of school mobility are most likely to be felt by our most vulnerable

children: children in need of special education services, those from economically disadvantaged families, or those experiencing social-emotional challenges.

Furthermore, economic trends in Bexar County and across Texas forewarn of increasing levels of school mobility. Rising income inequality, declining access to affordable housing, and increasing school-choice opportunities under current accountability and funding rules combine to make school mobility more likely and more severe. If this issue is ignored, any increased investments and efforts to improve education will be met by a growing headwind, preventing real forward progress in raising educational attainment rates.

The goal of this research study was to close gaps in knowledge about the prevalence of nonstructural school mobility within Bexar County and its effects on teaching and learning. Researchers conducted a mixed-methods investigation of the following research questions:

- (1) How likely are public school students to experience nonstructural school mobility?
- (2) Which students are most likely to experience nonstructural school mobility?
- (3) How and why do students with the highest rates of nonstructural school mobility experience school mobility?

Nonstructural school mobility describes when a student changes schools unrelated to grade promotion, change in attendance zones or school feeder patterns, or school closures (Welsh, 2017). In this report, this phenomenon is referred to as school mobility.



RESEARCH DESIGN

METHODS

Researchers used a mixed-methods research design that involved longitudinal multivariable regression analyses and case study research. The primary investigator conducted the quantitative analyses, estimating how student attributes and school experiences related to school mobility using regression analyses with student-level random effects. For this quantitative analysis, the target population consisted of public school students limited to Bexar County, excluding those attending schools in residential settings. Early results of the quantitative analysis helped inform the selection of student subgroups on which to focus case study research.

The primary investigator also modeled the effect school mobility has on losing special education services and, in a separate equation, on gaining special education services.

In three separate statistical models, the cumulative effect of school mobility was related to rates of four-year high school graduation, college enrollment in the fifth year following high school entry, and college degree completion six years later.

For the qualitative case study research, researchers set out to explore perceptions of school mobility, particularly when it came to the needs of students with disabilities or disciplinary histories. A total of six case studies were produced after interviews with 24 individuals – including teachers, parents, and advocates for students with disabilities. Teachers and parents chosen had experience either in traditional public schools or state-created public charter schools (charter schools).

In-depth interviews, open-ended questioning, direct observation, and written documents were used for the purposes of data collection. These qualitative methods allowed for

the exploration of school mobility through specific cases within real-life contexts. The objective was to collect rich depictions and perspectives of those most involved in the phenomenon of school mobility.

In turn, the case study research helped generate alternative explanations of school mobility that could be tested in the multivariable regression analysis. Over the course of a year, these two different research methods informed each other and allowed researchers to dig deeper and ultimately produce richer evidence that answered the research questions. A more detailed specification of the research design can be found in Appendix A.

STUDY POPULATION

For the quantitative analysis, the target population was defined as public school students limited to Bexar County, excluding those who attended schools in residential care centers or alternative education programs. As such, researchers constructed a study population of students who met the following criteria:

- Enrolled in a Bexar County public school between first and twelfth grade at any time from 2007 to 2018;
- Not enrolled in schools in residential care centers; and
- Did not change schools outside of Bexar County.

Researchers excluded those who moved to schools outside of Bexar County to control for school changes associated with long-distance family relocations, a motivation outside this study's interest in school mobility.

The study sample included approximately 2.4 million annual education records of students. As shown in Table 1, the study population reflects the demographics and socioeconomics of Bexar County public school students. Approximately half of all students were female. Hispanic students represented 68.8% of all students, followed by White students at 18.5%, Black students at 8.1%, and Asian students at 2.1%. Students who identified as more than one race or ethnicity or who were Native American or Pacific Islander amounted to 0.8% of all students. This last group is referred to as Other in tables and graphs for simplicity.

Students identified as economically disadvantaged and limited English proficient in a given year comprised 76.2% and 8.8% of the study population. During any given year, the average share of students who were previously identified as limited English proficient equaled 6.8%.

Students who received special education services equaled 10.5%. During any given year, 1% of students did not receive special education services but would receive them in the following year.

Students who received a disciplinary report in a given year equaled 14.7%. The share of students enrolled in a disciplinary alternative education program (DAEP) or juvenile justice alternative education program (JJAEP) equaled less than 0.2% and less than 0.1%. Students enrolled in alternative education programs in any given year made up 1.8% of the study population. Variables indicating enrollment into these alternative education settings were included in the multivariable analysis to control for their influence on student outcomes. This decision was made because it is common for students to be located in DAEP while receiving instruction from their home schools. Also, enrollment in alternative education programs was outside the focus of this study.

This report presents the findings of the multivariable regression analysis using predicted probabilities. For example, the statement that Hispanic students have a predicted probability of school mobility equal to 17.2% means that this measure of likelihood is solely based on the relationship between Hispanic ethnicity and student mobility. This probability measure does not include influences from other variables such as economic disadvantage. All other variables are held constant at the mean value of the population.

TABLE 1: STUDENT ATTRIBUTES & EXPERIENCES OF STUDY POPULATION

Variables	Mean	SD
Received special education services in current year	0.105	0.307
Acquired special education services in next year	0.010	0.098
Received disciplinary report in current year	0.147	0.354
Female	0.482	0.500
Limited English proficient in current year	0.088	0.283
Limited English proficient previously	0.068	0.251
Hispanic	0.688	0.463
White	0.185	0.388
Black	0.081	0.273
Asian	0.021	0.144
Other	0.008	0.091
Economically disadvantaged	0.762	0.426
Enrolled in charter school in current year	0.047	0.211
Enrolled in charter school in next year	0.045	0.207
Enrolled in DAEP in current year	0.002	0.040
Enrolled in DAEP in next year	0.001	0.036
Enrolled in JJAEP in current year	0.000	0.015
Enrolled in JJAEP in next year	0.000	0.012
Enrolled in alternative education in current year	0.018	0.134
Enrolled in alternative education in next year	0.015	0.121
Grade	5.872	3.145
Year	2012.159	3.176

Note: Data were structured in long-format by student and year. Sample size equaled 2,409,605 student-year records of Bexar County public school students who were ever enrolled in public school from 2007 to 2018.

In this study, schools identified as charter schools represent charter schools created by the state. They do not include the few charter schools created by school districts. These in-district charter schools are categorized as traditional public schools.

Charter schools enrolled a different student population than traditional public schools, as shown in Table 2. The following student attributes and experiences were found to be statistically significant at the 5% level.

Charter schools enrolled fewer students with special needs than traditional public schools (8.4% vs. 10.6%) and more students who lacked special education services in one year but gained them the following year (1% vs 1.3%).

Charter schools enrolled fewer students with a prior school disciplinary report than traditional public schools (9.4% vs. 15.0%).

Charter schools also enrolled more Black students (13% vs. 7.9%); more Hispanic students (71.1% vs. 68.7%); fewer White students (10.6% vs. 18.9%); and fewer Asian students (2.0% vs. 2.1%).

Charter schools enrolled more students identified as economically disadvantaged (86.7% vs. 75.7%); more students identified as limited English proficient (11.8% vs. 8.3%); and fewer students identified as previously limited English proficient (5.4% vs. 7.2%).

TABLE 2: STUDENT ATTRIBUTES & EXPERIENCES OF STUDY POPULATION IN CHARTER AND TRADITIONAL PUBLIC

Variables	Charter		Traditional	
	Mean	SD	Mean	SD
Received special education services in current year	0.084	0.277	0.106	0.308
Acquired special education services in next year	0.013	0.113	0.010	0.098
Received disciplinary report in current year	0.094	0.292	0.150	0.357
Female	0.489	0.500	0.482	0.500
Limited English proficient in current year	0.118	0.323	0.083	0.275
Limited English proficient previously	0.054	0.227	0.072	0.259
Hispanic	0.711	0.453	0.687	0.464
White	0.106	0.308	0.189	0.392
Black	0.130	0.337	0.079	0.269
Asian	0.020	0.141	0.021	0.144
Other	0.008	0.091	0.008	0.091
Economically disadvantaged	0.867	0.340	0.757	0.429
Enrolled in charter school in next year	0.703	0.457	0.013	0.111
Enrolled in DAEP in current year	0.000	0.000	0.002	0.041
Enrolled in DAEP in next year	0.000	0.019	0.001	0.036
Enrolled in JJAEP in current year	0.000	0.000	0.000	0.015
Enrolled in JJAEP in next year	0.000	0.006	0.000	0.013
Enrolled in alternative education in current year	0.312	0.463	0.004	0.062
Enrolled in alternative education in next year	0.185	0.388	0.007	0.080
Grade	5.784	3.053	5.876	3.149
Year	2013.111	3.198	2012.112	3.168

Note: Data were structured in long-format by student and year. The study sample of students enrolled in Bexar County traditional public schools equaled 2,296,647 student-year records from 2007-2018. The study sample of students enrolled in Bexar County charter schools equaled 112,958 student-year records from 2007-2018.

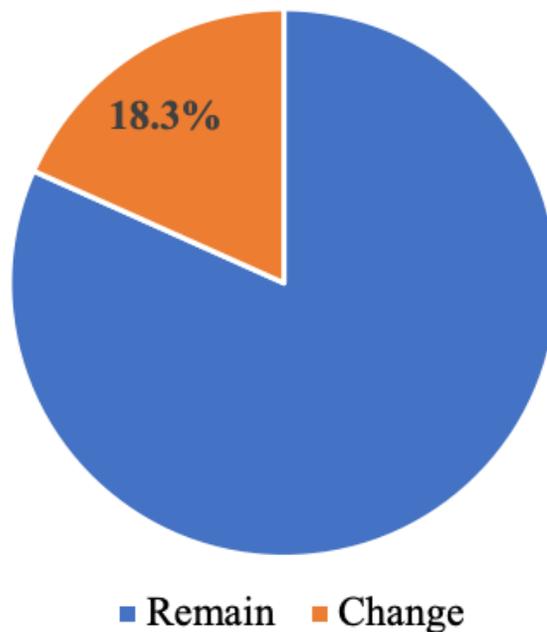
For the case study research, researchers interviewed subjects who could shed light on the causes of school mobility experienced by students with the highest rates of school mobility: students with special needs, students from economically disadvantaged backgrounds, and students enrolled in charter schools.

ANALYSIS AND FINDINGS



In Bexar County, public school students had an 18.3% probability of changing schools by the start of the next school year.

FIGURE 1: EXPECTED PROBABILITY OF CHANGING SCHOOLS, YEAR TO YEAR



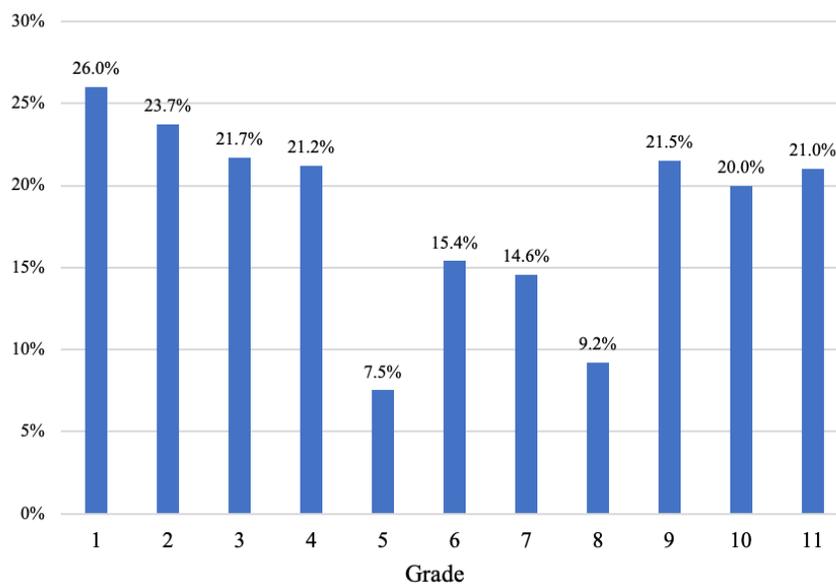
Note: School change was measured from year to year during the first six weeks of each academic year.

School mobility varied by grade, as shown in Figure 2. Students had the highest predicted rates of school mobility during the early grades. As students progressed, predicted school mobility declined from a high of 26% in first grade to 21% in 11th grade.

Students in fifth and eighth grades had the lowest rates of school mobility, 7.5% and 9.2%, respectively. These grades represent the highest grade of typical elementary and middle schools in Bexar County.

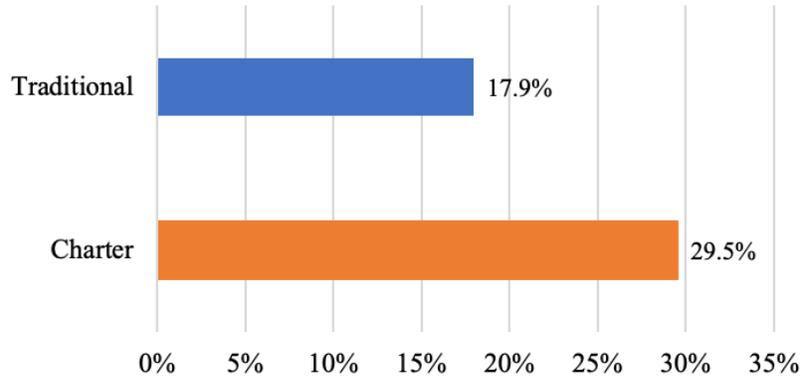
Estimates for Grade 12 were not included because this study defined school mobility based on reenrollment in the same school from the start of one year to the next. Eleventh grade is the last grade that allows for this calculation.

FIGURE 2: PREDICTED PROBABILITY OF CHANGING SCHOOLS BY GRADE LEVEL

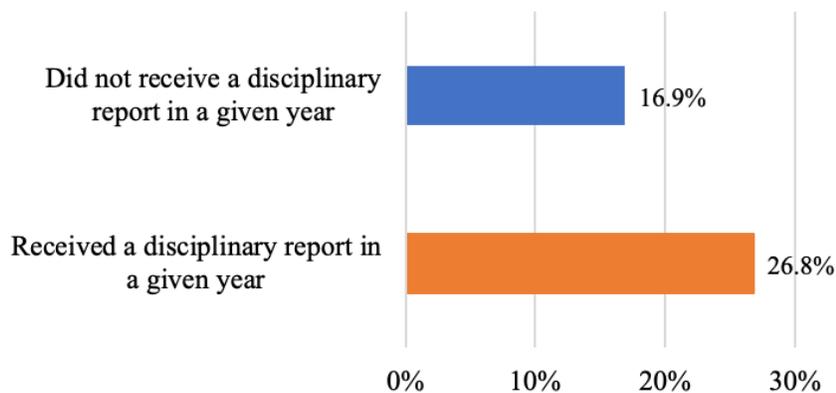


STUDENT SUBGROUPS

Having certain attributes or experiences altered a student's predicted probability of changing schools. Enrollment in a charter school was most strongly associated with changing schools, as shown in Figure 3. Students enrolled in a charter school had a predicted school mobility rate of 29.5%, a rate about 1.7 times that of students enrolled in traditional public schools. Traditional public school students had a predicted school mobility rate of 17.9%.

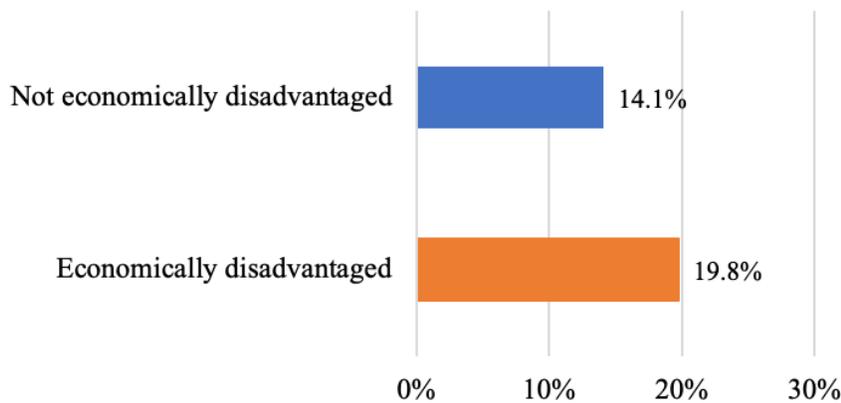
FIGURE 3: PREDICTED PROBABILITY OF CHANGING SCHOOLS BY TYPE OF PUBLIC SCHOOL

The link between receiving a school disciplinary report in a given year and school mobility was a close second to that of charter school enrollment, as shown in Figure 4. Students who received a school disciplinary report in a given year had a 26.8% predicted probability of enrolling in a new school the following year, a rate 1.6 times that of students who did not receive a disciplinary action. Students who did not receive a disciplinary report had a predicted school mobility rate of 16.9%.

FIGURE 4: PREDICTED PROBABILITY OF CHANGING SCHOOLS BY SCHOOL DISCIPLINARY HISTORY IN A GIVEN YEAR

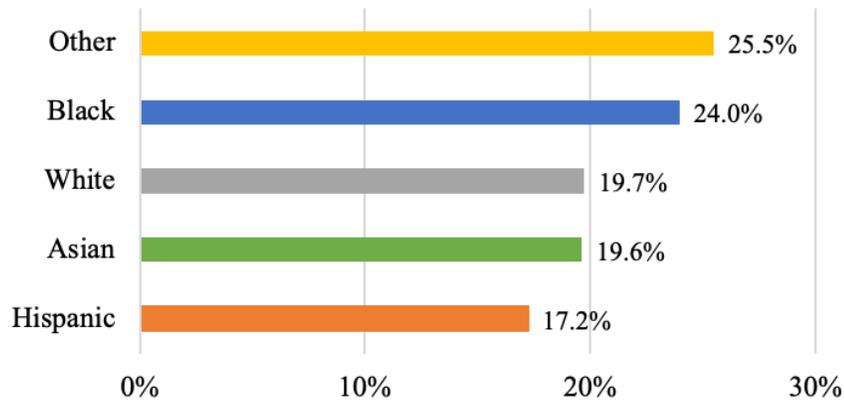
Children experiencing poverty were more likely to change schools, as shown in Figure 5. Students from economically disadvantaged families had a 19.8 % predicted likelihood of changing schools, a rate 1.4 times that of students who were not economically disadvantaged. The non-economically disadvantaged students changed schools at a predicted rate of 14.1%.

FIGURE 5: PREDICTED PROBABILITY OF CHANGING SCHOOLS BY ECONOMICALLY DISADVANTAGED STATUS



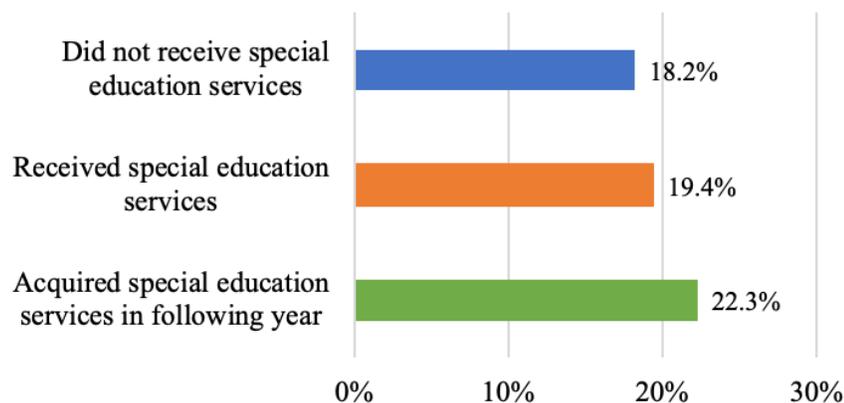
School mobility varied by race and ethnicity, as shown in Figure 6. After controlling for all other student attributes and experiences, students who were classified as Other (a group that includes multiracial and ethnic students and Native Americans and Pacific Islanders) had the highest predicted rate of school mobility rate of 25.5%. In close second, Black students had a predicted school mobility rate of 24.0%. Students who were White or Asian had predicted school mobility rates equal to 19.7% and 19.6%, respectively. Hispanic students had the lowest predicted rate of school mobility at 17.2%.

**FIGURE 6: PREDICTED PROBABILITY OF CHANGING SCHOOLS
BY RACE & ETHNIC SUBGROUPS**



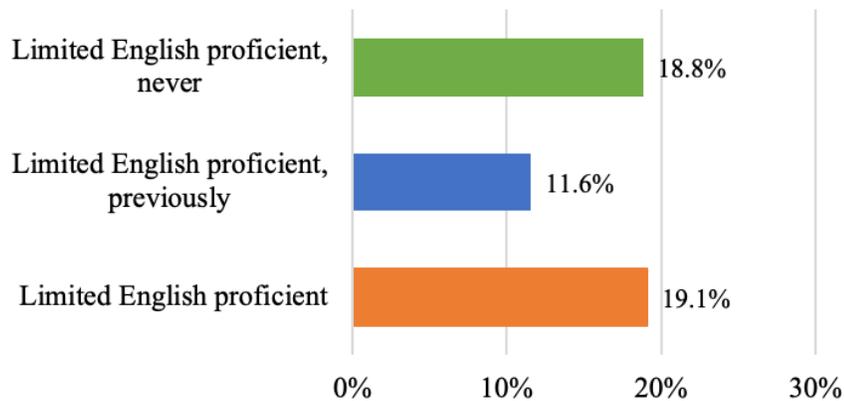
As shown in Figure 7, students who received special education services had a predicted likelihood of changing schools equal to 19.4%. Students who never received special education services had a predicted school mobility rate of 18.2%. Students who lacked special education services one year but gained them the next had a predicted school mobility rate of 22.3%. This third group represents students who did not receive special education services in a given year but may have needed them since they acquired them the following year.

**FIGURE 7: PREDICTED PROBABILITY OF CHANGING SCHOOLS
BY SPECIAL EDUCATION STATUS**



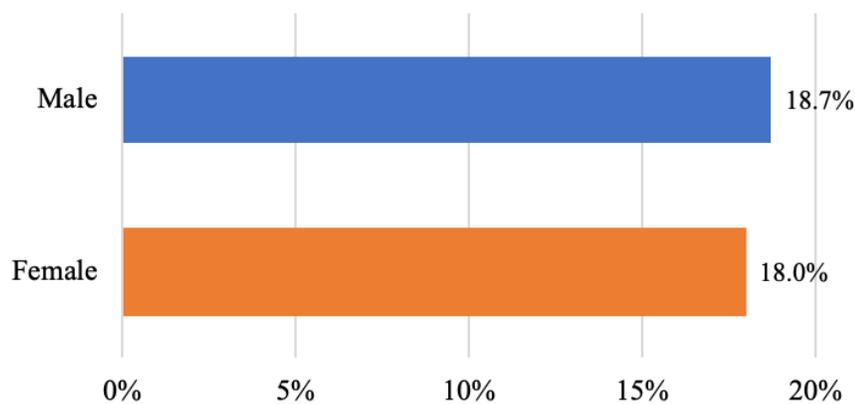
As shown in Figure 8, students who were currently identified as limited English proficient had a predicted school mobility rate equal to 19.1%. In contrast, students who were previously identified as limited English proficient had a lower predicted school mobility rate equal to 11.6%. Those who were never identified as limited English proficient had a predicted school mobility rate equal to 18.8%.

FIGURE 8: PREDICTED PROBABILITY OF CHANGING SCHOOLS BY LIMITED ENGLISH PROFICIENT STATUS



Female students had a predicted school mobility rate equal to 18.0%; while male students had a predicted school mobility rate equal to 18.7%, as shown in Figure 9.

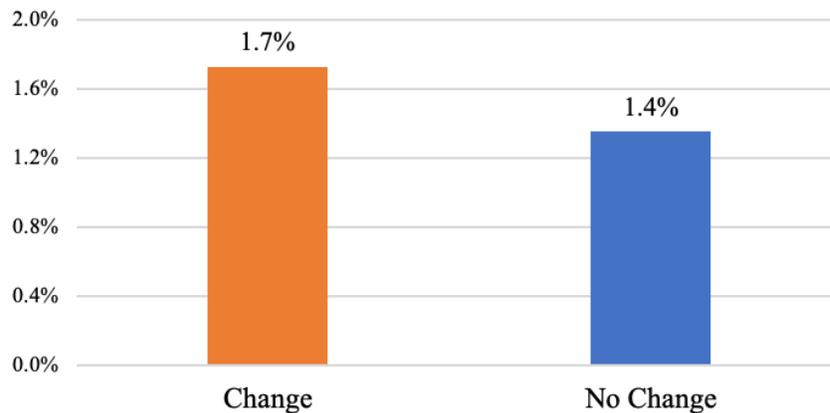
FIGURE 9: PREDICTED PROBABILITY OF CHANGING SCHOOLS BY GENDER



RECEIPT OF SPECIAL EDUCATION SERVICES

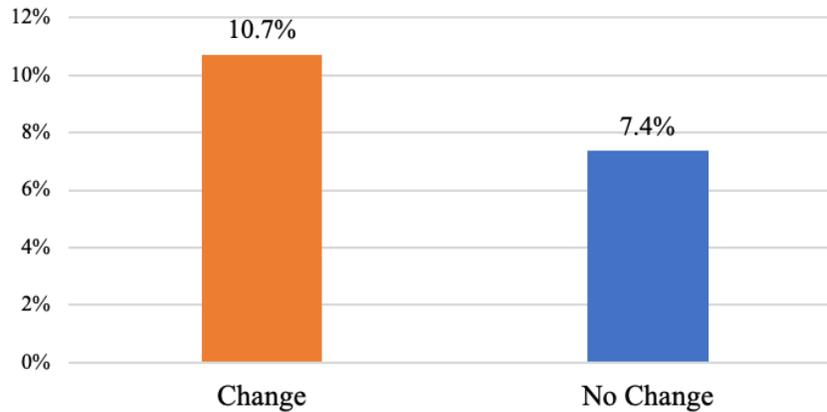
Gaining and losing special education services was also found to be linked to school mobility, as illustrated in Figures 10 and 11. Students who changed schools acquired special education services 1.7% of the time; while those who remained in the same school acquired special education 1.4% of the time, a 22% reduction in likelihood of gaining special education services.

FIGURE 10: PREDICTED PROBABILITY OF GAINING SPECIAL EDUCATION SERVICES WHEN STUDENTS CHANGE SCHOOLS OR REMAIN IN THE SAME SCHOOL



Students receiving special education services lost those services when they changed schools at a predicted rate of 10.7%; while those who remained in the same school lost special education 7.4% of the time, a 31% reduction in the likelihood of losing special education services.

FIGURE 11: PREDICTED PROBABILITY OF LOSING SPECIAL EDUCATION SERVICES WHEN STUDENTS CHANGE SCHOOLS OR REMAIN IN THE SAME SCHOOL



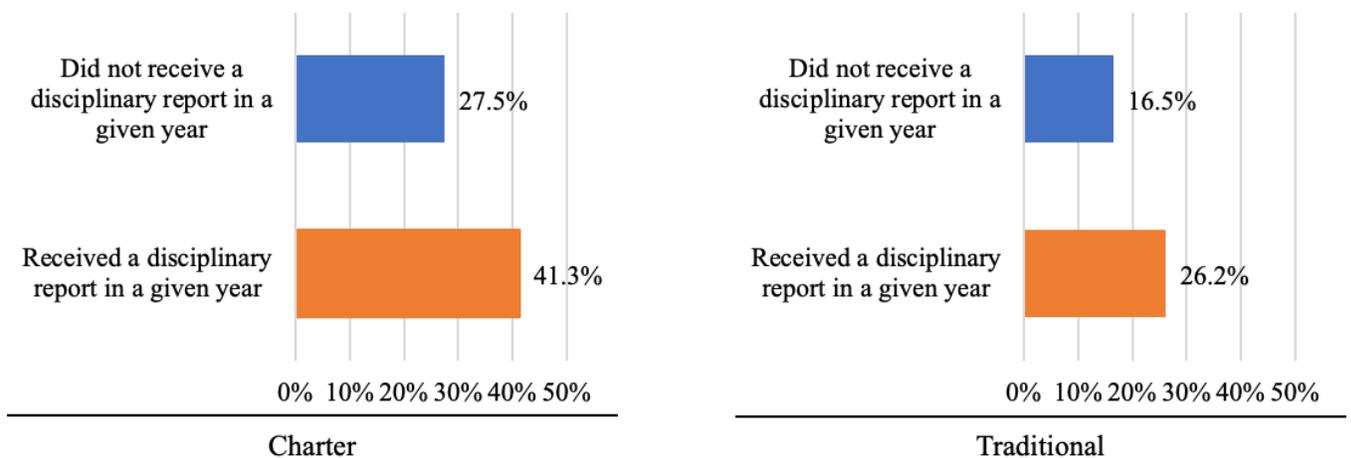
CHARTER SCHOOLS

Students enrolled in charter schools changed schools at the highest rates. The research team found no subgroup of students where this was not the case. However, as the following subsections will report, there are two sets of students that had pronounced levels of school mobility when enrolled in a charter school.

The first group includes students in need of special education services but not receiving them (based on the time pattern of receiving special education services), and students who received a disciplinary report in a given year. The second group with heightened predicted school mobility rates at charter schools are Asian and White students and students not identified as economically disadvantaged.

School Disciplinary Action. The subgroup of charter students that was most likely to change schools was comprised of those who received a disciplinary report. When charter school students received a disciplinary report, their predicted probability of changing schools increased from 27.5% to 41.3%, as shown in Figure 12. Had these students been enrolled in a traditional public school, their predicted likelihood of school mobility would have been 26.2%. The least likely to change schools were students who did not receive a school disciplinary report and who were enrolled in a traditional public school. These students had a predicted school mobility rate of 16.5%.

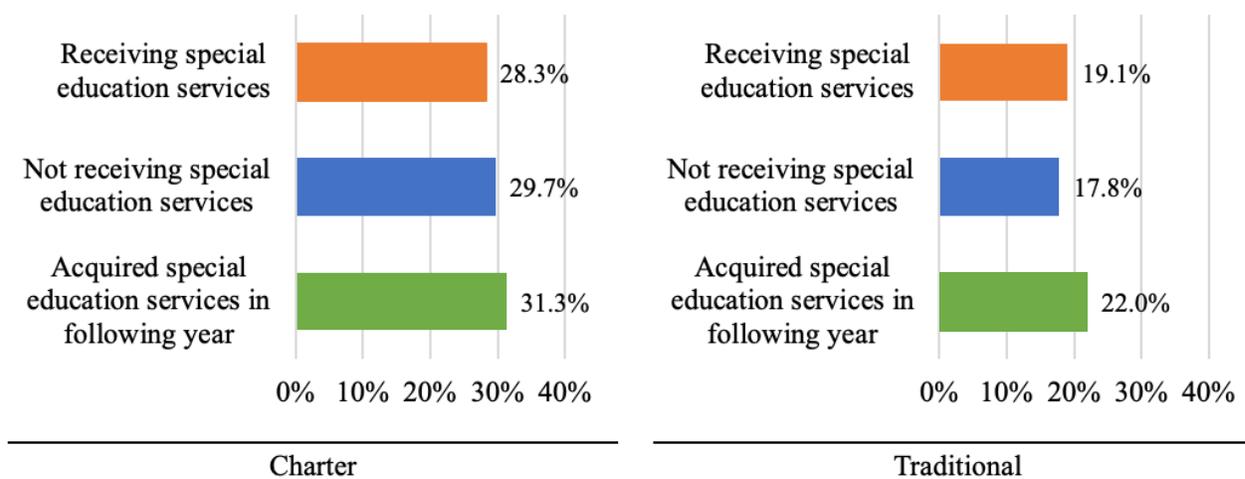
FIGURE 12: PREDICTED PROBABILITY OF CHANGING SCHOOLS BY SCHOOL DISCIPLINARY HISTORY IN A GIVEN YEAR, CHARTER VS. TRADITIONAL PUBLIC SCHOOL



Special Education Services. Did school mobility patterns change based on receipt of special education services and charter school enrollment? Yes, but only for students who were not receiving special education services in a given year but began receiving them in the following year. Based on case study research, this group represents students being deprived of special education services. This group had a predicted school mobility rate of 31.3% at charter schools and 22.0% at traditional public schools.

Students who were not receiving special education services in any given year had a predicted school mobility rate of 29.7% at charter schools and 17.8% at traditional public schools. Students who received special education services had a predicted school mobility rate of 28.3% at charter schools and 19.1% at traditional public schools.

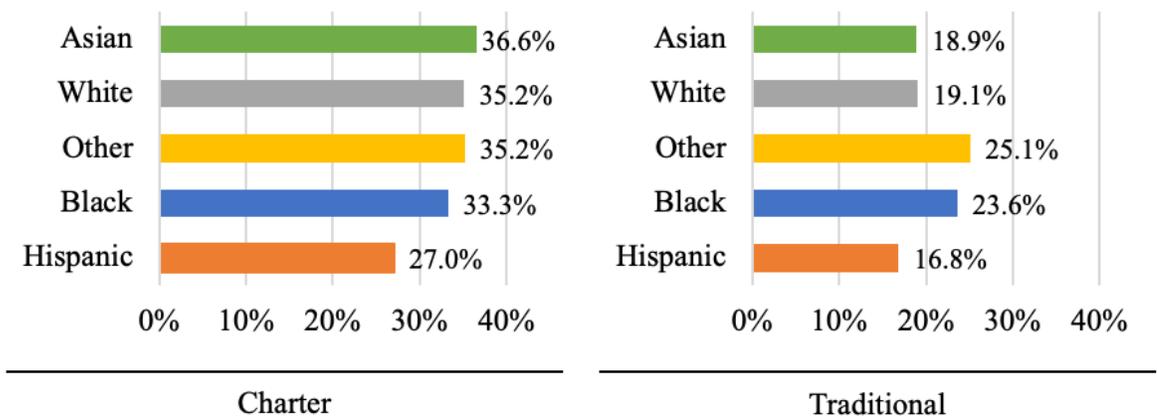
**FIGURE 13: PREDICTED PROBABILITY OF CHANGING SCHOOLS
BY SPECIAL EDUCATION STATUS, CHARTER VS. TRADITIONAL PUBLIC SCHOOL**



Race and Ethnicity. School mobility by racial and ethnic subgroups had a unique pattern at charter schools, as shown in Figure 14. Asian, White, and Other students had the highest predicted rates of school mobility equal to 36.6%, 35.2%, and 35.2%, respectively. Black students had a predicted school mobility rate of 33.3%. Hispanic students were the least likely to change schools with a predicted school mobility rate of 27.0%.

Students of each ethnic and racial subgroup experienced lower school mobility rates when enrolled in a traditional public school, but their ranking by mobility differed from charters. Asian and White students had predicted school mobility rates of 18.9% and 19.1%. Black students and students in the “other” category had predicted school mobility rates of 23.6% and 25.1%. Once again, Hispanic students were the least likely to change schools with a predicted school mobility rate of 16.8% when enrolled in a traditional public school.

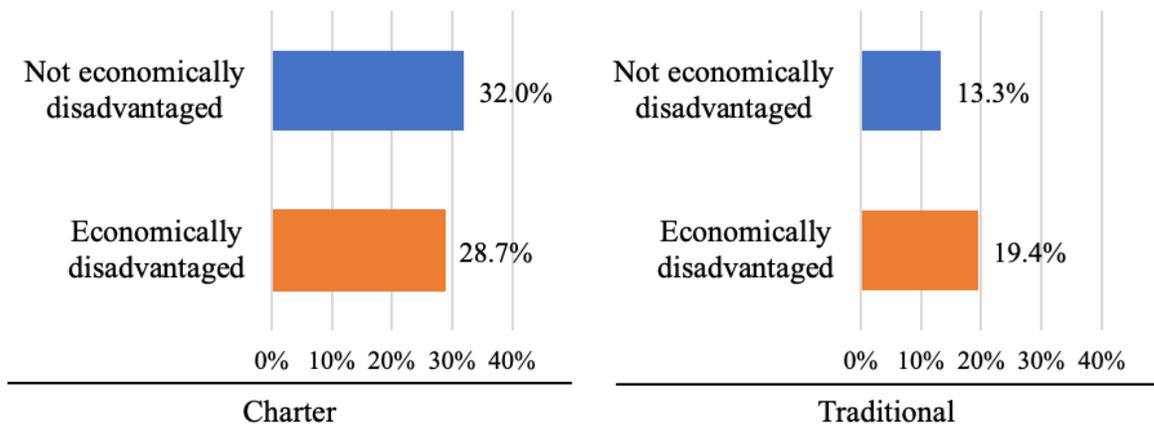
FIGURE 14: PREDICTED PROBABILITY OF CHANGING SCHOOLS BY RACE AND ETHNIC SUBGROUP, CHARTER VS. TRADITIONAL PUBLIC SCHOOL



Poverty. The relationship between poverty and school mobility also differed between charter schools and traditional public schools, as shown in Figure 15. Charter students from non-economically disadvantaged families were more likely to change schools. These students had a predicted school mobility rate of 32%, while their classmates who were economically disadvantaged had a predicted school mobility rate of 28.7%. Had economically disadvantaged students enrolled in a traditional public school, their predicted school mobility rate would equal 19.4% – a rate 58% lower than their charter school peers.

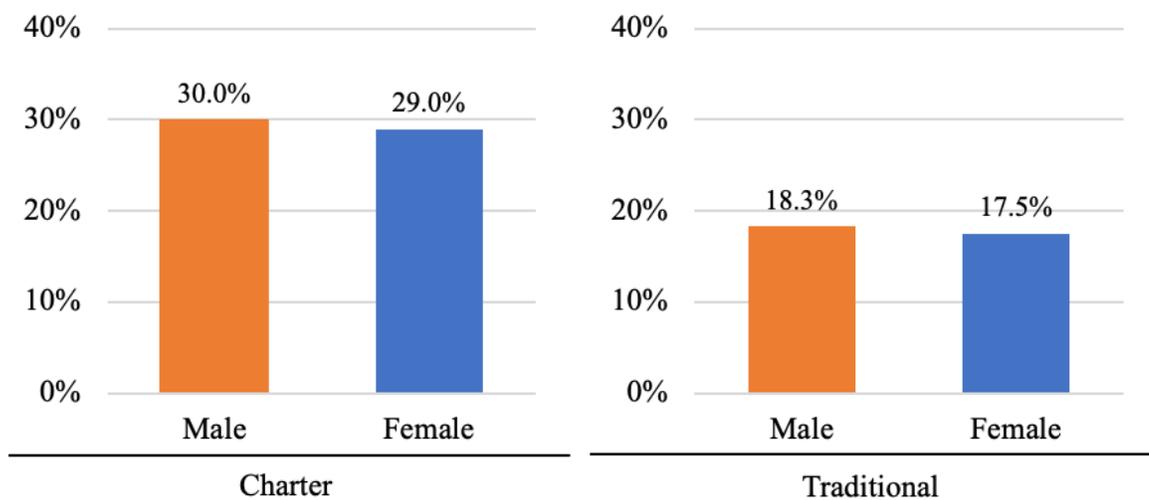
Students least likely to change schools were those who were not economically disadvantaged and enrolled in a traditional public school. These students had a predicted school mobility rate of 13.3%.

FIGURE 15: PREDICTED PROBABILITY OF CHANGING SCHOOLS BY ECONOMICALLY DISADVANTAGED STATUS, CHARTER VS. TRADITIONAL PUBLIC SCHOOL



Gender. Male students were slightly more likely to change schools than female students, as shown in Figure 16. Once again, the primary predictor of school mobility was charter enrollment. Males had a predicted school mobility rate of 18.3% when enrolled in a traditional public school and 30.0% when enrolled in a charter school. Females had a predicted school mobility rate of 17.5% when enrolled in a traditional public school and 29.0% when enrolled in a charter school.

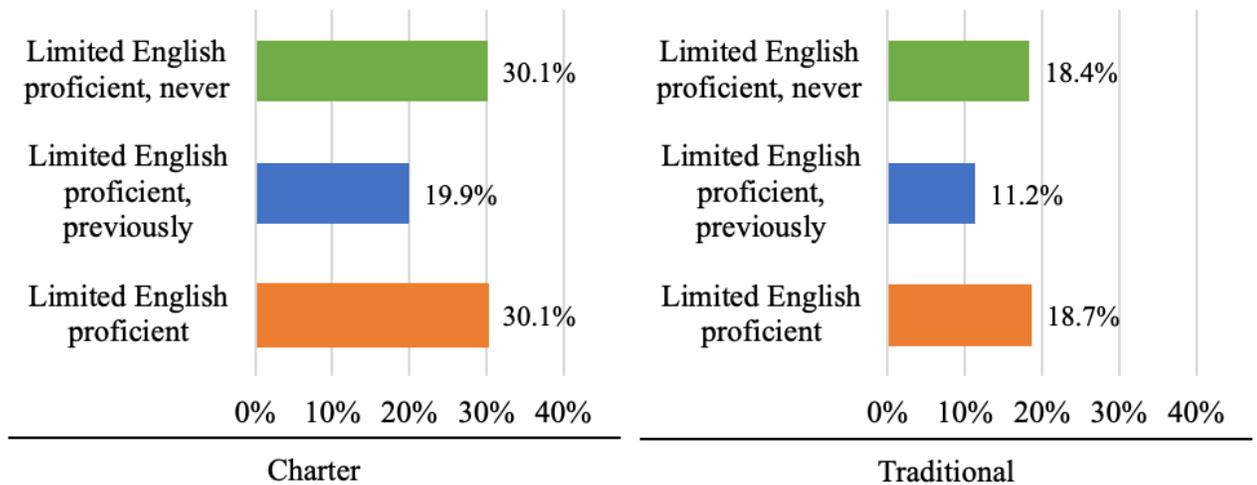
FIGURE 16: PREDICTED PROBABILITY OF CHANGING SCHOOLS BY GENDER, CHARTER VS. TRADITIONAL PUBLIC SCHOOL



Limited English Proficiency. When examining school mobility through the lens of limited English proficiency, students who were least likely to change schools were those who were previously classified as limited English proficient, as shown in Figure 17. These students had a predicted school mobility rate of 11.2% when enrolled in a traditional public school and 19.9% when enrolled in a charter school.

The remaining groups had predicted school mobility rates approximately equal to their larger, respective populations. The remaining students enrolled in charter schools had a predicted school mobility rate of 30.1%. The remaining students enrolled in traditional public schools had a predicted school mobility rate of approximately 18.5%.

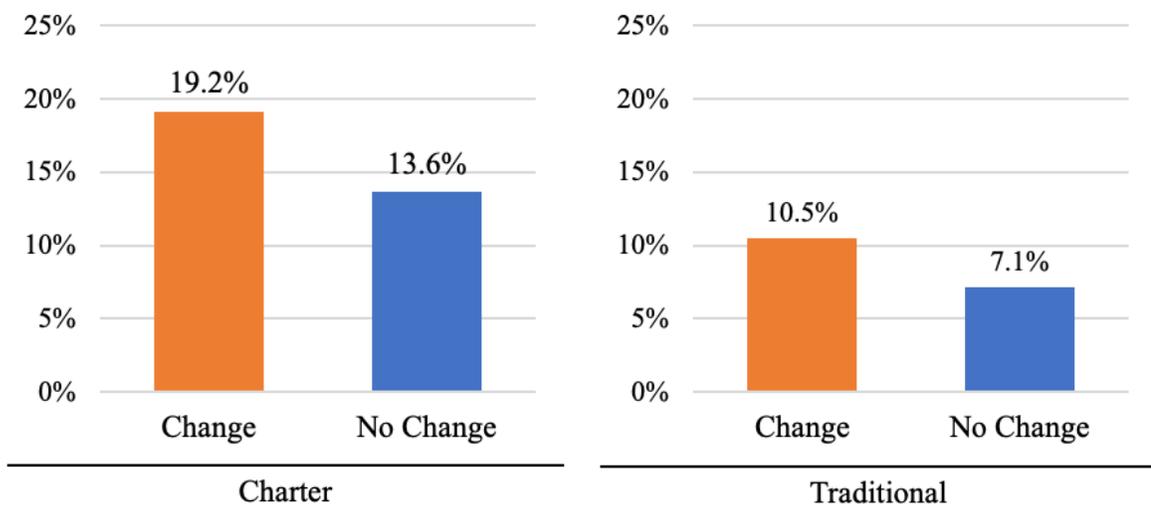
FIGURE 17: PREDICTED PROBABILITY OF CHANGING SCHOOLS BY LIMITED ENGLISH PROFICIENT STATUS, CHARTER VS. TRADITIONAL PUBLIC SCHOOL



Receipt of Special Education Services. When students with special needs changed schools, their chances of losing special education services went up. But, if the receiving school was a charter school as compared to a traditional public school, the chance of losing special education services increased 1.8 times. As shown in Figure 18, the predicted probability of losing special education services equaled 19.2% if students changed to a charter school and 10.5% if students changed to a traditional public school.

Students with special needs who did not change schools were the least likely to lose their special education services. The predicted probability of losing special education services equaled 13.6% for charter school students who did not change schools and 7.1% for traditional public school students who did not change schools.

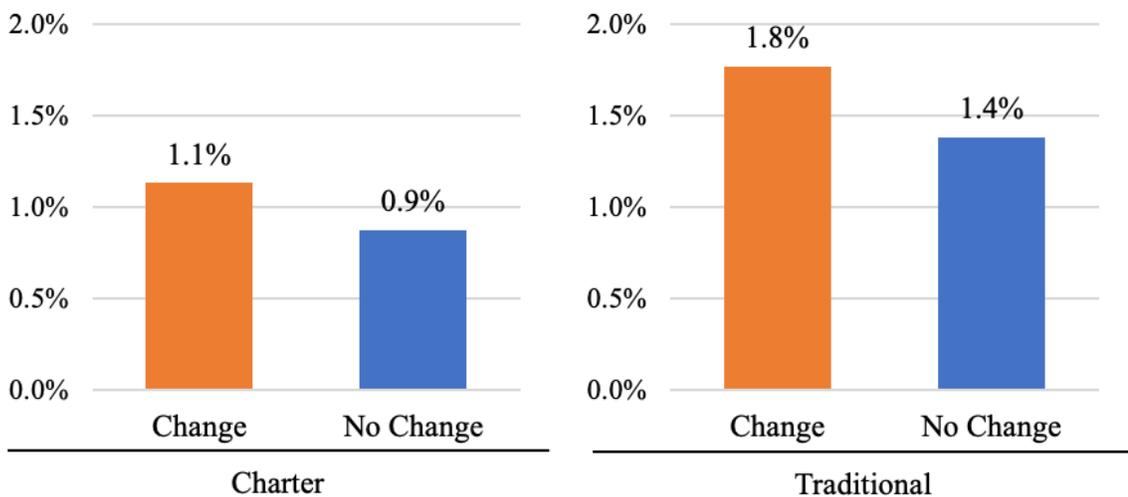
FIGURE 18: PREDICTED PROBABILITY OF LOSING SPECIAL EDUCATION SERVICES BY TYPE OF RECEIVING SCHOOL



While it is easier to lose special education services at a charter school, it is harder to gain them. The predicted probability of gaining special education services following a change of schools equaled 1.8% when enrolling in a traditional public school and 1.1% when enrolling in a charter school.

Not changing schools was associated with the lowest predicted rates of gaining special education services. The predicted probability of gaining special education services equaled 1.4% when remaining in the same traditional public school and 0.9% when remaining in the same charter school.

FIGURE 19: PREDICTED PROBABILITY OF GAINING SPECIAL EDUCATION SERVICES BY TYPE OF RECEIVING SCHOOL

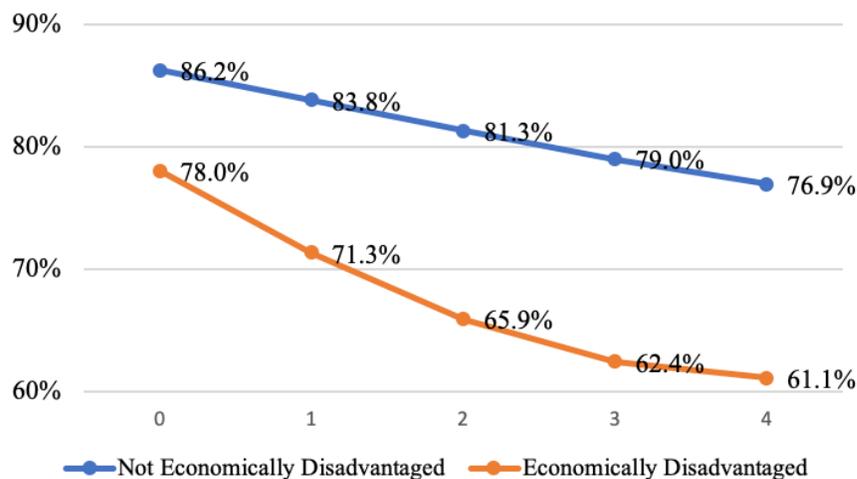


School Mobility & Educational Achievement. School mobility had a strong negative relationship to secondary and postsecondary educational achievement overall. For students from economically disadvantaged families, this negative relationship was even more pronounced.

As shown in Figure 20, every time a student changed schools, the predicted probability of on-time high school graduation declined. Students not considered economically disadvantaged had a predicted probability of graduating from high school on time equal to 86.2% if they did not experience school mobility. However, each time they experienced school mobility, their chances of on-time graduation dropped, first by 2.4 percentage points, then by 2.5, 2.3, and then 2.1 percentage points for each additional move.

In contrast, students identified as economically disadvantaged who did not experience school mobility started with a predicted probability of on-time high school graduation equal to 78.0%. After their first move, their chances of on-time graduation declined by 6.7 percentage points. Following their second, third, and fourth moves, their predicted probability of on-time high school graduation dropped by an additional 5.4, 3.5, and then 1.3 percentage points.

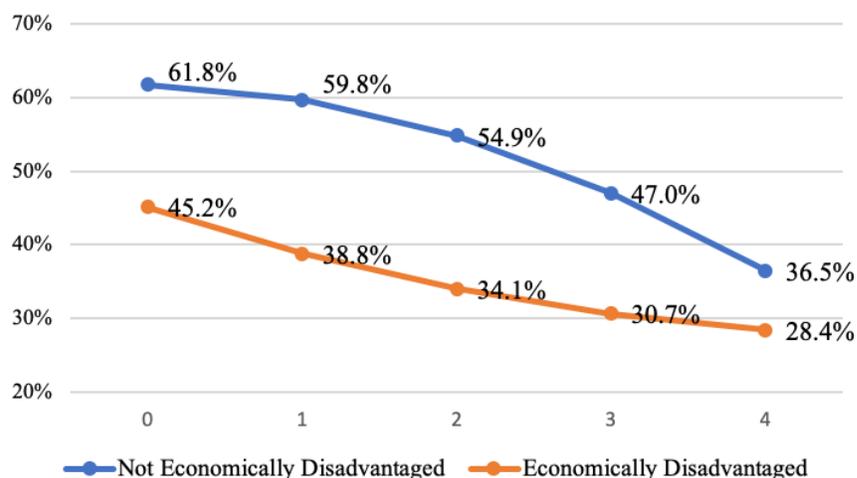
FIGURE 20: PREDICTED PROBABILITY OF ON-TIME HIGH SCHOOL GRADUATION BY NUMBER OF NONSTRUCTURAL ANNUAL SCHOOL CHANGES AND BY STUDENT'S ECONOMICALLY DISADVANTAGED STATUS



The negative relationship between school mobility and high school graduation snowballed into negative effects on postsecondary outcomes. As shown in Figure 21, every time a student changed schools, the predicted probability of postsecondary enrollment declined. Students not considered economically disadvantaged had a predicted probability of enrolling in college (a two-year or four-year institution of higher education) equal to 61.8%, but only if they did not experience school mobility. However, each time they experienced school mobility, their chances of college enrollment dropped, first by 2.0 percentage points, then by 4.9, 7.8, and then 10.5 percentage points for each subsequent move.

In contrast, students identified as economically disadvantaged who did not experience school mobility started with a lower predicted probability of college enrollment equal to 45.2%. After their first move, their chances of college enrollment declined by 6.4 percentage points. Following their second, third, and fourth moves, their predicted probability of college enrollment dropped by an additional 4.8, 3.4, and then 2.2 percentage points.

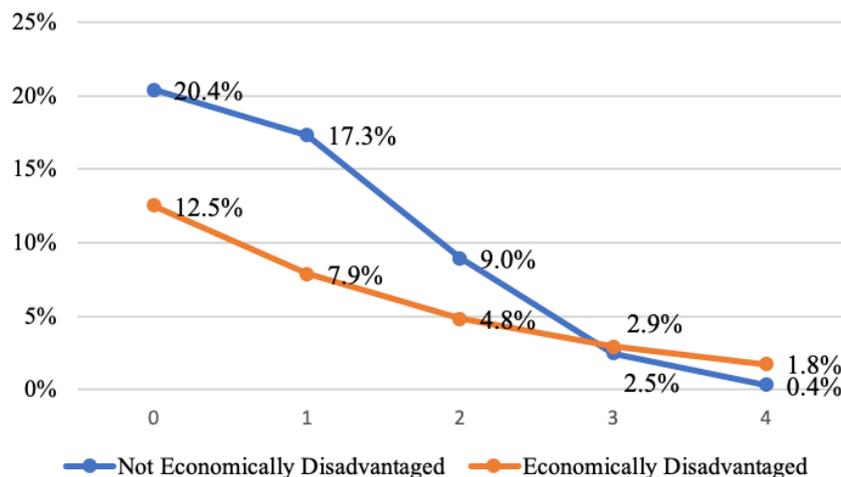
FIGURE 21: PREDICTED PROBABILITY OF POSTSECONDARY ENROLLMENT BY NUMBER OF NONSTRUCTURAL ANNUAL SCHOOL CHANGES AND BY STUDENT'S ECONOMICALLY DISADVANTAGED STATUS



The predicted likelihood of college degree completion for these two subgroups converged by the third school move. As shown in Figure 22, students not considered economically disadvantaged had a predicted probability of earning a college degree (from a two-year or four-year institution of higher education) equal to 20.4%, but only if they did not experience school mobility. However, each time they experienced school mobility, their chances of earning a college degree dropped, first by 3.1 percentage points, then by 8.4, 6.5, and then 2.1 percentage points for each additional move.

In contrast, students identified as economically disadvantaged who did not experience school mobility started with a predicted probability of college degree completion equal to 12.5%. After their first move, their chances of college enrollment declined by 4.7 percentage points. Following their second, third, and fourth moves, their probability dropped by an additional 3.0, 1.9, and then 1.2 percentage points.

FIGURE 22: PREDICTED PROBABILITY OF POSTSECONDARY DEGREE COMPLETION BY NUMBER OF NONSTRUCTURAL ANNUAL SCHOOL CHANGES AND BY STUDENT'S ECONOMICALLY DISADVANTAGED STATUS



CASE STUDIES

Through case study interviews and analysis, researchers identified practices that may explain why charter school students with special needs were more likely to change schools than their traditional public school peers.



A common sequence of events was identified in charter schools (both state-issued charters and those created by traditional public school districts): (1) a school delays special education services or fails to identify that a student has special needs; (2) the student disrupts classroom instruction and begins to perform poorly on academic tasks due to the lack of special education services; (3) the school takes official disciplinary action against the student due to classroom disruptions; (4) school administrators and educators begin to communicate indirectly and in subtle ways that the student does not belong at the school; and, finally, (5) either the parents of the student or school administrators decide the student would be better served elsewhere or that the charter school didn't have the "right resources." Researchers call this five-step process as "counseling out." The term, also used often by educators about ways expensive or challenging students are pushed from a school, generally refers to the last two steps (4 and 5) of this process.

Case study research also revealed other charter school practices that increased the odds of a student with special needs changing schools. Charter school students with special needs often felt they did not belong because there were so few other students with special needs on campus. Some charter schools contract out the delivery of special education services, which often meant students with special needs were pulled out of class to receive services, furthering feelings of alienation.

Finally, some charter schools cultivated a culture of elitism, often reminding parents that it was a privilege – not a right – to be enrolled in their school. Parents received this message as a warning to "fit in" or leave. This culture normalized the practice of counseling out students.



DISCUSSION AND POLICY IMPLICATIONS

One out of five Bexar students changed schools when there were no structural reasons requiring a change of school communities. School mobility in Bexar County was found to be strongly related to declining educational achievement outcomes that surface in high school and follow students into their postsecondary years. If policy changes are not made to reduce school mobility, Bexar County public schools will become increasingly segregated by socioeconomic and racial-ethnic subgroups. Our most vulnerable students will be left behind.

What can be done to reduce school mobility? As stated earlier, school mobility is triggered by multiple root causes. Three causes that are associated with negative student outcomes include (1) poverty, (2) a high-stakes, punitive school accountability system, and (3) underfunding of special education services.

POVERTY

All people have needs that must be met if they are to pursue and realize their potential. Basic needs include shelter, nutrition, and rest. They also include psychological needs for belonging, relationships, and self-esteem (Maslow, 1962). These conditions for growth are especially significant for children because early development affects later development. Skills beget skills (Heckman & Kautz, 2013).

Poverty is strongly associated with school mobility in Bexar County. Students from economically disadvantaged families were 40% more likely to change schools in any given year as compared to their classmates who were not economically disadvantaged. As a result, for these students' school change further destabilized an already unstable existence and put postsecondary education further out of their reach. As shown in Figure 18, economically disadvantaged students started with a probability of enrolling in college

that was 16.6 percentage points lower than their non-economically disadvantaged peers. With each school move, the likelihood of enrolling in college plunged further and at a steeper rate than their non-economically disadvantaged peers.

Texas policymakers must recognize the link between poverty and educational attainment by pursuing policies that strengthen our state's safety net. Access to quality, affordable health care, food security, quality childcare, and affordable housing would stabilize the lives of working families. With these basic needs met, parents would be under less stress and better able to create nurturing home environments for their children.

HIGH-STAKES, PUNITIVE ACCOUNTABILITY SYSTEM

The findings of this study strongly suggest that high levels of school mobility are systematic and can be traced to incentives created by Texas' high-stakes, punitive accountability system.

The existing system categorizes the performance of schools on an A-to-F grading system. Though schools provide an array of services (job training, extracurricular activities, family and student engagement, meals, first aid, security, and quality instruction), their entire operations are disproportionately judged by how students perform on a single test at one point in time. The consequences of receiving a low grade include school closure and loss of employment. Moreover, the Texas Education Agency (TEA) has the authority to take over a school district if a single school in that district fails to meet state education standards for a minimum of five years.

In this system, schools are incentivized to counsel out students who are costly to educate, who disrupt standardized classroom instruction, as well as those who are more likely to produce test scores that harm a school's accountability grade. It is a logical conclusion that school leaders determined to increase test scores efficiently might counsel out hard-to-serve students.

School leaders who follow this strategy are responding to the incentives of the state's accountability system. This behavior and its unintended negative consequences are predicted by existing research (Heinrich & Marschke, 2010). Changing the behavior of school leaders requires changing these incentives.

Texas policymakers should lower the high stakes and punitive nature of the state's accountability system. State legislators should consider joining eight other states that have ended or reduced the use of student tests to evaluate teachers. They should eliminate the A-to-F school grading system, which lacks any evidence of measurement validity and effectiveness on accomplishing its stated policy goals (Adams 2016; Tanner 2016).

MONEY MATTERS

Texas' meager funding of public education creates additional incentive to push out hard-to-serve students or to not enroll them at all. Ranked in the bottom 11 states for per-pupil funding, Texas schools must be cost efficient (Census, 2018). The need for cost management is particularly true for students with special needs.

During the study period, the TEA failed to meet minimum funding requirements under federal law by signaling to school districts that they would be audited if more than 8.5% of their students received special education services. As a result, fewer students received needed special education services (Rosenthal et al., 2016; Swaby, 2018).

With their special education costs not fully covered by the state, school leaders are able to avoid TEA scrutiny, reduce their operating costs, and improve their chance of an A grade by pursuing four possible tactics: (1) enrolling fewer special education students, (2) delaying identification of students with special needs, (3) discontinuing special education services, or (4) pushing out students with special needs. Despite a federal prohibition against these activities, our study found that the likelihood of these outcomes increased when students enrolled in charter schools rather than traditional public schools. Factors that may help explain this pattern include charter schools' unique ability to strategically enroll students through targeted marketing, and ban students with disciplinary histories. Charter schools also face greater cost pressures due to a lack of economies of scale given their smaller student populations relative to traditional public schools.

The Texas Legislature should commission an independent study of the actual costs of educating students with special needs, English language learners, and students who are economically disadvantaged. The study should consider regional cost variations. Legislators should then amend school finance law to cover the actual costs of educating

these student populations.

TECHNICAL FIXES TO LEVEL THE PLAYING FIELD

While the above recommendations represent fundamental solutions for addressing school mobility's root causes, the following recommendations represent more technical and discrete fixes to the existing system. All of these recommendations aim to prevent schools from being rewarded for meeting accountability standards through strategic enrollment.

State Legislature.

- 1) State law should be amended to remove the ability of charter schools to exclude students who have a history of school disciplinary reports.

- 2) Schools should be required to enroll and keep enrolled a student body that reflects the demographics and socioeconomic characteristics of their county or regional area. If they fail to do so, consequences could include (a) a decrease in a school district's or school's accountability grade, (b) a requirement to submit a remediation plan, and (c) a freeze on adding more schools. The remediation plan should address enrollment issues, identification of special education students, provision of special education services, and evidence of sufficient dedication of resources.

- 3) For accountability purposes, schools that receive mobile students should share the state-mandated test scores and Career and College Readiness metrics of their mobile students with the schools who sent them. This would reduce the incentive to push out students with predicted low performance metrics.

The Texas Education Agency (TEA).

- 1) TEA should use existing data to flag public schools for targeted audits. These flags should identify schools that have unusual rates of low enrollment and high levels of school mobility of students with special needs. A flag should also be created for under-identification of students with special needs by identifying students who gain or lose special education services after changing schools. See Appendix B for an example of this type of report.

- 2) TEA should also proactively monitor schools with persistent violations and hold them accountable including revocation, nonrenewal, and closure to address significant failures in educating students with special needs.

School Districts.

- 1) School districts should introduce greater flexibility in their attendance zone policies to accommodate students who need to change residences due to family circumstances with the goal of minimizing school change related to poverty.

- 2) School districts should re-examine their disciplinary policies and practices and consider adopting alternative approaches known as restorative justice. Early descriptive research suggests these alternative approaches may reduce disparities in punitive actions against minority and low-income students and improve student outcomes (Fronius et al., 2019).

- 3) School districts should review the systems that result in under-identification of students with special needs and inadequate service provision. In conducting this review, they should interview parents and students with special needs to understand how they experience school systems intended to help them.

APPENDIX A: RESEARCH DESIGN

Quantitative Analysis. In the quantitative analysis, the primary outcome of interest was the occurrence of students changing schools unrelated to school structures such as grade promotion, school feeder patterns, or school closures (nonstructural school mobility) in any given year. Using a logit regression model with student-level random effects, researchers modeled the probability of nonstructural school mobility based on Equation 1.

EQUATION 1

$$Y_{i,t} = \beta_0 + \beta_1 \text{charter}_{i,t} \# \# (\text{special}_{i,t} + \text{acquiredspecial}_{i,t+1} + \text{disciplinary}_{i,t} + \text{black}_{i,t} + \text{hispanic}_{i,t} + \text{asian}_{i,t} + \text{other}_{i,t} + \text{poverty}_{i,t}) + \beta_2 \text{female}_{i,t} + \beta_3 \text{lep}_{i,t} + \beta_4 \text{charter}_{i,t+1} + \beta_5 \text{daep}_{i,t} + \beta_6 \text{daep}_{i,t+1} + \beta_7 \text{jaep}_{i,t} + \beta_8 \text{jaep}_{i,t+1} + \beta_9 \text{altd}_{i,t} + \beta_{10} \text{altd}_{i,t+1} + \beta_{11} \text{grade}_{i,t} + \beta_{12} \text{year}_{i,t}$$

In Equation 1, $Y_{i,t}$ represents 1 if student i enrolled in a new school unrelated to school structures in year $t+1$; and 0 otherwise. $\text{Charter}_{i,t}$ represents 1 if student i enrolled in a charter school in year t ; and 0 otherwise.

Bolded coefficients, such as B_1 , and variables $\text{grade}_{i,t}$ and $\text{year}_{i,t}$ represent arrays. The symbols $\# \#$ represent a function that creates the main effect and interaction effect for $\text{charter}_{i,t}$ and each variable inside the parenthesis.

$\text{Special}_{i,t}$ represents 1 if student i received special education services in year t ; and 0 otherwise. $\text{Acquired special}_{i,t}$ represents 1 if student i did not receive special education services in year t but gained them in year $t+1$; and 0 otherwise. $\text{Disciplinary}_{i,t}$ represents 1 if student i received a disciplinary report in year t ; and 0 otherwise.

$\text{Black}_{i,t}$ represents 1 if student i identified as Black; and 0 otherwise. $\text{Hispanic}_{i,t}$ represents 1 if student i identified as Hispanic; and 0 otherwise. $\text{Asian}_{i,t}$ represents 1 if student i identified as Asian; and 0 otherwise. $\text{Other}_{i,t}$ represents 1 if student i identified as more than one race or ethnicity or as Native American or Pacific Islander; and 0 otherwise. $\text{Poverty}_{i,t}$ represents 1 if student i qualified for the federal free or reduced lunch program in year t ; and 0 otherwise.

$\text{Female}_{i,t}$ represents 1 if student i identified as Female; and 0 otherwise. $\text{Lep}_{i,t}$ represents 1 if student i was identified as limited English proficient in year t ; 2 if student i was identified as limited English proficient in prior to year t ; and 0 otherwise. $\text{Daep}_{i,t}$ represents 1 if student i enrolled in a disciplinary alternative education program in year t ; and 0 otherwise. $\text{Jaep}_{i,t}$ represents 1 if student i enrolled in a juvenile justice alternative education program in year t ; and 0 otherwise. $\text{Altd}_{i,t}$ represents 1 if student i enrolled in an alternative education program in year t ; and 0 otherwise.

$\text{Grade}_{i,t}$ represents an array of dummy variables indicating which grade student i enrolled in in year t . $\text{Year}_{i,t}$ represents an array of dummy variables indicating which academic year occurred in year t for student i .

Researchers also modeled the probability of losing special education services and gaining special education services as described in Equation 2 and 3.

EQUATION 2

$$\begin{aligned}
 L_{i,t} = & \beta_0 + \beta_1 \text{charter}_{i,t} + \beta_2 \text{disciplinary}_{i,t} + \beta_3 \text{black}_i + \beta_4 \text{hispanic}_i + \beta_5 \text{asian}_i \\
 & + \beta_6 \text{other}_i + \beta_7 \text{poverty}_{i,t} + \beta_8 \text{female}_i + \beta_9 \text{lep}_{i,t} + \beta_{10} \text{charter}_{i,t+1} \\
 & + \beta_{11} \text{daep}_{i,t} + \beta_{12} \text{daep}_{i,t+1} + \beta_{13} \text{jaep}_{i,t} + \beta_{14} \text{jaep}_{i,t+1} + \beta_{15} \text{altd}_{i,t} \\
 & + \beta_{16} \text{altd}_{i,t+1} + \beta_{17} \text{grade}_{i,t} + \beta_{18} \text{year}_{i,t} \mid \text{change}_{i,t} = 1 \ \& \ \text{special}_{i,t} \\
 & = 1
 \end{aligned}$$

EQUATION 3

$$\begin{aligned}
 G_{i,t} = & \beta_0 + \beta_1 \text{charter}_{i,t} + \beta_2 \text{disciplinary}_{i,t} + \beta_3 \text{black}_i + \beta_4 \text{hispanic}_i + \beta_5 \text{asian}_i \\
 & + \beta_6 \text{other}_i + \beta_7 \text{poverty}_{i,t} + \beta_8 \text{female}_i + \beta_9 \text{lep}_{i,t} + \beta_{10} \text{charter}_{i,t+1} \\
 & + \beta_{11} \text{daep}_{i,t} + \beta_{12} \text{daep}_{i,t+1} + \beta_{13} \text{jaep}_{i,t} + \beta_{14} \text{jaep}_{i,t+1} + \beta_{15} \text{altd}_{i,t} \\
 & + \beta_{16} \text{altd}_{i,t+1} + \beta_{17} \text{grade}_{i,t} + \beta_{18} \text{year}_{i,t} \mid \text{change}_{i,t} = 1 \ \& \ \text{special}_{i,t} \\
 & = 0
 \end{aligned}$$

Mobility effects also were studied on the following five additional student outcomes: (1) high school graduation within four years; (2) postsecondary enrollment in the year following predicted high school graduation; (3) completion of a postsecondary credential (certificate, associates, or bachelor's degree) within six years of predicted high school graduation; (4) postsecondary enrollment in the year following high school of four-year high school graduates; (5) completion of a postsecondary credential (certificate, associates, or bachelor's degree) within six years of those who enrolled following high school.

EQUATION 4

$$\begin{aligned}
 Y_{i,t} = & \beta_0 + \beta_1 \text{charter}_{i,t} \# (\text{special}_i + \text{acquiredspecial}_{i,t+1} + \text{disciplinary}_{i,t} + \text{black}_i \\
 & + \text{hispanic}_i + \text{asian}_i + \text{other}_i + \text{poverty}_{i,t}) + \beta_2 \text{female}_i + \beta_3 \text{lep}_{i,t} \\
 & + \beta_4 \text{charter}_{i,t+1} + \beta_5 \text{daep}_{i,t} + \beta_6 \text{daep}_{i,t+1} + \beta_7 \text{jaep}_{i,t} + \beta_8 \text{jaep}_{i,t+1} \\
 & + \beta_9 \text{altd}_{i,t} + \beta_{10} \text{altd}_{i,t+1} + \beta_{11} \text{grade}_{i,t} + \beta_{12} \text{year}_{i,t}
 \end{aligned}$$

Case Studies. For the qualitative case studies in this research project, researchers set out to explore perceptions of school mobility, particularly when it came to the needs of students with disabilities or disciplinary histories. Researchers undertook a total of six case studies after interviews with 24 individuals – including teachers, parents, and advocates for students with disabilities – were conducted. Teachers and parents chosen had experience either in traditional public schools or in public charter schools, or a blend of both – hence the phenomenon of mobility.

Researchers used in-depth interviews, open-ended questioning, direct observation, and written documents for the purposes of data collection. The qualitative methods allowed for the exploration of school mobility through specific cases within real-life contexts. The objective was to collect rich depictions and perspectives of those most involved in the process to add to the overall study findings.

Researchers piloted the interview protocol and obtained consents before meeting in person with each subject. Participation was voluntary and subjects were advised they could withdraw at any point. Peer debriefing among the researchers was conducted on a regular basis throughout the study to receive feedback and to check the validity of the process. Interviews were tape recorded and later transcribed.

Analysis took the form of in-depth team discussions of each case in relation to the research questions. Consideration was given to connections between each case study and the theoretical and practical issues in the larger study.

Definitions. It is worth noting that researchers use a simplistic definition to classify schools as being either charter schools or traditional public schools because of data limitations. In this study, charter schools are all public schools created by the state’s charter authorization process and not created by traditional school districts; all other schools in this study are traditional public schools. This binary definition masks the reality that some traditional public schools create in-district charter schools; while some state-created charter schools adopt policies and practices more similar to traditional public schools when it comes to student enrollment and retention. Due to data limitations we were unable to identify these finer distinctions and include them in the analysis. As a result, findings that infer charter school effects on school mobility represent group averages, not school-specific descriptions.

Data. This study relied on data collected from administrative data systems and semi-structured interviews. The administrative data was student-level longitudinal data collected by the Texas Education Agency and the Texas Higher Education Coordinating Board and stored at the University of Texas Education Research Center. Data consisted of the education records of 552,108 unique students.

The case study research relied on data collected after interviews with 24 individuals – including teachers, parents, and advocates for students with disabilities. The Urban Education Institute sourced interviewees from a public call for research subjects. Social and earned media was used to publicize the search for research participants. Participants interviewed for context included Disability Rights Texas, a nonprofit advocacy organization that helps people with disabilities understand and exercise their legal rights.



Study Limitations. The case study research produced descriptive evidence on how and why school mobility occurs with those most at risk. Though anecdotal, these findings logically explain the quantitative findings. Nevertheless, these case study findings should be considered descriptive and theory building, not conclusive.

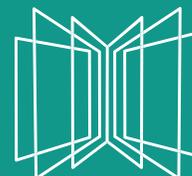
The longitudinal regression analysis is limited by the same factors that limit all multivariable regression analyses: missing variables and mistaking correlation for causation. Although a rich supply of variables existed, researchers did not have data on all plausible factors that affect student mobility such as housing evictions or changes in family income. As such, if missing variables correlate with student mobility and a variable that was included, the correlation between the included variable and student mobility will be biased. Finally, great care has been taken to represent quantitative findings that link potential explanatory factors to school mobility as correlations. Taken alone, these findings should not be mistaken for causation.

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