

# Sacramento City Unified School District Student Travel Survey

Alex Karner, UT Austin, Cassie Hartzog, UC Davis & Nancy Erbstein, UC Davis

*Sacramento City Unified School District Research Brief Series, Issue Four | Nov 2018*

## EXECUTIVE SUMMARY

This research brief reports on the findings of a travel survey administered to students in three Sacramento City Unified School District (SCUSD) schools. The results demonstrate substantial differences in travel mode choice by school type, grade level, and student race/ethnicity. Importantly, about 1 in 4 students report missing at least one day of school in the six weeks prior to the survey because of transportation barriers. We also observe a relationship between long travel times and absences. These findings have implications for travel time to school and attendance. School districts should consider these results when siting new schools and developing after school programs. The results are also relevant for public transit agencies—closer coordination with school districts could help to optimize student travel and offset commuting costs.

## INTRODUCTION

Access to affordable, reliable, and safe school transportation is a critically important but understudied factor in student achievement and chronic absence. School-based supports and interventions will be irrelevant if students are unable to regularly attend school due to transportation-related barriers.

A decades-long decline in walking and biking (active transportation) to school has motivated much of the existing research on student travel. Researchers have typically focused on “mode choice” and sought to identify factors influencing student use of different travel modes (e.g. car, walk, bike, school bus, or public transit). This work has

found that distance to school is the most important determinant of the choice to walk, while land use, demographic characteristics, and perceptions of safety also play a role.

Recent education policy trends contradict efforts to promote active transportation as a policy and public health goal. School districts across the country are increasingly pursuing school choice, with the goal of increasing access to high-quality education for students previously locked into underperforming neighborhood schools. However, school choice initiatives tend to consider transportation as an afterthought, if at all, despite the fact that distant “choice” schools are only accessible to students if they can reliably travel.

More generally, public school districts across the country have eliminated or dramatically scaled back transportation budgets in the face of scarce resources. While federal law requires transportation to be made available for certain categories of disadvantaged students, in California, state law allows districts to determine transportation provision for the student population at large. Dramatic reductions in traditional school bus service in multiple states require students to rely on other modes. School districts have often relied upon public transportation to fill this gap, but coordination between transit agencies and school districts is rare and most public transit systems were not designed to accommodate student travel.

This research brief reports upon the results of a survey administered in partnership with the SCUSD to understand the drivers of student travel behavior, barriers that students face in getting to school, and patterns across various student populations.

## RESEARCH METHODS

Data were collected on student travel behavior, attitudes about travel, and demographics from three SCUSD schools using an internet-based survey completed during class hours. Two schools serving primarily neighborhood populations (Will C. Wood Middle School (WCW) and Hiram Johnson High School (HJ) and one magnet high school (Health Professions High (HPH)) participated. Surveys were completed in late April and early May 2018 at WCW and HJ and in June at HPH.

At each school, teachers began each survey session by reading prepared introductory remarks regarding the survey purpose and procedure. At all three school sites, we achieved a random sample by identifying required classes in which all students at each school must enroll. Sections of these classes were selected randomly to achieve a target number of responses.<sup>†</sup> 573 surveys were completed at Will C. Wood Middle, 546 were completed at Hiram Johnson High, and 79 were completed at Health Professions High. In general, the demographics of the student body were reflected in our survey samples.

## RESEARCH FINDINGS

### Grade Level, School Type, And Race Have Strong Associations with Travel Mode Choice

Prior work on student mode choice has shown that distance to school is a powerful predictor of travel mode—students who live closer to school are much more likely to walk or bike than students who reside further away. Our results replicate these prior findings while highlighting the ongoing importance of racial demographics in travel choices.

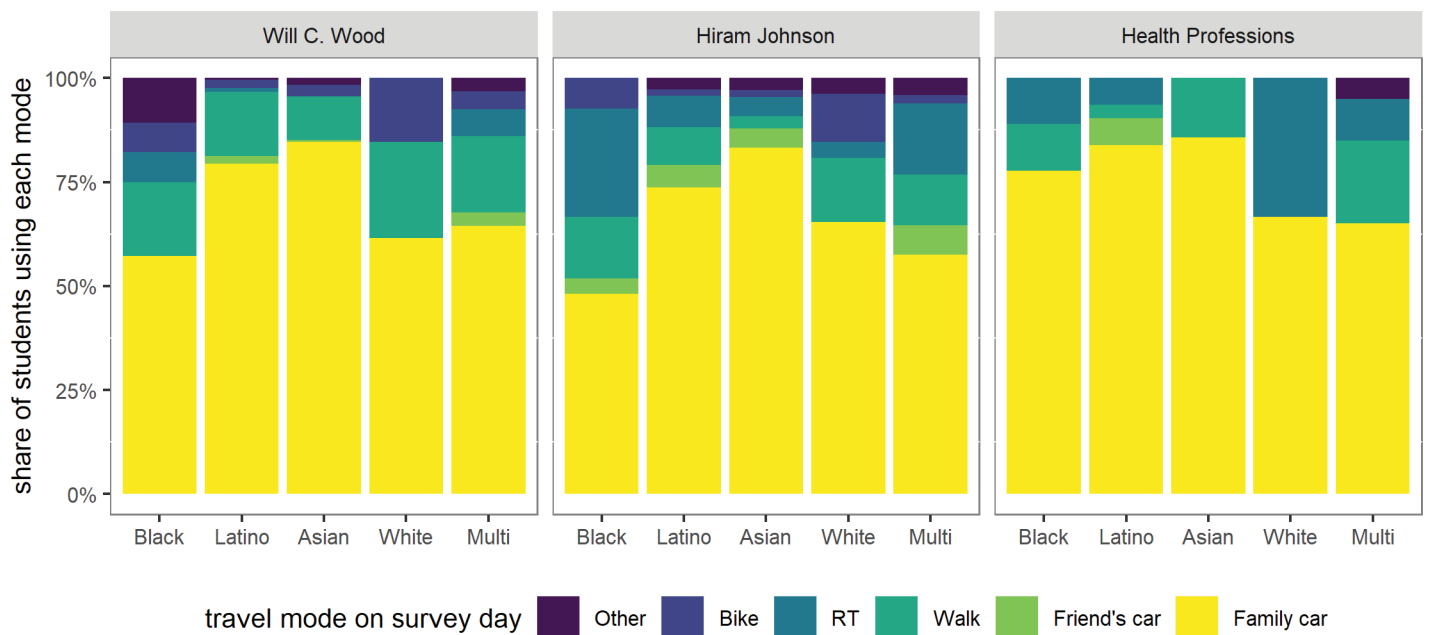
Figure 1 summarizes student mode choice to school on the survey day by racial/ethnic group and school site. The results clearly indicate that, across all school sites and racial/ethnic groups, driving is the dominant mode, whether involving a family or friend's car. But there is also substantial variation in rates of driving across schools and demographic groups. Asian and Latino students drive or are driven at the highest rates across all schools, while Black and multiracial students are less likely to drive or be driven and much more likely to take RT, especially at HJ. In general, Black students at WCW and HJ use non-automobile modes at the highest rates.

Walking and biking to school is somewhat more common at WCW, where students are more likely to live close by. White students at WCW and HJ are more likely to walk and bicycle than other groups.

Across all racial groups, rates of driving increase for students at HPH relative to the two other school sites. This is expected because of HPH's explicit status as a magnet school.

Multiple factors could be driving apparent racial differences, including economic poverty. Asking children and young adults to self-report on their socioeconomic status is challenging. Best practices have emerged that rely upon asking these populations about household characteristics of which they have direct knowledge, including number of automobiles, number of computers, and whether they have their own bedroom. As demonstrated in Figure 2, across the survey sample, Black students clearly reside in households with lower levels of automobile ownership compared to all other racial/ethnic groups.

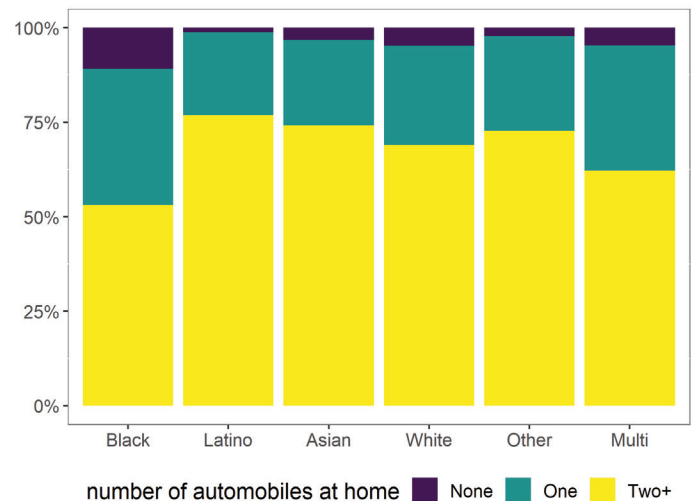
<sup>†</sup>Conducting the surveys at school introduced a number of confounding factors into our analysis. Most importantly, students unable to attend school on the day that the surveys were completed would have no way to respond, so the specific barriers they face will not be reflected in our dataset. The demographic characteristics of students at these three schools are also rather homogeneous. There was not wide variation in socioeconomic status, so our ability to identify the effect of greater parental financial and social capital on student outcomes was limited.



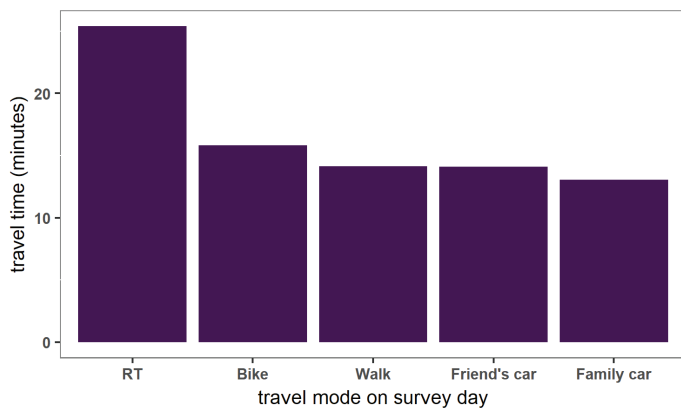
**FIGURE 1 Student travel mode by school and racial/ethnic group.**

### Students Using Public Transit Face Long Travel Times

Students self-reported their travel times to school on the survey day by selecting one of five categories. The results demonstrate very similar averages across modes at all school sites except for RT users. Figure 3 shows average travel times of between 13 and 15 minutes for students who walked, biked, drove, or got a ride in a family or friend's car. Travel times for the 63 students reporting using RT exceeded these times by approximately 66%, with an average time of 25 minutes. Students in the top quartile of travel time (i.e. those with travel times in the top 25% of students in their mode group) reported times greater than 38 minutes for RT and only 10 minutes for automobile.



**FIGURE 2 Automobile ownership by race/ethnicity.**



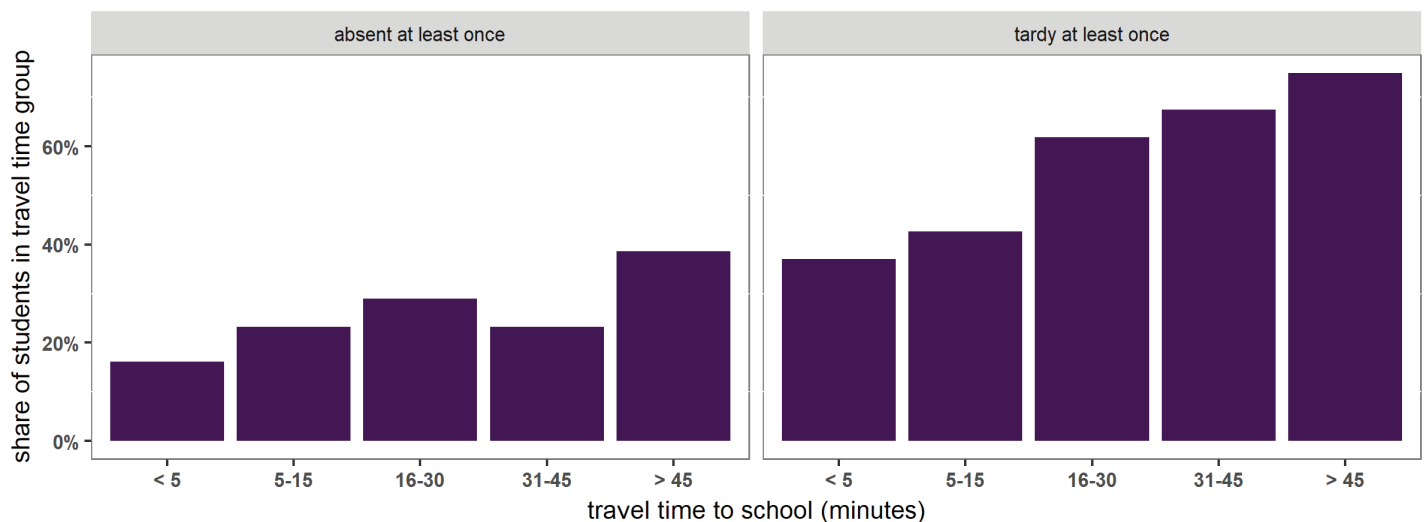
**FIGURE 3 Average travel time across all school sites by travel mode on the survey day.**

### Long Travel Times Are Associated with More Absences and Tardies

A student facing a long travel times to school each day is likely to encounter difficulties with the trip that increase their likelihood of being absent or tardy. Longer trips by RT are more likely to include transfers. If a student misses their initial bus or if that bus is late, it will affect their ability to board the second bus and get to school on time. Similarly, students being driven long distances to school are at increased likelihood of experiencing congestion-related delays. Students who live closer to school are less likely to experience such uncertainty.

We asked students several questions to understand transportation-related barriers to attendance. First, 24% of respondents reported having missed at least one day of school in the prior six-week period due to transportation-related issues. Students reporting the highest rates of absences (missing five or more days of school over the prior six weeks) tended to also use non-driving modes at higher rates (37%) compared to students that never missed school because of transportation-related reasons (22%).\*

Figure 4 demonstrates that as travel time increases, larger shares of students report absence or tardiness at least once in the prior six weeks. In general, tardies are more common than absences and the largest differences are observed between the greatest and shortest travel times. Differences in the shares of students reporting at least once absence between the highest (39%) and lowest (16%) travel time groups are statistically significant.\* Similarly, differences in the shares of students reporting at least one tardy between the highest (75%) and lowest travel time are also statistically significant.\*



**FIGURE 4 Share of students absent or tardy at least once by travel time on the survey day.**

\* The difference between these proportions is statistically significant ( $p < 0.05$ ) using a chi-squared test for equality of proportions.

## POLICY IMPLICATIONS

Distance from school (measured in terms of travel time) appears to affect the ability of students to regularly attend class at these three school sites in the SCUSD. Shortening the distances that students need to travel or increasing the speed at which that travel occurs may improve student outcomes. In addition, most students perceive traveling home after staying late at school to be a challenge.

These findings carry policy implications for school districts and public transit providers. School districts should consider these results when siting new schools. To the extent that they are located far from where many students can arrive within short times, the likelihood of absence and tardiness will increase. Further, school choice strategies should include a careful school transportation analysis. If students enrolling in choice schools are traveling further than they would have to reach a neighborhood school, their ability to attend regularly and in a timely manner is likely to be compromised. Because public transit providers cannot provide point-to-point service from every origin to every destination in a region, their ability to alter service to simplify and reduce travel times for student trips is likely to be limited. But when undertaking service planning exercises, they should be made aware that, especially at the high school level, use of public transit for school trips is relatively high. They may find opportunities to provide flexible and student-oriented services during the periods that students need access to schools.

Plans to implement afterschool programs as a key student support strategy at school sites must also consider transportation. Often schools are considered a convenient location for programs in light of their accessibility, but transportation realities, even in locales with public transit, may in fact work against student participation.

In light of decreasing school transportation budgets and the increasing importance of public transit for meeting student travel needs, coordination between school districts and public transit providers is absolutely essential. Although transit agencies themselves may have little flexibility outside of serving their core commuting ridership with destinations focused on traditional employment centers, some districts have experimented with providing free or reduced-cost transit passes for students. To the extent that these efforts increase public transit student ridership, there may be opportunities to optimize some school-serving routes, especially at the high school level.



Alex Karner, Ph.D.  
alex.karner@utexas.edu



Nancy Erbstein, Ph.D.  
nerbstein@ucdavis.edu

Cassie Hartzog, Ph.D.  
chartzog@ucdavis.edu

