

Drivers of Choice

Parents, Transportation, and School Choice

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CONTENTS

ACKNOWLEDGMENTS	1
EXECUTIVE SUMMARY	3
INTRODUCTION	7
CONTEXT OF SCHOOL TRANSPORTATION	9
THE SURVEY	11
Sample	11
School Choices	13
Reasons for Choices	
Schools Considered	
School Satisfaction	
Transportation Patterns	19
Trip Length and Distance	
Transportation and Choice	24
How Important Is Transportation?	
Would You Have Chosen Another School?	
A Hypothetical Better School?	
Multiple Regression Analyses	
CONCLUSION	31
BIBLIOGRAPHY	35
ABOUT THE AUTHORS	37

LIST OF TABLES

Table 1. Education of Respondents	12
Table 2. Type of School Child Attends	15
Table 3. Type of School Child Currently Attends, by Family Income	15
Table 4. Number of Schools Considered	17
Table 5. Parents' Satisfaction by Type of School	18
Table 6. How Students Get to School, by Mode	20
Table 7. Estimated Length of Trip (Time) to School	21
Table 8. Estimated Home to School Distance	22
Table 9. Time to School by Type of School	23
Table 10. Distance to School by Type of School	24
Table 11. How Parents Learned About Transportation Options	25
Table 12. Willingness to Send Child to Hypothetical Better School, by Income (Transportation Provided)	28

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The goal of "Doing School Choice Right" is to improve educational opportunities for low-income urban families, and we could not have conducted this transportation study without the help of the survey respondents in Denver and Washington, D.C.

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We hope this report provides policymakers with better information about how parents perceive and act upon their school choices when transportation barriers are part of the equation. It seems clear that better transportation options would create better school options for many parents.

EXECUTIVE SUMMARY

school choice is changing the fundamental assumptions of the traditional school model in many unforeseen ways. One of the key ways choice is impacting public education is the challenge of finding transportation models that can keep up with expanding public school choices. Under the traditional model of the neighborhood school, students (particularly elementary school students) would attend a school relatively close to their home, often within walking distance. Others would ride a school bus to an assigned school within their attendance area. However, with the rise of expanded school choice options, such as charter and magnet schools, children may now live farther away from the school they attend. Indeed, in this study of two large urban districts—Denver, Colorado, and Washington, D.C.—we find that less than half of the students sampled attend the neighborhood public (non-charter) school closest to their home.

A critical question, then, is how much transportation distance, time, and mode represent barriers to families seeking better school options for their children. An environment of greater choice seems likely to lead to longer commutes, a price many private school and charter school choosers have already decided is worth paying. But longer commutes raise the question, so far unanswered, about the relationship between choice and transportation. More important for policy purposes is whether or not transportation represents a barrier for low-income families who want to choose a different school. Low-income families, compared to those with higher incomes, are more likely to live nearer to schools that are low performing. And due to tuition costs, private schools are a less viable option for these families. To get to a higher-performing school, their children would have to travel farther. We know very little about whether they are able to do so, whether they want to do so, or how they make this decision for their children.

In this study, 600 parents were surveyed: 300 in Denver and 300 in Washington, D.C. While both cities are of similar size, Washington is typical of many Eastern cities: a dense, urban environment that provides rich mass transit options for students, including an extensive modern subway system. Denver is more typical of many cities in the West: spread out, relatively low density, and minimal transit options beyond buses. In both cities, we conducted a random survey of all parents with children in the K–12 grades, in households with annual incomes of \$75,000 or less.

The findings demonstrate that transportation is indeed a barrier to choice for many low- and moderate-income families. Depending upon the specific question we asked, 25-40 percent of respondents said that transportation issues influenced their school choice, or that they would have made a different school choice if they had enjoyed better transportation options. In fact, a little over one-quarter of respondents (and one-third of those with the lowest incomes) did not enroll their child in the school they preferred due to transportation difficulties. Almost two-thirds of those surveyed (and 80 percent of the parents with the lowest incomes) reported that they would choose a (hypothetical) better school farther from their home if transportation were provided.

The findings also suggest that, like families who have chosen to send their children to private schools or charter schools, many families who have their child enrolled in the closest public school would also be willing to send their students farther, in terms of both time and distance, in order to enroll them in a better academic program, if transportation was not at issue. Conversely, parents who have their child enrolled in the closest neighborhood school, who either chose that school over other options or did not make an explicit school choice at all, greatly emphasized the convenience of the school, compared to parents who sent their child farther, who were more likely to cite academic reasons for doing so.

Transportation is a particular barrier for low-income parents in these cities; 45 percent of families with incomes less than \$20,000 do not own cars, and some who do reported that their cars are not reliable. This is clearly less of a problem for middle-income families, many of whom now drive their children to school. These middle-income families tend to be relatively satisfied with their schools, and many (26-31 percent in income groups between \$40,000 and \$75,000) have already chosen charter or private schools for their child. Presumably, this contrast by income would be even more pronounced if we had sampled parents with incomes in excess of \$75,000, who obviously have more resources.

While there are some differences between the responses across the two cities, partly because Washington has more public transportation options, the differences are not enormous. Fewer families in Washington own cars than in Denver, and more students ride public transportation. However, the basic finding that transportation is a barrier is accurate in both cities.

How can these barriers be overcome for lower-income parents? Since about one-third of parents reported that they were not aware of district transportation options, more information would certainly help. The expansion of choice under the federal *No Child Left Behind Act* (NCLB) will probably influence knowledge among lower-income parents in low-performing schools, though there is national evidence that many parents still do not know enough about this program, and districts need to do a better job spreading that information.

School districts might also reconsider transportation policies more broadly. Most existing policies were designed for a pre-choice model. In both Washington and Denver, about three-quarters of parents have considered other options, and about half have actually chosen private, charter, or non-neighborhood public schools. Of the 50 percent remaining in their neighborhood school, half of them at least considered other schools before ending up in the closest zoned school.

Unfortunately, during our brief telephone survey of major school districts around the country, we did not hear a lot of innovative thinking about transportation policy. Generally, a centralized plan that typically runs school buses in feeder patterns to neighborhood schools continues to be the prevailing mode of transportation. Given the newer range of choices, and the way in which children actually get to school, districts should think about different transportation plans and mechanisms. If an average of nearly \$700 per year, per student is spent on public school buses and mass transportation today, there may be better ways to spend this money. Transportation vouchers, for example, could give families options. Do they want to use the voucher on public transportation? To help support the expenses associated with car ownership? Do they want to consider a ride-sharing plan with other families? Or a bicycle? Or more flexible use of taxis and minivans?

Choice itself is designed to give parents decentralized options for their children's education, and to give them the power to make decisions. A more decentralized transportation function might also provide parents with an additional tool to make school choices that work better for them. The era of the yellow school bus transporting most children to their neighborhood school is probably already over.

INTRODUCTION

chool choice is expanding all across the United States. More than 40 states now have charter schools, a few targeted voucher programs have been expanded, more states are allowing the use of tax credits and deductions for private schools, and choice within the traditional public school system—whether magnets, intra-district, or inter-district—is also growing. NCLB has required some districts to provide students in failing schools with better educational options, and to pay for their transportation to a new school.

While most observers are confident that middle- and upper-income parents have the resources to make good choices for (and with) their children, it is less clear whether that is true for low-income parents and guardians. These families may not only have less information, but they are also more likely to live closest to the lowest-performing schools, without access to the transportation resources required for longer trips to different schools.

At the same time, the most important expansion of choice is taking place in urban areas—in cities that tend to be quite dense and provide more schooling options per square mile for families. Exercising this new freedom of choice may require transporting students from one side of town to the other. For example, in the nation's capital, 37 percent of students currently attend charter schools and about 17 percent attend private schools. Of the remaining 46 percent, only half attend the assigned, nearest traditional public school. There is, in short, considerable choice already in the nation's capital—more than 70 percent of parents are making choices for their child away from the closest public school.

Transportation is clearly a consideration to be factored into any discussion of school choice. Yet we know very little about how much it matters in family's decisions about their children's school, and almost nothing about how much of a barrier it is to school choice, especially for low-income families. How far does the average family want their child to travel to school? Would they be as comfortable letting their younger children travel as far

as they might a middle or high school student? What transportation options are available to low-income families? These are the kinds of questions we tried to address in this study, in order to obtain meaningful data to help shape school transportation policy.

This project first surveyed the landscape of transportation and school choices. It examined the density of large districts in the U.S. The project team contacted large school districts to find out their policies on transportation and choice, and then examined district budgets to see how much they actually spend on transportation. Most importantly, the project surveyed families in two cities—Denver and Washington, D.C.—to find out their travel patterns and school choice options. The study breaks down that data, collected from households earning less than \$75,000 in annual income, to determine how much transportation is a barrier to choice.

This report addresses the following questions:

- How far do children travel to school?
- Is transportation a big barrier to choice for families, especially for low-income families?
- Would families make different school choices if they had better transportation options?
- How do these choices vary by income, age of child, type of school, and location?
- Do families know their districts' transportation policies?
- Given these results, how might district transportation policies better adapt to a choice environment?

CONTEXT OF SCHOOL TRANSPORTATION

here is surprisingly little good information on patterns of American school transportation. As part of this research, project team members telephoned officials in the 20 largest U.S. school districts

to explore transportation issues, and examined national databases to gather more information.

Regarding transportation policies, there seems to be relatively little variation across the largest districts. Students typically get free transportation within a specified zone, with school buses or public transportation provided if the student has to travel 1.5 miles or more from home to school. There is normally no subsidized transportation available to students outside the specified zone, unless explicitly stated in district policy. For example, a policy might stipulate that magnet schools could offer students paid transportation in a bid to attract students from around the district.

Generally, district information about transportation budgets is quite limited. District officials estimate that transportation represents 2–5 percent of district operating expenditures. Potential transportation costs associated with NCLB seem to be quite high on district officials' radar screens, as more students are taking advantage of that opportunity. These new requirements are likely to influence transportation costs and may raise awareness about transportation planning.

The Institute for Education Sciences reports that in the 2004–2005 school year, 55 percent of American public school K–12 students (most of whom ride buses) were transported at public expense, at a cost of \$692 "per student transported" (2007 dollars). This percentage is slightly lower than the 59 percent of students reported being transported in 1980 (the first year for which data was reported). In 2004, it appears that allocating transportation

^{1.} U.S. Department of Education, National Center for Education Statistics. (2008). Digest of Education Statistics, 2007 (NCES 2008-022), Chapter 2. "Per student transported" represents all transportation costs divided by the number of students actually receiving district-funded transportation to school. "Total per-student transportation cost" represents all transportation costs divided by enrollment, whether or not students took advantage of district-funded transportation services.

costs across all students produced a "total per-student transportation cost" of \$337.² That would indicate that district transportation costs in 2004 were about 4 percent of total current expenses per pupil, a figure confirming to some degree the 2008 estimates provided by district officials.

National figures suggest that:

- 55 percent of American K-12 students, including suburban and rural students, ride the school bus to school each day.³
- The average ride time for students on a school bus is about 45 minutes each way, or 90 minutes daily.⁴
- The average working adult commutes 27 minutes per day to his or her job (and presumably spends a similar amount of time on the return).

These figures suggest that school children who ride a bus spend more time on the bus than typical commuters, which may be a factor of both the distance involved and the number of stops a school bus is required to make to pick up and drop off children. Students who do not ride a bus (about 45 percent) may have shorter commutes to school.

The data gathered on large districts reveals that even in large, relatively urban districts, density varies greatly. Among the districts examined, New York has 3,500 students per square mile (the highest in the nation); Clark County, Nevada (which includes Las Vegas and was in recent years the fastest growing county in the United States) has 31 students per square mile. The number of public schools per square mile ranges from a high of 4.0 in New York City to 0.1 in less dense urban districts, such as Clark County.

With regard to this study, Washington, D.C., is more than twice as dense as Denver. The nation's capital has 964 students per square mile, while Denver has just 444. In terms of school density, Washington is three times as dense, with 2.3 schools per square mile, compared to 0.8 in Denver. Denver, in terms of density, is similar to other cities such as San Diego and Atlanta; among larger cities, only Chicago and Boston resemble Washington in terms of density.

^{2.} Ibid.

^{3.} Ibid. It is interesting that in Colorado, 40 percent of students take a bus to school— a number well below the national average. Comparable data on the number of students bussed do not exist for Washington.

^{4.} U.S. Department of Transportation national statistics; http://www.dft.gov.uk/pgr/statistics/datatablespublications/personal/factsheets/traveltowork.pdf.

THE SURVEY

SAMPLE

Washington who earn \$75,000 annually or less. The project surveyed 300 parents in each jurisdiction, from a universe that included "all parents," not just school "choosers," in order to obtain baseline information about the transportation decisions of all parents—those who actively chose a new school for their children and those who did not, but rather accepted the assigned local public school. Although the primary interest of the study lay in students from families making \$50,000 or less, we surveyed all families up to an annual income of \$75,000 to see if decisions about school choice and transportation change as incomes rise.

The Center on Reinventing Public Education Denver prepared the survey questions, which were administered by the University of Connecticut's Center for Survey Research Analysis (CSRA) in winter/spring 2008. As with prior surveys of school issues, most of the respondents are women (86 percent in Washington and 78 percent in Denver). This is partly because during the telephone calls the "main school decisionmaker" in the interviewed household was sought, but also because many respondents, especially in Washington, are single mothers. In fact, while 62 percent of Denver respondents are married or living with a partner, that is true of only 34 percent of those in Washington.

The survey produced a relatively even spread of income groups at or below \$75,000 annually in both cities. Some 72 percent of the sample in Denver and 77 percent in Washington reported incomes below \$50,000. That was the income cutoff used in prior

survey work on parent choice.⁵ Analyzing the latest data against that cutoff allows some comparisons across the two studies (generally, the findings about choice decisions are quite similar).

Parental education in the surveyed group is also spread widely, as table 1 shows.

TABLE 1. Education of Respondents

	<hs< th=""><th>HS Graduate</th><th>Some College</th><th>College Graduate</th></hs<>	HS Graduate	Some College	College Graduate
Denver	19%	26%	24%	31%
Washington	10%	31%	35%	24%

In Denver, about 81 percent of the respondents had completed high school or higher, with 31 percent reporting college graduation. Across the United States, by comparison, 85 percent of adults reported completing high school or more, while just 28 percent reported completing a bachelor's degree.⁶ The distribution in Washington differs. These parents are also relatively highly educated, in terms of high school attainment and beyond. Fully 90 percent of respondents reported they have at least a high school diploma, but just 24 percent are college graduates.

In terms of race, there are some notable differences between the sample population being surveyed and the statistical racial makeup of each city. In Washington, the sample is overwhelmingly African American, at 86 percent, with 5 percent of respondents Hispanic and 6 percent white. In comparison, the Washington adult population is 60 percent African American, 27 percent white, and 10 percent Hispanic. While the sample does not reflect the Washington adult population, it does track very closely to the Washington public school population: 84 percent African American, 9 percent Hispanic, and 5 percent white.

In Denver, the sample represents a more diverse racial mix: 42 percent white, 41 percent Hispanic, and 14 percent African American. While this sample is similar to the Denver adult population (49 percent white, 35 percent Hispanic, and 12 percent African American), it is not representative of the Denver Public Schools' enrollment,

^{5.} See Teske, Opening Doors, 2007.

^{6.} National Center on Education Statistics, *Digest of Education Statistics*, 2005, Table 8. Downloaded at http://nces.ed.gov/programs/digest/d05/tables/dt05_008.asp?referrer=list.

which is over 50 percent Hispanic (20 percent white, 57 percent Hispanic, and 19 percent African American). Consequently, the Denver sample under-represents both Hispanic and African American students and over-represents white students, in relation to public school enrollment. It is also noteworthy that fully 26 percent of parents in Denver reported that English is not their first language. As a result, many of the surveys reported here were performed in Spanish.

The majority of survey respondents are employed, with some variation by city. In Denver, 47 percent are employed full-time, and another 15 percent are employed part-time. In Washington, some 53 percent are employed full-time, and another 16 percent are employed part-time.

If surveyed parents had more than one child in the K–12 system, we asked them to talk about the child for whom they had made the most recent school choice decision. The children we ended up talking about are very close to a 50/50 male/female student split across the sample. In addition, the percentages of children discussed in the surveys are spread fairly evenly across all K–12 grade levels. Somewhat less than half of all responding families reported just one child currently in K–12 schools (41 percent in Denver, 49 percent in Washington), while about a third have one other child in K–12 (35 percent in Denver, 26 percent in Washington), and another 24 percent in both cities have 3 or more K–12 children in their household.

SCHOOL CHOICES

In both cities, across our entire sample, the majority of the children are presently enrolled in traditional public schools (67 percent), with the remaining third in public charter schools (18 percent) or private schools (15 percent). In terms of school choice, it is significant that the 33 percent enrolled in charter and private schools do not represent everyone choosing a school other than their neighborhood school. Many parents in the two cities choose a public school that is not their neighborhood school. When those parents whose children now attend any traditional public school were asked if their child attends the school to which they were assigned, fully one-third indicated their child does *not* attend the local neighborhood school.

Taken together with the parents who chose to send their children to charter or private schools, this represents an overall majority of respondents—54 percent—who chose a school other than their assigned neighborhood public school. Of the 316 respondents who did not enroll their child in the nearest traditional public school, 123 students are in non-

neighborhood public schools (including some outside the city district lines). Meanwhile an additional 87 students are in private schools and 106 are in charter schools.

What of the remaining 46 percent whose children are enrolled in the neighborhood public school? Consider that about a quarter (24 percent) of all parents reported that they did not consider any school other than the neighborhood school. That leaves another 22 percent of parents who considered other schools, but then chose the neighborhood school. In effect, then, 76 percent of the sampled parents are "choosers"—either actually choosing a school that is not the closest traditional public school, or considering other schools before settling on the neighborhood school.

On the face of it, transportation does not appear to be an overwhelming barrier to at least thinking about choice for about three-quarters of families, since they actually chose, or at least considered, options in other neighborhoods. While nearly all Washington children go to school within the district itself (92 percent), a somewhat smaller number of Denver residents attend school within the city (85 percent). Colorado allows inter-district choice, and it appears that many parents pursue that option or choose a charter or private school located outside the city limits.

Table 2 breaks down the data on the number of children in various types of schools by neighborhood, outside neighborhood, charter, and private. Across the entire sample, a minority of children (46 percent) attend their local neighborhood public school. In Denver, the most frequent alternative choice is a public school outside one's neighborhood. In contrast, in Washington the most frequent alternative is a charter school. More parents make alternative choices in Washington generally, with only 42 percent selecting their neighborhood public school, while in Denver the slight majority (51 percent) have their child attend the local neighborhood school.

TABLE 2. Type of School Child Attends

	Total Respondents	Denver	Washington
Public			
Neighborhood	271 (46%)	146 (51%)	125 (42%)
Outside neighborhood	123 (21%)	76 (26%)	47 (16%)
Charter	106 (18%)	29 (10%)	77 (26%)
Private	87 (15%)	36 (13%)	51 (17%)

Not surprisingly, the choice of school differs according to the income of the parents, in a way that is highly statistically significant. The lower the income of the family, the more likely it is to choose a public school. Middle-class parents (those in households earning between \$60,000 and \$75,000 annually) are five times as likely to choose a private school as are low-income parents (25 percent to 5 percent). However, as shown in table 3, the majority of parents in all income groups (ranging from low income at less than \$20,000 annually, to middle class earning between \$60,000 and \$75,000) choose a public school in some location.

TABLE 3. Type of School Child Currently Attends, by Family Income

Type of School	Income			
	<\$20,000	\$20-39K	\$40-59K	\$60-75K
Traditional Public	81%	69%	61%	61%
Charter	14%	20%	20%	15%
Private	5%	11%	20%	25%

Examining this data more carefully, it is possible to make some comparisons between the parents of children in non-assigned schools and those whose children remain in the neighborhood schools. In both cities, parents with higher incomes, higher education levels, white parents, and those who speak English are more likely to choose a school (private, charter, or traditional public) other than the neighborhood school. In some ways this is what critics of school choice have predicted. However, on the other hand, it might be expected that better-educated and higher-income families would live near a high-quality local public school in the first place. It is possible that the family income cap for the survey (\$75,000) is too low for that expectation to make much difference.

Reasons for Choices

When asked why they made the choices they did, the largest proportion of survey respondents (37 percent) said they chose their child's current school for reasons related to "academic quality." That proportion is somewhat higher in Washington (41 percent) than in Denver (32 percent). "Location/convenience" was the second largest concern (26 percent in both cities). This secondary reason would seem to be directly related to transportation costs and time, and perhaps other issues too, such as the availability of other potential caregivers (aunts, grandparents, trusted friends) nearby. The third most common reason cited for selecting a school was the school's "environment or feeling." This was cited by 17 percent of the total sample, but more than twice as often by Denver respondents (24 percent) as those in Washington (10 percent). Special programs represented the fourth category, cited by about 10 percent in both cities.

In Denver, of the 49 percent of parents who chose a school other than their neighborhood school, nearly half gave academic quality as the primary reason. By comparison, of the parents whose children remained in the neighborhood school, just 16 percent cited academic quality as the number one reason. This second group of parents cited location/convenience as their top rationale at nearly five times the rate of those who placed their children outside the neighborhood schools (44 percent versus 9 percent).

The same pattern is evident in Washington. Of the 42 percent of children in neighborhood schools, 51 percent of their parents cited location and convenience as the primary reason for the choice; just 26 percent reported academic quality as the key reason. However, these figures are reversed for parents of children not in neighborhood schools. Here, 59 percent of Washington parents reported academic quality as the main reason for their choice, with just 7 percent citing location and convenience.

In both cities, these differences are highly statistically significant, showing that parents who make a choice do so more strongly for academic reasons, and are less concerned about location, transportation, convenience, or distance. Parents who favor location and convenience—with transportation time and costs surely a part of that calculation—are more likely to place their child in the closest school.

Schools Considered

Parents were also asked how many other schools they considered. Approximately onequarter of the respondents (24 percent) considered no other school. This group, even in two cities with a fairly long history of choice, tends to send their children to the assigned neighborhood school. While it appears that this group make their decision by default, it is also possible that this same group of parents, or some subsector of them, choose where to live based partly upon the quality of the local school. Table 4 shows the number of schools considered by those who did actively make a choice.

TABLE 4. Number of Schools Considered

No. of Schools	Total Respondents	Denver	Washington
0	142 (24%)	71 (24%)	71 (24%)
1	121 (20%)	72 (24%)	49 (16%)
2	149 (25%)	68 (23%)	81 (27%)
3	93 (15%)	43 (14%)	50 (17%)
4+	75 (12%)	31 (10%)	44 (15%)

Interestingly, parents in Washington who make the decision to choose are more likely to explore a larger number of schools than parents in Denver. This may be due to the higher density of schools within the District of Columbia. The modal response for Denver parents is to consider one other school; the modal response for parents in Washington is to consider two other schools. This general pattern fits with prior research, which shows that most parents only seriously consider a few schools for their child, rather than looking at a very large number of options.

School Satisfaction

Most of the parents surveyed are quite satisfied with their child's current school. Overall, 61 percent of the parents in the study reported being very satisfied with the child's school. Another 22 percent are somewhat satisfied. At the other end of the continuum, 13 percent of parents reported some level of dissatisfaction with their child's school (7 percent very dissatisfied, 6 percent somewhat dissatisfied). Denver parents reported slightly more

satisfaction with their schools than parents in Washington, but the differences are not statistically significant.

Examining parents' satisfaction with their child's type of school, parents whose child attends a private school are more likely to be satisfied than parents whose child attends a traditional public or charter school (see table 5). Charter school parents are more likely than traditional public school parents to be "very satisfied." These statistically significant differences suggest that something in addition to the act of choice is affecting satisfaction.

TABLE 5. Parents' Satisfaction by Type of School

Satisfaction	Traditional Public	Charter	Private
Very satisfied	56%	66%	81%
Somewhat satisfied	25%	17%	15%
Neutral	5%	3%	3%
Somewhat dissatisfied	7%	6%	1%
Very dissatisfied	8%	9%	0%

There are no significant differences in satisfaction based on parents' income or by the child's grade in school. There is, however, a trend for parents with children in middle school or high school to be somewhat less satisfied than parents with children in earlier grades.

What about satisfaction differences across various demographic groups? Generally, of the parents surveyed, non-English speakers are slightly more satisfied than English-speaking parents. Whites are more satisfied with their schools than non-whites. A larger percentage of parents with higher levels of education reported they are satisfied with their current school. No significant differences in satisfaction exist between parents in terms of how many other schools they reported considering.

In aggregating some of these results, comparing parents whose child ended up in the nearest neighborhood school with those who made a different choice, parents who "choiced out" (i.e., sent their child somewhere other than the local school) tend to be more satisfied with their choice than those staying in their neighborhood school. Satisfaction is

not clearly related to the distance from school or how long it takes to get to school, either for those attending the local school or those who chose another school.

Relating satisfaction to transportation, there appears to be a strong correlation between parents' level of satisfaction and the influence of transportation on school choice. Parents who were not able to choose the school they preferred due to transportation challenges reported being dissatisfied with the school in which they felt they had to enroll their child. These parents are significantly less satisfied with their current school. These findings suggest that transportation barriers have an impact on the degree of satisfaction with the school choice made by parents. Interestingly, the greater the influence of transportation issues in the school decision, the lower the parent satisfaction with the current school. This issue is discussed in more detail below.

TRANSPORTATION PATTERNS

To gauge neighborhood transportation patterns, the survey gathered information about car ownership in respondent households. Only 19 percent of the combined sample do not own at least one car. However, the two cities differ dramatically. In Denver, only 8 percent of households do not have a car, while 35 percent have one car, 44 percent have two, and 12 percent have three or more. In Washington, where neighborhoods are denser and higher-quality mass transit is available, fully 29 percent of the households surveyed do not own an automobile, while 43 percent have one car, and 28 percent own two or more.

Not surprisingly, car ownership is highly correlated with income (R=0.37). The higher the income, the more likely a family is to own a car; the lower the income, the less likely. Across the entire sample, 45 percent of households with annual incomes less than \$20,000 do not have an automobile. But that proportion drops to 18 percent of households with incomes of \$20,000–39,000, to 7 percent in families with incomes in the \$40,000–59,000 group, and to just 2 percent of the \$60,000–75,000 income group. Income itself provides families with a lot of transportation options.

So how do children actually get to school in these cities? The most common mode of transportation is for the parent to drive the child to school. Walking, taking a school bus or van, or using public transportation are secondary modes; relatively similar proportions of students (between 15 and 26 percent) use each mode, according to parent responses.

Transportation patterns in the two cities differ. While a majority of students in Denver

are driven to school by their parents (50 percent), the figure is much lower in Washington (30 percent). In relative terms, far more Washington students walk to school (26 percent), than do Denver students (15 percent). That makes sense, given that Washington (as noted above) is a more dense urban area with more schools closer to more households. A much larger percentage of children in Washington also ride public transportation (24 percent), while few do so in Denver (8 percent). A low number of students ride school buses in both cities, when compared to the national average of 55 percent. In Denver, just 15 percent ride school buses, a figure scarcely distinguishable from the 16 percent who ride buses in Washington. These figures are summarized below in table 6.

TABLE 6. How Students Get to School, by Mode

	Total Respondents	Denver	Washington
Parent drives	40%	50%	30%
Child walks	21%	15%	26%
School bus/van	16%	15%	16%
Public transport	15%	8%	24%
Sibling/carpool/other	8%	13%	2%

These figures change slightly for the afternoon trip home. In Denver, where 50% of the parents drive their child to school, only 43 percent drive them home. It seems more children walk or take a bus or public transit to get home.

The mode of transportation differs significantly by parental income. Children of poorer parents are more likely to walk (30 percent) or take a school bus or van (16 percent), and they are less likely to be driven by their parents (29 percent). The middle class children in this group (incomes of \$60,000–75,000) are driven to school more frequently by parents (43 percent) and walk (17 percent) or take the school bus less frequently (10 percent).

Parents were also asked if they would be willing to have their children ride school buses or public transportation. Letting their children ride public transportation presents a significant problem for many parents. Fully two-thirds of respondents (66 percent) indicated they were not willing to let their children use public transportation to get to school. By contrast, less than one-third of parents (30 percent) object to their child taking a school bus. Interestingly, although a larger proportion of Washington children actually use public transportation, there is little difference in parental attitudes toward it. Parents'

perceptions of the use of both transit options in Denver and Washington are virtually the same.

Not surprisingly, parents' willingness to have their child use public transportation varies significantly with the child's age. Parents are more willing to have older children use public transportation. At the elementary level, only 24 percent approve of their child using public transportation, compared to 38 percent at the middle school level, and 58 percent at the high school level. No differences by child's age exist in parents' willingness to use a school bus or van. Income rarely factors into these perceptions: no significant differences were found by income in parents' willingness for their child to use public transportation or school buses.

Trip Length and Distance

How long does it take to get to school and how far do students travel? As shown in table 7, transit times are significantly longer in Washington than in Denver, but there is much variation within each city. Although about 60 percent of Denver trips to school are less than 15 minutes, just 46 percent of Washington trips fall into that short category. Nearly one-quarter of Washington students require 30 or more minutes to get to school, compared to only 15 percent in Denver.

TABLE 7. Estimated Length of Trip (Time) to School

Time	Total	Denver	Washington
less than 5 minutes	15%	18%	11%
5–9 minutes	19%	21%	17%
10–14 minutes	19%	21%	18%
15–19 minutes	15%	15%	14%
20–29 minutes	14%	12%	16%
30+ minutes	19%	15%	23%

Overall, students in Washington travel longer, which may be partly explained by more traffic congestion in a bigger, denser metropolitan area

In addition to time of the trip, parents were also asked to estimate the distance of their

school trips. Table 8 illustrates that in both cities little more than half of these trips (54 percent) are 2 miles or less in distance.

TABLE 8. Estimated Home-to-School Distance

	Total	Denver	Washington
Less than a mile	36%	36%	37%
1–2 miles	18%	19%	16%
2–5 miles	23%	25%	20%
More than 5 miles	23%	20%	26%

Perhaps surprisingly, given that Washington is more compact, distances of more than five miles are a bit more likely in Washington than in Denver, but the differences in distance when comparing these cities are not significant. Neither are they as large as the time differences. The greater difference in time in Washington suggests that a similar length trip takes longer in that city, which makes sense given density and traffic patterns.

As expected, there is a strong relationship between the length of time it takes to get to school and the child's grade level. On average, the older the child, the longer it takes him or her to get to school. This is true for both cities.

Parents were asked if they had any serious concerns about their child's current school transportation mode. Overall, 16 percent reported serious concerns, with little difference between the two cities. However, the nature of that concern is significantly different. Fully 81 percent of Washington parents reported safety concerns—a significantly higher rate than the 55 percent worried about safety in Denver (itself an alarmingly high figure). It is conceivable that this reflects the greater percentage of Washington children using public transportation and walking (rather than driving in a car). Parents are not alarmist in worrying about their children's safety in these cities. On an FBI index of 1–10 for violent crime (with 10 being high), Washington, D.C., is one of the most dangerous cities in the United States, with an index of 8 in 2006. The Denver index for violent crime is 7. (By comparison, the violent crime index in New York City is 6.)

The other primary concern of Denver parents is the timing of the transportation available. This may have to do with more parents driving children to school in Denver, or with children being picked up by buses in the dark on winter mornings.

Finally, this project explored differences in the distance and time to school by the type of school the child attends. Significant differences exist, with students attending neighborhood public schools being much closer to (and taking less time to get to) their schools than children attending charter, private, or public schools outside their zone (see tables 9 and 10). In fact, the modal time to school for students attending their local public school is between five and nine minutes; the modal time for the other three groups is more than thirty minutes. More than one in four children attending a charter, private, or non-neighborhood public school travels more than thirty minutes to get to that school. These data suggest the willingness of parents to sacrifice time and distance for a different school, presumably one that they perceive as superior to their neighborhood school.

TABLE 9. Time to School by Type of School

Time		Public		Private
	Neighborhood	Non- neighborhood	Charter	
<5 minutes	22%	4%	8%	12%
5–9 minutes	27%	13%	11%	16%
10–14 minutes	20%	21%	20%	11%
15–19 minutes	14%	18%	15%	13%
20–29 minutes	9%	18%	18%	18%
30+ minutes	8%	27%	28%	31%

^{*} Modal times are in bold for each category of school. These differences are statistically significant.

TABLE 10. Distance to School by Type of School

Distance		Public		Private
	Neighborhood	Non- neighborhood	Charter	
<1 mile	59%	10%	25%	20%
1–2 miles	17%	19%	19%	18%
2–5 miles	18%	31%	28%	18%
5-10 miles	4%	21%	20%	20%
10+ miles	2%	19%	10%	24%

^{*} Modal distances are in bold for each category of school. These differences are statistically significant.

TRANSPORTATION AND CHOICE

One key issue addressed in this study is the extent to which awareness of their transportation options influences or limits the scope of parents' school choices. Was information about transportation options provided by the district? Was lack of knowledge about transportation options a barrier to school choice?

About two-thirds of parents (65 percent total: 68 percent in Denver, 61 percent in Washington) reported that they were aware of district transportation options when they made their school choice. But, this means that one-third of parents were not aware, which might have influenced their choices. For instance, they might not have known that they could have received free transportation to another school.

However, most people who liked another school but did not choose it because of transportation difficulties were in fact aware of the options provided by the district. So, although one-third of parents who wanted their child to go to another school reported that they were not aware of their transportation options, lack of knowledge for most parents was not a formidable barrier to choosing a different school.

How did parents learn about transportation options? The differences between the two cities on this issue, as illustrated in table 11, are statistically significant.

TABLE 11. How Parents Learned About Transportation Options

	Total	Denver	Washington
Talked to school officials	42%	54%	29%
Written information from school	18%	16%	21%
Family/friends	17%	14%	22%
Common knowledge	12%	9%	15%

A majority of parents in Denver (54 percent) reported that they had talked to school officials. This was the modal response for Washington parents as well (29 percent), but many other sources of information were reported as nearly as important to these parents. Washington parents are more likely to get written information from the school, talk with family and friends, and share what is considered to be common knowledge.

How Important Is Transportation?

On the critical question of how important transportation was to their school choice, nearly four in ten parents (38 percent total: 40 percent in Denver, 37 percent in Washington) reported that transportation influenced their school choice. Those who indicated transportation had influenced their decision were then asked to rate on a five-point scale the level of influence transportation had on their decision. From this subgroup of 38 percent, nearly three-quarters (73 percent) reported transportation to be either extremely (31 percent) or very (42 percent) important to their school choice. There are no significant differences noted across the two cities in this respect; responses were nearly identical. For nearly 40 percent of parents, it appears that transportation issues matter to their choice, and for about 30 percent (three-quarters of the 40 percent), it is quite important to that choice.

How did income relate to transportation challenges? Although there were no significant income differences in whether transportation was cited as a problem (the "yes/no" answer), among those who did cite it, it was more likely to be a significant problem for low-income families. Almost half of the poorest parents who reported transportation to be a problem in their choice of school reported it to be an extreme problem (48 percent), compared to only 17 percent of the highest income group. (The two intermediate income groups reported transportation to be an extreme problem at 27 percent or 28 percent

rates.) The extremity of the problem, therefore, seems to correlate directly to the income level of the reporting family. More income equals more transportation options.

This project also examined the relationship of other demographic factors to the "strength" of transportation as an influence on parents' choices. In addition to income, single parents and parents in minority households are more likely to report transportation as having a stronger influence on their choice.

When parents were asked how or why transportation is important, 60 percent said it is about location or convenience, 20 percent reported no transportation options, and 9 percent cited transportation safety. On a separate question, 28 percent said the child's transportation choice is affected by their own work schedule (presumably, these would be parents who drive their children to school). Most of these parents cited timing of their trips as the main challenge.

Would You Have Chosen Another School?

Parents were asked if there was another school they would have liked for their child to attend (one they actually named), but did not choose because transportation was a problem. A little over one-quarter of the respondents (27 percent) indicated there was such a specific school. There are no differences by city in this response. However, there is a trend (but not a statistically significant one) for those in the lowest income group to be more likely to say "yes" to this question. One-third (33 percent) of those with incomes less than \$20,000 reported that there was such a school, and slightly more than a quarter (27 percent) of those with incomes from \$60,000–75,000 agreed. Interestingly, this response does not vary much by the grade of the child.

Of the parents whose children are attending the closest neighborhood school, we also find a higher percentage of parents reporting that they would have had the child attend school elsewhere, but for transportation difficulties. In both cities, a statistically significant number of families—33 percent with children in neighborhood schools, 22 percent with children in non-neighborhood schools—reported that they would have chosen another school if transportation issues had not been a barrier. This supports the idea that a large number of parents considered another school, but facing some transportation challenges, decided to enroll their child in the closest school.

Among the parents who responded that they had considered another school, follow-up questions revealed that the more desirable school was always much farther away than the current school. Almost half (48 percent) responded that the preferred school was more than 30 minutes away. Parents indicated that, to get there, their child would have been

more likely to take public transportation (33 percent), have a parent drive (33 percent), or take a school bus or van (14 percent).

Perhaps not surprisingly, lower-income parents, minority parents, single parents, parents with less education, and parents in Spanish-speaking households are more likely to indicate that they would probably have chosen a different school had transportation not been a problem. That makes sense, given that transportation challenges and lack of access to one's own automobile might loom larger as challenges in these households.

In response to another follow-up question, 36 percent of parents who had another specific school in mind would have actually selected that school for their child if a better or free form of transportation had been available. Parents reported that they preferred this other school (over the school they actually did choose) because of academic quality (54 percent), special programs (12 percent), or school feeling/environment (10 percent). The percentage citing academic reasons for the other school is considerably higher than the percentage that cited academic reasons for choosing their current school (just 37 percent).

Of the reasons for considering the other school, there are no observable differences between Denver and Washington. However, we do observe a trend by income in both cities. The highest-income group (\$60,000–75,000) would have been less likely to select the other school for academic quality reasons (40 percent) than the lower-income groups (52 percent of the lowest-income group and 58 percent of the middle two income groups would have selected the other school they considered for academic reasons). This would seem to indicate that transportation obstacles present a substantial barrier to lower-income families when it comes to school choice.

A Hypothetical Better School?

Two hypothetical questions were presented to parents asking them if they would send their child to a school, similar in all other respects to their current school, but with higher test scores. The questions stipulated that the alternative school would be further away and transportation would be provided. Parents were asked to consider schools with average test results that were 20 points higher and 40 points higher (out of 100 points). For both hypothetical questions, about three-quarters of respondents indicated they would send their child to the school with higher scores. No differences are noted on these items by city, though there are income differences—those with lower incomes indicated a higher likelihood of sending their child to the hypothetical school (see table 12).

TABLE 12. Willingness to Send Child to Hypothetical Better School, by Income (Transportation Provided)

Parent Income

	<	\$20,000	\$20,000-39,000	\$40,000-59,000	\$60,000-75,000
		Would (Choose School with	n Better Average	Test Results if:
-166	 				

Difference In Test Scores

+ 20 <i>points</i>	84%	74%	62%	64%
+ 40 points	83%	72%	62%	65%

^{*} Income differences are statistically significant.

Clearly a majority of parents in all income groups would send their child to the better school, regardless of distance, assuming transportation was provided. Still, the income trend (willingness to change schools declining as income rises) suggests that higher-income parents are already more likely to have their child enrolled in a school with academic quality that satisfies them, perhaps partly because they were able to overcome any transportation issues fairly easily in the first place.

These hypothetical questions were followed up with a question about how long parents would be willing to have their child travel to the higher-performing school. The modal response was 30 minutes or more. Nearly half (48 percent) of those selecting the school with scores 20 points higher were willing to have their child travel that far. The proportion rises to 61 percent if the new school promised a 40-point increase in test scores. Both of these percentages significantly exceed the percentage of students who now have school trips of 30 minutes or more (19 percent for the whole sample). They also exceed the 31 percent of private school children who already travel 30 minutes or more in Washington and Denver.

Broken down by city, parents in Washington are more willing to have their child travel farther for these schools (55 percent of Washington parents would contemplate a longer school commute to obtain a 20-point achievement gain, and 65 percent would do so for a 40-point gain). In Denver, the comparable figures are 41 percent and 56 percent, respectively. In all cases, parents are more willing to have their older children travel further, with the proportion of parents willing to have their child travel 30 minutes or more increasing with each grade level. While these questions are hypothetical, they seem to corroborate the accepted idea that parents will allow longer trips for what they perceive

to be better options, since current data show that children placed in private and charter schools do presently travel farther than others.

Multiple Regression Analyses

So far this report has focused on binary relationships between attributes of parents and school choices. In an effort to "explain" parents' responses to issues of transportation and choice, and see which factors are most important to parents in a broader context, several multiple regression analyses were also completed. A few caveats about these analyses are in order. Not surprisingly, several of the explanatory, independent variables discussed above (income, education, single parent household, car ownership, distance to school, etc.) are highly correlated with each other. Their correlations with the dependent variables about choice are attenuated in the joint model. And, the adjusted R-squared values of these models are low; that is, these particular variables do not explain much of the variance across parents on these questions.

Still, a few statistically significant relationships are worth highlighting. With all other factors held constant, the following trends are observed:

- In most of these models, lack of car ownership became the factor most highly related to transportation influence and choices.
- Parents in Denver are more likely than those in Washington to say they would have preferred another school if transportation had not been a problem.
- Parents who reported being less satisfied with their current school are more likely to say that transportation played a role—that is, they probably believe they were forced to make a less than optimal choice (partly because of transportation challenges).
- Parents' income and education are statistically significant in explaining whether or not they would opt for the hypothetical "better" school: lower-income and less-educated parents are much more likely to say "yes."

CONCLUSION

respondents with annual incomes of less than \$75,000 said that transportation is a barrier to respondents with annual incomes of less than \$75,000 said that transportation issues influenced their school choice, or that they would have made a different specific school choice if they had better transportation options. Most parents reported that they would have chosen an academically better school if they could have, and they are willing to have their child travel farther to get to such a school. In addition, parents who have their child enrolled in the closest neighborhood school, who either did not make a choice or chose that school over other options, greatly emphasize the convenience of that choice, compared to parents who send their child to school farther away, who are more likely to cite academic reasons for doing so.

Within the income groups (up to a household income of \$75,000 annually), poorer families are more likely to say that transportation is a factor for them, and more likely to report that they did not choose another school they preferred because of transportation problems. Also, they are more likely to say they would go to a better school, and would travel farther to it, if transportation were taken care of for them. This is partly because some very poor families have few or unreliable cars (45 percent of families with less than \$20,000 income do not have a car). In addition, some parents with automobiles have work schedule conflicts that limit their ability to drive their child to school. Beyond income, parents with less education, fewer cars, and limited English facility are more likely to cite transportation issues as barriers to choice.

Some of these findings are not surprising. In contrast to the lower-income groups, middle-income parents are pretty satisfied with their schools. Many (26-31 percent of income groups above \$40,000) have already chosen charter or private schools for their child. Many of these parents drive their children to school themselves. These parents do not highlight transportation as a big issue, and they do not say they would be highly likely to change schools if free transportation were provided. This suggests that transportation and distance to preferred schools are not big issues for them. Presumably, this trend would be even more pronounced if we had sampled parents with incomes in excess of \$75,000, since they obviously have more resources.

How can these barriers be overcome for lower-income parents? Since about one-third of parents reported that they were not aware of district transportation options, more information would certainly help. The expansion of NCLB choice will probably influence knowledge among lower-income parents in low-performing schools, though there is national evidence that many parents still do not know enough about this program. Obviously, if the NCLB choice and free transportation program continues, districts need to do a better job informing parents about these options.

Districts might also reconsider their transportation policies more broadly. Most current policies were designed more for school systems before widespread choice, focusing on traditional, assigned local schools. In Washington and Denver, about three-quarters of parents have considered other options and about half have actually chosen private, charter, or non-neighborhood public schools. Of the half in their neighborhood public school, half of them at least considered other schools before ending up in the closest zoned school. Clearly some who ended up back in the neighborhood school would have preferred another option, but transportation limited their choices. A broad reconsideration of transportation policies might make a significant difference to lower-income families.

From the brief telephone survey of school districts conducted as part of this study, little evidence emerged of innovative thinking about transportation policy. Generally, the centrally planned district approach, involving feeder patterns of school buses going to local schools, continues to be the prevailing mode of transportation. Given the newer range of choices, and the way in which children actually get to schools, districts should think about different transportation plans and mechanisms as part of their planning for school choice.

Since a plurality of parents in Washington and Denver drive their children to school now,

perhaps districts should consider other options. If an average of nearly \$700 per year per student is spent on public school buses and mass transportation today, there may be better ways to spend this money. A system of transportation vouchers could give families the option of whether to use the transportation money to help support the expenses associated with car ownership, a ride-sharing plan with other students, a bicycle, or a more flexible use of taxis and minivans. Choice itself is designed to give parents a decentralized approach to schooling, and to give them the power to make decisions. A more decentralized transportation function might also provide parents with more tools to make school choices that work better for them.

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The Center on Reinventing Public Education (CRPE) was founded in 1993 at the University of Washington. CRPE engages in independent research and policy analysis on a range of K-12 public education reform issues, including finance & productivity, human resources, governance, regulation, leadership, school choice, equity, and effectiveness.

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