

TRANSFERRING TO ST. LOUIS COUNTY SCHOOLS:
HOW MANY CITY OF ST. LOUIS STUDENTS WOULD MAKE THE CHANGE?

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Executive Summary

If City of St. Louis adults responsible for making decisions about where to enroll their children had the option to select a St. Louis County public school of their choice with no charge for tuition, approximately 15,740 students would move from their current school. That is approximately 27.8% of the K-12 pupils now living in the City. About 2,248 would be City students participating in the Voluntary Interdistrict Choice Program who, free to select any St. Louis County school district, would shift from their current district to another one in St. Louis County. Among the St. Louis County school districts, the largest number of transferring students, about 3,567, would choose the Clayton School District.

Here are the estimated transfer rates and number of students for each major educational segment:

	<u>Rate</u>	<u>Number</u>
St. Louis Public Schools	29.5%	8,318
Charter Schools	24.1%	1,746
Private/Parochial Schools	19.4%	2,757
Voluntary Interdistrict Choice Participants	42.7%	2,248

The transfer rate is 32.8% among students with individualized education programs (IEP), meaning about 3,157 IEP students would be among those transferring to a school of their choice in St. Louis County.

These estimates are based on a telephone survey of a probability sample of 601 City of St. Louis households conducted in October and November 2011. Both land line and cell phone numbers were contacted. The overall estimate has a sampling error of plus-or-minus 3.6% at the 95% confidence level, making the transfer estimate range between 13,702 and 17,712.

The 27.8% transfer rate is similar to the approximately one-third of African-American children whose caregivers have either applied to the VICC program or are already enrolled in it during the four years from 2006-2007 through 2009-2010.

This study also finds that substantial numbers of City of St. Louis children live within a relatively brief automobile and public transit commuting distance of at least one of the Clayton School District's three elementary schools, its Wydown Middle School, and Clayton High School. These distances typically require a shorter average commuting time than those experienced by current VICC transfer students.

The study also documents that academic considerations (graduation rate, college attendance rate, and Missouri Achievement Program communication arts and mathematics test scores) are the dominant factors when parents or their equivalents select a school district and that the St. Louis County public school districts in general and the Clayton School District in particular are perceived as being academically better than the St. Louis Public Schools.

Overview

This study addresses the following four questions:

- (1) How many school-age children live in the City of St. Louis?
- (2) What is the proximity of these children to school buildings in the Clayton School District?
- (3) What factors are most important in selecting a public school district?
- (4) What proportion of City children, overall and by selected subgroups, would transfer to St. Louis County public school districts of their choice, overall and by selected districts, if they could do so with no charge for tuition?

The study uses five data sources to answer these questions:

- (1) The most recent five-year (2005-2009) American Community Survey (ACS) conducted by the U.S. Census Bureau.
- (2) Missouri Achievement Program (MAP) test scores on communication arts and mathematics, collected by the Missouri Department of Elementary and Secondary Education.
- (3) Data about applicants to and enrollees in the Voluntary Interdistrict Choice Corporation (VICC) Program, supplied by the VICC office.
- (4) Automobile and public transit times generated by Google at www.google.com.
- (5) A telephone probability survey of 601 City of St. Louis adults who (a) have one or more children living in the household who will be attending school in Fall 2012 and be enrolled between kindergarten and Grade 12 and (b) either "make most of the decisions about where the children will attend school" or "share that decision with someone else." The raw number of qualifying children in the survey is 984 and, after adjusting by phone type (landline versus wireless), the weighted number is 1008.

School Age Children in the City of St. Louis

The ACS (2005-2009) is the best source for determining the number of school age children since it asks explicitly about how

many children are enrolled in kindergarten, Grades 1 through 8, and Grades 9 through 12. For this period, on average 56,619 City of St. Louis children were enrolled in K-12. Here are the overall numbers as well as breakouts by race (African American and non-African American) and grade level (K, 1-8, 9-12):

	<u>Total</u>	<u>African American</u>	
		<u>Yes</u>	<u>No</u>
Kindergarten:	4,107	Not Available	
Grades 1-8:	33,708	19,754	13,954
Grades 9-12:	18,804	13,006	5,798
TOTAL	56,619		

Proximity to Clayton School District

Measuring Proximity. The ACS (2005-2009) data are reported for each of the 113 census tracts within the City of St. Louis. The school enrollment data, broken out by race for Grades 1-8 and Grades 9-12, are provided for each census tract.

To determine the travel time between each tract and each of the Clayton School District's five buildings (Captain Elementary School, Glenridge Elementary School, Meramec Elementary School, Wydown Middle School, and Clayton High School), we determined the most central intersection within each of the 113 tracts and, using the Google travel time program, obtained the automobile and public transit time estimates for each of the 665 (113 tracts times five buildings) trips.

We assume that the Grades 1-8 enrollments are divided evenly by grade (i.e., each grade has one-eighth of the total) and that therefore 62.5% of the Grades 1-8 total are elementary school (Grades 1-5) students and 37.5% are middle school (Grades 6-8) students. African American students who currently qualify to enroll in the Clayton School District through the VICC Program (i.e., those living in Area 1) are excluded from the numbers reported below. Because kindergarten enrollments are not broken out by race in the ACS data, they are excluded.

Automobile Proximity. Here are the number of elementary, middle, and high school students living within 14 or less minutes automobile travel time (one-way) and 19 or less minutes automobile travel time (one-way) of at least one Clayton School District elementary building, Wydown Middle School, and Clayton High School:

	<u>One-Way Auto Travel Time</u>	
	<u>14 or Less</u>	<u>19 or Less</u>
Elementary Schools	9,181	16,200
Wydown Middle	3,246	9,070
Clayton High	2,191	11,715
Total	14,618	36,985

Even without excluding African American students eligible to attend Clayton schools under VICC from the overall total, almost two thirds (65.3%) of City students live less than 20 minutes driving time (one-way) from the Clayton public school for their grade.

Public Transit Proximity. Public transit time is from when the bus or train arrives at the stop nearest the tract's central intersection until the time it arrives at the stop closest to the school building. Here are the number of elementary, middle, and high school students living within 29 or fewer minutes, 44 or fewer minutes, and 59 or fewer minutes public transit time (one-way) of at least one Clayton School District elementary building, Wydown Middle School, and Clayton High School:

	<u>One-Way Public Transit Time (Minutes)</u>		
	<u>29 or Less</u>	<u>44 or Less</u>	<u>59 or Less</u>
Elementary Schools	1,372	4,689	14,709
Wydown Middle	372	1,360	5,126
Clayton High	92	1,926	8,318
Total	1,836	7,975	28,153

Again, even without excluding African American students eligible to attend Clayton schools under VICC, almost one half (49.7%) of City students would have less than a one hour public transit time to the Clayton public school for their grade.

Clayton Is Usually the Closest High Achievement District. We calculated the one-way automobile and public transit trip time between each tract's centroid and public schools in St. Louis County districts where the percent of students scoring proficient or advanced on the MAP communication arts and mathematics tests exceeded fifty percent.

Here are the results for the 113 tracts:

<u>Percentage of Tracts Where District Is the Closest</u>						
	<u>Elementary</u>		<u>Middle</u>		<u>Secondary</u>	
	<u>Auto</u>	<u>Public</u>	<u>Auto</u>	<u>Public</u>	<u>Auto</u>	<u>Public</u>
Affton	21%	18%	23%	19%	19%	20%
Clayton	63%	57%	47%	31%	15%	39%
Mehlville	3%	3%	2%	4%	3%	6%
Maplewood- Richmond Heights	13%	22%	28%	46%	62%	35%
Webster Groves	0%	0%	0%	0%	2%	0%
Total	100%	100%	100%	100%	101%	100%

Clayton is the closest high achievement district to the highest proportion of City census tracts for elementary schools (both auto and public transit), middle schools (auto), and secondary schools (public). It is second for middle schools (public) and third for secondary schools (auto).

Parents Accept Lengthy Commutes. The VICC Program has tested parents' (or their equivalents') acceptance of lengthy commutes for children transferring from the City to County school districts. Using VICC data about the travel times (one-way) for 2011-2012 school year students, we calculated the average (i.e., mean) travel time for the 46 census tracts having 30 or more VICC participants.

For students in Grades 1-8, the mean time is 55.8 minutes. For students in Grades 9-12, the mean time is 53.6 minutes. Using the standard deviation, we then calculated the mean travel time for those one standard deviation or more above the mean (i.e., the 15.9% of the students with the longest commutes). The times are 68.4 minutes for Grades 1-8 and 66.5 minutes for Grades 9-12.

These VICC commute times are either larger than or at the limit of the maximum public transit times used above, suggesting that public transit travel times up to one hour would not deter parents from using that mode for their children.

Vehicle Availability. The ACS (2005-2009) does not report the number of household vehicles for the entire population or for parents of school-age children. It does report vehicle availability for households having one or more workers ages 16 years or older. These households serve as a workable proxy for parents (or their equivalents) since both focus on individuals in their working (and child-bearing) years.

Here are the results:

	<u>Households</u>	
	<u>Number</u>	<u>Share</u>
Three or more vehicles	24,740	16.0%
Two vehicles	57,932	37.4%
One vehicle	57,248	37.0%
No vehicle	14,909	9.6%
Total	154,829	100.0%

Over ninety percent of worker households have at least one vehicle and over half (53.4%) have two or more vehicles, making automobile commutes a realistic possibility for most City households.

School Selection Factors

Survey Results: Academics Most Important. After being told to "assume you were choosing a St. Louis County public school district in which to enroll a child" and being read "some reasons people give for why they select a particular public school district," the respondents were asked whether each of seven reasons was extremely important, very important, somewhat important, not very important, or not at all important in deciding where to enroll a child.

The seven reasons, asked in random order to avoid any sequencing bias, were:

- How many dollars the school district spends on each student. (SPEND)
- The performance of the school district's students on standardized tests such as the Missouri Assessment Program. (MAP)
- The diversity of the school district's students. (DIVERSE)

- The school district's graduation rate. (GRAD)
- How close a district's schools are to your home. (CLOSE)
- How close a district's schools are to public transit like Metro buses and Metrolink. (METRO)
- The percentage of a district's graduates that go on to a two or four year college or university. (COLLEGE)

Here are the results ranked by the proportion saying they are extremely important:

	<u>Importance</u>					
	<u>Extremely</u>	<u>Very</u>	<u>Some</u>	<u>Not Very</u>	<u>None</u>	<u>DK/NA</u>
GRAD	42%	42%	9%	2%	3%	2%
COLLEGE	41%	41%	10%	1%	4%	3%
MAP	35%	42%	14%	3%	4%	2%
DIVERSE	27%	31%	24%	7%	8%	3%
SPEND	26%	30%	25%	7%	8%	4%
CLOSE	21%	29%	30%	7%	10%	2%
METRO	18%	24%	21%	16%	19%	3%

The three academic factors (graduation rate, college attendance rate, MAP test scores) are the top trio measured either by proportion replying extremely important or the combined share replying either extremely or very important.

VICC Applicant Choices. Parents (or their equivalents) applying for the VICC Program on behalf of their children are asked to express their first choice of eligible county schools. The district options vary depending on their residential location.

For the 3,873 VICC applicants expressing a choice in 2010-2011 for the 2011-2012 school year, we calculated the mean MAP test scores (proportion scoring either proficient or advanced on the communication arts and mathematics tests) for their first choice and the same score for the district(s) they did not select.

Parents (or their equivalents) are considerably more likely to choose districts with higher MAP scores, with the first choice averaging 3.48 percentage points higher for proficient and advanced scores. This difference is statistically significant at the .001 level (i.e., the probability of it occurring by chance is less than one in a thousand).

Academic Reputation: State, City, County. Survey respondents were asked to assign a letter grade (A, B, C, D, Fail) to the

public schools in the State of Missouri, the City of St. Louis public schools, and the public schools in St. Louis County. These grades were then used to construct a grade point average (A=4, B=3, C=2, D=1, Fail=0) for each category.

Here are the results based on the 74% of the sample who graded all three school categories:

	<u>Grade Point Average</u>	<u>% D or F</u>
State of Missouri	2.16	22%
City of St. Louis	1.67	44%
St. Louis County	2.73	7%

By either the grade point average standard or the proportion receiving a D or an F, the St. Louis County public schools are perceived as being considerably better. The difference between the City of St. Louis and St. Louis County is statistically significant at the .001 level (i.e., the probability of it occurring by chance is less than one in a thousand).

Survey Participants Expressed Preference for Clayton. After being informed that "the six St. Louis County public school districts with the highest student performance on the Missouri Assessment Program are, in no particular order (the order was randomized to prevent any sequencing bias), the Brentwood School District, the Clayton School District, the Kirkwood School District, the Ladue School District, the Lindbergh School District, and the Rockwood School District," respondents were asked "if you were to choose to enroll a child in a St. Louis County public school, which of these districts would be your first choice (order randomized to prevent any sequencing bias): Brentwood, Clayton, Kirkwood, Ladue, Lindbergh, Rockwood, or if some other district would be your first choice, just say so.

Here are the results, ordered by the share selecting it:

	<u>First Choice</u>
Clayton School District	22.7%
Kirkwood School District	12.1%
Lindbergh School District	11.8%
Rockwood School District	11.2%
Some Other District	11.1%
Ladue School District	11.0%
Brentwood School District	7.3%
Don't know/no answer:	12.8%

The Clayton School District share is almost twice that of Kirkwood's and more than twice the proportion for the other options.

City to County School Transfer Choices

Survey Results. The sample survey asked the following question for each of up to four children in each household who would be enrolled in Fall 2012 between kindergarten and Grade 12:

What if starting with Fall 2012 this child would be free to attend the public school of your choice in St. Louis County with no charge for tuition? How likely would you be to enroll this child in the St. Louis County public school of your choice? Would you be almost 100% certain to enroll this child, would the chances be 75% or more but less than 100%, would the chances be between 50% and 74%, between 25% and 49%, or would they be less than 25%?

In making all estimates about transfer choices, we assume that 90% of those replying "almost 100%" would transfer, that 75% of those replying "75% or more but less than 100%" would transfer, that 50% of those replying "between 50% and 74%" would transfer, that 25% of those replying "between 25% and 49%" would transfer, and that no one replying "less than 25%" or don't know or refusing to answer would transfer.

Using these assumptions and before providing more information about what might possibly happen, the estimated transfer rate is 49.3%.

The survey then followed with two additional questions that might affect the transfer decision:

What if you were responsible for providing the transportation for this child between your home and the St. Louis County public school? Would that make you more likely or less likely to enroll in a St. Louis County public school of your choice—or would it not make much difference either way? (IF MORE/LESS LIKELY) Would it make you a lot (MORE/LESS LIKELY) or somewhat (MORE/LESS LIKELY)?

If the St. Louis Public Schools improve enough to meet the State of Missouri's standards for accreditation, the opportunity to send this child to a public school in St. Louis County would end and you would need to make other

arrangements for this child's school the following school year. Does knowing that make you more likely or less likely to enroll this child in a St. Louis County public school of your choice—or would it not make much difference either way? (IF MORE/LESS LIKELY) Would it make you a lot (MORE/LESS LIKELY) or somewhat (MORE/LESS LIKELY)?

Assuming all respondents who replied either "somewhat less likely" or "a lot less likely" to either of these questions would not transfer a child, the estimated transfer rate becomes 27.8%. Applying this rate to the 56,619 City students yields a transfer estimate of 15,740. Incorporating the sampling error (plus-or-minus 3.6% at the 95% confidence level), the bracketed estimate is between 13,702 and 17,712, with 15,740 being the best estimate. About 2,248 would be City students participating in the Voluntary Interdistrict Choice Program who, free to select any St. Louis County school district, would shift from their current district to another one in St. Louis County.

Among the 27.8% transfer rate group, 22.7% selected the Clayton School District as their first choice. That yields a 6.3% transfer rate for the Clayton School District. Applying this rate to the 56,619 City students yields a transfer estimate of 3,567. Incorporating the sampling error (plus-or-minus 1.9% at the 95% confidence level), the bracketed estimate is between 2,491 and 4,643, with 3,567 being the best estimate.

For those students currently enrolled in school, here are the estimated transfer rates and numbers with the sampling error at the 95% confidence level for selected categories:

	<u>Estimated Transfer Rate</u>
St. Louis Public Schools	29.5% (+/- 3.6%)
Charter Schools	24.1% (+/- 3.4%)
Private/Parochial Schools	19.4% (+/- 3.2%)
VICC Participants	42.7% (+/- 3.9%)

	<u>Estimated Transfer Numbers</u>	
	<u>Best Estimate</u>	<u>+/- Range</u>
St. Louis Public Schools	8,318	+/- 1,015
Charter Schools	1,746	+/- 247
Private/Parochial Schools	2,757	+/- 455
VICC Participants	2,248	+/- 205

In the absence of any independent uniform enrollment totals that apply to all four categories, we used the proportion for children in the survey who are currently enrolled in each school segment. Here are the survey share estimates:

	<u>Share</u>
St. Louis Public Schools	49.8%
Charter Schools	12.8%
Private/Parochial Schools	25.1%
VICC Participants	9.3%
Home Schools/Don't Know/No Answer	3.0%
Total	100.0%

For students with individualized education programs (17% of the children in the survey or, when applied to the 56,619 student total, 9,625 IEP children), the estimated transfer rate is 32.8% (+/- 3.7%). That yields a transfer estimate of 3,157 for IEP students. Applying the sampling error, the range is between 2,801 and 3,513 with 3,157 being the best estimate.

VICC Experience. For the years 2005-2006 through 2008-2009, the average number of student applicants for the four years from 2006-2007 through 2009-2010 was 4,049. For the years 2006-2007 through 2009-2010, the average number of VICC participants was 7,020. Adding the applicants for the following year with the enrollment for the current year and averaging for the four year period yield an annual demand of 11,069 students. Dividing that by the ACS's estimate of the overall number of African American students in Grades 1 through 12 (a total that omits kindergarten) of 32,760 generates a transfer rate of 33.8%,

If one assumes that the African American share of kindergarten reenrollment is the same as for the other twelve grades (62.3%) and adds that proportion of kindergarteners (2,559) to the African American total, the total African American enrollment is then 35,319 and the projected transfer rate becomes 31.3%.