Overview:

What is student mobility?

“In K-12 education, “student mobility,” also called “churn” or “transience” can include any time a student changes schools for reasons other than grade promotion, but in general refers to students chaning schools during a school year. It may be voluntary – such as a student changing schools to participate in a new program – or involuntary, such as being expelled or escaping from bullying. Student mobility is often related to residential mobility, such as when a family becomes homeless or moves due to chanes ina parent’s job. School mobility refers to the frequency of such moves amont students in a particular classroom, school, or districk. high chur in schools not only can hurt the students who leave, but also the those who remain enrolled. A ***2014 report by the Governer’s Office of Student Achievment in Georgia*** found schools with higher concentrations of mobile students had higher percentages of students with disability and fewer students in gifted educational programs.

[Governor’s Office of Student Achievement](https://gosa.georgia.gov/student-mobility-georgia-2013-2014-update) (Definition):

To count as “mobile” fo rthe purposes of their analysis, students must have entered or withdrawn from a school betweeen October 1, and May 1. October 1 is the Georgia Department of Education’s fall enrollement count date. May 1 represents a consistent date that is prior to the end of the school year in all Georgia districts. Students who withdrew and reentered the same school within seven days were not conted as mobile.

[Student Mobility’s Causes & Consequences](https://nepc.colorado.edu/newsletter/2015/06/student-mobility)

* Changing schools can negatively impact child and adolescent development by disrupting peer and teacher relationships and altering a student’s educational program
* Reasons for changing schools:
  + Family member changing job or residences
  + Eviction
  + Divorce
  + Expulsion
  + School Closure
* Impact on students:
  + Lower test scores
  + Lower graduation rates
  + Student behavior
* Mitigation of negative outcomes:
  + Solutions must be adaptable to a variety of different circumstances
  + Developing open enrollement policies to retain local students who have moved
  + Parents given sufficient information about school transfers
  + Preparation to receive student by receiving school
  + Policies to promote housing stability:
    - affordable houseing
    - policies to promote economic stability:
      * better-paying & more secure jobs

[Student Mobility: How it Affects Learning (Education Week)](https://www.edweek.org/ew/issues/student-mobility/index.html)

* Number of students potentially affected by student mobility: 6.5 million
* Impacts social and academic development
* [Policy/Legislation] Every Student Succeds Act
* “Growing bod of research suggests student mobility may be a key indicator to indentify vulnerable students and keep them ona path to academic achievement”
* Russell Rumberger (Professor @ University of California Santa Barbara)
* Most common reasons for student mobility relate to parent’s jobs or other financial instability.
* 2010 Government Accountability Office Study
  + Followed Students who entered kindergarten in 1998 through 2007.
  + Findings:
    - 13% of students changes schools four or more times by the end of 8th grade
    - Highly mobile students were disproportionately more likely to be poor or black than students who changes schools less than twice or fewer times.
    - Families who did not own their own homes made up 39% of the highly mobile students.
* 2015 state policy report in Colorado
  + Tracked student mobility in its districts, found mobility rates in 2014-2015 ranged from more than 17% for students in poverty to more than 33% for students of migrant and homeless students, and more than half of all students in the foster care system.
* Reflecting national trends, homeless students are likelier thanother studetns to change schools not just several times in their school career, but multiple times in a single year.
* Additionally homeless students remain more mobile than other studetns even after their families find stble homes.
* June Report – US Department of Housing and Urban Development
  + 20 months after regaining permanent housing, formerly homeless adolescents were more than four times as likely to change schools at least one than peers who had not been homeless.
* In general, as a school’s churn rate increased, its score on the College and Career Ready Perfomance Index decreased
* A school’s churn rate provides meaningful information about its learning environment. This education update finds wide variance among schools in terms of churn rates. However, the percentage of student who move, their reasons for moving, and most school’s churn rates tend to show ittle change ov erhte two years studied.

[Student Mobility in Georgia: Establishing Patterns and Predictors](Articles/Student%20Mobility%20in%20Georgia%20-%20Establishing%20Patterns%20and%20Predictors.pdf)

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* To assess student mobility at the school and district level, researchers calculated a churn rate for each school and district, which represents the number of student entries and exits during the school year divided by the number of students enrolled at the school.
* 2012-2013 Findings Summary:
  + [School] Average Churn Rate: 23%
  + [School] Median Churn Rate: 16.9%
  + [District] Average Churn Rate: 17.5%
  + [District] Median Churn Rate: 14.8%
  + As the percentage of students with disabilities and free/reduced price lunches increased a school’s churn rate also increased.
  + As the percentage of figted studetns and the percentage of English Language Learners increased, the schools churn rate decreased.
  + the percentage of minority studetns, the region of the state, and the presence of military bases did not have a statistically significant relationship with school churn rates when holding constant other factors.
  + At the student level, of the 1.7 milion public school students in the 2012-2013 academic year, approximately 176,000 students, or 10.3 were mobile during the school year. Among the students, 59% transferred to another public school within Georgia.
  + Students who qualified for the free lunch assistance program were 3.9% more likely to be mobile than non free lunch program qualifiers.
  + Differences in student mobility by rce/ethnicity were minimal once other factors, such as free lunch assistance qualification were held constant.
    - Two ways to test for ethnic or bias:
      * Exclude free lunch assistance program qualified students. > Then measure the churn rate for using the non free lunch assistance program qualifed students as the sample population.
      * Using students who qualifed for free lunch assistance as the population, internally measure and compare the churn rates for each ethnic demographic.
  + Students with disabilities were 1.3% more likely to be mobile than student w/o disabilities.

UCI Data Analytics Project – Considerations:

* Heat map: Gradient map overly depicting churn rates of districts or particular schools
* Breakdown of Withdrawal reasons
  + Transferred to another public school system within the same state
  + Transferred to antoher school within the same district.
  + Transferred out of state
  + Unknown
  + Removed for lack of attendance
* Breakdown of student mobility by race
* Assess mobility of student within specific, interesting categorical groups
  + free lunch assistance
  + disabilities
  + ethnicity groups
  + income stratas
  + students enrolled in afterschool programs/sports
* Use backwards induction to identify similarities, trends and relationships between students within a certain mobility group.
  + Example: Instead of saying 15% of students who were considered low-income were considered to be highly mobile in 2018, we could say of the students who were classified as highly mobile, 33% were low income (significance framing)
* Mobility and the CCRPI (College and Career Ready Performance Index)
  + In general, as a school’s churn rate increased, its score on the College and Readiness performance Index decreased.
* Mobility Timing Timeline:
  + Graphically illustrate when student mobility is the highest throughout the course of the year to identify trends.
  + Opportunities for other relevant, statistical overlays.
* Assess the quality of Schools:
  + Regresion Variables
  + [Dependent / Predicted Variable] Churn Rate
  + [Independent / Predictor Variables] Measure then compare the following:
    - % students who qualify for the free lunch assistance program.
    - % students with disabilities
      * Students with disabilities have special and may struggle in a normal classroom setting. After learning of the disability, parents of the disability student may opt for more specialied environment or educators to maximize the educational value for their child.
    - % students who were English Language Learners
    - % gifted students
    - % minority students
    - % students military
    - Total School Enrollment
    - # of After School Programs Hosted
    - Change in the unemployement rate
      * Job stability indicatory - With parent job relocation being amongst the highest stated reasons for student mobility, measuring the change in the unemployment rate would offer insight as to how student mobility changed given a 1% change in unemployment.
    - county median income as % of state
      * Relative country wealth indicator. Measures the level of wealth of a country relative to the average. As such instead of depicitng nominal wealth this variable/indicator shows us relative wealth which is more significant saying how much wealthier or impoverished is a country relative to the average person in the state. This potentially allows us to measure the effects of income inequality within a country and its effects on student mobility.
    - Log county population
      * Proxy indicator to measure the level of school impactedness while simultaneously adjusting for exponential population growth due to the increase in the base population. Indicatory is meaningful in that it would capture student mobility in the context of students switching schools due to a degredation in the quality of a school or educational program due to overcrowding.