GAO

November 2010

K-12 EDUCATION

Many Challenges Arise in Educating Students Who Change Schools Frequently

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Why GAO Did This Study

Educational achievement of students can be negatively affected by their changing schools often. The recent economic downturn, with foreclosures and homelessness, may be increasing student mobility.

To inform Elementary and Secondary Education Act of 1965 (ESEA) reauthorization, GAO was asked:
(1) What are the numbers and characteristics of students who change schools, and what are the reasons students change schools?
(2) What is known about the effects of mobility on student outcomes, including academic achievement, behavior, and other outcomes?
(3) What challenges does student mobility present for schools in meeting the educational needs of students who change schools?
(4) What key federal programs are schools using to address the needs of mobile students? GAO analyzed federal survey data, interviewed U.S. Department of Education (Education) officials, conducted site visits at eight schools in six school districts, and reviewed federal laws and existing research.

What GAO Recommends

GAO is not making recommendations in this report. Education had no comments on this report.

View GAO-11-40 or key components. For more information, contact Cornelia Ashby at (202) 512-7215 or ashbyc@gao.gov.

What GAO Found

While nearly all students change schools at some point before reaching high school, some change schools with greater frequency. According to Education's national survey data, the students who change schools the most frequently (four or more times) represented about 13 percent of all kindergarten through eighth grade (K-8) students and they were disproportionately poor, African American, and from families that did not own their home. About 11.5 percent of schools also had high rates of mobility—more than 10 percent of K-8 students left by the end of the school year. These schools, in addition to serving a mobile population, had larger percentages of students who were low-income, received special education, and had limited English proficiency.

Research suggests that mobility is one of several interrelated factors, such as socio-economic status and lack of parental education, which have a negative effect on academic achievement, but research about mobility's effect on students' social and emotional well-being is limited and inconclusive. With respect to academic achievement, students who change schools more frequently tend to have lower scores on standardized reading and math tests and drop out of school at higher rates than their less mobile peers.

Schools face a range of challenges in meeting the academic, social, and emotional needs of students who change schools. Teachers we interviewed said that students who change schools often face challenges due to differences in what is taught and how it is taught. Students may arrive without records or with incomplete records, making it difficult for teachers to make placement decisions and identify special education needs. Also, teachers and principals told us that schools face challenges in supporting the needs of these students' families, the circumstances of which often underlie frequent school changes. Moreover, these schools face the dual challenge of educating a mobile student population, as well as a general student population, that is often largely low-income and disadvantaged.

Schools use a range of federal programs already in place and targeted to at-risk students to meet the needs of students who change schools frequently. Teachers and principals told us that mobile students are often eligible for and benefit from federal programs for low-income, disadvantaged students, such as Title 1, Part A of ESEA which funds tutoring and after-school instruction. In addition, school officials we interviewed said they rely on the McKinney-Vento Education for Homeless Children and Youth Program, which provides such things as clothing and school supplies to homeless students and requires schools to provide transportation for homeless students who lack permanent residence so they can avoid changing schools. GAO did not evaluate the effectiveness of these programs in meeting the needs of mobile students.

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United States Government Accountability Office
Washington, DC 20548

November 18, 2010

The Honorable Tom Harkin
Chairman
Committee on Health, Education, Labor, and Pensions
United States Senate

The Honorable Christopher J. Dodd
Chairman
Subcommittee on Children and Families
Committee on Health, Education, Labor, and Pensions
United States Senate

Although the landmark Elementary and Secondary Education Act of 1965 (ESEA) was enacted more than 40 years ago to help improve the educational outcomes of our nation's poor children, the achievement gap continues to persist and grow between them and their more affluent peers. Research suggests that poor students change schools more frequently than other students and that these school changes can disrupt their education. Moreover, the recent economic downturn, which resulted in job loss, foreclosures, and homelessness for many Americans, may be increasing the numbers and frequency of students changing schools as their families relocate in search of employment and affordable housing.

In preparation for the reauthorization of ESEA, the Chairman of the Senate Committee on Health, Education, Labor, and Pensions, and the Chairman of its Subcommittee on Children and Families asked GAO to undertake a study of the scope of student mobility in the United States today and examine its effect on students and schools. Specifically, we were asked to address the following questions: (1) What are the numbers and characteristics of students who change schools, and what are the reasons students change schools? (2) What is known about the effects of mobility on student outcomes, including academic achievement, behavior, and other outcomes? (3) What challenges does student mobility present for schools in meeting the educational needs of students who change schools? (4) What key federal programs are schools using to address the needs of mobile students?

To answer these questions, we analyzed two nationally representative datasets from the Department of Education (Education): one, which followed a cohort of students from 1998 to 2007, contained information on the numbers and characteristics of mobile students and the other

contained information on the schools students attended in 2007.[1] Neither of these datasets allowed us to assess effects of the economic downturn on student mobility, which occurred post 2007. To collect additional information about the mobile student population and reasons for their mobility, including any potential effects of the recent economic downturn, we interviewed school officials and federal and state education officials. We determined that Education's data were sufficiently reliable and valid for the purposes of our review. We reviewed external studies that measured the effects of student mobility on both educational and noneducational student outcomes. We selected studies that were published during or after 1984 and contained original data analysis or meta-analysis. We conducted site visits to a nonprobability sample of eight schools across six school districts in three states (California, Michigan, and Texas) where we interviewed school officials and parents about the challenges of student mobility and how schools address those challenges. We selected states that provided geographic coverage and that had high percentages of economically disadvantaged students and/or high rates of foreclosures to provide insight on how the economic downturn might be affecting students and schools in high poverty areas. We selected schools with high percentages of mobile students and that differed by school type (public and charter), grade level (elementary, middle, and high school), and location (urban, suburban, and rural). We interviewed federal, state, and school officials about federal programs that serve low-income, disadvantaged, and special needs students, including those who change schools, and we reviewed relevant federal laws, regulations, and agency documents. In addition, we interviewed state education officials and local homeless education liaisons about federal efforts to assist mobile students from homeless families.[2] (See appendix I for a detailed description of this study's scope and methodology.)

We conducted this performance audit from October 2009 through November 2010 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable

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[1]We analyzed Education's *Early Childhood Longitudinal Study: Kindergarten Class of 1998-1999* data from 1998-2007 and *National Assessment of Educational Progress* data from 2007.

[2]The McKinney-Vento Homeless Assistance Act requires every local educational agency to designate a liaison who serves as a primary contact between homeless families and schools to help ensure homeless students enroll in school. 42 U.S.C. § 11431(g)(6).

basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Nearly all students change school at some point during their school years, most typically when they are promoted to a higher grade at a different school. Specifically, students may change schools as they are promoted from elementary to middle school and again from middle to high school. In addition, students may also change schools when their families move to a new home or to relocate closer to jobs.

In 1994, we issued a report that highlighted concerns about the education of elementary school students who changed schools more frequently than the norm.[3] This report found that one in six third graders changed schools frequently, attending at least three different schools since the beginning of first grade. Students who changed schools frequently were often from low-income families, the inner city, migrant families, or had limited English proficiency. These highly mobile students had low math and reading scores and were more likely to repeat a grade. We recommended that Education ensure low-income students have access to ESEA's Title I services,[4] which they have taken steps to do so.

Since we issued our 1994 report, policymakers have continued to focus attention on students' educational achievement. Specifically, the No Child Left Behind Act of 2001 (NCLBA), which reauthorized ESEA, established a deadline of 2014 for all students to reach proficiency in reading, math, and science. Under NCLBA, districts and schools must demonstrate adequate yearly progress toward meeting state standards for all students and every key subgroup of students, including low-income students, minority students, students with disabilities, and students with limited English proficiency.

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[3]GAO, *Elementary School Children: Many Change Schools Frequently, Harming Their Education,* GAO/HEHS-94-45 (Washington, D.C.: Feb. 4, 1994).

[4]Title I, Part A of ESEA provides federal funds to elementary and secondary schools to improve the educational opportunities of economically disadvantaged children.

Characteristics of More Mobile and Less Mobile Students and Their Schools Differ

While nearly all students change schools at some point before reaching high school, some students change schools with greater frequency (see figure 1). According to Education data, which followed a cohort of kindergarteners from 1998 to 2007, the majority of students—about 70 percent—changed schools two times or less and about 18 percent changed three times before reaching high school.[5] Some of these school changes could occur as a result of students being promoted to a higher grade in a different school or parents moving to a new home or relocating closer to their jobs.

However, for the students who changed schools four or more times (about 13 percent), our analysis of Education's data revealed statistically significant differences between them and students who had changed two times or less, not only in the frequency of their changes but along several important dimensions. We compared students who changed schools two or fewer times (referred to in this report as "less mobile") to students who changed schools four or more times (referred to as "more mobile"). We selected this comparison because the differences were most pronounced and because the two groups combined represent a significant fraction (about 82 percent) of the population of the students in the cohort. We also found statistically significant differences between students who changed schools two or fewer times and students who changed schools three or more times, but these differences were less pronounced. See appendix II for Education's *Early Childhood Longitudinal Study: Kindergarten Class of 1998-1999* (ECLS-K) data on the mobile student population.

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[5]Results based on Education's *Early Childhood Longitudinal Study: Kindergarten Class of 1998-1999* data from 1998-2007.

Figure 1: Number of Times Students Changed Schools Between Kindergarten and Eighth Grades

Percentage of students

Number of changes	Percentage
0	5
1	31
2	34
3	18
4 or more	13

Most changes

Legend:
- 0-2 school changes
- 3 school changes
- 4 school changes
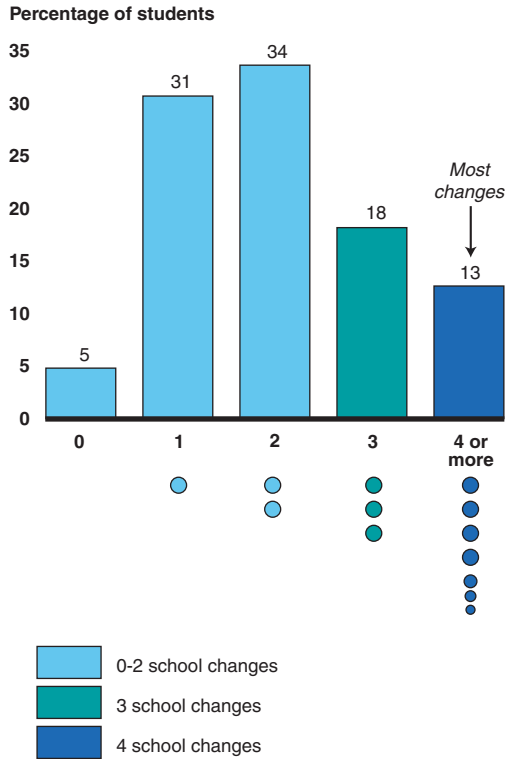
Source: GAO analysis of ECLS-K data, 1998-2007.

Note: Percentages do not add to 100 due to rounding.

Students who changed schools four or more times were disproportionately poor, African American, and from families that did not own their home or have a father present in the household. These more mobile students—compared to those who changed schools two times or less—had a significantly larger percentage of students with family incomes below the poverty threshold, according to Education's survey data.[6] Furthermore, a significantly larger percentage of the more mobile students, compared to less mobile students, received benefits under the National School Lunch Program (NSLP), the Supplemental Nutrition Assistance Program, and the

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[6]The ECLS-K dataset did not allow us to identify homelessness as a student characteristic. The poverty threshold for a family of four in 2009 was $21,954.

Temporary Assistance for Needy Families (TANF) program.[7] As shown in figure 2, about 26 percent of students who changed schools four or more times had family incomes below the poverty threshold, compared to about 17 percent of the students who changed schools two times or less. Moreover, significantly smaller percentages of the more mobile students had a father present in the household, when compared to their less mobile peers who changed schools two times or less.

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[7]Under NSLP, the Department of Agriculture reimburses schools for providing nutritious free or reduced-price lunches to low-income students. The Supplemental Nutrition Assistance Program is the new name for the federal food stamp program. TANF is a federally funded block grant—administered by the Department of Health and Human Services—that is designed to help needy families achieve self-sufficiency.

Figure 2: Comparison Across Income Measures for Less Mobile and More Mobile Students

Percent of students

Income measures

- 0-2 school changes
- 4 or more school changes
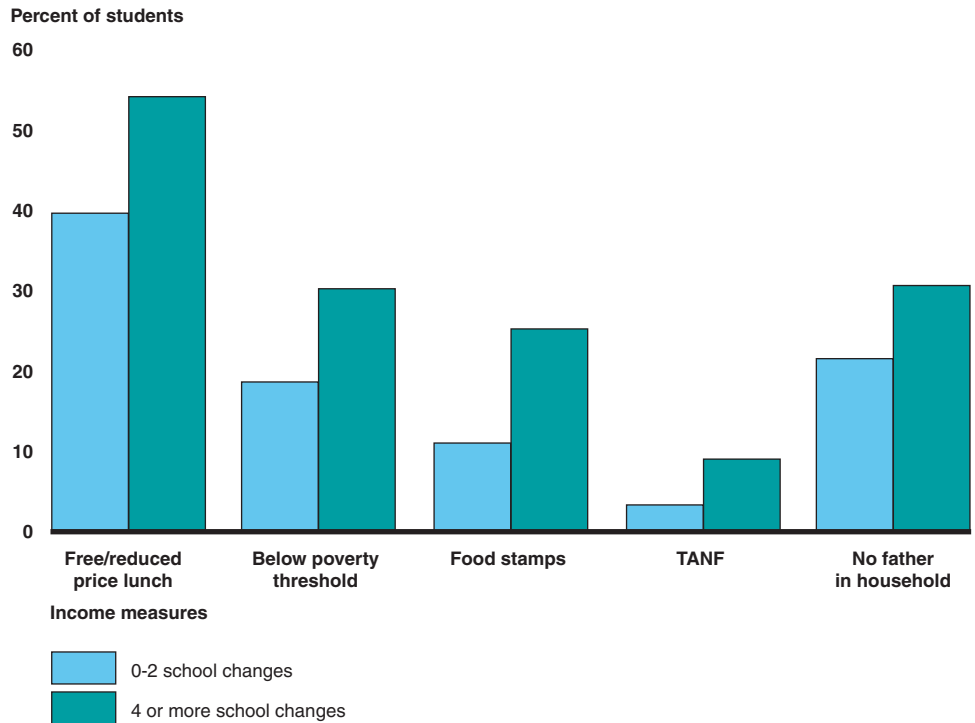
Source: GAO analysis of ECLS-K data, 1998-2007.

Notes: Estimates in this figure compare the percentage of all students who changed schools two times or less that had these characteristics to the percentage of all students who changed schools four or more times who also had these characteristics. For example, as depicted in the graph, 40 percent of all students who changed two times or less and 54 percent of all students who changed four or more times received free or reduced price lunch.

Except where otherwise noted, all results for all figures presenting student data were statistically significant at the 95 percent confidence level.

African-American students comprised a disproportionately larger percentage of the students who changed schools four or more times when compared to African-American students, as well as all other racial ethnic groups, who changed schools two times or less, as shown in figure 3.[8] African-American students represented about 15 percent of students in kindergarten through eighth grade who changed schools two times or less;

[8]This difference is statistically significant at the 90 percent confidence level. There were no statistically significant differences for the other racial groups.

however, they represented about 23 percent of students who changed schools four or more times. In contrast, white students, who represented about 60 percent of all students in the same grade range who changed schools two times or less, accounted for about 51 percent of students who changed schools four times or more.

Figure 3: Comparison Across Race for Less Mobile and More Mobile Students

Percentage of less mobile students (0-2 school changes)   **Percentage of more mobile students** (4 or more school changes)
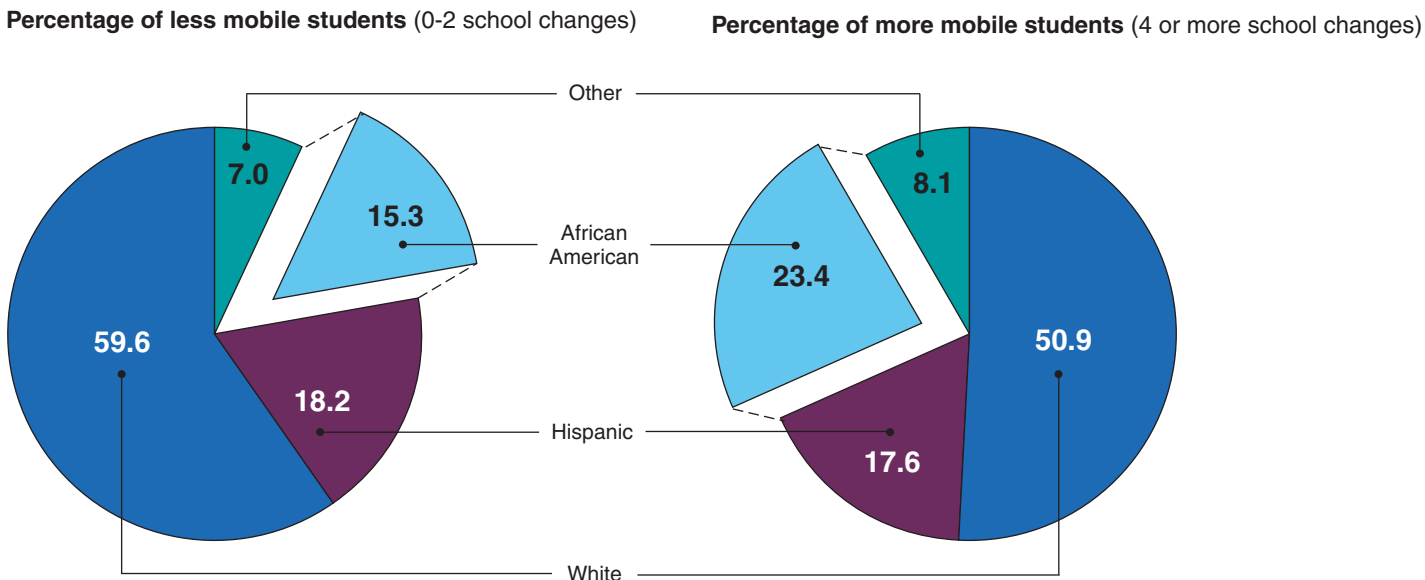
Source: GAO analysis of ECLS-K data, 1998-2007.

Finally, a significantly larger percentage of students who changed schools four or more times came from families that did not own their home. Students from families that did not own their own home represented about 39 percent of students who changed schools four or more times compared to about 20 percent for those who changed schools two or fewer times—a difference of about 100 percent. According to principals and teachers we interviewed, the more mobile students' families may rent, live with relatives, or move back and forth between relatives and friends. Further, some students may be homeless; however, teachers and other school officials we interviewed said that, in some cases, it may be difficult to know whether a student is homeless because families may not disclose that they are homeless or may not consider their particular living arrangements as being homeless, for example, staying with relatives or doubling up—that is, living with another family or families in a residence

designed for a single family.[9] See appendix II for additional information about the mobile student population.

The schools with the highest rates of student mobility also showed differences across several characteristics. According to Education's data, about 11.5 percent of schools had the highest rates of student mobility—those where more than 10 percent of their eighth grade students started the year at the school but left by the end of the school year.[10] These schools had larger percentages of at-risk eighth grade students compared to schools where less than 10 percent of the students changed schools. According to Education's data, these schools had larger percentages of eighth grade students eligible for Title I assistance, the federal government's largest program for low-income school age children. For example, about 62 percent of the schools with high mobility rates received Title I funding, compared to about 46 percent of the schools where students' mobility rates were lower. Moreover, the schools with high mobility rates were more often eligible for Title I "school-wide" programs, a designation that allows schools with a population of at least 40 percent low-income students, to offer services to every student in the school. As shown in figure 4, about 45 percent of the schools with high mobility rates were classified as school-wide, compared to about 21 percent of the schools that had lower rates of student mobility.

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[9]According to a GAO report issued in June 2010, "Programs' definitions of homelessness range from including primarily people in homeless shelters or on the street to also including those living with others because of economic hardship." See GAO, *Homelessness: A Common Vocabulary Could Help Agencies Collaborate and Collect More Consistent Data*, GAO-10-702 (Washington, D.C.: June 30, 2010).

[10]These results are from the *National Assessment of Educational Progress (NAEP)*, which collects data on 4th, 8th, and 12th graders. In this section, we present data on eighth graders to be consistent with the eighth grade results we report using the ECLS-K data. In appendix III, we also present information on fourth and eighth graders from the NAEP.

Figure 4: Comparison of Schools with Low and High Mobility Rates Receiving School-wide Title I Funding

Percentage of schools with low mobility   **Percentage of schools with high mobility**

Do not receive
Title I funding

Receive Title I
funding–
entire school

53.63

21.33

25.04

45.12

37.99

16.89

Receive Title I
funding–
individual students
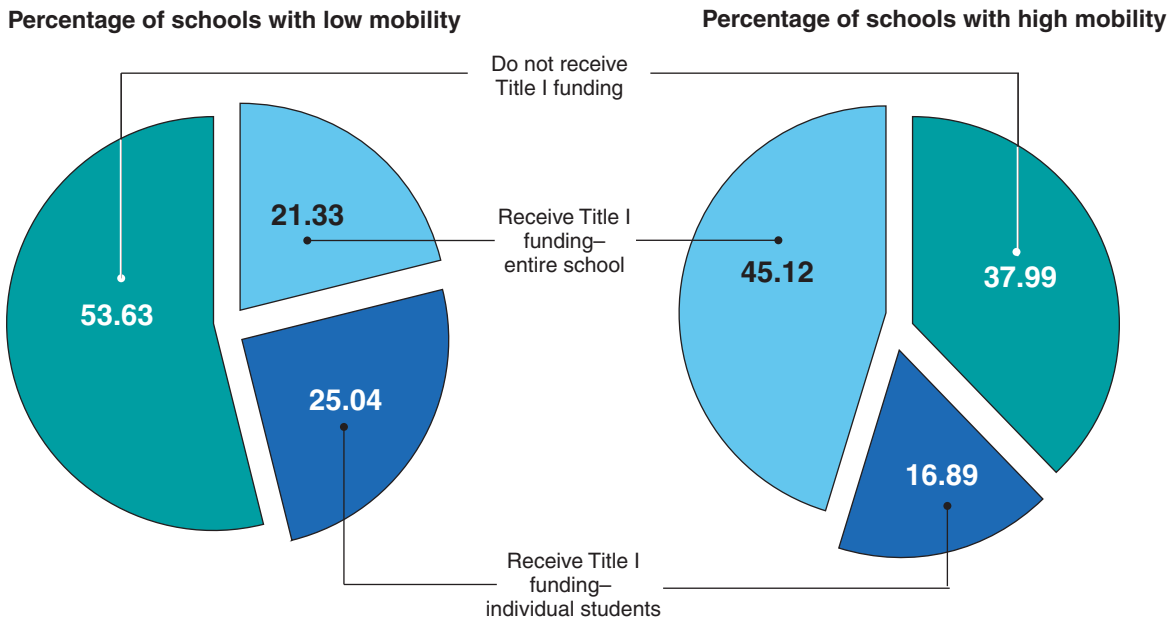
Source: GAO analysis of NAEP data, 2007.

Note: Except otherwise noted, all results for all figures presenting school data were statistically significant at the 95 percent confidence level.

Moreover, the schools with high mobility rates were more likely to participate in NSLP. Specifically, as shown in figure 5, about 91 percent of the schools with high mobility rates participated in the school lunch program, compared to about 68 percent of the schools with lower rates of student mobility.

Figure 5: Comparison of Schools with Low and High Mobility Rates That Participate in NSLP

Percentage of schools with low mobility

Percentage of schools with high mobility

School does not participate

32.34

8.58

67.66

School participates

91.42
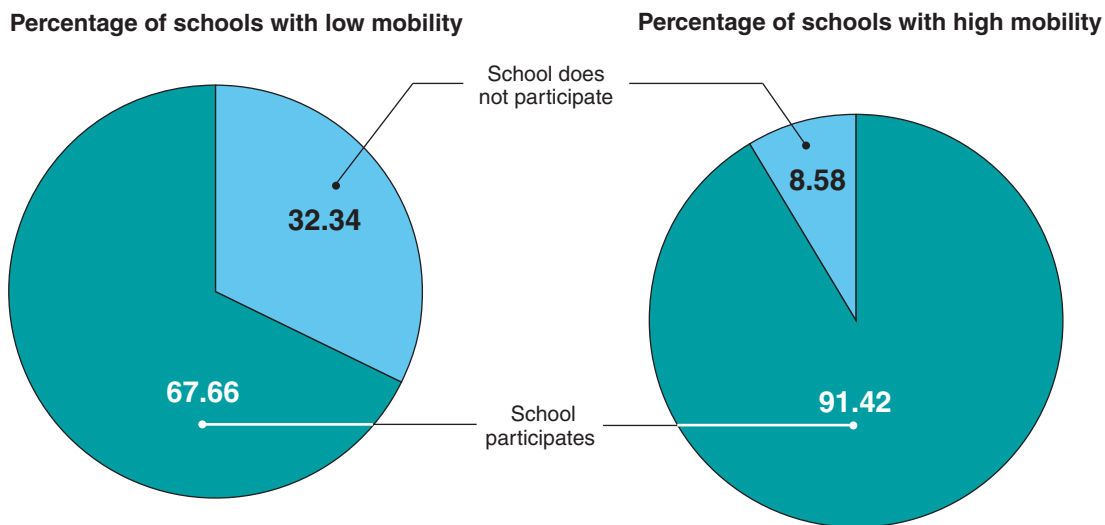
Source: GAO analysis of NAEP data, 2007.

In addition, for about 10 percent of the schools with high mobility rates, all of the students in these schools were eligible for free or reduced-price lunch, compared to about 5 percent of the schools with lower rates of student mobility (see figure 6).

Figure 6: Comparison of Schools with Low and High Mobility Rates Regarding Student Eligibility for NSLP

Percentage of schools with low mobility **Percentage of schools with high mobility**

All students eligible

4.85

10.05

95.15

89.95

Individual students eligible
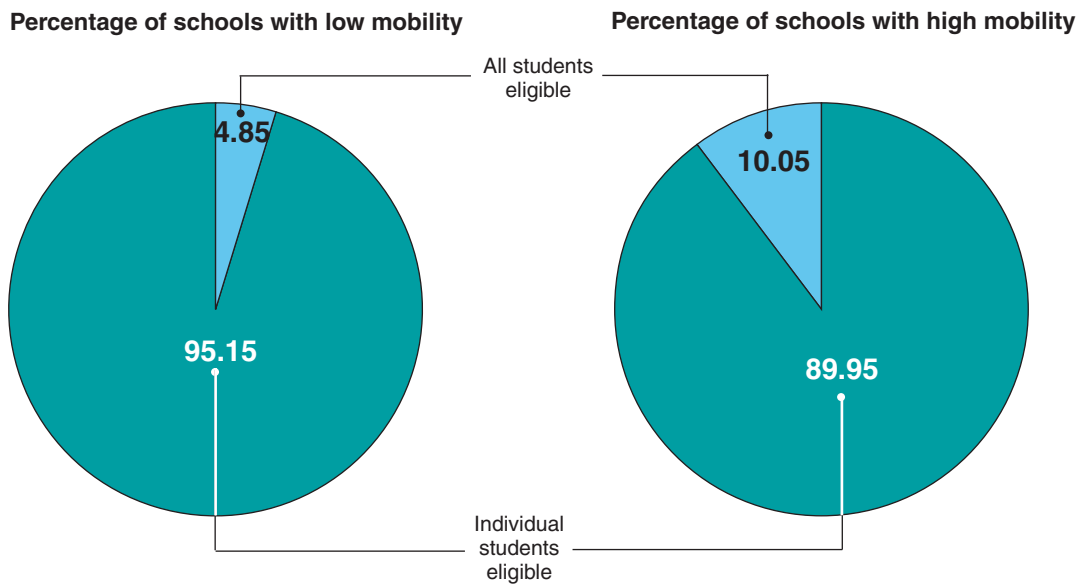
Source: GAO analysis of NAEP data, 2007.

The schools with high mobility rates also had larger percentages of eighth grade students receiving special education services, with limited English proficiency, and having higher rates of absenteeism. Specifically, as shown in figure 7, of the schools that had 11-25 percent of their eighth grade students receiving special education services, about 50 percent had high mobility rates compared to about 32 percent that had lower rates of mobility.

Figure 7: Comparison of Schools with Low and High Mobility Rates Regarding Special Education Students

Percent of schools

Percent of special education students	Low mobility	High mobility
0 - 5	44	10
6 - 10	20	24
11 - 25	32	50
26 - 50	3	8
51 - 100	1	8

Percent of special education students

Low mobility
High mobility
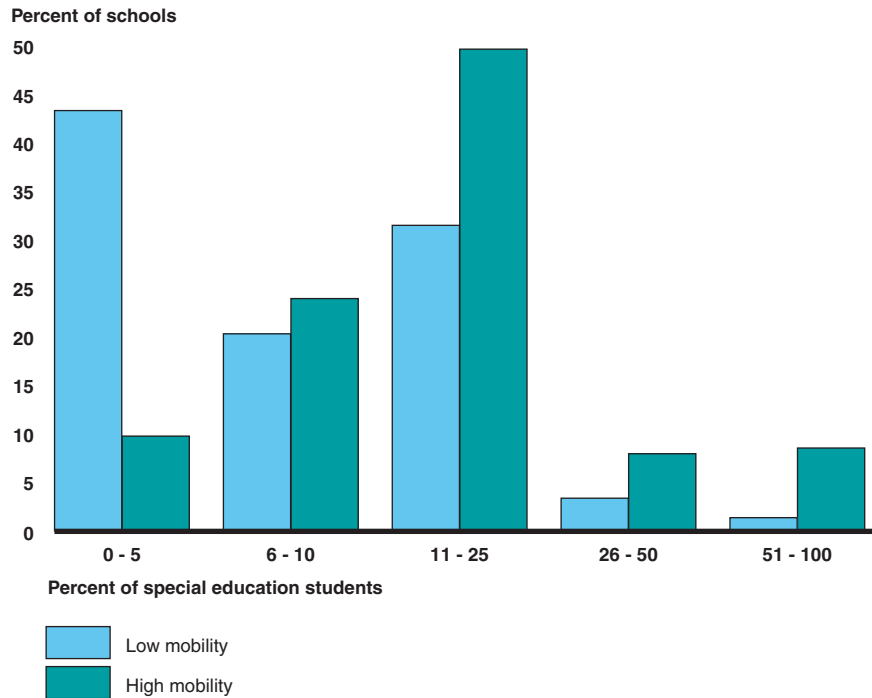
Source: GAO analysis of NAEP data, 2007.

Schools with high mobility rates also had larger percentages of their eighth grade students who had limited English proficiency. For example, as shown in figure 8, of the schools that had 26-50 percent of students with limited English proficiency, about 11 percent had high mobility rates compared to about 2 percent that had lower rates of mobility.

Figure 8: Comparison of Schools with Low and High Mobility Rates Regarding Students Who Have Limited English Proficiency

Percent of schools

Percent of students with limited English proficiency

Low mobility
High mobility
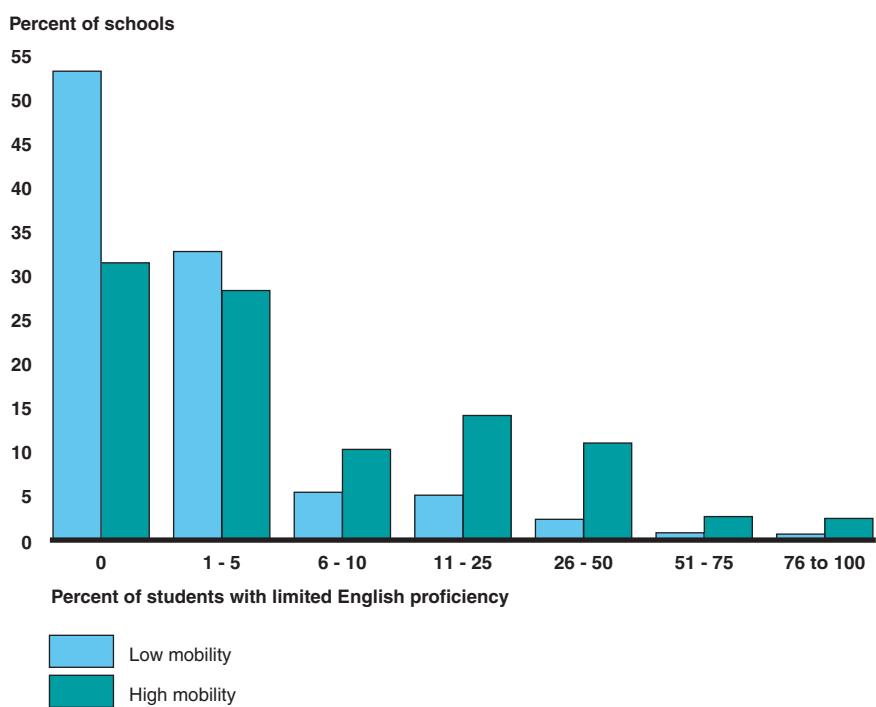
Source: GAO analysis of NAEP data, 2007.

Finally, the schools with high mobility rates had larger percentages of students absent. About 30 percent of the schools with high mobility rates had 6-10 percent of students absent on an average day, compared to about 11 percent of the schools with lower rates of mobility. See appendix III for additional information comparing schools with high rates of mobility to schools with less mobility.

Teachers, principals, and parents told us that financial difficulties and family instability often underlie why students change schools frequently, but some cited other reasons as well, such as parents' desire to send their children to a better-performing or safer school. Some school officials and

parents in all three states we visited (California, Michigan, and Texas) said that economic difficulties, including job loss, played a role in student mobility. For example, the principal of one Detroit-area school serving a large low-income population said that families lost their jobs when the automobile industry declined and moved out of the area in search of jobs. Several principals and teachers also cited foreclosures on homes and the inability of some families to pay the rent as reasons that students changed schools. For example, officials at a rural California high school said that relatively inexpensive real estate attracted many homeowners who later lost their homes. One teacher in California told us that some families who are unable to pay the rent and are evicted will move from one apartment complex to another complex offering a free month's rent. In addition, school officials in all three states we visited said that they saw more families "doubled-up"—sharing a single-family residence with one or more other families. School officials said all of these situations have resulted in students changing schools.

Family instability also plays a role in mobility, according to parents and school officials we interviewed. School officials in all three states we visited cited divorce as a reason for mobility. For example, school officials in Michigan told us that one student had changed schools four times during one school year when his parents' custody arrangement changed. In an urban school in Texas and a rural school in California, teachers and principals also said that school changes can result when students are passed around among relatives or friends when there is conflict in the student's family. Officials in California and Michigan told us that mobility also results when social services personnel need to remove students from their homes and that foster children are highly mobile, too. In addition to family issues, school officials and parents in all three states said that, in some cases, mobility results from family choice related to safety concerns or the desire to provide different educational options for their children. For example, one parent in Texas said she changed residences and her child's school after two home break-ins and in California, a principal said that some families come to his school district to escape gang activity and violence.

Research Suggests Student Mobility Can Have a Negative Effect on Academic Achievement, but Its Effect on Social Adjustment is Unclear

A body of research suggests that student mobility has a negative effect on students' academic achievement, but research on its effect on their social and emotional well-being is inconclusive. With respect to academic outcomes, while research suggests that the academic achievement of students is affected by a set of interrelated factors that includes socio-economic status and parental education, there is evidence that mobility has an effect on achievement apart from these other factors.[11] Specifically, the body of research suggests that students who changed schools more frequently tended to have lower scores on standardized reading and math tests and to drop out of school at higher rates than their less mobile peers.[12] For example, a national study that tracked high school age students found that changing high schools was associated with lower performance on math and reading tests. Another study using the same national, longitudinal dataset found that students who changed schools two or more times from 8th to 12th grade were twice as likely to drop out of high school, or not obtain a General Equivalency Diploma, compared to students who did not change schools. In addition, a meta-analysis found that student mobility was associated with lower achievement and higher rates of high school dropout.[13]

Further, some studies found that the effect of mobility on achievement varied depending on other factors, such as the student's race/ethnicity, special needs, grade level, frequency of school change, and characteristics of the school change—whether it was between school districts or within a district, or whether it was to an urban or suburban/rural district.[14] For example, one study found that school changes from one school district to another tended to result in long-term changes in academic performance

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[11]Many of the studies that met the criteria for inclusion in our review controlled for a variety of factors that can affect a student's academic achievement, such as socio-economic status, parental education, urban or rural school location, and parental marital status. All of the studies we reviewed on academic achievement controlled for students' level of achievement prior to changing schools to account for any pre-existing differences between more mobile and less mobile students. While homelessness may be one of many reasons why students change schools, none of the studies we reviewed included homelessness as a potential factor that could affect student achievement.

[12]Each study we reviewed used its own method to define what constituted "more" or "less" mobile.

[13]A meta-analysis is a statistical analysis of a collection of studies for the purpose of integrating the results.

[14]Many studies focused exclusively on low income, minority students in an urban area and did not compare students of different income levels.

and that this long-term change tended to be positive for students who moved to schools in nonurban districts[15] but negative for those who moved to urban areas. In addition, this study found that school changes within the same school district were not associated with any long-term changes in performance, but were associated with short-run negative effects on performance that were generally greater for African-American, Hispanic, and poor students.

The small body of research that exists about the effect of mobility on students' social and emotional well-being is limited and inconclusive. These studies generally used methods that do not support strong conclusions about specific relationships between mobility and social and behavioral outcomes. One important limitation is that these studies typically did not account for pre-existing differences between more mobile and less mobile students. For example, we were unable to report the results of two national longitudinal studies that we reviewed because the studies used narrow, limited measures of student behavior and other social outcomes, and the studies did not control for prior student behavior and social conditions. A complete list of the studies we reviewed is included in appendix IV.

Schools with High Student Mobility Face Challenges in Meeting the Academic and Emotional Needs of All Students

Officials we interviewed in schools with high rates of student mobility said they often face the dual challenge of meeting the needs of their students who change schools at high rates and the needs of the entire student body, which is comprised largely of low-income, disadvantaged students. A number of teachers and principals told us that when new students arrive, it can sometimes affect the pace of instruction for the entire classroom, as teachers attend to the needs of a new student. Moreover, some teachers and principals said that for a new student, there may be differences in what and how instruction has been delivered to them from school to school, and this can make it difficult for teachers to assess where students are academically when they arrive and make decisions about proper placement. Further, teachers in two schools said that the order in which

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[15]The long-term gain in academic achievement when changing to schools across districts was true for all demographic groups except African Americans. The study authors propose that long-term gains in achievement are due to switching into schools of higher quality, and they suggest that African Americans who switch into nonurban schools do not generally experience as large an increase in school quality as do white and Hispanic students who switch into non-urban schools. The authors did not explore the factors underlying why African Americans did not experience similar gains.

course material is taught varies from school to school, presenting challenges for teachers in the classrooms. For example, one teacher told about a student who moved to Texas from California and was placed in an algebra class based on her academic record, but was later moved to a more appropriate class after the teachers saw her struggling to keep up with her peers. Also, a teacher from a Texas middle school, whose district teaches pre-algebra reasoning skills beginning in kindergarten, said that students from other states are taught these skills in later grades.

A number of teachers and principals also told us that mobile students' records are often not transferred to the new school in a timely way or at all, and, as a result, this can make it difficult for school officials to determine class placement, credit transfer, and the need for special services, such as services related to special education and language proficiency. Several teachers said that when students arrive without records, the school must observe and document whether students need special education services—a process that is very comprehensive and can take several weeks or months. In an effort to help schools make more informed decisions about class placement and identification of students with special needs, Texas has developed a system to electronically transfer student records between schools in the state. This system allows schools to share information on what classes students took at the previous school, their grades and standardized test scores, reasons for withdrawal, annual absences, immunization records, and special circumstances, such as English proficiency, migrant status, homeless status, participation in gifted programs or special education, whether the student has an Individualized Education Program,[16] and eligibility for NSLP.

Schools also face the challenge of helping mobile students adjust socially and emotionally to the new school environment. While some students adjust well to their new school, some do not. A few teachers, principals, and other school officials said that some mobile students may feel like they do not belong, fail to make new friends, exhibit poor attendance, and, in some cases, drop out. Others who have difficulty fitting in socially may try to gain attention by exhibiting certain behavior, such as disrupting other students in the class. Also, some guidance counselors and teachers

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[16]Under the Individuals with Disabilities Education Act, once a child is determined to be eligible for special education services, an Individualized Education Program is prepared for that child which includes, among other things, an assessment of the child's current educational performance, a statement of measurable performance goals, and a description of the special services that will be provided to the child. 20 U.S.C. § 1414(d).

told us some mobile students often act detached, especially when they have changed schools repeatedly and anticipate changing again. In some of the schools we visited, new students were paired with a "buddy" who walks them to class, sits with them at lunch, and helps them learn classroom routines and procedures. Some schools also provided orientation tours of the school for new students and parents and arranged for new students to meet with the guidance counselor to help with the transition. For example, in a suburban/rural public school district in Michigan we visited, the principal and teachers at the elementary school meet with new students and their parents on the first day of the school year; students officially start school the next day. This gives advance notice to teachers about incoming students and allows them time to prepare. In addition, the junior high school in this district has a welcoming committee to introduce new students and parents to the school faculty and provide a tour of the school.

Several school officials told us that the needs of mobile and nonmobile students can extend beyond the classroom and often their families are in need of services too. To help address the family circumstances that contribute to mobility, two school districts we visited use school-based family resource centers that rely on partnerships between the school, community, church, and city agencies to arrange for "wraparound" services for the entire family—such as services related to housing, employment and finances, health care, education for parents and children, and social support networks. In all three states we visited, some schools have specific school-based or community outreach to parents that can benefit both mobile and nonmobile families, such as parenting classes on a range of topics, like budgeting and accessing housing. Also, homeless students, who are often mobile, may lack basic supplies, for example, backpacks, school supplies, and school uniforms, and they may miss school frequently because of issues such as lack of transportation or domestic violence. In addition, some school officials told us they help arrange for services for homeless mobile students and their families, such as coordinating with local homeless shelters and arranging to provide homeless mobile students with food on the weekends when they do not have access to free breakfast and lunch at school.

Schools Use a Range of Federal Programs Already in Place to Meet the Needs of Mobile Students

Because the highly mobile schools we visited also had large percentages of low-income, disadvantaged students and special populations already targeted by federal programs, the schools met the needs of mobile students using funding from programs already in place. For example, during our site visits, a number of school officials and state and local educational agency officials told us they relied on funds from Title I, Part A of ESEA, a federal program targeted to disadvantaged students, including those who are from low-income families, have limited English proficiency, are from migrant families, have disabilities, or are neglected or delinquent. Services available under Title I, Part A are intended to ensure that disadvantaged children have a fair and equal opportunity to obtain a high-quality education and to reach proficiency on assessments based on the state's academic standards.[17] Some school officials and state and local educational agency officials told us they used funds from Title I, Part A to pay for tutoring, after-school instruction, teachers' salaries, technology upgrades, school field trips, and staff development and training on addressing diverse needs of mobile and nonmobile students. One school we visited used funding provided by the American Recovery and Reinvestment Act of 2009 (Recovery Act)[18] for ESEA Title I, Part A to, among other things, hire additional teachers to provide small-group instruction to all students who are behind academically, including mobile students. See table 1 for information about school-based federal programs for disadvantaged and special needs students.

[17]20 U.S.C. § 6301.

[18]Pub. L. No. 111-5 (2009).

Table 1: School-based Federal Programs That Serve Disadvantaged and Other Special Needs Students, Including Mobile Students

Federal agency implementing program	Name of law or program	Purpose of program	Population served by program	Funding for program
Department of Education	Title I, Part A of ESEA	To ensure that disadvantaged children have a fair and equal opportunity to obtain a high-quality education and to reach proficiency on assessments based on state academic standards.	Disadvantaged students, including children who are low-income, limited English proficient, migratory, children with disabilities, or neglected or delinquent.	• Formula-based distribution • Regular: $14.5 billion (fiscal year 2009) • Recovery Act: $10 billion (fiscal year 2009)
	McKinney-Vento Education for Homeless Children and Youth Program	To ensure that homeless students have equal access to free, appropriate public education as other children and youth.	Homeless children and youth.	• Formula-based distribution; funds disseminated through a state-run grant process • Regular: $65.4 million (fiscal year 2009) • Recovery Act: $70 million (fiscal year 2009)
	Migrant Education Program	To ensure that migrant children fully benefit from the same free public education provided to other children.	Migrant students in the agricultural and fishing sectors.	• Formula-based distribution based on each state's count of eligible migratory children and per-pupil expenditure • Regular: $394.8 million (fiscal year 2009)
	Individuals with Disabilities Education Act	To provide early intervention, special education, and related services to children and youths with disabilities.	Students with disabilities.	• Formula-based grants to states based on the number of students receiving special education services • Regular: $23.8 billion (fiscal year 2010) • Recovery Act: $11.3 billion in grants to states (fiscal year 2009)
Department of Agriculture	School Breakfast Program (SBP) and NSLP	To provide nutritionally-balanced free or reduced price breakfasts and lunches to low-income students.	Low-income students.	• Cash reimbursements and direct food donations • Regular: $9 billion (NSLP) and $2.6 billion (SBP) (fiscal year 2009) • Recovery Act: $100 million (fiscal year 2009)

Federal agency implementing program	Name of law or program	Purpose of program	Population served by program	Funding for program
Department of Health and Human Services	Head Start	To promote school readiness by enhancing the social and cognitive development of children through the provision of educational, health, nutritional, social and other services to economically disadvantaged children and families.	Low-income children age 0-5.	• Grants to local public and private organizations • Regular: $5 billion (fiscal year 2009) • Recovery Act: $2.1 billion (fiscal year 2009)

Sources: GAO analysis of information from the Departments of Education, Agriculture, and Health and Human Services.

Note: GAO did not independently verify the information in this table.

School officials in one district we visited told us that some of their mobile students are eligible for services under the Individuals with Disabilities Education Act, a program that provides early intervention and special education services for children and youths with disabilities.[19] The schools we visited also received funding through the Department of Agriculture's school nutrition programs,[20] which provide free and reduced-price school meals for low-income, disadvantaged students. School officials in some locations said that this program allows them to provide school meals to a large percentage of their student body, including both mobile and nonmobile students.

In addition, some schools we visited used the McKinney-Vento Education for Homeless Children and Youth Program (McKinney-Vento Program),[21] which is designed to meet the educational needs of homeless students. Some school officials told us that homeless students are often mobile. Specifically, the McKinney-Vento Program requires all school districts to put in place homeless education liaisons. Some homeless education liaisons and other school officials we interviewed said they used funds from the McKinney-Vento Program to provide homeless students with food, clothing, school uniforms, backpacks of toiletries and school supplies, tutoring at homeless shelters, academic enrichment services, and

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[19]20 U.S.C. § 1400 et seq.

[20]42 U.S.C. § 1751 et seq. (school lunch programs) and 42 U.S.C. § 1771 (child nutrition programs).

[21]42 U.S.C. § 11431 et seq.

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summer programs. The McKinney-Vento Program also requires all school districts to provide transportation to those homeless students who choose to remain in their school of origin,[22] however funding for transportation is provided by the school district. Some schools we visited used their own school funds to pay for transportation, such as bus passes and gas cards, as needed, for homeless students to get to school. Schools we visited also used McKinney-Vento Program funds for various other purposes, including one school that used the funds to hire staff to identify homeless students and two other schools that used the funds to provide outreach to parents. Across all three states we visited, homeless education liaisons help provide a stable environment for homeless students to learn by arranging for services for their families, such as referrals to soup kitchens, health services including free dental clinics, free school supplies, and domestic violence groups.

According to state education agency officials we interviewed, schools in their states relied on the Migrant Education Program, which supports the educational needs of a specific population of mobile students—students who are migrant workers or children of migrant parents.[23] The Migrant Education Program (1) provides students with services, such as academic (tutoring and summer school) and health services; (2) allows school districts to share migrant student information electronically across state boundaries; (3) encourages states to collaborate in administering state assessments and sharing lesson plans; and (4) provides funding for "portable" education services, such as instructional booklets and CD-ROM learning modules that help migrant students earn school credits as they move from school to school or undergo extended absences. States use the Migrant Student Information Exchange—a Web-based database—to collect, maintain, and share student record information to facilitate school enrollment, grade and course placement, and accrual of secondary school course credits.[24] We did not evaluate the effectiveness of these federal programs in meeting the needs of mobile students.

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[22]42 U.S.C. § 11432(e)(3)(E)(i)(III).

[23]20 U.S.C. § 6391-6399. None of the schools we visited received funding from the Migrant Education Program.

[24]According to Education officials, the Records Exchange Advice, Communication, and Technical Support provides technical assistance on record exchange to state and local officials. Also, Education awards Consortium Incentive Grants to states for activities to improve intrastate and interstate coordination of migrant education programs.

We provided a draft copy of this report to the Department of Education for review and comment. Education did not have any comments on the report.

As agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from its issue date. At that time, we will send copies of this report to relevant congressional committees, the Secretary of Education, and other interested parties. In addition, this report will be available at no charge on GAO's Web site at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-7215 or ashbyc@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff that made major contributions to this report are listed in appendix V.

Cornelia M. Ashby
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  Income Security Issues

Appendix I: Scope and Methodology

This appendix discusses in more detail our methodology for our study examining the scope and implications of student mobility on students and schools. Our study was framed around four questions: (1) What are the numbers and characteristics of students who change schools, and what are the reasons students change schools? (2) What is known about the effects of mobility on student outcomes including academic achievement, behavior, and other outcomes? (3) What challenges does student mobility present for schools in meeting the educational needs of students who change schools? (4) What key federal programs are schools using to address the needs of mobile students?

Analysis of Federal Datasets

To obtain information on the number and characteristics of mobile students and schools they attend, we analyzed two nationally representative datasets that are administered by the Department of Education's (Education) National Center for Education Statistics (NCES)—the *Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999* (ECLS-K) and the *National Assessment of Educational Progress* (NAEP). We selected these datasets in consultation with our methodologists and Education officials.

For both datasets, we assessed the quality, reliability, and usability of the data for reporting descriptive statistics on the characteristics of students and the schools they attend. For our data reliability assessment, we reviewed agency documents about the datasets' variable definitions, survey and sampling methods, and data collection and analysis efforts. We also conducted electronic tests of the files and interviewed Education officials about the steps they took to ensure data reliability. We determined that the Education data were sufficiently reliable for the purposes of our review. The surveys used weighted probability sampling of students (ECLS-K) and schools (NAEP). We followed recommended statistical techniques to estimate standard errors of estimates from the ECLS-K and NAEP data.

The ECLS-K's measure of individual-level student mobility is limited in that its measure of school changes includes the number of promotional school changes—for example, the typical school change from an elementary school to a middle school—as well as the nonpromotional school changes.

Early Childhood Longitudinal Survey, Kindergarten Class of 1998-1999

The ECLS-K is a longitudinal survey of students from kindergarten through eighth grade. The survey population is a nationally representative cohort of 21,260 students who began kindergarten in 1998. The survey collects

data from students, parents, teachers, and school officials from 1998 to 2007. In our analysis of ECLS-K data, we focused on the eighth grade survey round, to ensure that we captured the most complete data on school changes.

During each spring survey round from first through eighth grade, parents were asked how many times their child changed schools since the last survey period. We used the responses from those questions, as well as school identification information, to estimate the number of school changes for each student. We examined the following student characteristics available in the ECLS-K data: (1) race; (2) measures of family income, including poverty threshold, receipt of free or reduced-price lunch, food stamps, or assistance from the Temporary Assistance for Needy Families (TANF) program; (3) whether a father was present in the household; and (4) whether the family owned their home.

We compared students who changed schools two or fewer times (referred to as "less mobile") to those who changed schools four or more times (referred to as "more mobile"). We chose those groups for comparison because they provide a clear separation between the more mobile and less mobile groups and also because the two groups combined represent a significant fraction—about 82 percent—of the population of the students in the cohort. Students who changed schools four or more times would generally have experienced at least three nonpromotional school moves. We also considered defining high mobility students as those who changed five or more times. However, such students only made up about 5 percent of the population followed by the ECLS-K. Because table cell sample sizes were often very small using the five change cut-off, resulting in wide confidence intervals, we decided against the use of this definition.

In addition to the analyses we presented in the main body of this report, we compared students who changed schools two or fewer times to those who changed schools three or more times. We found statistically significant differences among some of the relationships we explored, but as expected, the differences were more pronounced when the highly mobile population was defined as students who changed four or more times. See appendix II for ECLS-K data on the mobile student population.

National Assessment of Educational Progress

The NAEP—the results of which are issued as the Nation's Report Card—provides nationally representative results on school characteristics based

on samples of 4th, 8th, and 12th grade students.[1] Similar to our analysis of the ECLS-K, our analysis of NAEP focused on the eighth grade year. We used the results from survey questions related to school environment and characteristics to describe the characteristics of schools and their student mobility rates. To determine schools' student mobility rates, we used responses from the following question administered in the 2007 survey: "About what percentage of students who are enrolled at the beginning of the school year is still enrolled at the end of the school year?"[2] Further, using the NAEP data, we explored relationships between schools' mobility rates and the following school characteristics: (1) geographic location; (2) measures of low-income students, such as receipt of Elementary and Secondary Education Act of 1965's (ESEA) Title I funding[3] and participation in the National School Lunch Program (NSLP);[4] (3) students in special education; (4) students with limited English proficiency; and (5) students absent on an average day.

For our comparison of schools with "low" student mobility rates and schools with "high" student mobility rates, we sorted the NAEP data into three pairings to determine which pairing provided a clear separation between low mobility and high mobility schools. When we compared schools that had 5 percent or fewer of their students no longer enrolled at the end of the school year (low mobility) with schools that had more than 5 percent of their students no longer enrolled at the end of the year (high mobility), we found few statistically significant differences. When we compared schools that had 10 percent or fewer of their students no longer enrolled at the end of the school year (low mobility) with schools that had more than 10 percent of their students no longer enrolled at the end of the year (high mobility), we found several statistical differences. When we compared schools that had 20 percent or fewer of their students no longer enrolled at the end of the school year (low mobility) with schools that had more than 20 percent of their students no longer enrolled at the end of the

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[1]NAEP also collects information on school environment and students' academic achievement. The grades surveyed by NAEP were chosen because they represent critical junctures in academic achievement.

[2]This question asked the respondent to exclude students who transferred into the school during the school year.

[3]Title I, Part A of ESEA is the federal government's largest program for disadvantaged students, including students from low-income families.

[4]The National School Lunch Program is a federal program that provides free and reduced-price lunch to students from low-income families.

year (high mobility), cell sample sizes were too small to make meaningful comparisons. We thus selected the 10 percent pairing because it provides a clear separation between the low mobility and high mobility schools and the sample sizes were sufficient to make meaningful comparisons. See appendix III for NAEP data on schools.

Review of External Research Studies

We reviewed existing studies to determine what research says about the effects of mobility on student outcomes, including academic and nonacademic outcomes, such as behavior. To identify existing studies, we searched several electronic databases using the keywords "student mobility," "school mobility," and "transience."[5] We identified 151 studies that met the following criteria:

- original analysis of data based on students in the United States or original quantitative synthesis of such previously conducted research (also referred to as meta-analysis[6]) and

- published or prepared during or after 1984.

We screened the studies to identify those that were relevant for our study and identified 62 of the 151 studies that met the following criteria:

- assessed a student's school change as distinct from a student's residential change;

- used quantitative measurement of the association between school change and at least one student outcome, either academic or nonacademic; and

- peer-reviewed journal article, association or agency paper, state or local education agency paper, or a conference paper from the last 2 years (2007 onward).

Each of these 62 studies was reviewed by a social scientist to determine whether the study (1) contained sufficient information on methods to

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[5]We searched the following electronic databases: Education Resources Information Center, ProQuest, ECO/EconLit/SocAbs, PsycINFO, Social SciSearch, Wilson Social Sciences Abstracts, MEDLINE, and Academic OneFile.

[6]A meta-analysis is a statistical analysis of a collection of studies for the purpose of integrating the results.

make a determination about the study's soundness and limitations and (2) for studies on academic outcomes only—controlled for students' academic performance prior to changing schools. For the purpose of controlling, we considered a variety of methods to be sufficient, such as

- using a statistical model that included prior academic performance as a predictor or covariate,

- matching students on prior performance, or

- analyzing difference scores (i.e., difference between premobility academic performance and postmobility performance) rather than absolute measures of achievement.

The result of this stage of the review was a set of studies that we determined used sound methods and, in the case of studies of academic outcomes, controlled for prior academic achievement. For each of these studies, we also reviewed the other studies these authors used as references, screened these studies using the same methods described above, and identified one additional study that met our inclusion criteria. Further, we excluded a few studies due to redundancy (covering the same or nearly the same data and analysis as other studies included in the review). At the end of the screening process, 26 studies on the effects of mobility on student outcomes remained, of which 21 assessed academic outcomes and 11 assessed nonacademic outcomes.[7]

To review the findings, methods, and limitations of the selected studies, we developed a data collection instrument to obtain information systematically about each study's methods, findings, and limitations on the reliability, scope, and generalizability of these findings. We based our data collection and assessments on generally accepted social science standards. A senior social scientist with training in survey methods and statistical analysis of survey data reviewed each study using the data collection instrument. A second senior social scientist reviewed each completed data collection instrument and the relevant portions of the study in question to verify the accuracy of the information recorded. Most of our selected studies measured academic outcomes using standardized test scores or school dropout or completion rates and nonacademic

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[7]Six studies assessed both academic and nonacademic outcomes.

outcomes using misbehavior and social capital (i.e., richness of students' social networks).

We selected the studies for our review based on their methodological soundness and not on the generalizability of the results. Although the findings of the studies we identified are not representative of the findings of all studies of student mobility, the studies consist of those published studies we could identify that used the strongest designs to assess the effects of mobility. The selected studies varied in methods and in scope. For example, some studies distinguished among types of mobility (e.g., intra-city versus city-to-suburbs, or school-change-only versus school-change-plus-residential-move), but others did not. Some studies used nationally representative samples of students, while others focused on specific populations, such as low-income students in one city. Some studies assessed effects of mobility at the student level, while others assessed effects at higher levels, such as classrooms. See appendix IV for a list of the studies we reviewed.

School Site Visits

We conducted site visits to a nonprobability sample of eight schools across six school districts in three states (California, Michigan, and Texas) where we interviewed school officials and others about issues related to student mobility. We selected states that provided geographic coverage and that had high percentages of economically disadvantaged students and/or high rates of foreclosures to provide insight on how the economic downturn might be affecting students and schools in high poverty areas. We selected schools with high percentages of mobile students and that would illustrate school type (public and charter), grade level (elementary, middle, and high school), and location (urban, suburban, and rural).

During our school site visits, we interviewed state education agency officials, local homeless education liaisons, principals, teachers, guidance counselors, school social workers, community group representatives, and parents of mobile students. During our interviews, we collected information about

- the number and demographic characteristics of mobile students;

- reasons for student mobility and timing of mobility;

- challenges related to student mobility, including meeting academic, social, and emotional needs of mobile and nonmobile students; and

- how schools address challenges of student mobility, including use of federal programs and community resources.

In preparation for our site visits, we reviewed relevant laws, regulations, and agency documents, and interviewed federal officials and representatives of education and homeless associations about issues related to student mobility and federal programs that serve low-income, disadvantaged, and special needs students, including those who change schools.

We conducted this performance audit from October 2009 through November 2010 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Data on Characteristics of Mobile Student Populations

This appendix provides information from the *Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999* (ECLS-K)—which followed a cohort of students from 1998 to 2007—on the number of schools students attended, by various student and parent characteristics. In each table, we provide a comparison of the percent of students who changed schools two times or less to students who changed schools three or more times, and students who changed schools four or more times.

Table 2: Number of Times Students Changed Schools by Eighth Grade

Number of school changes	Percentage of students who changed schools
0	5%
1	31
2	34
3	18
4 or more	13

Source: ECLS-K data, 1998-2007.

Note: Data derived from interviews of parents who were asked in each survey round a version of the question: "Since spring 2004 how many times has your child changed from one school to another?"

Table 3: Percent of Students from Families with Incomes Below the Poverty Level

Number of school changes	Percent of students from families with incomes below the poverty level
Comparison between 2 or less versus 3 or more school changes	
2 or less	17%
3 or more	22[a]
Comparison between 2 or less versus 4 or more school changes	
2 or less	17
4 or more	26[a]

Source: ECLS-K data, 1998-2007.

Note: Data derived by combining data on household income and the number of people living in the household with estimates of the poverty threshold published by the Census Bureau.

[a]Indicates differences between the comparisons were statistically significant at the 95 percent confidence level.

Table 4: Percent of Students from Families Receiving TANF

Number of school changes	Percent of students from families receiving TANF
Comparison between 2 or less versus 3 or more school changes	
2 or less	3%
3 or more	6[a]
Comparison between 2 or less versus 4 or more school changes	
2 or less	3
4 or more	9[a]

Source: ECLS-K data, 1998-2007.

Note: Data derived from interviews of parents who were asked: "In the past 12 months, have you or anyone in your household received Temporary Assistance for Needy Families?"

[a]Indicates differences between the comparisons were statistically significant at the 95 percent confidence level.

Table 5: Percent of Students Receiving Free or Reduced-Price Lunch

Number of school changes	Percent of students receiving free or reduced-price lunch
Comparison between 2 or less versus 3 or more school changes	
2 or less	40%
3 or more	49[a]
Comparison between 2 or less versus 4 or more school changes	
2 or less	40
4 or more	54[a]

Source: ECLS-K data, 1998-2007.

Note: Data derived from interviews of parents who were asked: "Does your child receive free or reduced-price lunches at school?"

[a]Indicates differences between the comparisons were statistically significant at the 95 percent confidence level.

Table 6: Percent of Students From Families Receiving Food Stamps

Number of school changes	Percent of students whose families receive food stamps
Comparison between 2 or less versus 3 or more school changes	
2 or less	11%
3 or more	18[a]
Comparison between 2 or less versus 4 or more school changes	
2 or less	11
4 or more	25[a]

Source: ECLS-K data, 1998-2007.

Note: Data derived from interviews of parents who were asked: "In the past 12 months, have you or anyone in your household received food stamps?

[a]Indicates differences between the comparisons were statistically significant at the 95 percent confidence level.

Table 7: Percent of Students With No Father in the Household

Number of school changes	Percent of students with no father in the household
Comparison between 2 or less versus 3 or more school changes	
2 or less	21%
3 or more	28[a]
Comparison between 2 or less versus 4 or more school changes	
2 or less	21
4 or more	31[a]

Source: ECLS-K data, 1998-2007.

Note: Father's presence was determined by ECLS-K surveyor during interviews of parents.

[a]Indicates differences between the comparisons were statistically significant at the 95 percent confidence level.

Table 8: Percent of Students of Various Races

Number of school changes	Percent of students classified as Black or African-American, Non-Hispanic students	Percent of students classified as Hispanic	Percent of students classified as White	Percent of students classified as other
Comparison between 2 or less versus 3 or more school changes				
2 or less	15%	18%	60%	7%
3 or more	21[a]	18	53[a]	8
Comparison between 2 or less versus 4 or more school changes				
2 or less	15	18	60	7
4 or more	23[b]	18	51[b]	8

Source: ECLS-K data, 1998-2007.

Note: Data derived from interviews of parents who were given various racial or ethnic categories to indicate their child's race.

[a]Indicates differences between the comparisons were statistically significant at the 95 percent confidence level.

[b]Indicates differences between the comparisons were statistically significant at the 90 percent confidence level.

Table 9: Percent of Students from Families Who Do Not Own Their Home

Number of school changes	Percent of students from families that do not own their home
Comparison between 2 or less versus 3 or more school changes	
2 or less	20%
3 or more	32[a]
Comparison between 2 or less versus 4 or more school changes	
2 or less	20
4 or more	39[a]

Source: ECLS-K data, 1998-2007.

Note: Data derived from interviews of parents who were asked: "Do you [or anyone else in your family living there] own the home or apartment, pay rent, or do something else?"

[a]Indicates differences between the comparisons were statistically significant at the 95 percent confidence level.

Appendix III: Data on Characteristics of Schools Regarding Mobile Student Populations

This appendix includes data from the *National Assessment of Educational Progress* (NAEP), which is also known as the Nation's Report Card. The NAEP is a continuing assessment of student progress conducted nationwide periodically in reading, math, science, writing, U.S. history, civics, geography, and the arts. The NAEP assessment collects data from students and school officials for a nationally representative sample of 4th, 8th, and 12th graders. In the following tables, we present data on the characteristics of students in grades four and eight from the 2007 NAEP assessment for schools with "low" and "high" mobility rates. Schools with low mobility rates had fewer than 10 percent of their students who were no longer enrolled at the end of the year while schools with high mobility rates had more than 10 percent of their students who were no longer enrolled at the end of the school year. The tables are based on a selection of variables relevant to our review.

Table 10: Mobility by Geographic Region of Schools

	4th grade				8th grade			
	Schools with low mobility		Schools with high mobility		Schools with low mobility		Schools with high mobility	
Region	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent
Northeast	9,870.7	20.08%	885.7	7.68%	6,542.9	20.66%	365.7	8.90%
Midwest	14,163.9	28.81	2,281.2	19.78	9,143.1	28.87[a]	1,014.7	24.69[a]
South	15,597.9	31.72	4,273.8	37.05	10,135.1	32.00[a]	1,345.7	32.75[a]
West	9,534.7	19.39	4,094.6	35.50	5,851.1	18.47	1,383.2	33.66
Total	**49,167.2**	**100%**	**11,535.2**	**100%**	**31,672.3**	**100%**	**4,109.3**	**100%**

Source: GAO analysis of NAEP data, 2007.

[a]Indicates differences between schools with low mobility and schools with high mobility were *not* statistically significant at the 95 percent confidence level.

Table 11: Mobility by Metro-Centric Type of Locale

	4th grade				8th grade			
	Schools with low mobility		Schools with high mobility		Schools with low mobility		Schools with high mobility	
Metro-centric type of locale	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent
Large city	7,182.3	14.61%	2,238.0	19.40%	4,269.3	13.48%	771.8	18.78%
Midsize city	6,156.0	12.52	2,608.9	22.62	3,867.6	12.21	696.8	16.96
Urban fringe of large city	12,305.4	25.03[a]	2,666.4	23.12[a]	6,898.1	21.78[a]	862.6	20.99[a]
Urban fringe or midsize	5,631.2	11.45[a]	1,159.3	10.05[a]	3,417.9	10.79[a]	453.1	11.03[a]
Large town	609.3	1.24[a]	162.0	1.40[a]	241.7	0.76[a]	45.9	1.12[a]
Small town	3,302.2	6.72[a]	897.1	7.78[a]	2,433.0	7.68[a]	348.1	8.47[a]
Rural	7,804.3	15.87	896.8	7.77	6,126.9	19.34	433.2	10.54
Rural, inside Core Based Statistical Area	6,176.4	12.56	906.7	7.86	4,417.6	13.95[a]	497.8	12.11[a]
Total	**49,167.2**	**100%**	**11,535.2**	**100%**	**31,672.3**	**100%**	**4,109.3**	**100%**

Source: GAO analysis of NAEP data, 2007.

[a]Indicates differences between schools with low mobility and schools with high mobility were *not* statistically significant at the 95 percent confidence level.

Table 12: Mobility by Receipt of Title I Funding

	4th grade				8th grade			
	Schools with low mobility		Schools with high mobility		Schools with low mobility		Schools with high mobility	
Received Title I funding	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent
No	20,207.9	41.28%	2,020.5	17.53%	16,727.8	53.63%	1,555.2	37.99%
Yes, for students	15,635.6	31.94	1,993.8	17.30	7,809.3	25.04	691.4	16.89
Yes, for school purpose	13,105.9	26.77	7,509.8	65.17	6,651.8	21.33	1,847.3	45.12
Total	**48,949.4**	**100%**	**11,524.1**	**100%**	**31,188.9**	**100%**	**4,094.0**	**100%**

Source: GAO analysis of NAEP data, 2007.

Table 13: Mobility by Percent of Students Receiving Targeted Title I Services

| | 4th grade | | | | 8th grade | | | |
| | Schools with low mobility | | Schools with high mobility | | Schools with low mobility | | Schools with high mobility | |
Percent of students receiving targeted Title I services	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent
None	22,790.2	48.72%	4,224.6	38.79%	18,198.4	60.71%	1,905.4	50.03%
1-5%	3,818.8	8.16	206.6	1.90	2,836.0	9.46	45.6	1.20
6-10	4,525.1	9.67	498.9	4.58	2,163.4	7.22	135.5	3.56
11-25	6,512.3	13.92[a]	1,241.7	11.40[a]	2,284.8	7.62[a]	246.5	6.47[a]
26-50	3,084.6	6.59	1,082.5	9.94	1,541.8	5.14[a]	249.4	6.55[a]
51-75	796.5	1.70	677.3	6.22	533.2	1.78	287.6	7.55
76-90	810.8	1.73	476.2	4.37	335.9	1.12	173.8	4.56
More than 90	4,444.4	9.50	2,482.9	22.80	2,083.1	6.95	764.3	20.07
Total sample	**46,782.6**	**100%**	**10,890.9**	**100%**	**29,976.6**	**100%**	**3,808.1**	**100%**

Source: GAO analysis of NAEP data, 2007.

[a]Indicates differences between schools with low mobility and schools with high mobility were *not* statistically significant at the 95 percent confidence level.

Table 14: Mobility by Students Eligible for NSLP

| | 4th grade | | | | 8th grade | | | |
| | Schools with low mobility | | Schools with high mobility | | Schools with low mobility | | Schools with high mobility | |
Percent of students eligible for NSLP	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent
0-10%	8,237.3	21.54%	158.0	1.44%	4,748.1	21.48%	47.4	1.25%
11-25	6,146.0	16.07	426.1	3.89	3,838.5	17.36	165.7	4.38
26-34	4,066.9	10.64	576.5	5.26	2,152.7	9.74[a]	278.2	7.34[a]
35-50	6,338.8	16.58[a]	1,690.4	15.43[a]	3,968.2	17.95[a]	652.7	17.23[a]
51-75	7,060.1	18.47	3,850.6	35.15	3,872.1	17.52	1,100.0	29.04
76-99	5,234.5	13.69	3,754.6	34.28	2,879.9	13.03	1,172.1	30.95
100	1,150.9	3.01[a]	497.1	4.54[a]	647.9	2.93	371.5	9.81
Total	**38,234.5**	**100%**	**10,953.4**	**100%**	**22,107.3**	**100%**	**3,787.6**	**100%**

Source: GAO analysis of NAEP data, 2007.

[a]Indicates differences between schools with low mobility and schools with high mobility were *not* statistically significant at the 95 percent confidence level.

Table 15: Mobility by How Schools Administer the NSLP

Determine eligibility for NSLP	Schools with low mobility		Schools with high mobility		Schools with low mobility		Schools with high mobility	
	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent
By individual student	35,708.7	96.03%	10,031.4	91.59%	2,0312	95.15%	3,373.7	89.95%
By special provisions	1,478.2	3.97	920.7	8.41	1,034.3	4.85	377.0	10.05
Total	**37,186.8**	**100%**	**10,952.1**	**100%**	**21,346.3**	**100%**	**3,750.7**	**100%**

Source: GAO analysis of NAEP data, 2007.

Table 16: Mobility by School Participation in the NSLP

School in NSLP	4th grade				8th grade			
	Schools with low mobility		Schools with high mobility		Schools with low mobility		Schools with high mobility	
	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent
Yes	37,092.8	75.87%	10,889.0	94.89%	21,276.4	67.66%	3741.8	91.42%
No	11,794.5	24.13	586.4	5.11	10,170.6	32.34	351.2	8.58
Total	**48,887.3**	**100%**	**11,475.4**	**100%**	**31,447.0**	**100%**	**4,093.0**	**100%**

Source: GAO analysis of NAEP data, 2007.

Table 17: Mobility by Special Education Students

| | 4th grade | | | | 8th grade | | | |
| | Schools with low mobility | | Schools with high mobility | | Schools with low mobility | | Schools with high mobility | |
Percent of special education students	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent
0-5%	18,426.2	38.98%	1,690.2	15.10%	13,092.9	43.39%	393.8	9.78%
6-10	13,220.3	27.97[a]	3,504.8	31.30[a]	6,137.6	20.34[a]	965.7	23.98[a]
11-25	14,016.2	29.65	5,449.5	48.67	9,518.4	31.54	2,003.0	49.73
26-50	1,230.7	2.60	493.0	4.40	1,015.8	3.37	320.6	7.96
51-100	375.4	0.79[a]	58.6	0.52[a]	411.2	1.36	344.3	8.55
Total	**47,268.7**	**100%**	**11,196.1**	**100%**	**30,175.8**	**100%**	**4,027.5**	**100%**

Source: GAO analysis of NAEP data, 2007.

[a]Indicates differences between schools with low mobility and schools with high mobility were *not* statistically significant at the 95 percent confidence level.

Table 18: Mobility by Students Who are Limited English Proficient

| | 4th grade | | | | 8th grade | | | |
| | Schools with low mobility | | Schools with high mobility | | Schools with low mobility | | Schools with high mobility | |
Percent of students with limited English proficiency	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent
0%	21,648.8	44.65%	1,954.3	17.07%	16,574.7	53.32%	1,288.8	32.02%
1-5	16,098.5	33.20	2,919.3	25.50	10,193.6	32.79[a]	1,159.6	28.81[a]
6-10	3,325.9	6.86	1,164.9	10.17	1,672.3	5.38	419.9	10.43
11-25	3,732.5	7.70	2,282.0	19.93	1,571.3	5.05	577.8	14.35
26-50	2,074.6	4.28	1,904.8	16.64	717.9	2.31	449.7	11.17
51-75	808.6	1.67	848.8	7.41	239.7	0.77	106.9	2.66
76-100	794.3	1.64[a]	375.2	3.28[a]	116.3	0.37[a]	22.9	0.57[a]
Total	**48,483.1**	**100%**	**11,449.3**	**100%**	**31,085.7**	**100%**	**4,025.7**	**100%**

Source: GAO analysis of NAEP data, 2007.

[a]Indicates differences between schools with low mobility and schools with high mobility were *not* statistically significant at the 95 percent confidence level.

Table 19: Mobility by Percent of Students Absent on an Average Day

	4th grade				8th grade			
	Schools with low mobility		Schools with high mobility		Schools with low mobility		Schools with high mobility	
Percent absent	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent	Number of schools	Percent
0-2%	20,059.5	41.34%	2,029.0	17.65%	13,398.7	42.94%	721.0	17.68%
3-5	25,153.9	51.84	6,817.6	59.32	14,292.5	45.80[a]	1,805.1	44.25[a]
6-10	3,043.1	6.27	2,461.4	21.42	3,323.2	10.65	1,210.5	29.67
More than 10	266.2	0.55	185.8	1.62	191.3	0.61	342.6	8.40
Total	**48,522.7**	**100%**	**11,493.8**	**100%**	**31,205.7**	**100%**	**4,079.2**	**100%**

Source: GAO analysis of NAEP data, 2007.

[a]Indicates differences between schools with low mobility and schools with high mobility were *not* statistically significant at the 95 percent confidence level.

Appendix IV: Literature Review of Published Research on Student Mobility

This appendix includes studies of possible academic and nonacademic outcomes of student mobility that met our criteria for inclusion in our review.

Study title	Author and source	Grade levels or ages	Geographic or demographic scope	Type of student outcomes[a]
Children in Motion: School Transfers and Elementary School Performance	Alexander, Karl L., Doris R. Entwisle, and Susan L. Dauber. *The Journal of Educational Research*, vol. 90, no. 1 (September/October 1996): 3-12.	Grades 1-5	District/city (Baltimore); urban, poor (data were intended to be representative of all Baltimore schoolchildren, but attrition over the 5 years of the study resulted in bias towards a African-American, low-socio-economic status (SES) population)	Academic
The Impact of Charter School Attendance on Student Performance	Booker, Kevin et al. *Journal of Public Economics*, vol. 91 (2007): 849-876.	Grade 4	State (Texas)	Academic
School Mobility in the Early Elementary Grades: Frequency and Impact From Nationally-Representative Data	Burkam, David T., Valerie E. Lee, and Julie Dwyer. Prepared for the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods (June 29-30, 2009).	Kindergarten through grade 3	National	Academic
Disruption Versus Tiebout Improvement: The Costs and Benefits of Switching Schools	Hanushek, Eric A., John F. Kain, and Steven G. Rivkin. *Journal of Public Economics*, vol. 88 (2004): 1721-1746.	Grades 4-7	State (Texas)	Academic
School Mobility and Student Achievement in an Urban Setting	Heinlein, Lisa Melman, and Marybeth Shinn. *Psychology in the Schools*, vol. 37, no. 4 (2000): 349-357.	Kindergarten through grade 6	District/city (New York City community); urban, largely minority and low-income population	Academic
Head Start Children: School Mobility and Achievement in the Early Grades	Mantzicopoulos, Panayota, and Dana J. Knutson. *The Journal of Educational Research*, vol. 93, no. 5 (May/June 2000): 305-311.	Kindergarten through grade 2	District/city (Midwestern community); suburban, economically disadvantaged, prior Head Start attendees	Academic
Student Mobility, Academic Performance, and School Accountability	Mao, Michael X., Maria D. Whitsett, and Lynn T. Mellor. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago (Mar. 24-28, 1997).	Grades 1-8	State (Texas)	Academic
Predictors of Educational Attainment in the Chicago Longitudinal Study	Ou, Suh-Ruu, and Arthur J. Reynolds. *School Psychology Quarterly*, vol. 23, no. 2 (2008): 199-229.	Preschool through age 20	District/city (Chicago); urban, low-SES population of mostly African-American children	Academic

Study title	Author and source	Grade levels or ages	Geographic or demographic scope	Type of student outcomes[a]
Special Education and School Achievement: An Exploratory Analysis with a Central-City Sample	Reynolds, Arthur J., and Barbara Wolfe. *Educational Evaluation and Policy Analysis*, vol 21, no. 3 (Autumn 1999): 249-269.	Kindergarten through grade 6	District/city (Chicago); urban, low-SES population of mostly African-American children	Academic
Student Mobility and the Increased Risk of High School Dropout	Rumberger, Russell W., and Katherine A. Larson. *American Journal of Education*, vol. 107, no. 1 (November 1998): 1-35.	Grades 8-12	National	Academic
The Hazards of Changing Schools for California Latino Adolescents	Rumberger, Russell W., Katherine A. Larson, Gregory J. Palardy et al. University of California, Berkeley: Chicano/Latino Policy Project (CLPP) Policy Report, vol. 1, no. 2, (October 1998).	Grades 8-12	State (California)	Academic
The Educational Consequences of Mobility for California Students and Schools	Rumberger, Russell W., Katherine A. Larson, Robert K. Ream et al. University of California, Berkeley and Stanford University: Policy Analysis for California Education Research Series 99-2, (March 1999).	Grades 8-12	State (California)	Academic
School Mobility and Achievement: Longitudinal Findings From an Urban Cohort	Temple, Judy A., and Arthur J. Reynolds. *Journal of School Psychology*, vol. 37, no. 4 (1999): 355-377.	Kindergarten through grade 7	District/city (Chicago); urban, low-SES population of mostly African-American children	Academic
Student Transience in North Carolina: The Effect of School Mobility on Student Outcomes Using Longitudinal Data	Xu, Zeyu, Jane Hannaway, and Stephanie D'Souza. National Center for Analysis of Longitudinal Data in Education Research (CALDER) Working Paper no. 22, March 2009.	Grades 3-8	State (North Carolina)	Academic
The Relation of School Structure and Social Environment to Parental Involvement in Elementary Schools	Griffith, James. *The Elementary School Journal*, vol. 99, no. 1 (September 1998): 53-80.	Students in elementary school and parents	District/city; large metropolitan area	Nonacademic
Early Intervention and Juvenile Delinquency Prevention: Evidence from the Chicago Longitudinal Study	Mann, Emily A., and Arthur J. Reynolds. *Social Work Research*, vol. 30, no. 3 (September 2006): 153-167.	Kindergarten through grade 12	District/city (Chicago); urban, low-SES population of mostly African-American children	Nonacademic

Study title	Author and source	Grade levels or ages	Geographic or demographic scope	Type of student outcomes[a]
Paths of Effects of Early Childhood Intervention on Educational Attainment and Delinquency: A Confirmatory Analysis of the Chicago Child-Parent Centers	Reynolds, Arthur J., Suh-Ruu Ou, and James W. Topitzes. *Child Development*, vol. 75, no. 5 (September/October 2004): 1299-1328.	Kindergarten through age 17	District/city (Chicago); urban, low-SES population of mostly African-American children	Nonacademic
School-Based Early Intervention and Later Child Maltreatment in the Chicago Longitudinal Study	Reynolds, Arthur J., and Dylan L. Robertson. *Child Development*, vol. 74, no. 1 (January/February 2003): 3-26.	Grades 3-7	District/city (Chicago); urban, low-income minority students who participated in school-based early intervention	Nonacademic
Friendship Networks of Mobile Adolescents	South, Scott J., and Dana L. Haynie. *Social Forces*, vol 83, no. 1 (September 2004): 315-350.	Grades 7-12 and parents	National	Nonacademic
Longitudinal Effects of Student Mobility on Three Dimensions of Elementary School Engagement	Gruman, Diana H. et al. *Child Development*, vol. 79, no. 6 (November/December 2008): 1833-1852.	Grades 2-5	Schools (10 suburban schools in the Pacific Northwest that had high-risk population of low income, single-family households, high mobility, and poor academic performance)	Academic and nonacademic
Why Are Residential and School Moves Associated with Poor School Performance?	Pribesh, Shana, and Douglas B. Downey. *Demography*, vol. 36, no. 4 (November 1999): 521-534.	Grades 8-12	National	Academic and nonacademic
Toward Understanding How Social Capital Mediates the Impact of Mobility on Mexican American Achievement	Ream, Robert K. *Social Forces*, vol. 84, no. 1 (September 2005): 201-230	Grades 8-12	National; Mexican American students and non-Latino White students	Academic and nonacademic
Early Schooling of Children at Risk	Reynolds, Arthur J. *American Educational Research Journal*, vol. 28, no. 2 (Summer 1991): 392-422.	Kindergarten through grade 2	District/city (Chicago); urban, low-SES population of mostly African-American children	Academic and nonacademic
School Adjustment of Children at Risk Through Fourth Grade	Reynolds, Arthur J., and Nikolaus Bezruczko. *Merrill-Palmer Quarterly*, vol. 39, no. 4 (October 1993): 457-480.	Kindergarten through grade 4	District/city (Chicago); urban, low-SES population of mostly African-American children	Academic and nonacademic
Students on the Move: Residential and Educational Mobility in America's Schools	Swanson, Christopher B., and Barbara Schneider. *Sociology of Education*, vol. 72, no. 1 (January 1999): 54-67.	Grades 8-12	National	Academic and nonacademic

Source: GAO review of existing research.

Note: In addition to the primary research studies included in this table, we reviewed one meta-analysis of studies of academic outcomes of student mobility: Reynolds, A. J., Chen, C.-C., & Herbers, J. E. (June 2009). School Mobility and Educational Success: A Research Synthesis and Evidence on Prevention. Paper presented at the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, National Research Council, Washington, DC.

[a]This column indicates the types of outcomes (academic, nonacademic, or both) for which studies were included in our report. Studies may have included additional outcomes that were not included in our review. For example, a study reviewed for a nonacademic outcome may also have included an academic outcome, but if the study did not control for prior academic achievement, then we would have reviewed the study for its nonacademic outcome only.

Appendix V: GAO Contact and Staff Acknowledgments

GAO Contact:	Cornelia M. Ashby, (202) 512-7215 or ashbyc@gao.gov
Staff Acknowledgments	In addition to the contact above, Sherri Doughty (Assistant Director), Linda Siegel (Analyst-in-Charge), Vida Awumey, Robert Grace, Erin O'Brien, and Stacy Spence made significant contributions to this report. Jack Wang, Ruben Montes de Oca, Luann Moy, and John Karikari assisted with data analysis and methodology. Russell Burnett, Lorraine Ettaro, and Jay Smale assisted with the review of external studies. James Rebbe provided legal support. Mimi Nguyen and Jeremy Sebest assisted with graphics. Susannah Compton assisted in report development.