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Mobility and Student Achievement in High Poverty Schools

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by

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ABSTRACT

Mobility and Student Achievement in High Poverty Schools

by

Janet Denise Dalton

Student mobility is an issue for high poverty schools in the shadow of increased rigor and

accountability for student performance. Whereas mobility is not a sole cause for poor

achievement, it is a contributing factor for students in poverty who are already considered

to be at risk of low achievement. Student mobility creates a hardship for schools and

districts and hampers attempts to properly monitor the progress of students.

This quantitative study examined the differences between mobile and nonmobile 4th

grade students from 4 high poverty schools in a Northeast Tennessee school district.

Research before and after the No Child Left Behind Act of 2002 (NCLB) was explored.

A two-way contingency analysis was used to determine if differences exist between

mobile and nonmobile students on reading and math achievements tests. Additionally,

the frequency of mobility and mobile and nonmobile among 3 ethnic groups were

explored to determine the effects of mobility on achievement. The analyses suggested

that no significant relationship exists between the independent variables.

DEDICATION

This study is dedicated to the memory of my parents, Master Sgt. William Ray and Edna Dalton.   Children of poverty, my parents did not have the educational opportunities of which I have been afforded. My father had to quit school in the seventh grade to work on the family farm. He credited the United States Air Force with giving his life direction by providing him an education. My father instilled in me a strong work ethic and a desire for knowledge. He valued higher education. He had been very sick for many years when I told him I was considering the pursuit of my doctorate. He responded with an enthusiastic, "Go for it! I'm going to live to see you graduate!"

When I began this journey, Alzheimer's had already taken the person I knew as my mother. Although she could not understand the goal I was pursuing, my mother provided gentle "pats" and sweet smiles as I studied by her bedside in the nursing home. I owe so much of who I am to my mother. I wish she could've understood because I know she would have been proud of me for achieving my highest educational goal.

Sadly, my father passed away 3 weeks into my first doctoral course, and my mother passed away during my final semester. Throughout this process I have felt their spirit guiding me and encouraging me to the finish. The strength, determination, and courage my parents showed in life, and in death, inspires me to be a better person. I dedicate this doctoral degree to my parents.

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CHAPTER 1

INTRODUCTION

Background of the Problem

Student mobility has become a problem for U.S. schools in the midst of state and federal demands for accountability. According to the 2004 U.S. Census 15%-20% of school-aged children moved within 1 year of enrollment (Schacter, 2004). In a 1994 report the U.S. General Accounting Office (GAO) found that one of six children has attended three or more schools by the time they reach third grade. A Chicago study disclosed that less than half of students who enrolled in first grade were attending the same school by fourth grade (Coleman, 1988; Hall, 2001; Sewell 1982,). Frequent moves increase the odds that a child will acquire problems in school (Tucker, Marx, & Long, 1998). The occurrence of mobility has been linked to the likelihood that students will drop out of high school (Coleman, 1988). Student mobility creates a hardship for schools and districts and hampers attempts to properly monitor the progress of students (Newman 1988, Sewell 1982).

In 2007 the U.S. Government Accountability Office found a considerable increase in the number of Title 1 schools that were unsuccessful in making *Adequate Yearly Progress* (GAO, 2007). The number of failing schools increased from 2,790 in 2006 to 4,500 in 2007 with student mobility cited as one reason for the upsurge.

Family and Home Structure

Students who are highly mobile frequently come from low socioeconomic, single-parent homes (Newman, 1988). According to Newman highly mobile students are twice

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as likely to come from single-parent homes and have lower achievement than students from two-parent homes. Tucker et al. (1998) examined the impact of mobility in relation to family structure. The relationship between student mobility and family structure is an intricate one in that the effects of mobility are not as harmful on children who have been highly mobile if they are from a two-parent home. In contrast, even a small number of moves can add to the possibility of learning difficulties for children from nontraditional family structures.

Housing instability is a significant problem for low-income families and the main cause for mobility (Federal Interagency Forum on Child and Family Statistics, 2009). Nearly half of households with children have experienced a minimum of one considerable housing problem. Problems range from inadequate housing to overcrowding or exorbitant costs that exceed 30% of household income (2009).

Researchers disagree as to how mobility specifically effects achievement (Hattie & Anderman, 2013). Mobile students perform poorly on academic achievement tests in contrast to their nonmobile peers; however, much of this gap can be attributed to the combined effects of poverty, mobility, and family structure.

Factors Contributing to Mobility

Mobile students often experience personal and family problems outside of the school environment that contribute to their mobility (Rumberger, 2002). Accounting for a variety of backgrounds and familial situations Rumberger maintained that mobility is more a symptom than the sole reason for poor achievement. Citing a 1997 Chicago study by Temple and Reynolds, Rumberger wrote that differences in achievement among mobile students and students with stability could be ascribed to differences in the

students' backgrounds. A Baltimore study of elementary students in 20 public city schools similarly found that in spite of mobility's negative effects, the influences were inconsequential when interventions were introduced and implemented for the family and the student in first grade (Alexander, Entwisle, & Dauber, 1996). The Baltimore study found that mobile students often came from families in poverty, implying that the students were underachieving before they were mobile.

Poverty, race, immigration status, and family structure are indissolubly associated (Parrett & Budge 2012). African American and Hispanic students are more often found living in poverty than White or Asian students. Students from two-parent households and students with nonimmigrant parents perform better than those from single-parent homes or immigrant parents.

Students in situations in which poverty, race, immigration status, and family structure are all factors suffer psychologically, socially, behaviorally, and academically, and are less likely to participate in extra-curricular activities but more likely to get into trouble (U.S. GAO, 1994). The GAO study also found that student mobility resulted in nutritional and health problems, below grade level reading scores, and retention. The impact of children changing schools frequently can result in a decline in reading achievement scores of 1 month for each move compared to same-aged peers (Kirkpatrick & Lash, 1990). Recurrent mobility continues to disrupt a child's development in spite of early intervention efforts being made available, and renders federal education programs ineffectual. In a study of Title 1 and nontitle schools in the southeast, Thompson, Meyers, and Oshima (2011) found that reading was the academic area most negatively affected by student mobility.

Academic Effects of Mobility

While research has not yet established that poor academic achievement is caused by mobility, several national studies have shown that mobility is a contributing factor to learning difficulties in math, reading, and language (Thomas, 2001). Examining two national children's health studies exploring the relationship of mobility to school functioning, emotional problems, and behavior, Rumberger analyzed the effects of mobility on student achievement (2002). Rumberger's study showed that grade retention can be predicted in cases of three or more school moves, and even a single residential move can negatively impact both academic and behavioral functioning in school. A 1987 study by Coleman suggested that children from two-parent homes had more resources to combat the negative effects of mobility. Evidence exists that mobility during elementary and high school lessens the possibility of graduation and increases the likelihood of students dropping out of high school (Rumberger, 2002). Teachers in schools with a high percentage of mobile students show tendencies to review previously taught content more frequently that results in less rigorous instruction for all students in the classroom. Long-term planning for mobile students is often met with frustration when the student moves again before plans can be fully implemented. Schools with high mobility rates face delays in receiving student records that result in inappropriate placement of students and delays in intervention efforts (Kerbow, 1996). Using data from Chicago public schools to determine the extent of urban school mobility the Kerbow study also revealed that constant review of material to help highly mobile students catch up results in delays in curriculum pacing that lessens achievement for all students in the school.

Schools with elevated rates of student mobility have higher than average amounts of one or more of the accompanying qualities: 1) migrant students, 2) homeless students, or 3) high poverty. The effect of mobility on students' learning is significant (Kerbow, 1996). Students who move frequently between schools might experience a variety of situations for example:

1) lower achievement levels because of the disparity of curriculum between schools, 2) behavioral difficulties, 3) trouble with social relationships, and 4) a greater risk for dropping out of school.

Limited research has been conducted on the effect of student mobility on nonmobile students yet schools with high rates of student mobility report an effect on their nonmobile students, teachers, and school climate (Hartman, 2002). Of the few relevant mobility studies, scarce attention had shed light on the degree poverty plays in combination with mobility (Bourque, 2009). A research brief published in 1999 by Policy Analysis for California Education indicated that California schools with mobility rates of 30% or higher reported that test scores for nonmobile students were lower than those of students in schools with lower mobility rates. The findings support that frequent student turnover is disruptive and keeps nonmobile students from advancing as educators invest additional time helping mobile students make up for lost instruction. Some schools have tried to assuage this disruption by keeping highly mobile students such as migrant and homeless students segregated so that the pattern of enrolling and withdrawing of mobile students does not upset the instruction of nonmobile students (Hartman, 2002).

While the effects of student mobility has yet to affect change on the national policy front, the No Child Left Behind Act of 2001 incorporated certain caveats in the

law that permit schools and areas to overlook test scores of students who don't meet certain time-in-school/district prerequisites (Barak, 2004). These stipulations in the law raise concern that mobile students will sidestep notice of a framework intended to consider schools responsible for the scholastic achievement of all students. In a case filed by a group of homeless students and their families in Suffolk County, NY, a judge ruled in 2004 that under the McKinney-Vento Act of 1987 all students should be given a satisfactory educational opporunity as defined by NCLB; however, the framework for tracking these students to gauge individual achievement is inadequate (Barak, 2004).

Purpose of the study

The purpose of this study was to determine the relationship of mobility to reading and math achievement in four high poverty schools in a specific Northeast Tennessee school district. Moreover, the study is an examination of the impact multiple student moves had on reading and math proficiency and is designed to determine how the proficiency of specific ethnic groups was affected. Using 2 years of data from the Tennessee Comprehensive Assessment Program and the district's student records, the data were analyzed to determine the relationship between mobility and reading and math proficiency.

1. Is there a significant difference in TCAP reading scores of mobile and nonmobile students?

2. Is there a significant difference in TCAP math scores of mobile and nonmobile students?

3. Is there a significant difference on TCAP reading scores of mobile students as categorized by the frequency of mobility (number of school moves)?

4. Is there a significant difference on TCAP math scores of mobile students as categorized by the frequency of mobility (number of school moves)?

5. Is there a significant difference in TCAP reading scores of mobile and nonmobile African-American, Hispanic, and White students?

6. Is there a significant difference in TCAP math scores of mobile and nonmobile African-American, Hispanic, and White students?

Significance of the Study

Student mobility is defined as students moving from one school to another for reasons other than promotion to a succeeding grade level (Rumberger, 2002). Rumberger's research concluded that poor achievement of mobile students is a direct consequence of their mobility as is a host of issues related to learning and behavior. Studies preceding Rumberger's research examined the issue of student mobility comprehensively as it related to Chicago area school districts (Evans, 1996; Kerbow, 1996; Mehana & Reynolds, 1995). Using data from Chicago public schools, a connection was made between student mobility and poor achievement as it relates to

schools with high mobility rates rather than as compared to a single mobile student (Kerbow, 1996). Schools with high mobility rates often had a slower curriculum pace evident by second grade. By fifth grade, the curriculum lag was as much as a year behind stable schools.

Staresina (2003) noted that mobility's effects on student achievment were potentially substantial. Mobile students experienced an array of issues other than academic difficulties. The disruption of learning, gaps in content, behavioral problems, and social difficulties result in mobile students being at a greater risk for dropping out of school.

Buell (2002) identified the stress student mobility places on schools. To meet the needs of the mobile student, teachers must revisit previously covered content many times to the disadvantage of other students. Hayes (1999) previously asserted that the inordinate amounts of time spent on paperwork and testing to provide needed services for mobile student are futile as many students move again before programs can be implemented.

This study focused on the effect student mobility has on reading and math achievement in high poverty schools. Differences between mobile and nonmobile students were examined, and the frequency of mobility's effect on achievement explored. Comparisons were also made between mobile and nonmobile students in specific ethnic groups and achievement.

Definition of Terms

In education specific terminology is used to describe methods, assessments, and conditions. Important terms are described below.

Academic Achievement – Skills possessed by a student that are typically measured by standardized tests.

Achievement Gap – The inequality on a number of educational measures between the performance of groups of students, particularly those defined by gender, race, ethnicity, and socioeconomic status (Tennessee Department of Education, 2010).

Assessment – Methods used to determine the performance of an individual, group, or organization.

Curricular Alignment – The degree to which material taught in the school matches the standards and assessments set by the state or district for specific grade levels.

Frequency of Mobility – For the purpose of this study, *frequency of mobility* addresses the number of school moves students made since kindergarten represented as: 0 moves (nonmobile), 1-2 moves, 3-4 moves, 5-6 moves, and 7 or more moves (hypermobile).

McKinney-Vento Act – The primary piece of federal legislation dealing with the education of children and youth experiencing homelessness in U.S. public schools.

Mobility – The practice of families moving and relocating frequently.

Normal Curve Equivalent (NCE) – A norm referenced, equal interval, derived standard test score that ranges from a low of 1 to a high of 99. The mean national NCE is 50 (Tennessee Department of Education, 2010).

Student mobility – The movement of students from one school to another for reasons other than being promoted to the next grade (Rumberger, 2002).

Transfer students – Students who move from one school to another within the same school year.

Transience – the practice of moving frequently.

Delimitations

1. This study is limited to data obtained from four high poverty schools in a small Northeaast Tennessee school district.

2. Documentation of the reasons for the mobility of students in this district is nonexistent. Therefore, the results of this study only address the number of school moves rather than whether the move was positive or negative for the family.

Summary

This study is organized into five chapters. Chapter 1 contains an introduction, background of the problem, purpose, significance of the study, pertinent terms, and delimitations. Chapter 2 provides a review of related literature on mobility. Chapter 3 describes the population and outlines the analysis of the data. Chapter 4 presents the findings of the study. Chapter 5 contains a summary of the study with implications for practice and recommendations for further study.

CHAPTER 2

REVIEW OF THE RELATED LITERATURE

According to Current Population Survey (CPS) results, many U.S. children experience more than one move during their lifetime with about 13% of children between the ages of 1 and 17 changing residences (U.S. Census Bureau, 2011). Seventy percent of these moves were within the same county. Children from families where the income was below the federal poverty level were more than four times as likely to have moved five or more times. Children in homes where the adults were unemployed were twice as likely to move frequently as compared to families where the adults had regular employment. Although not as strong as employment, the mother's educational experience was an indicator of family mobility as was single-parent homes versus two-parent homes (2011).

Student mobility refers to the occurrence of students changing schools for reasons other than advancing to the next grade (Hartman, 2002). Students who transfer regularly between schools during the school year are at greater risk for academic and behavioral issues. Some research implies that divergences in student attainment between nonmobile and mobile students can likewise be ascribed to students' background experiences (Rumberger, 2002). For example, a Minneapolis-based investigation on the effects of changing residence on student achievement and adjustment showed an unyielding connection between mobility and a student's race and family livelihood (Craig, 1998)

The 2004 Annual Social and Economic Supplement current population survey stated that 15% to 20% of school aged youngsters moved within the previous year (U.S.

Census Bureau, 2004). In 1994, the U.S. General Accounting Office reported that one

out of six students enrolled in several or more schools by the close of the third grade

(U.S. General Accounting Office, 1994). Research shows that frequent student mobility

has an aggregate influence on students' accomplishment that can place students up to 1

year behind their classmates (Kerbow, 1996). Students changing schools frequently are

additionally at greater risk of dropping out of school altogether (Rumberger & Larson,

1998).

History of Mobility in the United States

Mobility within and to the United States is not a new phenomenon. From the

Vikings in 1000 A.D. to the voyages of Christopher Columbus to the European

settlement of the Americas in the early 1600s, people were moving from place to place in

search of land, freedom, or work (Perreira, 2004). Although not a problem unique to the

United States the history presented here focuses on patterns of migration in the United

States after the Revolution up to the modern era.

Prior to the 18th and 19th centuries most of the population movement was

motivated by the rapid expansion of the country. The population of America had grown

from 3 million in 1790 to 5.3 million according to the census of 1800 (U.S. Census

Bureau, 2011). Before the late 1800s most of the population of America was scattered

among rural areas. The economy was supported primarily by agriculture. When the

weather cooperated, everyone benefited from a good crop. The decade long Dust Bowl

of the 1930s quickly made it apparent that poor weather could lead to high rates of

unemployment and homelessness that forced families to pack up and move elsewhere to

make a better life (2011). Stanley (1992) reported "over one million people left their homes in Oklahoma, Texas, Arkansas, and Missouri and moved to California. Most of the migrants were white, but the exodus from the southwestern states also included some black families" (p. 12). Many people moved to urban areas to take jobs in factories. Three hundred seventy-five thousand migrants, with many of them children, were from Oklahoma alone (Nelson, 2012).

Migration in America began with the Industrial Revolution (Taylor, 2010). Taylor placed the beginning of the Industrial Revolution in America at the end of the 18th and beginning of the 19th centuries. The invention of the steam engine in 1775 and other advances in technology changed the way people migrated about the country. The invention of steam power made it easier for industry to manufacture goods on a larger scale than ever before. Small businesses gave way to large factories. Workers were needed to operate the machinery. People were drawn to the larger urban areas by the promise of new jobs. A negative outcome of the Industrial Revolution was the displacement of children from one school to another, a problem that continued to grow into the 20th century and beyond (2010).

The US General Accounting Office (1994) reported 40% of third grade students in the United States had moved at least once between first and third grades. Seventeen percent of those students had changed schools at least twice during that time. Information released by the United States Department of Education (1995) stated that 3% of the eighth graders changed schools two or more times after entering first grade and before the middle of eighth grade; 10% of these students changed schools two or more times between the middle of eighth grade and spring of 1992. Rumberger (2002) reported 34%

of fourth graders, 21% of eighth graders, and 10% of twelfth graders had changed schools at least once in the previous 2 years. Engec (2006) reported 7% of students in all grades moved at least once within the school year with 55 students enrolling in schools five or more times during the school year. High school students in tenth grade (4.43%), eleventh grade (3.55%), and twelfth grade (2.18%) were less likely to move to a new school than students in kindergarten (7.43%), first grade (7.77%), and second grade (7.09). Titus (2007) reported that 15% to 18% of school-age children change residences each year. Residential change only accounted for 60% to 70% of student mobility.

Theoretical Foundations of Mobility

Social Constructivism

The issue of student mobility has its roots in *social constructivism* that involves effectual learning is optimum in learning environments where student interactions are present (Rhodes, 2005). Student growth occurs best when the social environment is stable and allows frequent social interactions with fellow students that lends some explanation as to why nonmobile students develop at a faster pace than mobile students (Gredler & Shields, 2004; Rhodes, 2005).

Social constructivism is rooted in the belief that learners construct their own knowledge (Dewey, 1916). Dewey wrote: "Education is not an affair of 'telling' and being told, but an active and constructive process" (p. 46). A key concept of constructivism is the process of learning and time for reflection on what is being learned in a social environment (Glaserfield, 1997). Glaserfield argued that constructivism acknowledges the role of an active learner in creating personal knowledge and

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experience, both individually and in a social context. A student oriented approach, constructivism follows the belief that knowledge is subjective and built on the basis of the individual learner's previous experiences (Mayer, 2002). A student's perception of the world is the foundation upon which new information is integrated. The acquisition of knowledge for highly mobile students, whose personal learning experiences have been fragmented, is disrupted (Rhodes, 2005).

Social constructivism focuses on learning that takes place because of a student's interaction in a group (Rhodes, 2005). Positive home and school environments are essential for students to achieve success in school (Xu, Hannaway, & D'Souza, 2009). Having the benefit of stable home and school environments, nonmobile students fare better than mobile students who experience struggle with adjusting to new school and home environments (Black, 2006; Schwartz, Stiefel & Chalico, 2007; Xu et al., 2009).

When examining constructivism as it relates to student mobility stability and consistency are imperative for learning (Rhodes, 2005). Mobile students are at a disadvantage due to the consequences of frequent moves and the complication of adjusting to multiple learning environments where curriculum alignment does not exist. Mobile students may experience repetitious learning or miss blocks of content altogether. Rhodes suggested that mobile students experience a reversal of Maslow's scale when thrown into an environment requiring depth of thought and problem solving situations (self-actualization) while still struggling to acclimatize to a new environment. Nonmobile students exemplify the constructivist's theory in that they have assimilated to the classroom and learning environment that contributes to developing knowledge and skills at an accelerated pace (Xu et al., 2009).

Heinlen (2000) noted that mobile students struggle with new social interactions due to fear and anxiety in a manner not experienced by their nonmobile peers. Social interactions require a level of trust from each member of the collective group; a trust that has been fostered and acquired over time. At the classroom level, such an environment would require a level of trust from each student, the teacher, and the other students. A highly mobile student may take time to gain comfort and security in order to participate in collaborative efforts in the classroom. However, Heinlen (2000) found that the achievement gap can be closed by sixth grade if mobile students who moved more than one time prior to third grade remain in a stable environment and at the same school.

Fullan's (2008) *change theory* is applicable to the perpetual state of commotion and discomfort experienced as a result of mobility. Not only is the individual student affected by anxiety and fear that accompanies each move, families must muddle through the responsibilities associated with moving that include the requirements of enrolling their children in school. Schools are similarly affected as classrooms are disrupted by the enrolling and withdrawing of students.

Continuity Theory

Dewey's (1938) continuity theory asserts that experiences are amassed and used for future learning. Dewey emphasized the necessity of inclusion and equity within the learning environment. While adults may have the ability to separate home and work experience, for students life is one large integrated, *de facto* learning experience (Rhodes,2005).

Causes of Mobility

Lee (1966) studied the impact of the Dust Bowl and other historical events to identify two general categories for mobility: *pushes* and *pulls*. Lee provided examples for each of the factors. Push factors included situations that forcibly removed a population from its homes. Examples of push factors included a shortage of jobs, poor living conditions, natural disasters, and political or religious persecution or suppression. Push factors are associated with migrating from a place. The Dust Bowl mentioned above is a recent example of a push factor in action

Pull factors were those situations that drew a population to a new place. Many of the pull factors are the direct opposite of a push factor (Lee, 1996). Job prospects, improved living conditions, political and religious freedom, climate, and family ties were some of the factors that pulled a population toward a new place. The increase of factories and manufacturing in urban areas during the Industrial Revolution is an example of a pull factor.

The configuration of students who frequently change schools during a school year comprises mobility (Bourque, 2009). Mobility can take the form of *upward* or *downward* mobility. Families who move to find better neighborhoods, housing, or jobs are becoming *upwardly mobile*, while those who must move because of financial distress or necessity are identified as *downwardly mobile*. In areas where poverty is high and mainly immigrant, student mobility critically affects the schools. Housing, poverty, immigration, and family predicaments are directly linked to mobility.

Frequent moves due to outside forces, as opposed to being chosen by the parents, are harmful to some children (Crowley, 2003). Investigating the relationship between

residential mobility of poor families and school mobility of poor children, Crowley noted that children from low-income families and minorities are most affected by residential mobility. Scanlon and Devine (2001) proposed that residential mobility is possible evidence of disparity in the United States.

Ethnicity and family income appeared to be more recent predictors of student mobility (Burkam, Lee, & Dwyer, 2009; Engec, 2006; Titus, 2007). Minority families tend to be more mobile than White families, and the lower the income, the more probable that the family will move (Crowley, 2003). Minority families, especially Blacks and Hispanics, are more likely to be renters than homeowners.   Twenty-nine percent of white students and 36% of Black students moved two or more times after entering first grade and before the middle of the eighth grade. Eight percent of white students and 16% of black students changed schools between the middle and end of their eighth grade year. The percentages decreased between elementary and middle school, but the gap between Whites and Blacks widened (Engec 2006). A National Research Council and Institute of Medicine study (Beatty, 2010) showed that Black children held the highest mobility rate and were at greater risk of being behind in literacy skills and being retained if they changed schools in kindergarten.

In a study determining the effects of mobility as a result of foreclosure, Been, Ellen, Schwartz, Stiefel, and Weinstein (2011) found that White and Asian students were more likely than Black or Hispanic students to move to better schools. Correspondingly, students from middle or higher class families were likely to move to better schools than poorer students, and girls tended to fair better than boys in their school moves. Furthermore, the study found that students who lived in multiple unit buildings were

likely to move to worse schools as opposed to students who moved due to property foreclosures involving a house. The study made recommendations for additional supports to be provided to students affected by foreclosure.

The United States Department of Education (1995) reported that 23% of students who changed schools two or more times between first grade and the middle of eighth grade lived with a single parent during that time. Thirty-nine percent were from families making less than $10,000 annually. Numerous moves made during the early years of a child's life are more damaging than one or two moves made over a long period of time (Crowley, 2003). Abrupt moves made without notice or preparation, are more detrimental to children and tend to be for reasons that are traumatic to children. In contrast although moving a family may be troubling, the inability to remove children from a violent or unsafe environment could potentially have more serious consequences.

A child's development is significantly shaped by environment and housing (Crowley, 2003). A stable home chosen and controlled by the parents is more likely to support positive parenting and security. In contrast, substandard housing that reduces the amount of a parent's choice and control can produce a dysfunctional environment that places the child at a distinct disadvantage socially.

Types of Student Mobility

Titus (2007) reported that one fifth of the population of the United States moved annually. At that time, the United States had the highest mobility rate in the world. Two types of school mobility were consistently identified: within-school-year mobility and year-to-year mobility (Engec, 2006). Year-to-year mobility was also identified as

between-school-year mobility (Burkam, Lee, & Dwyer, 2009). Mobility was further identified as being voluntary or involuntary (Engec, 2006). Voluntary mobility was usually due to family reasons while involuntary mobility resulted from how schools in the United States were structured (Burkham, Lee, & Dwyer, June, 2009; Engec, 2006). Of the different types of mobility, year-to-year, voluntary mobility was more common.

Within-School-Year Mobility

Students who moved at least once within the school year experienced what Engec (2006) called within-school-year student mobility. Engec found that when 7% of the students studied moved during the school year. Of the 7%, fifty-five students moved five or more times during the school year. The percentage of within-school-year student mobility decreased as the number of moves increased. A similar pattern was found among grade levels. The mobility rate for students in 10th grade was 4.43% compared to 3.55% in 11th grade, and 2.18% in 12th grade. Mobility became less likely as the grade level increased.

Mobility rates were significantly higher among students in kindergarten through second grade (Engec, 2006). The mobility rate for kindergarten students was 7.43%. First grade students experienced the highest mobility rate with 7.77% of the students moving at least once within the school year. A mobility rate of 7.09% was found for students in second grade. Engec posited that students were more likely to move one or more times at the beginning of their school career than at the end.

Year-to-Year Student Mobility

Students who moved at least once between school years experienced year-to-year mobility (Engec, 2006). Twenty-seven percent of the students in the study moved from

year to year. Engec further divided these students into two smaller groups: voluntary and involuntary. The voluntary group included students who moved schools even though the next grade was available to them. More than 12% of the students moved voluntarily. The year-to-year mobility rates were low for eighth grade (16.37%), eleventh grade (7.98%), and twelfth grade (4.93%) respectively. Year-to-year mobility rates were higher for ninth grade (65.86%), sixth grade (47.65%), and seventh grade (44.52%), respectively. As with within-school-year mobility, students tended to move less as the grade level increased.

The involuntary group included students who moved schools because the next grade was not available to them, as in transitioning from elementary to middle school or middle to high school. The involuntary group was 15.36% of the mobile population.

Burkam, Lee, and Dwyer (2009) found similar results. School mobility was more common between school years than during the school year. Seven percent of students changed schools at least once during the school year compared to 55% of students who changed schools during the school year sometime before the end of third grade. Of the 55% mobility rate, 36% of these students moved only once. Multiple moves during the first 4 years of school appeared to be a rare occurrence.

Studies by Burkam, Lee, and Dwyer (2009) and Engec (2006) reported that school mobility was due to school structure or family decisions. Over five percent (5.2%) of mobile students moved because of structural reason compared to 17.7% of students who moved due to family reasons.

Engec (2006) made a case for school structures that limit student mobility as a strategy for increasing performance.

> Because the performance of the obligatory students was lower than the
> performance on nonmobile students, K-12 grade structures for public school

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systems appear to be much more appropriate than grade-segregated structures, which are schools specific to only a few grade levels, such as elementary, middle, and secondary. Specifically, the unit school (K-12) that restricts mobility appears to have a positive relationship with student academic performance (p. 178)

Engec did not suggest changes be made to the K-12 organizational structure, but instead advocated that school level personnel study the negative effects of mobility on children and develop strategies to counter them.

Literature on student mobility links low academic performance with high rates of student mobility (Beesley, Gopalani, & Moore, 2010). Numerous studies have shown that as mobility increases student achievement decreases (Engec, 2006; Gruman, Harachi, Abbott, Catalano, & Fleming, 2008; Xu et al., 2009). In addition, Chen (2008) correlated increased rates of student mobility with discipline issues and school crime.

A study exploring the impacts of frequent moves on achievement focused on the effects of mobility on educational progress and illustrated the importance of the number of moves children make (Beatty, 2010). The study found that the effects of mobility are consistently negative and intensify with the number of moves. Mobility's effects become apparent when children made three or more moves during their school career. Burkham et al. (2009) found that the impact of mobility varied based on family characteristics and reasons for a move. While mobility rates varied little by gender, they varied greatly when examining race and socioeconomic status. "Black children had the highest rate of mobility, with only 45% enrolled for third grade in the same school they attended during kindergarten, compared with 54% for Hispanic children and nearly 60% for white and Asian third graders" (Beatty, 2010. p. 14). Additionally, children from low-income homes were more likely to move during their first 2 years of schooling (Burkham et al.,

2009). Additional findings showed that children who moved during kindergarten experienced delays in literacy skills as opposed to their peers (Beatty, 2010). Moves made between kindergarten and third grade greatly impacted students receiving special education services, English Language Learners, and children of poverty.   Although a single move had little to no impact, more than two moves resulted in lower achievement in third grade. A meta-analysis focusing on achievement and the negative effects of mobility found that elementary students who had changed schools were at a 3-to-4 month disadvantage compared to their nonmobile peers (Mehana & Reynolds, 2004).

Educators and others in child development professions substantially agree that moves resulting in recurrent school changes negatively affect a child's academic performance (Crowley, 2003). However, the effects are not as harmful if a child is enrolled in a better or more prosperous school located in higher income areas. Regrettably, this is a rare occurance for poor children who must frequently move and change schools. Mobility rates are higher (often as high as 70%), in high poverty schools.

In addition to social and emotional stressors, mobility results in lower math and reading achievement, a risk of behavioral issues, and a greater likelihood of being retained in a grade (Gruman et al., 2008). Students experiencing mobility in their elementary years are less likely to complete high school and attend college.

A child's sense of security and belonging is also affected, particularly for elementary students who are often uninvolved in the decision and reasons resulting in a change of school (Gruman et al., 2008). Research has shown that a move during the elementary school years disrupts the acquisition of knowledge critical for learning in

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subsequent years, and can contribute to a student becoming disengaged in school (Kerbow, 1996; Kirkpatrick & Lash, 1990). Black (2006) found that highly mobile students who move mid-year have difficulty adapting and need as much as 4 to 6 months to recover instructionally from a move to a new school. Interruptions to a child's learning such as a change of schools, is detrimental to academic attainment (de la Torre & Gwynne, 2009). The lack of curricular alignment between the previous school and the new school further impedes learning.

School engagement is adversely affected by mobility due to attitude and behavioral problems that can result from a change of school (Gruman et al., 2008). Positive classroom behaviors diminish as students move from school to school. Changing school during the elementary years is a predictor for a lack of classroom participation and low achievement. While a single school move does not have an immediate effect, frequent moves significantly impact a child's participation and attainment in school (Kerbow, 1996; Simpson & Fowler, 1994, Tucker et al., 1998; Wood et al., 1993).

Pribesh and Downey (1999) found that the quality of a child's relationship with both parents had an effect on test scores. They found that both the mother's and father's support and level of participation in a child's education could lessen the disruptive effects of mobility.

Xu et al. (2009) studied the effects of multiple moves on students and found that students who moved for the first time had a 2.2% standard deviation loss as compared to a 1.6% standard deviation loss across all moves for students moving more than one time. Students moving only two or three times did not appear to suffer in terms of math

performance, and by all indications seemed to adapt to the new math curriculum in their new school. However, chronic mobility (five times or more) resulted in a 7.7% standard deviation loss in math achievement.

Mobile students who moved across a district and within a district, as well as Hispanic and low socioeconomic students, experienced a loss in math achievement after even one move (Xu et al., 2009). The difference between mobility associated with a student's first move and the effects of cumulative mobility were significant for Hispanic, Black, and high poverty students. This difference was not present in other subgroups.

In a study of student mobility in North Carolina, Xu et al. (2009) found that white students were less likely to be mobile than Black or Hispanic groups. Almost half of mobile Black students became frequently mobile while Hispanic student mobility rates declined somewhat during the 4 years of study. Students from two-parent homes or homes where parents were college educated moved to better schools as compared to students whose parents had no college education. Students in poverty were inclined to move to poorer performing schools. Across ethnic groups, Whites fared better in moves than Black or Hispanic students, and Hispanics managed better than Blacks in the quality of the new school.

Poverty and Mobility

According to Hall (2001), "at all income levels, mobility is at least as great a predictor of subpar performance as race, poverty, or disability" (p.25). While some moves may be opportunistic, the general occurance is that families in poverty move 50% to 100% more frequently than families that are not in poverty

(Hartman, 2002). Seemingly, students who need permanence and stability the most are the most mobile and unstable (Gaddie, 2010).

Children of poverty are less prepared to benefit from school than children from affluent or middle class homes (Parrett & Budge, 2012). Health and well-being, language development, access to resources, and mobility are all poverty related factors that impede a student's ability to learn. Environmental factors such as poor housing, lack of medical care, and poor nutrition affect a child's physical and cognitive development. Children who live in poverty begin school lacking language development as opposed to their affluent peers. Jensen (2009) concluded that young children who experience poverty in their preschool years are less likely to complete school than those who experience it when they are older. Mobility, which almost always has a negative academic and social impact, adds another constraint on these students (Parrett & Budge, 2012).

The obstacles created by student mobility have ubiquitous consequences for both students and schools in that mobility is the entanglement of poverty, housing, economic issues, and immigration (Kaplan & Valenti, 2005). The greater number of risk factors impacting a child's life, the greater number of interventions and services required to overcome them. Additionally, as risk factors accrue, a student's ability to adapt to the frequent change of schools lessens (McLeod, Heriot, & Hunt, 2008). Statistics reveal that 23% of children who moved frequently repeated a grade compared with 12 % of children who never or infrequently moved (Chaika, 1999).

Students who experience mobility have little control to cope with the learning gaps they experience. While some may easily adapt, most experience frustration and

failure in the classroom (Puentes, Herrington, & Kritsonis, 2008). Gaps accrued over a longer amount of time negatively impact the academic achievement of mobile students (Rhodes, 2008).

Jensen (2009) asserted that cognitive delays are a factor that places students living in poverty at risk of failure. Jensen further contended that "one problem in poverty begets another" (p.7). He found that 40% of children living in chronic poverty displayed deficits in two or more areas of functioning by age 3. He also found that children in poverty lack opportunities for intellectual and academic enhancement. Disrupted lives leaves these students susceptible to the disorder and instability mobility produces.

Students who are highly mobile are often exposed to areas where crime is prevalent and have limited access to agencies and institutions whose services give priority to overseeing the needs of poor communities. Educational interventions that favor a more stable clientele are ineffective if the classroom is a revolving door (Weckstein, 2003).

Children in Foster Care

Children in foster care encounter impediments to educational success due to emotional issues stemming from their placement in foster care, high residential and school mobility, and long intervals of time between withdrawal and enrollment in school (Conger & Finkelstein, 2003). The absence of communication and collaboration between schools and child welfare workers further complicates a child's ability to quickly reenter school. Frequently, lags in school transfers are a result of delays completing the substantial paperwork involved by child welfare workers and the hesitancy or refusal to

allow foster children to enroll, especially those in need of special education or English language support.

As of 2010, 408,425 children were in foster care homes in the United States, most due to abuse or neglect, with many living in poverty. A disparate number of these students are minorities who reside in large urban areas with low-performing schools. Nearly half (48%) were in nonrelative foster homes (Child Welfare Information Gateway, 2010). Children in foster care critically need schools committed to excellence in teaching and learning with strategies for helping children who are behind in order to succeed (Allen & Vacca, 2010).

In addition to long delays in transferring between schools foster children all too often experience high mobility (Conger et al., 2003). Research is limited in this area due to lack of a sufficient monitoring system of educational results of students in foster care. Already experiencing emotional trauma and devastation due to a disruption in their family unit, children in foster care must also adjust to a new residence, foster parents, new schools, classmates, teachers, and instructional methods. While the literature directly addressing the mobility of foster children is somewhat limited, the instability, family disruption, and environment of abuse or neglect make these children more susceptible to the negative effects of mobility.

A study conducted in 1996 by McDonald, Allen, Westerfelt, and Piliavin found that children in foster care are less likely to graduate, have fewer years of schooling, are frequently placed in special education programs, and are less likely to attend college as compared to other students. A previous study conducted by Eckenrode, Rowe, Laird, and Brathwaite (1995) discovered that academic achievement was affected by 15% to 33%

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due to maltreatment in combination with residential changes and frequent school transfers. Although this study was not specific to children in foster care, it focuses on the effects of mobility on students who had experienced abuse or neglect that is commonly the case for children in foster care. Children in foster care are often misunderstood by school staff due to a lack of knowledge of the children's educational needs and frequently the absence of complete school records, leading to the likelihood that foster care children will not have the nurturing and encouraging relationships with teachers they need (Allen & Vacca, 2010).

Conger and Rebeck (2001) suggested a differing point of view in that some children benefit from a new environment and a new beginning both personally and academically, improving their attainment in school. This study found a positive correlation between school transfers and attendance for New York City children in foster care.

Migrant Children

The offspring of migrant farmworkers are referred to as "children of the road" (Branz-Spall, Rosenthal, & Wright, 2003, p.55). Obstacles most often encountered by these children include racial discrimination, language barriers, severe poverty, high mobility, and geographic isolation that result in cultural isolation. In 1999-2000, 815,245 migrant students were eligible for migrant education programs in the United States. Of this number, 685,536 students were served through the Migrant Education Program (2003).

In 1966 Congress established the Title I Migrant Education Program (MEP) to meet the needs of migrant students and their families. The goal of the MEP is to ensure

that migrant students have the same educational standards as those established for other children (Branz-Spall et al., 2003). These programs consist of several models that include electronic interstate record transfers, distance learning, and technology initiatives.

Migrants are considered "the poorest of the poor" (Branz-Spall et al., 2003). Long distance travel for modest pay and horrible working conditions are a way of life for migrants. Thus, children of migrant farmworkers experience extreme poverty and are often from non-English speaking households. Due to family financial needs the children are often required to work in the fields alongside their parents. The educational placement of migrant students is disrupted putting them at a considerable disadvantage.

President Lyndon B. Johnson funded the MEP (Branz-Spall et al., 2003). The objective of the Title I Elementary and Secondary Education Act in 1965 was to equalize the educational opportunities for children of poverty. However, it fell short in providing an evenly balanced education for extremely poor migrant children. High mobility prevented them from profiting from Title I services. The educational consequences of poverty, mobility, and cultural and language barriers for migrant children resulted in the development of a specific program to address their unique needs. Thus, in 1966 the Programs for Migratory Children provision was added as a stipulated condition to the Title I Act.

The Title I MEP was founded on the belief that there is a distinct relationship between poverty and mobility as it applies to school achievement (Branz-Spall et al., 2003). Poverty has a harmful effect on education in its own way, but when combined with mobility, the impact is ruinous to the educational hopes of migrant children. While migrant education programs were implemented because of the mobility of migrant

children, the needs resulting from mobility in combination with poverty are often ignored.

Migrant children often arrive at a school after the school year has begun and face difficulty enrolling in school due to a lack of school records and documentation (Branz-Spall et al., 2003). The lack of readily available information, along with their academic deficits frequently results in inappropriate grade placement. The language barriers and achievement gaps create demands that schools are often unable to meet.

Homeless Children

The United States Department of Education reported that 1,065,794 students are homeless, which is the highest number ever reported and an increase of 13% over 2009-2010 data (Beres, 2012). This number representing school age children indicated that the actual number of homeless children and youth is much higher. Forty-four states reported increases in the number of homeless students, with 15 states having a more than 20% increase. Since 2006 the number of homeless children enrolled in public schools has increased by 57%.

Under federal law, school districts cannot delay in enrolling homeless children and must allow students to remain in their enrolled school if they are forced to move (Beres, 2012). All school districts are required to have a homeless student liaison to provide assistance to homeless students and to make referrals.

In 1987 the United States federal government enacted the Stewart B. McKinney Homeless Assistance Act, providing equal access to a free public education for homeless students (Adams, 2012). In 2001 Congress reauthorized the McKinney Education of Homeless Children and Youth Program as the *McKinney-Vento Homeless Education*

Assistance Improvements Act in the *No Child Left Behind Act*, and it was signed by

President George W. Bush on January 8, 2002 (Julianelle & Foscarinis, 2003). Changes

within the reauthorization were grounded in model practices in schools and districts. The

McKinney-Vento Act requires districts to allow homeless students to remain in their

original school for the entire period of homelessness and provide transportation even if

the student is in another school district (Julianelle & Foscarinis, 2003). Districts are

required to keep a count of homeless students, and maintain a homeless liaison (Adams,

2012). Homeless students are those defined as staying in hotels or shelters, unsheltered,

and staying with friends or family. Being what the McKinney-Vento Act describes as

"doubled up" is the most common, with 71% of homeless students falling in this category

of sharing a home with family or friends. Although the law provides grants for services,

the grants are competitive and underfunded. Schools already lacking resources have

difficulty meeting the needs of homeless students.

Julianelle and Foscarinis (2003) found that a shortage of housing within the

financial means of a family with low income is the primary reason for homelessness.

Upon losing a home, families must seek shelter among several options: 1) emergency

shelters, 2) motels and hotels, 3) sharing housing with family or friends, and 4) temporary

inadequate options such as abandoned buildings, cars, or public spaces. Often, shelters

offer a limited stay, and motels and hotels are frequently an expense homeless families

cannot afford. Doubling up with family or friends is seldom a long-term option as

overcrowded conditions and financial strain place an undue burden on the host family.

The host family may also face eviction themselves if opening their home violates a lease

agreement.

Deficient living conditions such as automobiles or public spaces are harmful to the emotional, physical, and mental health of children (Julianelle & Foscarinis, 2003). Homeless children have two times the number of ear infections, five times more intestinal problems, and six times more speech and language issues than housed children. Being homeless between the ages of 3 and 6 can be emotionally damaging, requiring professional help. Homeless youth are more prone to anxiety and depression than housed children.

Homeless children are often moved without notice resulting in frequent school mobility (Julianelle & Foscarinis, 2003). Julianelle and Foscarinis found that within a single school year, 41% of homeless students were forced to attend two different schools, with 28% having moved to three or more schools. Research has shown that students who must change schools frequently and without notice have poor performance on standardized tests and, thus, have lower academic attainment (Kerbow, 1996; Lash & Kirkpatrick, 1990; Rumberger & Larson, 1998).

Frequent mobility results in a multitude of problems beyond test scores in that students, particularly the homeless, suffer emotional, mental, and social damage from frequent school moves (Julianelle & Foscarinis, 2003). Julianelle and Foscarinis categorized these adverse issues into three categories: 1) unrecognized educational needs, 2) unmet educational needs, and 3) a lack of stable social relationships.

Teachers and administrators struggle to meet the needs of students who frequently change schools resulting a failure to identify the educational needs of mobile students (Julianelle & Foscarinis, 2003). Due to the stresses of homelessness, parents may not identify the academic, social, medical, and educational needs of their children. School

mobility impedes communication between schools and parents, and homeless youth are often without an interested adult to monitor their educational needs. The absence of a constant educator or parent to follow the achievement of a student means educational needs can go easily undiagnosed for many years. Similarly, this may also result in misdiagnosis and interpretation of a child's educational issues initiating placement in inappropriate educational programs such as special education.

Even when identified educational needs of homeless students may still go unmet due to mobility itself (Julianelle & Foscarinis, 2003). Schools may work diligently to identify and initiate services for a student only to see that student move again prior to, or shortly after services begin. School officials may often be hesitant to commit the staff to provide services because they believe the student will not remain long enough to benefit. Special education evaluations may be initiated, but are incomplete due to the frequent mobility of these students.

Due to their frequent mobility, homeless children rarely have the opportunity to participate in extracurricular activities or sports (Julianelle & Foscarinis, 2003). Extracurricular activities are an important element of the school social experience. Rules requiring periods of continuous enrollment for eligibility prevent highly mobile students from participation. Stable social experiences are essential for these children to become confident, well-balanced adults, yet homeless children lack these rich experiences that result in a feeling of being unfulfilled. Furthermore, family social relationships suffer as some shelters segregate males and females that adds to the strain on a homeless family. The constant beginning again pattern of become acquainted with new schools, teachers,

classmates, and new rules can be overpowering for homeless students that frequently results in a hesitancy to establish new relationships.

Homeless students have interrupted school enrollment patterns that result in delays in the transfer of school records. White-Adams (2008) cited problems with school records, a lack of transportation, and state guardianship issues as being obstacles to school enrollment for homeless students. Lost birth certificates and immunization records further impede prompt enrollment in the new school for these students. Many public schools are ill equipped to handle the physical needs, need for psychological services, and poor health of homeless students. The most significant barriers to academic success for homeless students are the lack of parental involvement, frequent absenteeism, and frequent mobility.

Student Mobility and Academic Achievement

The affects of student mobility are not just limited to the family. Research indicated that mobility also affected students psychologically, socially, and academically (Ingersoll, Scamman, & Eckerling, 1989; Mehana & Reynolds,1985; Rumburger, 2002; Titus, 2007; U S General Accounting Office, 1995; Wood, Halfon, Scarla, Newacheck, & Nessim, 1993). Of these, academic achievement is the area where the school can be the most influential. Mobility can harm students' nutrition and health, increase grade retention, and lower academic achievement (U. S. General Accounting Office, 1994; Wood, Halfon, Scarlata, Newacheck, & Nessim, 1993). The organization of the American educational system was such that no distinct continuity exists between the instruction being delivered and the standards being taught. Titus (2007) reported that 49

states had adopted similar but different standards. There were 48 different assessments used to measure the level of proficiency for each standard. The age requirements for entering and leaving school varied widely. Curriculum differences resulted in the loss of academic credits. Graduation requirements differed, as did grading systems and scheduling. Compounded with this lack of consistency mobility creates an unattractive situation for some students, classrooms, and schools. The research showed that a high mobility rate led to distractions and disruptions that had a negative impact on classrooms, limited the continuity of instruction, and diminished student engagement (Lash & Kirkpatrick, 1990; Offenberg, 2004; Smreker & Owens, 2003; Titus, 2007).

Student mobility was brought into the spotlight under the *No Child Left Behind* legislation. As schools and districts began to face high stakes accountability, the negative effects of mobility began to be recognized as a contributor to low academic performance (Bourque, 2009). Student mobility can be directly linked to poverty, demographic gauges, and achievement in the framework of *NCLB*.

The activation of standardized testing has resulted in a greater understanding of student mobility's effects on schools and the academic performance of teachers (Crowley, 2003). Mobile students who often fail to receive necessary services, interventions, and assessments perform poorly on standardized tests. Due to lack of essential instruction their academic performance continues to decline. Not only is the mobile student affected, classmates are also impacted when the teacher must spend coveted instructional time reteaching material previously taught.

Student Mobility and Schools

Student mobility not only presents a challenge to students, it also affects both the enrolling and withdrawing schools (Franke, Isken, & Parra, 2003). Schools in high poverty communities have resources that are overextended from servicing families in need but become further strained and unstable if student mobility is high (Hartman & Franke, 2003).

The traditional pattern of schools in the United States is that a teacher, having been assigned a classroom of students, then spends 9 months periodically assessing students' progress and adjusting instruction (Gaddie, 2010). Instructional adjustments are based on information gathered through both summative and formative assessments. For highly mobile schools, this routine is frequently disrupted. Teachers and administrators are struggling to meet the demands of accountability and standardized testing as mandated by NCLB (Reese, 2007). The expectations of NCLB lead to the public perception that the population would be better educated if schools did a better job teaching their students (Offenberg, 2004). Rhodes (2005) linked mobility to school improvement status in a study that discovered that schools with higher mobility were less likely to make adequate yearly progress under the No Child Left Behind Act of 2001. A national formula to calculate mobility is needed in order to gauge how NCLB accountability and assessment systems are being impacted by mobility (Hartman & Franke, 2003). A disproportionate number of mobile students are not promoted to the next grade. The nonmobile students in classrooms affected by high mobility experience instructional disruption resulting in a less satisfying educational experience.

Thompson et al. (2011) found a negative correlation between mobility and achievement across grade levels and content areas. Their findings showed a negative relationship between achievement and student mobility across grade levels. Additionally, a negative relationship with mobility was established between content areas and school size. Their study explored mobility, achievement, and the poverty status of schools and once more found a negative relationship existed.

Research is limited on the effects of mobility on nonmobile students although schools with high mobility rates report that nonmobile students, teachers, and the school climate are affected (Research Center, 2004). A research brief published in 1999 by Policy Analysis for California Education indicated that California schools with heightened mobility rates (30 % or higher) reported that test scores for nonmobile students were lower than those of students in schools with lower mobility rates . The findings support that frequent student turnover is disruptive and keeps nonmobile students from advancing as educators invest additional time helping mobile students make up for lost instruction. Some schools have tried to assuage this by keeping highly mobile students such as migrant and homeless students isolated from different classes, so that the ceaseless enrolling and withdrawing of mobile students does not upset the instruction of nonmobile students (Hartman, 2002).

The No Child Left Behind Act of 2001 made some adjustments to disregard test scores of students with limited enrollment in schools and districts, but student mobility still remains unaddressed in national policy. There is concern that mobile students will not be held responsible within the framework of accountability of schools responsible for the scholastic achievement of all students. In a ruling based on the McKinney-Vento Act

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of 1987 that guarantees the right of homeless students of an education, a judge ruled that all students should be given equal educational opportunities as defined by NCLB (Barak, 2004). Still, the framework for tracking these students to guage individual achievement is inadequate.

Mobility creates disparity in learning, a lack of stability and permanence that increases the likelihood a child will eventuall drop out of school (Tkatchov & Pollnow, 2012). Mobility affects some subgroups more than others, and inner city and high poverty homes are more mobile than those in upper income areas. Tkatchov and Pollnow found that the majority of moves due to mobility were interdistrict transfers occuring at twice the rate of intradistrict transfers. In small schools even a few mobile students can effect achievement. However, regardless of the school or district size, mobility makes record keeping and progress monitoring of students difficult.

Mobilty rates and types vary from state to state (Tkatchov & Pollnow, 2012). For example, Colorado and Missouri experience more urban mobility while Nebraska, Wyoming, and Arizona sees more rural mobility. Rural mobility and urban mobility typically occur for different reasons, with high urban mobility areas having a level of poverty above the state average, thus being more affected by mobility's effects than students in rural settings. More students from urban areas suffer from mobility than students in rural areas (2012).

A 2012 study by the University of Tennessee (Phipps, 2012) found that areas of East Tennessee have one of the the highest mobile Hispanic populations in the state. Hispanics with origins in Mexico, Guatemala, Puerto Rico, Cuba, and other Central American and South American countries account for 2.3% of the state's total population.

Only metropolitan areas exceeded this growth. Tennessee saw a 134% increase in Hispanics from 2000 to 2010, which represented the third fastest growth rate in the United States.

The years 2007-2012 showed an increase of mobility due to poverty and the economy. As the housing market declined, families had to move to find work, yet in some rural areas, moves were made because jobs were created (Tkatchov & Pollnow, 2012).

Research indicates the crucial role schools have in diminishing the negative effects of mobility on achievement (Gruman et al., 2008). Limited professional development is available to teachers concerning how to address the needs of mobile students. Teachers plan instruction on the premise that students will remain in their classroom an entire school year. Hartman and Franke 2003 suggested that schools provide transportation to allow mobile students to have a more stable educational experience. Parents should be informed about the educational effects of mobility and encouraged to avoid or delay moves when possible. The negative effects of mobility can be diminished if schools implement programs designed to aid students in transitioning to their new schools.

Public school leaders and teachers face an even greater challenge in meeting these expectations when student mobility is considered due to the reality that "in the real world, many students are just passing through" (Hall, 2001, p. 24). According to Titus (2007) the United States has one of the highest mobility rates with about one fifth of its population moving annually. Classroom assessments and progress monitoring efforts are futile when students frequently transfer in and out throughout the school year, resulting in

schools being held accountable for the achievement of students who received their education elsewhere (Wasserman, 2001). Reese (2007) held that high academic standards for everyone is a dream that has no basis in reality. A flaw of NCLB is its failure to concede the influence that outside factors such as family structure, environmental exposure, community factors, and mobility have on student achievement (Offenberg, 2004).

Americans have long held the belief that public schools are the source of solving society's problems (Reese, 2007). This belief has its roots in the vision of Horace Mann, born in 1796, who said, "schools will help assimilate the millions of immigrants arriving from Germany and Ireland, teaching them American values, and Christian (Protestant) morals" (as cited in Reese, 2007, p. 224). Teachers and schools have become an easy scapegoat for societal problems yet are held accountable for learning in spite of factors beyond their control such as, school resources, class size, student mobility, attendance, and parental support (Weingarten, 2008). Children of immigrant parents comprise 22% of aggregate child poverty situations in the United States (Jensen, 2009).

Hartman (2002) reported that every student is adversely affected by student mobility due to slower curriculum pacing, although research on a mobility's effects on nonmobile students is rare. High mobility in schools often results in teacher turnover and adds to an already chaotic environment (Crowley, 2003).

Beesley et al. (2010) found that districts with higher mobility rates were most often in rural areas and had poverty rates above the state average based on free or reduced price lunch eligibility. Rural schools tend to have more difficulty dealing with the effects of mobility. Being smaller than other schools, even low mobility can have a great impact

on the academic performance of rural schools. Rural schools with fewer faculty members and fewer financial resources have difficulty meeting the high demands of mobile students (Schafft, 2005, 2006; Schafft & Killeen, 2007).

<div align="center">*Strategies to Aid in Student Transitions*</div>

Tracking mobile students and families presents procedural challenges entangled in the factors that led to the mobility (Beatty, 2010). The absence of housing within the means of low income families is a factor of instability that results in mobility, and often homelessness, for some families (Crowley, 2003). Educators and policymakers have been made aware of the link between residential mobility and achievement in school; however, they lack a systematic method of collecting data regarding mobility (Beatty, 2010; Crowley, 2003).   Residential mobility rates in the United States outnumber neighboring countries, but measures and definitions differ (Beatty, 2010). Clearly, housing stability is a frequent contributor to mobility for low-income families. According to the 2004 U.S. Census, 14% of the population moved between 2002 and 2003, with 24% of low-income families moving during that year. Mobility's effects are greater when the family moves for negative reasons rather than better opportunities or employment. Children from low-income families who are most affected by residential mobility are in greater jeopardy of having difficulty in school than those from middle or upper class families (Crowley, 2003). The reasons for residential moves of low-income families tend to be for negative reasons. Tracking mobility is difficult because of the longitudinal data on families and children required (Beatty, 2010).

In contrast, the Department of Defense has experienced success in combatting the effects of mobility (Smrekar, Guthrie, Owens, & Sims, 2001). Due to the transient nature

of the military, students are not enrolled in schools for a long period of time. Yet these schools had high academic achievement despite the high rate of mobility. Smrekar et al. identified eight areas that appeared to ease the transition of student in Department of Defense Schools. The eight areas were:

1. Local decision making

2. Regular flow of school-related data

3. Sufficient financial resources

4. High quality, job-embedded professional development

5. Small school size

6. High academic expectations

7. Continuity of care

8. Corporate commitment to public education

The curricular inconsistency that caused many mobile students to perform below expectations was notably absent in the Department of Defense schools, yet it was something that most school systems took for granted (Smrekar et al., 2001). Titus (2007) posited that a consistent curriculum is essential to maintaining high academic achievement. The reality was that most state standards and their alignment to the local curricula assumed that most students were stable even as research was revealing this was not the case. A common curriculum was recommended for ensuring that students are receiving similar instruction toward meeting similar goals. Additional strategies that positively affected the transitions of students from one school to another were a timely transfer of student records, a checklist for student transfers, immediate student orientation, extracurricular programs, communication of changes in schedules,

professional development targeting mobile students, and similar requirements for graduation.

Children of military staff are highly mobile yet not ordinarily acknowledged in most research. Consistent with the Military Child Education Coalition, nearly 800,000 military children make a normal of six to nine school changes between kindergarten and high school graduation (Keller, 2003). Nearly 13 % of the aforementioned students go to schools run by the Department of Defense. Because of projects pointed at decreasing the negative influences of mobility, DOD students will almost always have high scholastic accomplishment. Nonetheless, 75% of military-associated students do not reenroll in the same DOD schools and encounter the challenges confronted by mobile students who transfer often between public schools.

Research has shown that an effective school is one of the best deterrents of mobility in that parents will be reluctant to move if a school is helping their child learn (Rumberger & Larson, 1998). Tkatchov and Pollnow (2012) offer suggestions for schools to help reduce the impact of mobility:

- Enroll and transition students into a new school quickly

- Develop a system to partner new students with current academically strong students to help the new student fit in

- Administrators should schedule a follow-up appointment with the parents of the new student within 2 weeks of enrollment

- Provide information to educate parents about the negative effects of mobility

- If change is unavoidable, encourage parents to keep their students in the same school for the remainder of the year

Xu et al. (2009) recommended that schools and districts identify and *flag* students who are highly mobile in order to find ways to stabilize education for the child. Providing transportations and developing pacing guides were suggested as ways of combatting mobility.

<center>*Student Mobility and State Level Testing*</center>

The impetus behind the *No Child Left Behind* legislation is a belief that equality exists between schools where student achievement is affected placing all schools on a level playing field (Offenberg, 2004). Due to this perception that all schools are on equal footing the public is often mislead by media reports of school rankings. Urban schools that are typically high poverty and high mobility schools usually obtain the bottom rankings, while their more affluent counterparts occupy the upper ranks. (Thompson, 2004).

The NCLB act mandated that every state develop a plan for *Adequate Yearly Progress*. The plan must ensure that students attending a given school for most of the school year make progress toward proficiency in reading and math on state achievement tests (Offenberg, 2004). Ligon and Paredes propose that the expectation of measuring achievement without addressing the issue of student mobility is unrealistic (1992). Hall posited that standardized tests are an inaccurate measure of student learning unless school mobility is also measured (2001). NCLB assumes that the quality of educational instruction is inferred from the achievement of its students while ignoring the effects of poverty and mobility (Offenberg, 2004). Seemingly, policy makers and business leaders adhere to the belief that high-poverty schools should be expected to achieve at the same

<center>53</center>

level as schools serving the middle class and the affluent, while the opposing view holds that poor children should not be held accountable for the same expectations as middle and upper class children (Thompson, 2004). This argument purports the school is at fault for having low expectations, ineffective leadership, or lack of sufficient instruction if poor children do not do well. There are fundamental issues with each of these views. Preoccupation with student backgrounds and experiences can contribute to a failure to assume responsibility for student achievement, ultimately resulting in the lowering of expectations. However, educators would be remiss to ignore research that has shown the connection between poverty's negative effects on children and the impact of family support in the education of children.

A failure to make adjustments for the hindrances caused by poverty and mobility exacerbates the problem for schools already struggling under rigorous accountability standards (Thompson, 2004). Strong academic achievement is often linked with family stability defined as the children having two natural parents in the home. Children forced to reside with relatives that other than their parents are principally at risk due to commonly having suffered abuse or neglect, having low income, and living in overcrowded, urban areas (Pribesh, 2005).

Weckstein (2003) identified three risks to the successful implementation of No Child Left Behind Act or NCLB. The first risk was whether or not mobile students were assessed and ultimately counted toward the adequate yearly progress of a school, district or state. The second risk involved lower achieving students moving from one school to another to avoid accountability for their achievement, and the third risk involved highly mobile students not receiving appropriate intervention and assistance (2003).

Title I of the NCLB Act required students test results to be shared with teachers and parents. The legislation also stipulated that assessment results were to be used to improve the child's performance (U. S. Department of Education, 2010). Neither of these things could happen if a student has not been assessed. Two reasons for not assessing mobile students were possible. Either the student was transitioning between schools at the time of the test or the student was advised to miss the testing dates in order to keep the anticipated low scores from impacting the school's achievement outcomes.

The U. S. Department of Education (2010) implemented measures to reduce the number of students who were not assessed. The law required 95% of students in a school and 95% of any subgroup to be assessed for a school to make adequate yearly progress. Weckstein (2003) stated that some schools have viewed the 5% exclusion rate as a license to keep mobile students from participating in assessment programs and being counted toward the school's adequate yearly progress. The No Child Left Behind Act responded by requiring a second academic measure to be chosen by the state be used to determine adequate yearly progress. Excluding any student from assessment programs violated NCLB regulations.

According to Weckstein (2003) only two routes existed to exclude students from assessment programs. First, a student who was not promoted into a grade level that was required to assess students was exempt. Students who were retained a grade level were understood not to have made adequate yearly progress. Second, students who dropped out of school were not assessed. The dropout rate distorted the proficiency outcomes of some schools by as much as 30%. This encouraged some districts to encourage low performing students to drop out before the end of the 11th grade in order to increase academic

outcomes. The No Child Left Behind Act countered with language that required states to report the number of students who graduated with a regular diploma within a standard number of years. NCLB required only an overall graduation rate for determining adequate yearly progress. The effects of the legislation were confounded by the elimination of a requirement for states to report student subgroups. Many mobile students fell within these subgroups. Weckstein posited that the risk of mobile students not being assessed and therefore not counted toward adequate yearly progress outcomes continued to be a problem as districts found new loopholes for violating NCLB.

The risk of not being assessed was further complicated by the No Child Left Behind Act itself (Weckstein, 2003). The law mandated that all students were to be assessed but excluded the results for mobile students from being counted as part of a school's adequate yearly progress because no school was solely responsible for the student's education during that year. If a child moved to a school within the same district, the student's results did count toward the district's adequate yearly progress. Similar mandates were made for students transferring schools located within the same state. The student's scores did not count toward any one school or district but did count toward the state's results. The law failed to account for the lack of academic continuity between schools or districts within the same state. It also failed to recognize that the state and district were not directly responsible for the education of the student.

The second risk identified by Weckstein (2003) was that schools would remove low achieving students to avoid accountability for their achievement. Student mobility was achieved by placing students in temporary learning centers due to disciplinary reasons, a disability, or a lack of English proficiency. Some districts debated the

placement of homeless students who had moved out of their zones. No school or district wanted to be identified as not having made adequate yearly progress. The consequences for being so identified were harsh leading many schools and districts to find ways to avoid counting low achieving students. Many of these students were highly mobile. Engec (2006) echoed Weckstein's position that school or district organization influenced the mobility of some students.

The third risk identified by Weckstein (2003) was of having limited access to the educational benefits of Title I. Among the benefits described in the program were an enriched and accelerated curriculum, effective instructional strategies, highly qualified teachers, continuous and high quality professional development, strategies for meeting the emotional and physical needs of low achieving students, and methods for helping students struggling with the state standards. The No Child Left Behind Act required schools to develop a plan detailing how these services would be provided. The plan was based on a needs assessment conducted by the school or the system. Mobile students were often excluded from any data because they were not present at the time it was conducted. Schools also faced the challenge of determining how requirements for individual assistance would be carried out in less time than for other students. Students eligible for Title I services were often identified using data from the previous school year. Sometimes data were not available to schools leaving them uncertain as to how to meet the student's needs. Weckstein concluded that mobile students were in greatest need of Title I services but had the most trouble gaining access to the services.

As the strengths and weaknesses of accountability systems are deliberated, one shortcoming has not been given adequate consideration. Annual summative tests are

insufficient in measuring student learning unless consideration is given to the fact that students being tested vary from year to year in a given school (Hall, 2001). While value-added approaches that focus on growth over a period of time, may seemingly be fairer to students, they are not sufficient for evaluating progress toward the *NCLB* goal of 100% proficiency (Offenberg, 2004).

The No Child Left Behind Act of 2001 indeed recognized mobility as a factor in student achievement through its mandate for the states to include an accountability model adjusted for mobility yet falls short in recommending how this is to be done (Rhodes, 2005). Mobility data analysis differs from state to state as few state deparments of education actually report mobility rates (Hartman, 2002).

The National Center for Educational Accountability supported the creation of longitudinal student databases to permit school authorities to track student moves all through their school careers (Dougherty, 2002). This prepares schools to make more precise decisions of the student's academic needs. Consistent with Education Week's Quality Counts 2005 report, 25 states have advanced a statewide student-ID project outlined to help schools gain access to essential academic information concerning a student's history in a more rapid manner (Education Week, 2005).

States are advancing systems in an endeavor to flatten student mobility rates and moderate the impact of mobility on students' education (Research Center, 2004). Illustrations of the proposed projects and methods incorporate: 1) informing parents regarding minimizing the negative impacts of mobility, 2) developing *buddy* systems to place new students with current students, 3) executing standardized curricula, 4)

improving student record-tracking frameworks between schools and regions, and 5)

providing training to aid teachers in helping highly mobile students.

Schools with remarkably mobile student populations should have a schoolwide,

multitiered instructional plan in place (Smith, Fien, & Payne, 2008). The plan should

include differentiated instruction for students meeting achievement objectives, students

who are at some risk for not meeting objectives, and students who are at high risk for not

achieving targets.

To identify the instructional necessities of mobile students who are at risk,

schools can increase instructional time, decrease class size, and use targeted instructional

methods explicitly designed to increase achievement.

CHAPTER 3

METHODOLOGY

Introduction

This chapter describes the methods used in this nonexperimental, quantitative study to determine how mobility and the frequency of mobility affects reading and math achievement in high poverty schools. The study focused on fourth grade students from four high poverty schools in a small Northeast Tennessee public school district. Comparisons were made between mobile and nonmobile students, mobile and nonmobile African-American, Hispanic, and White students, and the frequency of mobility, or number of school moves.

Research Questions and Corresponding Null Hypotheses

Research has shown a correlation between mobility and low academic achievement in reading and math. The effect of mobility is greater for students in high poverty schools who already serve a large number of students considered at risk of failure. While mobility may not be the sole cause of poor achievement, it is a contributing factor when combined with the effects of poverty. Academic achievement is further impacted when students must move and change schools frequently. This study examined reading and math achievement scores between mobile and nonmobile students, and also between mobile students as determined by the number of school moves made since their first entry into school. The following research questions and corresponding null hypotheses were addressed in this study. Mobility and nonmobility are the

independent variables. The dependent variables are the proficiency scores on the TCAP

test in the areas of reading and math.

Research Question 1:

Is there a significant difference in TCAP reading scores of mobile and nonmobile

students?

    HO_1: There is no significant difference in TCAP reading scores of mobile and

    nonmobile students.

Research Question 2:

Is there a significant difference in TCAP math scores of mobile and nonmobile students?

    HO_2: There is no significant difference in TCAP math scores of mobile and

    nonmobile students.

Research Question 3:

Is there a significant difference on TCAP reading scores of mobile students as

categorized by the frequency of mobility (number of school moves)?

    HO_3: There is no significant difference on TCAP reading scores of mobile

    students as categorized by the frequency of mobility.

Research Question 4:

Is there a significant difference on TCAP math scores of mobile students as categorized

by the frequency of mobility (number of school moves)?

    HO_4: There is no significant difference on TCAP math scores as categorized by

    the frequency of mobility.

Research Question 5:

Is there a significant difference in TCAP reading scores of mobile and nonmobile

African-American, Hispanic, and White students?

HO$_5$: There is no significant difference in reading scores of mobile and

nonmobile African-American students.

HO$_6$: There is no significant difference in reading scores of mobile and

nonmobile Hispanic students.

HO$_7$: There is no significant difference in reading scores of mobile and

nonmobile White students.

Research Question 6:

Is there a significant difference in TCAP math scores of mobile and nonmobile African-

American, Hispanic, and White students?

HO$_8$: There is no significant difference in math scores of mobile and nonmobile

African-American students.

HO$_9$: There is no significant difference in math scores of mobile and nonmobile

Hispanic students.

HO$_{10}$: There is no significant difference in math scores of mobile and nonmobile

White students.

Instrumentation

Academic achievement in the areas of reading and math were obtained from the

Tennessee Comprehensive Assessment Program. The TCAP is a collection of

assessments given in Tennessee that gauge an individual student's skills and progress in content areas of reading/language arts, math, social studies, and science.

Students in grades 3-8 are administered the TCAP in the spring of each school year. The state establishes a testing window and strict security procedures by which schools must abide. Results are received by the time school begins the following year and are reported to parents and schools. The state of Tennessee also releases information on its website in the form of state, system, and school report cards.

The TCAP is a timed, multiple-choice test that measures skills in Reading, Language Arts, Mathematics, Science, and Social Studies. Administering the TCAP to students in Kindergarten and Grades 1 and 2 is optional. An English only state, the TCAP is administered in English; however, a modified version with simplified terminology is available for English Language Learners and Special Education students meeting state criteria (Tennessee Department of Education, 2010).

Criterion-Referenced items measure a student's performance against specific standards, rather than to the performance of other test takers. These items are directly aligned with state content standards and performance indicators.

In 2009-2010 school year, Tennessee began reporting TCAP results based on four achievement levels: 1) below basic, 2) basic, 3) proficient, and 4) advanced. Students who perform at a *below basic* level have not demonstrated mastery in academic performance, thinking abilities, and application of understandings that reflect the knowledge and skill specified by the grade or course level content standards and are considered not prepared for the next level of study. Students who perform at a *basic* level are considered to have partially mastered academic performance, thinking abilities,

and application of understandings that reflect the knowledge and skill specified by the grade or course level content standards and are minimally prepared for the next level of study. Students who perform at a *proficient* level demonstrate mastery in academic and are deemed prepared for the next level of study. Students who perform at an *advanced* level have demonstrated superior mastery and are significantly prepared for the next level of study.

Population

The subjects in this study were fourth grade students in four high poverty elementary schools in a Northeast Tennessee School District for whom TCAP achievement assessment scores were obtainable for the year 2012. The schools were selected due to their percentages above the district in both the Black and Hispanic ethnic groups, and for having 90% or more of their student enrollment economically disadvantaged. Demographic data from the 2011-2012 school year obtained from the Tennessee Department of Education are represented in Table 1.

	District	School A	School B	School C	School D
Enrollment K-5	10,259	445	530	430	446
Black	6.7%	9.6%	13.2%	9.8%	15.5%
Hispanic	15.1%	34.7%	30.5%	39.8%	39.4%
White	76.3%	54.4%	55.6%	48.5%	42.7%
Economically Disadvantaged	63.3%	92%	92%	95%	90%

Table 1. School and District Information.

Data were gathered from the 2012 TCAP fourth grade reading and math proficiency scores and enrollment data provided by the district.   The population included approximately 279 students.

Data Collection

A request was submitted to the Institutional Review Board (IRB) for approval to collect TCAP and mobility data from four high poverty schools in a Northeast Tennessee school district. The IRB determined that this study met neither the FDA nor the DHHS definition of research involving human subjects, and as such, did not fall under the purview of the ETSU IRB.

Permission to conduct research and access TCAP and mobility data was granted by the director of schools in the chosen district. The district Data and Assessment Coordinator deidentified 2012 TCAP reading and math proficiency levels and mobility data on fourth grade students from the district's four highest poverty schools. The research did not contain any identifiable information on students or the schools used in the study.

Data Analysis

Descriptive statistics were used to analyze the quantitative data. The dependent variables are TCAP achievement scores in reading and math.   Independent variables are mobility, frequency of mobility, and ethnicity. The Statistical Program for the Social Sciences (SPSS) was used to analyze data. The findings were tested at the .05 level of significance.

A chi square test was used to determine if a significant difference exists between mobile and nonmobile students on reading and math achievement, which addressed the first two research questions. Mobile students were further identified as making one to two moves, three to four moves, five to six moves, and more than six. A chi-square test was used to determine if the frequency of moves was related to a significant difference on TCAP reading and math achievement. In addition, a chi-square contingency table was used to determine differences between mobile and nonmobile ethnic groups.

CHAPTER 4

RESULTS

Chapter 4 describes the results of the analyses of the research questions identified in Chapters 1 and 3. This study was conducted to determine if the reading and math proficiency levels on the reading and math sections of the Tennessee Comprehensive Assessment Program were significantly different for mobile and nonmobile students. The dependent variable for the study was the proficiency levels (Below Basic, Basic, Proficient, and Advanced) students received on reading and math portions of the assessment. The independent variables were mobility designation, mobility frequency, and ethnicity.

Findings

Data were collected on mobile and nonmobile fourth grade students in four high poverty schools where demographics were similar. Enrollment membership data were gathered on any fourth grade student in the four schools who took the TCAP assessment in 2012. Membership data were used to determine if a student was mobile, meaning the student had changed schools since beginning kindergarten, and the number of schools the student had enrolled in since kindergarten. Frequency of mobility was considered for one to two moves, three to four moves, five to six moves, seven or more moves, and zero moves. The TCAP and membership data were used to explore six research questions.

Is there a significant difference in TCAP reading scores of mobile and nonmobile students?

H_o1: There is no significant difference in TCAP reading scores of mobile and nonmobile students.

A two-way contingency analysis was performed to examine the relationship between student mobility and reading achievement. The relationship between these variables was not significant, X^2(3, N = 279) = 1.62, p = .655, ns. Therefore, H_o1 was retained. The proportion of nonmobile students who scored on the Below Basic level (8%) on the reading section of the Tennessee Comprehensive Assessment Program (TCAP) was not significantly different from the expected proportion of 8%. Similar results were found for the mobile students who scored at the Below Basic level of proficiency. Both the actual and expected proportions were 10%. The proportion of nonmobile students scoring on the Basic level (52%) was slightly less than the hypothesized proportion of 56%, while the proportion of mobile students at the same level of proficiency (60%) was slightly more than the expected proportion of 56%. The proportion of nonmobile students who scored at the proficient level (30%) was slightly higher than the expected proportion of 28%. The data suggest that the proportion of mobile students at the proficient level (26%) was slightly less than the expected proportion of 28%. The proportion of advanced level students who were nonmobile (10%) was larger than the expected proportion of 8%, while their mobile peers at the advanced level (7%) was less than the expected proportion of 8%. The data suggest that a relationship between mobility and reading achievement as measured by the TCAP was

negligible. Figure 1 shows the percentages of nonmobile and mobile students and the related proficiency levels on the reading section of the TCAP.
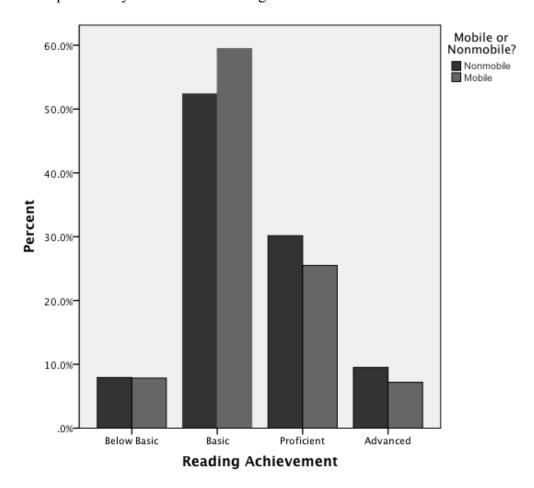

Figure 1. Reading Proficiency Levels of Mobile and Nonmobile Students

Research Question 2

Is there a significant difference in TCAP math scores of mobile and nonmobile students?

H_o2: There is no significant difference in TCAP math scores of mobile and nonmobile students.

A two-way contingency analysis was performed to examine the relationship between student mobility and math achievement. The relationship between these variables was not significant, $X^2(3, N = 279) = 1.60$, $p = .659$, ns. Therefore, H_o2 was retained. The proportion of nonmobile students who scored on the Below Basic level (14%) on the math section of the Tennessee Comprehensive Assessment Program (TCAP) was slightly more than the expected proportion of 13%. Similar results were found for the mobile students who scored at the Below Basic level of proficiency. The actual proportion of mobile students (12%) was slightly less than the expected proportion of 13%.

The proportion of nonmobile students scoring on the Basic level (56%) was slightly less than the hypothesized proportion of 60% while the proportion of mobile students at the same level of proficiency (63%) was slightly more than the expected proportion of 60%. The proportion of nonmobile students who scored at the proficient level (25%) was slightly larger than the expected proportion of 22%. The data suggest that the proportion of mobile students at the proficient level (20%) was slightly smaller than the expected proportion of 22%. The proportion of advanced level students who were not mobile (6%) was equal to the expected proportion while their mobile peers at the advanced level (5%) was slightly smaller than the expected proportion of 6%. The data suggest that a relationship between mobility and math achievement as measured by the TCAP was negligible. Figure 2 shows the percentages of nonmobile and mobile students and the related proficiency levels on the math section of the TCAP.

Figure 2. Math Proficiency Levels of Mobile and Nonmobile students

Research Question 3

Is there a significant difference on TCAP reading scores of mobile students as categorized by the frequency of mobility (number of school moves)?

H_o3: There is no significant difference on TCAP reading scores of mobile students as categorized by the frequency of mobility.

A two-way contingency analysis was performed to examine the relationship between the frequency of student mobility and reading achievement. The relationship between these variables was not significant, $X^2(12, N = 251) = 16.62, p = .164$, ns.

Therefore, H_o3 was retained. The proportion of students who were nonmobile and scored on the Below Basic level (8%) on the reading section of the Tennessee Comprehensive Assessment Program (TCAP) was slightly smaller than the expected proportion of 9%. The proportion of students who had changed schools one or two times and scored at the Below Basic level of proficiency (5%) was smaller than the expected proportion of 9%. The proportion of students who had changed schools three or four times and scored at the Below Basic level of proficiency (14%) was larger than the expected proportion of 9%. The proportion of students who had changed schools five or six times and scored at the Below Basic level of proficiency (0%) was less than the expected proportion of 9%. The proportion of students who had changed schools seven or more times and scored at the Below Basic level of proficiency (50%) was larger than the expected proportion of 10%.

The actual proportion of nonmobile students who scored at the Basic level of proficiency (52%) was slightly smaller than the expected proportion of 56%. The proportion of students who had changed schools one or two times and scored at the Basic level of proficiency (58%) was slightly larger than the expected proportion of 56%. The proportion of students who had changed schools three or four times and scored at the Basic level of proficiency (62%) was slightly larger than the expected proportion of 56%. The proportion of students who had changed schools five or six times and scored at the Basic level of proficiency (71%) was larger than the expected proportion of 56%. The proportion of students who had changed schools seven or more times and scored at the Basic level of proficiency (50%) was smaller than the expected proportion of 55%.

The actual proportion of nonmobile students who scored at the Proficient level of proficiency (30%) was slightly larger than the expected proportion of 26%. The

proportion of students who had changed schools one or two times and scored at the Proficient level of proficiency (26%) and the expected proportion were equal. The proportion of students who had changed schools three or four times and scored at the Proficient level of proficiency (19%) was slightly smaller than the expected proportion of 26%. The proportion of students who had changed schools five or six times and scored at the Proficient level of proficiency (29%) was slightly larger than the expected proportion of 26%. The proportion of students who had changed schools seven or more times and scored at the Proficient level of proficiency (0%) was smaller than the expected proportion of 16%.

The actual proportion of nonmobile students who scored at the Advanced level of proficiency (10%) was slightly larger than the expected proportion of 9%. The proportion of students who had changed schools one or two times and scored at the Advanced level of proficiency (11%) was slightly larger than the expected proportion of 9%. The proportion of students who had changed schools three or four times and scored at the Advanced level of proficiency (6%) was slightly smaller than the expected proportion of 9%. The proportion of students who had changed schools five or six times and scored at the Advanced level of proficiency (0%) was smaller than the expected proportion of 9%. The proportion of students who had changed schools seven or more times and scored at the Advanced level of proficiency (0%) was smaller than the expected proportion of 10%.

The data suggest that no discernible relationship between the number of times a student changes schools and reading achievement as measured by the TCAP existed.

Figure 3 shows the percentage of moves for nonmobile and mobile students and the

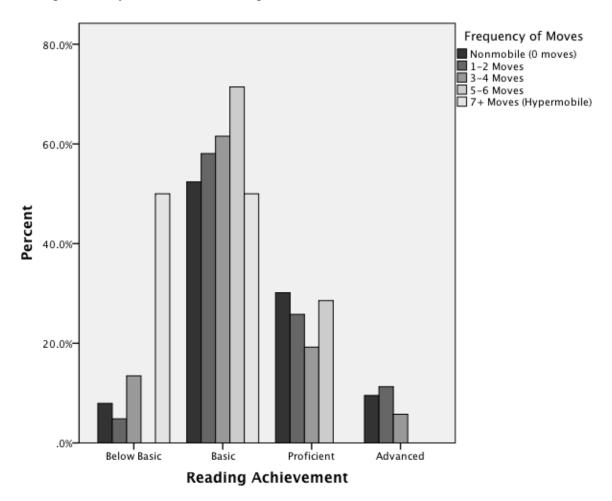related proficiency levels on the reading section of the TCAP.

Figure 3. Reading Proficiency and Degree of Mobility

Research Question 4

Is there a significant difference on TCAP math scores of mobile students as

categorized by the frequency of mobility (number of school moves)?

H_o4: There is no significant difference on TCAP math scores of mobile students

as categorized by the frequency of mobility.

A two-way contingency analysis was performed to examine the relationship between student mobility and math achievement. The relationship between these variables was not significant, $X^2(12, N = 251) = 8.75$, $p = .724$, ns. Therefore, H_o4 was retained. The proportion of students who were nonmobile and scored on the Below Basic level (14%) on the math section of the Tennessee Comprehensive Assessment Program (TCAP) was slightly larger than the expected proportion of 13%. The proportion of students who had changed schools one or two times and scored at the Below Basic level of proficiency (8%) was slightly smaller than the expected proportion of 13%. The proportion of students who had changed schools three or four times and scored at the Below Basic level of proficiency (19%) was slightly larger than the expected proportion of 13%. The proportion of students who had changed schools five or six times and scored at the Below Basic level of proficiency (0%) was less than the expected proportion of 13%. The proportion of students who had changed schools seven or more times and scored at the Below Basic level of proficiency (25%) was larger than the expected proportion of 13%.

The actual proportion of nonmobile students who scored at the Basic level of proficiency (56%) was slightly smaller than the expected proportion of 60%. The proportion of students who had changed schools one or two times and scored at the Basic level of proficiency (69%) was slightly larger than the expected proportion of 60%. The proportion of students who had changed schools three or four times and scored at the Basic level of proficiency (56%) was slightly smaller than the expected proportion of 60%. The proportion of students who had changed schools five or six times and scored at the Basic level of proficiency (71%) was slightly larger than the expected proportion of

60%. The proportion of students who had changed schools seven or more times and scored at the Basic level of proficiency (75%) was slightly larger than the expected proportion of 60%.

The actual proportion of nonmobile students who scored at the Proficient level of proficiency (25%) was slightly larger than the expected proportion of 22%. The proportion of students who had changed schools one or two times and scored at the Proficient level of proficiency (18%) was slightly larger than the expected proportion of 21%. The proportion of students who had changed schools three or four times and scored at the Proficient level of proficiency (19%) was slightly smaller than the expected proportion of 22%. The proportion of students who had changed schools five or six times and scored at the Proficient level of proficiency (29%) was slightly larger than the expected proportion of 21%. The proportion of students who had changed schools seven or more times and scored at the Proficient level of proficiency (0%) was smaller than the expected proportion of 23%.

The actual proportion of nonmobile students who scored at the Advanced level of proficiency (6%) was equal the expected proportion. The proportion of students who had changed schools one or two times and scored at the Advanced level of proficiency (5%) was slightly smaller than the expected proportion of 6%. The proportion of students who had changed schools three or four times and scored at the Advanced level of proficiency (6%) was approximately equal to the expected proportion. The proportion of students who had changed schools five or six times and scored at the Advanced level of proficiency (0%) was smaller than the expected proportion of 6%. The proportion of

students who had changed schools seven or more times and scored at the Advanced level of proficiency (0%) was smaller than the expected proportion of 5%.

The data suggest that no discernible relationship between the number of times a student changes schools and math achievement as measured by the TCAP existed. Figure 4 shows the percentage of moves for nonmobile and mobile students and the related proficiency levels on the math section of the TCAP.
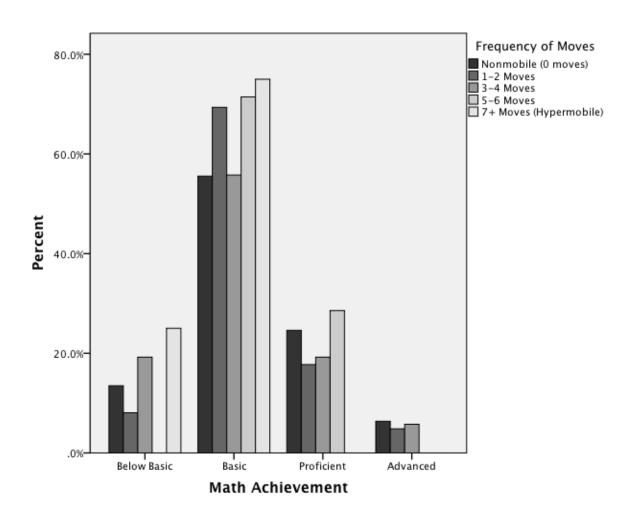

Figure 4. Math Proficiency and Degree of Mobility

Research Question 5

Is there a significant difference in TCAP reading scores of mobile and nonmobile African-American, Hispanic, and White students?

HO$_5$: There is no significant difference in reading scores of mobile and nonmobile African-American students.

HO$_6$: There is no significant difference in reading scores of mobile and nonmobile Hispanic students.

HO$_7$: There is no significant difference in reading scores of mobile and nonmobile White students.

A two-way contingency analysis was performed to evaluate whether a difference existed in the reading achievement of students from different ethnic groups (Black, Hispanic, and White) and student mobility (mobile or nonmobile). Ethnicity and student mobility were not found to be significantly related when reading proficiency levels were weighted, $X^2(2, N = 646) = 2.60$, p = .273, ns. Therefore, H$_o$5 was retained. The proportions of nonmobile students who were identified as Black, Hispanic, or White were 9%, 30%, and 60% respectively. The proportions of mobile students who identified themselves as Black, Hispanic, or White were 11%, 35%, and 54% respectively. The data suggest that ethnicity and mobility are not related. Figure 5 shows the percentages of student mobility and ethnicity when reading proficiency levels are weighted.

Figure 5. Reading Achievement, Mobility Categories, and Ethnicity

Research Question 6

Is there a significant difference in TCAP math scores of mobile and nonmobile African-American, Hispanic, and White students?

HO$_8$: There is no significant difference in reading scores of mobile and nonmobile African-American students.

HO$_9$: There is no significant difference in reading scores of mobile and nonmobile Hispanic students.

HO_{10}: There is no significant difference in reading scores of mobile and nonmobile White students.

A two-way contingency analysis was performed to evaluate whether a difference existed in the math achievement of students from different ethnic groups (Black, Hispanic, and White) and student mobility (mobile or nonmobile). Ethnicity and student mobility were not found to be significantly related when reading proficiency levels were weighted, $X^2(2, N = 604) = .54$, $p = .763$, ns. Therefore, H_o6 was retained. The proportions of nonmobile students who were identified as Black, Hispanic, or White were 9%, 35%, and 56% respectively. The proportions of mobile students who identified themselves as Black, Hispanic, or White were .10, .37, and .54 respectively. The data suggest that ethnicity and mobility are not significantly related. Figure 6 shows the percentages of student mobility and ethnicity when math proficiency levels are weighted.
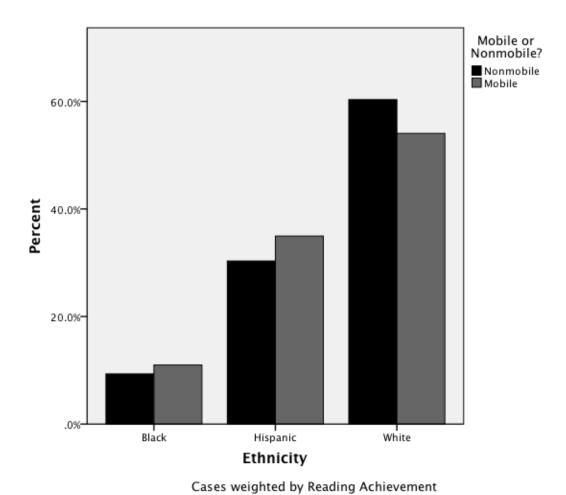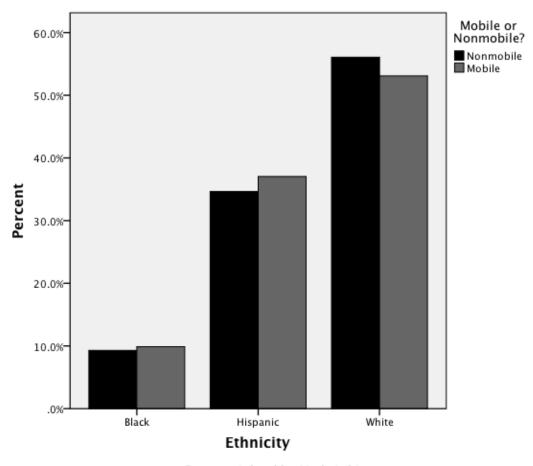
Figure 6. A clustered bar chart of mobility categories within ethnicity

Summary

A series of two-way contingency analyses were conducted to evaluate the relationships between student mobility, reading achievement, and math achievement. The analyses suggested that no significant relationships exist between the variables. Ethnicity was included in the last two analyses and was not significantly related.

CHAPTER 5

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Numerous studies have been conducted on the effects of mobility on achievement

and schools. Mobility has been established as a contributing factor of low academic

achievement, especially when linked with poverty and nontraditional family structure.

The purpose of this study was to determine the effects of mobility and the frequency of

mobility on reading and math achievement in a Northeast Tennessee School District.

This study was a comparison of mobile and nonmobile students from four high poverty

schools in the areas of reading and math as determined on the 2012 TCAP achievement

test.   Mobile and nonmobile students disaggregated by ethnic groups (Whites, Blacks,

and Hispanics) were examined as was the frequency of mobility (number of moves).

Summary of Results

Research Question 1:

Is there a significant difference in TCAP reading scores of mobile and nonmobile

students?

The result of the two-way contingency analysis performed to examine the

relationship between mobility and reading achievement was not significant.   The

proportion of mobile and nonmobile students scoring on the Below Basic level of

proficiency was similar. The proportion of nonmobile students scoring on the Basic level

of proficiency was only slightly less than mobile students at the same level of

proficiency. The number of nonmobile students scoring Proficient were slightly higher

that mobile students, and was larger than mobile students at the Advanced proficiency level. The data suggest that the relationship between mobility and reading achievement was not significant.

Research Question 2:

Is there a significant difference in TCAP math scores of mobile and nonmobile students?

In the area of math proficiency, the results were not significant.

The result of the two-way contingency analysis performed to determine the relationship between student mobility and math achievement was not significant. While the proportion of nonmobile students scoring on the Below Basic level was slightly more than expected, similar results were found for mobile students. On the Basic level, the proportion of nonmobile students was slightly less than the expected proportion while the proportion of mobile students was slightly more. The proportion of nonmobile students on the Proficient level was 5% higher than that of mobile students. On the Advanced level of proficiency, nonmobile students only slightly (.01) outperformed mobile students. The data suggest that there is no significant relationship between math achievement and mobility.

Research Question 3:

Is there a significant difference on TCAP reading scores of mobile students as categorized by the frequency of mobility (number of school moves)?

In examining the relationship between the number of school moves, characterized as *frequency of mobility*, a two-way contingency analysis was performed to determine if there was a significant difference in reading achievement between students who were nonmobile, moved one to two times, three to four times, five to six times, and seven or

more times. The results indicated that students who had moved one to two times scored in the Below Basic proficiency level at a proportion slightly less than that of nonmobile students. The proportion of students moving three to four times was slightly larger, and students moving seven or more times was larger than the other groups. Interestingly, none of the students moving five to six times scored on the Below Basic level of proficiency.

The actual proportion of nonmobile students scoring at the Basic level of proficiency was slightly smaller than the proportion of students moving one to two and three to four times and slightly larger (.02) than students moving seven or more times. The proportion of students moving five to six times was the largest group on the Basic level of proficiency.

At the Proficient level of proficiency the proportion of nonmobile students was larger than those who had moved one to two and three to four times, but only slightly larger than students moving five to six times. There were no students moving seven or more times that score in the Proficient range.

Results on the Advanced level were similar between three groups: nonmobile, students moving one to two times, and students moving three to four times. Differences were only slight, but nonmobile students scores slightly less than students moving one to two times.

Worth noting is that none of the students moving seven or more times were in the Proficient or Advanced levels. Interestingly, students mobile (one to two, three to four, and five to six times) and nonmobile, who scored Proficient or Advanced were very

closely related. The data suggest that there is no significant relationship between the number of times a students change schools and reading achievement.

Research Question 4:

Is there a significant difference on TCAP math scores of mobile students as categorized by the frequency of mobility (number of school moves)?

In examining the relationship between the frequency of mobility and math achievement a two-way contingency analysis was performed to determine if there was a significant difference between students who were nonmobile, moved one to two times, three to four times, five to six times, and seven or more times. The differences were small between nonmobile students and students moving one to two times with more nonmobile students scoring Below Basic than the students moving one to two times. . The percentage of students moving three to four times was slightly larger, and students moving seven or more times was slightly higher than students moving three to four times. Interestingly, none of the students moving five to six times scored on the Below Basic level of proficiency.

At the Basic level of proficiency, nonmobile students and students moving three to four times were proportionate to one another and slightly less than the other areas. Differences were slight between students moving one to two, five to six, and seven or more times with the latter having the most students in the Basic range.

More students who were nonmobile and students who had made five to six moves were on the Proficient level of achievement and only differed slightly with nonmobile being less. Students making one to two and three to four moves were closely aligned on

the Proficient level. There were no students moving seven or more times scoring on the Proficient level.

Differences between three groups: nonmobile, students moving one to two times, and students moving three to four times were barely noticeable on the Advanced level. Students moving five to six or seven or more times were not represented on the Advanced level. The data suggest there is no discernible relationship between the frequency of moves and math achievement.

Research Question 5:

Is there a significant difference in TCAP reading scores of mobile and nonmobile African-American, Hispanic, and White students?

Mobile and nonmobile African-American, Hispanic, and White students were examined to determine if a relationship exists between mobility, ethnicity, and reading achievement.The data suggest that ethnicity and mobility were not significantly related as determined on the TCAP reading achievement test.

Research Question 6:

Is there a significant difference in TCAP math scores of mobile and nonmobile African-American, Hispanic, and White students?

Mobile and nonmobile African-American, Hispanic and White students were examined to determine if a relationship exists between mobility, ethnicity, and math achievement. Mobile and nonmobile Black, Hispanic, and White students' proficiency levels were weighted. The data suggest that ethnicity and mobility were not significantly related as determined on the TCAP math achievement test.

Implications for Practice

Mobility has shown to be particularly harmful to students, especially among certain subgroups including those living in poverty (Beatty, 2010). Moves made within during the school year are more harmful than moving between grades. The greatest harm has been linked to students moving more than three times in the first few years of their school career. Beatty reported that frequent mobility accompanied by poverty, homelessness, migrant work, and family disruption is difficult to overcome (2010).   In addition, research has shown that mobility affects more than just the individual mobile student. Schools, classrooms, and instruction are all disrupted as students move in and out of school (2010). The findings of this study examining mobility in four high poverty schools found no significant differences between mobile and nonmobile groups; however, homelessness, migrant families, and disrupted family structures were not explored.

Xu et al. (2009) examined the frequency of moves between students moving only one time and those making multiples moves and found that chronic mobility resulted in as much as a more than 7% standard deviation loss in the area of math achievement. The differences between one move and multiple moves were significant in the Black and Hispanic ethnic groups in the area of math achievement (Xu et al., 2009).   The results of this study contradict the research of Xu et al. in that differences between nonmobile students and students making one to two moves and up to five to seven moves were not significant in the areas of reading or math. While students making seven or more moves resulted in scores below proficiency, the scores were not significantly lower than the other groups studied.

Although differences between the variables studied in this research were not significant, research linking high mobility and low academic performance is applicable (Beesley et al., 2010; Engec, 2006; Gruman, Harachi, Abbott, Catalano, & Fleming, 2008; Xu et al., 2009).   While differences between mobile and nonmobile students were negligible, the study revealed that the majority of all students, mobile and nonmobile, in the four high poverty, highly mobile schools studies scored in the Basic and Below Basic proficiency levels: 64% in reading and 72% in math. Perhaps studies showing that nonmobile students are affected by mobilty could be applied to the four schools in the study (Research Center, 2004).

de la Torre (2009) found that interruptions to learning such as a change of schools has a detrimental effect on academic achievement. He further proported that learning for students who are mobile is a result of a lack of curricular alignment. The four schools studied are part of the same district. Mobile students who moved within the same district benefitted from curriculum and pacing guides implemented for the specific purpose of curricular alignment. The four schools in the study conduct frequent reading and math assessments on all children and target instruction and interventions to specific deficits. Though using different instructional materials and methods, the schools in the study have a double dose of reading instruction built into their schedules for either all students or at-risk students. This practice is supported by a Baltimore study that found the influences of mobility were inconsequential if interventions are introduced and implemented (Alexander et al., 1996).

Conger and Rebeck (2001) suggested that some mobile children benefit from moving to a new school. Rumberger and Larsen (1998) found that effective schools that

are focused on meeting student needs are the best deterrents of the negative effects of mobility. The four schools involved in this study are accustomed to quickly identifying and targeting reading and math interventions to the needs of specific students and have several characteristics in common: they are high poverty, high minority, and high mobility schools. Receiving the largest portions of district Title I monies, the schools have access to professional development funds not available in non Title I schools. Although many of the mobile students in the study moved from outside the district, state, and in some cases, the United States, the interventions in place would help students overcome the academic deficits resulting from mobility.

Tkatchov and Pollnow (2012) suggest the following to help reduce the effects of mobility in schools:

- Enroll students quickly into a new school

- Develop a buddy system to help new students transition academically and socially

- Meet with the parents within the first 2 weeks of enrollment

- Inform parents about the negative effects of mobility on achievement

- If change is unavoidable, encourage and assist parents in keeping their child in the same school for the remainder of the year

Xu et al. (2009) recommend *flagging* students at the district level who are highly mobile in order to find ways to stabilize education for children. Titus (2007) suggested similar methods adopted by the Department of Defense in assisting students who are mobile:

- Timely transfer of student records

- Checklist for student transfers

- Immediate student orientation

- Extracurricular programs

- Communication of changes in schedules

- Professional development targeting mobile students

- Similar requirements for graduation.

Hartman (2002) further recommended the need for staff development to help teachers understand the problem of mobility: its negative impact, causes, and results. Hartman further recommended that districts put policies and programs into place to address mobility. In 2003 Hartman made additional recommendations that the federal government be the frontrunner to improve record transfers and tracking of students between states and districts. His recommendations included standardized reporting of mobility data at the state level as well as admonishing districts to retain students who move short distances until the end of the year. The National Center for Educational Accountability advocates longitudinal tracking of students throughout their school careers (Dougherty, 2002). Several states have already developed statewide programs to help schools access a student's school history in a timely manner.

Recommendations for Practice

Based on the findings of this study, the author offers the following recommendations:

1. Develop a district method for tracking students who move frequently within the district

2. Do not delay enrollment. Efforts to verify residential addresses frequently results in students missing several days between schools.

3. Retain students in the same school when possible for the remainder of the school year.

4. Be efficient in record-keeping. Schools across the district are inconsistent in documenting school history when a new student enrolls in the district.

5. Administrators and teachers should meet with the parents at enrollment and within 2 weeks of enrollment to discuss assessment data and recommended interventions.

Implications for Further Research

It is well documented that mobility is negatively linked to low achievement (Allen & Vacca, 2010; Beatty, 2010; Beesley et al., 2010; Bourque, 2009; Buell, 2002; Burkham et al., 2009; Candal, 2009; Dauter & Fuller, 2011; de la Torre & Gwynne, 2009; Engec, 2006; Gaddie, 2010; Gruman et al., 2008; Mehana & Reynolds, 2004; Murphey et al., 2012; Parrett & Budge, 2012; Puentes et al., 2008; Rhodes, 2005; Rhodes, 2008; Schafft, 2009; Schwartz et al., 2007; Thompson et al., 2011; Titus, 2007; Tkatchov et al., 2012; Xu et al., 2009). Mobility's effects are not limited to mobile students but impact the classrooms and schools in which they are enrolled (Beatty, 2010). All students in highly mobile schools have significantly lower achievement when compared with less mobile schools (2010).

The purpose of the current study was to investigate the relationship of student mobility in high poverty schools to determine if differences exist between mobile students and their stable peers in reading and math achievement. Evaluation of these findings should consider the limitations of this study. The reasons for students changing

schools were unknown to the researcher, nor was it known if the moves were upward or downward mobility. Future research should include the reasons behind the changes in school be it residential, family disruption, or as a result of disciplinary action. An exploration of the relationship between family structure and mobility merits exploration as well to determine if student mobility has a lesser or greater effect on students from two-parent homes or single-parent homes.

Whether students changed schools within the school year or in between years was not documented. When looking at the frequency of mobility, future research should be designed to determine if changes occurring midyear or between grades result in a significant difference due to disruption of grade level instruction.

Conclusion

This study showed that in the four high poverty schools in a rural Northeast Tennessee school district there was no significant difference between mobile and nonmobile students, mobile and nonmobile African-American, Hispanic, and White students and the frequency of mobility in the areas of reading and math achievement. Although this study did not show significant differences, the data collected showed that a majority of students (64% in reading and 72% in math) were below proficient on the 2012 fourth grade TCAP achievement test. While research on the effects of mobility on nonmobile students is limited, effects on academic achievement of mobile students is plentiful. Schools and districts should be knowledgeable of mobility's effects and be diligent in addressing the needs of mobile students. Strategies should be developed for schools and districts to undertake corresponding efforts to address the issues of mobility.

The interwoven relationship between ethnicity, poverty, and mobility should continue to

be explored to determine effects on academic achievement.

REFERENCES

Adams, C. (2012). One million students homeless. *Administrator.* Scholastic. Retrieved October 27, 2012, from http://www.scholastic.com/browse/article.jsp?id=3756883

Alexander, K. L., Entwisle, D. R., & Dauber, S. L. (1996). Children in motion: School transfers and elementary school performance. *The Journal of Educational Research,* 90, 3-12.

Allen, B., & Vacca, J. S. (2010). Frequent moving has a negative affect on the school achievement of foster children makes the case for reform. *Children and Youth Services Review,* 32, 829-832.

Barak, T. (2004). Homeless children retain right to sue, judge rules. *Education Week, 24*, p. 6.

Beatty, R. (2010). Student mobility: Exploring the impacts of frequent moves on achievement. Washington, DC: The National Academies Press.

Beck, C., & Kosnik, C. M. (2006). *Innovations in teacher education: A social constructivist approach*. Suny Series in Teacher Preparation and Development. New York: State University of New York Press.

Been, V., Ellen, I. G., Schwartz, A. E., Stiefel, L., & Weinstein, M. (2011). *Foreclosure and kids: Does losing your home mean losing your school*. New York: The Institute for Education and Social Policy and the Furman Center for Real Estate and Urban Policy.

Beesley, A., Moore, L., and Gopalani, S. (2010). *Student mobility in rural and nonrural districts in five central region states* (Issues & Answers Report, REL 2010–No. 089). Washington, DC: Regional Educational Laboratory Central, U.S. Department of Education.

Beres, A. (2012). *One million US students homeless, new data show*. Washington DC: National Law Center on Homelessness & Poverty. Retrieved October 12, 2012, from http://www.nlchp.org/view_release.cfm?PRID=148.

Black, S. (2006). Stabilizing schools with kids on the move. *Educational Digest , 72*, 46-55.

Bourque, M., (2009). *The impact of student mobility on academic achievement: Lessons learned in the time of the Boston University/Chelsea public schools partnership.* Boston, MA: Information Age. pp. 65-68.

Bourque, M. (2009). *Swapping desks: The impact of mobility on student achievement.* White paper redaction of a doctoral dissertation, The Impact of Student Mobility on Academic Achievement, Boston University, 2008. Retrieved October 27, 2012, from: https://www.stcloudstate.edu/tpi/initiative/documents/preparation/Swapping%20Desks.pdf.

Branz-Spall, A. M., Rosenthal, R., & Wright, A. (2003). Children of the road: Migrant students, our nation's most mobile population. *Journal of Negro Education, 72*(1), 55-62.

Buell, B. (2002). *Addressing the causes and consequences of high student mobility: The role of school systems and communities*. (AYP Forum Brief No. 3/1). Chicago: Panel for the School Policy's Parent Connection.

Burkham, D. T., Lee, V. E., & Dwyer, J. (2009, June). *School mobility in the early elementary grades: Frequency and impact from nationally-represented data*. Paper prepared for the joint Institute of Medicine/National Researcch Council workshop: Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, Washington, D.C.

Candal, C. S. (2009). *Partnering for progress: Boston University, the Chelsea public schools, and urban education reform*. Boston, MA: Information Age. Research in educational policy.

Chaika, G. (1999). *Student mobility*: *Helping children cope with a moving experience.* Education World. Retrieved January 7, 2013, from: http://www.educationworld.com/a_curr/curr134.shtml.

Child Welfare Information Gateway. (2012). *Foster care statistics 2010.* Washington, DC: U.S. Department of Health and Human Services, Children's Bureau. Retrieved August 21, 2012, from http://www.childwelfare.gov/pubs/factsheets/foster.cfm

Chen, G. (2008). Communities, students, schools, and school crime: A confirmatory study of crime in U.S. high schools. *Urban Education, 43*, 301-318.

Coleman, J. (1987). Families and schools. *Educational Researcher, 16*, 32-38.

Coleman, J. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, Chicago: University of Chicago Press. S95-S120.

Craig, V., (1998) *A Report from the kids mobility project.* Minneapolis: Kids Mobility Project, Minneapolis Public Schools, MN.

Dauter, L., & Fuller, B. (2011). *How diverse schools affect student mobility: Charter, magnet, and newly built institutions in Los Angeles.* Policy Analysis for California Education. Retrieved October 27, 2012, from http://www.edpolicyinca.org.

de la Torre, M. & Gwynne, J. (2009). *Changing schools: A look at student mobility trends in Chicago Public Schools since 1995.* Consortium on Chicago School Research.

Dewey, J. (1916). *Democracy and education; An introduction to the philosophy of education*, New York: Macmillan.

Dewey, J. (1938). *Experience and education.* New York: Macmillan.

Dougherty, C. (2002). *Using data to improve schools: The educator's role.* Austin, TX: National Center for Educational Accountability.

Education Week. (2005). *Quality counts: No small change.* Retrieved August 21, 2012, from http://www.edweek.org/ew/toc/2005/01/06/index.html

Engec, N. (2006). Relationship between mobility and student performance and behavior. *Journal of Educational Research, 99*, 167-178.

Federal Interagency Forum on Child and Family Statistics. (2009). *America's children: Key national indicators of well-being, 2009.* Washington, DC: U.S. Government Printing Office.

Franke, T. M., & Isken, J. A., & Parra, M. T., (2003). A pervasive school culture for the betterment of student outcomes: One school's approach to student mobility. *The Journal of Negro Education, 72*, 150-156.

Fullan, M. (2008). *The six secrets of change: What the best leaders do to help their organizations survive and thrive.* San Francisco: Jossey Bass.

Gaddie, J. (2010). *Understanding social capital development and academic attainment of mobile students.* Educational Administration: Theses, Dissertations, and Student Research Paper. Retrieved October 27, 2012, from: http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1045&context=cehsed addiss.

Gredler, M., & Shields, C. (2004). Does no one read Vygotsky's words. *Educational Researcher*, *33*(2), 21-25. Retrieved January 7, 2013, from http://www.jstor.org/stable/3699972

Green, S. B., & Salkind, N. J. (2008). *Using SPSS for windows and macintosh: Analyzing and understanding data* (5th ed.). Upper Saddle River, NJ: Pearson/Prentice Hall.

Gruman, D.H., Harachi, T.W., Abbott, R.D., Catalano, RF., and Fleming, C.B. (2008). Longitudinal effects of student mobility on three dimensions of elementary school engagement. *Child Development, 79 (6),* 1833-52.

Hall, T. (2001). Student movement: The fatal flaw of the Bush education plan. The Washington Monthly, 33, 23-25.

Hartman, C. (2002). High classroom turnover: How children get left behind. *Poverty & Race,* 227-244.

Hartman, C., & Franke, T. M. (2003). Student mobility: How some children get left behind. *Journal of Negro Education*. Winter 2003; 72, 1.

Hattie, J., & Anderman, E., *International guide to student achievement: Educational psychological handbook.*, New York, NY: Routledge, pp. 155-157.

Heinlein, L. M., & Shinn, M. (2000). School mobility and student achievement in an urban setting. *Psychology in the Schools*, *37*, 349-357.

Ingersoll, G. M., Scamman, J. P., & Eckerling, W. D. (1989). Geographic mobility and student achivement in an urban setting. *Educational Evaluation and Policy Analysis 11*, 143-149.

Julianelle, P. F., & Foscarinis, M. (2003). Responding to the school mobility of children and youth experiencing homeless: The mckinney-vento act and beyond. *Journal of Negro Education, 72*, 39-54.

Kaplan, S., & Valenti, C. (2005). Moving forward: Helping new york's high mobility students to succeed. *The Independent Journal of Schools and Cultural Affairs in the Empire State,* 1-8. Retrieved October 27, 2012, from: http://www.educationnewyork.com/pdfs/EDNYstudentmobility.pdf.

Kelly, U. A. (2009). Learning to lose: Rurality, transience, and belonging. *Journal of Research in Rural Education, 24*, 1-4.

Kerbow, D. (1996). Patterns of urban student mobility and local school reform. *Journal of Education of Students Placed at Risk*. 7, 147-169. EJ 531 794.

Lash, A., & Kirkpatrick, S. (1990). A classroom perspective on student mobility. *Elementary School Journal, 91*, 176.

Lee, E. (1966). A theory of migration. *Demography, 3*, 47-57.

Ligon, G., & Paredes, V. (1992). *Student mobility rate: A moving target.* Austin Independent School District. Austin, TX: Office of Research and Evaluation.

Maslow, A. H. (1970). *Motivation and personality*. New York: Harper and Row.

Mayer, V. J. (2002). *Global science literacy*. Dordrecht: Kluwer Academic Publishers.

McLeod, C., Heriot, S., & Hunt, C. (2008). Changing places: Resilience in children who move. *Australian Journal of Education, 52*. 168-182.

Mehana, M., & Reynolds, A. J. (1985). *The effects of mobility on scholastic achievement*. Paper presented at the Biennial Meeting of the Society for Research in Child Development.

Mehana, M., & Reynolds, A.J. (2004). School mobility and achievement: A meta-analysis. *Children and Youth Services Review, 26*, 93-119.

Murphey, D., Bandy, T., & Moore, K. (2012). *Frequent residential mobility and young children's well-being*. Child_Trends-2012_02_14_RB_Mobility.pdf. Retrieved February 23, 2013, from http://www.childtrends.org/Files/Child_Trends-2012_02_14_RB_Mobility.pdf.

Nelson, C. (n.d.). *The great depression: About the dust bowl*. Retrieved June 10, 2011, from http://www.english.illinois.edu/maps/depression/depression.htm

Newman, J. (1988). *What should we do about the highly mobile student? A research brief*. Mount Vernon WA: Educational Service District 189, (ED 305 545).

Offenberg, R. (2004*)*. Inferring adequate yearly progress of schools from student achievement in highly mobile communities. *Journal of Education for Students Placed At Risk, 9*, 337-335.

Parrett, W. H., & Budge, K. M. (2012). *Turning high-poverty schools into high performing schools*. Alexandria, VA: ASCD.

Perreira, K. M., (2004). Immigration timeline. University of North Carolina. Retrieved June 20, 2011, from http://www.unc.edu/~perreira/198timeline.html.

Phipps, C. (2012). UT study: Hamblen leads non-metro communities in Hispanic population. *Citizen Tribune*, August 23, 2012. Morristown, TN.

Pribesh, S. L. (2005). *The consequences of residential and school mobility for adolescents*. Dissertation # OSU1110315943. Retrieved August 21, 2012, from OhioLINK ETD.

Puentes, H., Herrington, D., & Kritsonis, W. (2008). Student mobility and academic achievement at a selected elementary campus: a case study with national implications. *National Forum of Applied Educational Research Journal, 21*, 55-61.

Reese, W. (2007). Why Americans love to reform schools. *Australian Journal on Educational Research and Perspectives, 31*, 107-119.

Research Center. (2004). Student mobility. *Education Week.* Retrieved June 10, 2011, from http://www.edweek.org/ew/issues/student-mobility/

Rhodes, V. (2005). Kids on the move: The effects of student mobility on NCLB school accountability ratings. *Penn GSE Perspectives on Urban Education, 3*(3): Retrieved June 10, 2011, from http://www.urbanedjournal.org/archive/volume-3-issue-3-spring-2005/kids-move-effects-student-mobility-nclb-school-accountability-r.

Rhodes, V. (2008). Learning on the go: Voices of highly mobile urban students. *Learning Inquiry, 2*, 113-125.

Rumberger, R.W. (1999). *The educational consequences of mobility for California students and schools.* Berkley, CA: Policy Analysis for California Education. ED 441 040.

Rumberger, R. W. (2002). *Student mobility and academic achievement*. ERIC Digest ED-PS-02-1.

Rumberger, R.W., & Larson, K.A. (1998). Student mobility and the increased risk of high school dropouts. *American Journal of Education, 107*, 1-35. SJ 583 043.

Scanlon, E., & Devine, K. (2001). Residential mobility and youth well-being: Research, policy, and practice issues. *Journal of Sociology & Social Welfare, 28*, 119–138.

Schacter, J. P. (2004). *Geographical mobility 2002-2003*. Washington, DC: U.S. Department of Commerce.

Schafft, K. A. (2005). The incidence and impacts of student transiency in upstate New York's rural school districts. *Journal of Research in Rural Education, 20*, 1-13.

Schafft, K.A. (2006). Poverty, residential mobility, and student transiency within a rural New York school district. *Rural Sociology, 71*, 212-231.

Schafft, K.A., & Killeen, K.M. (2007). *Assessing student mobility and its consequences: A three-district case study.* Albany, NY: The Research Foundation of the State University of New York.

Schafft, K.A., & Killeen, K.M. (2008). *Casualties of globalization and NCLB: A case study of highly transient youth in rural schools.* Paper presented at the Annual Meeting of the American Educational Research Association, New York, NY.

Schwartz, A. E., Stiefel, L., & Chalico, L. (2007). *The multiple dimensions of student mobility and implications for academic performance: Evidence from New York City elementary and middle school students* (Condition Report). Albany, NY: Education Finance Research Consortium.

Sewell, C., (1982). *The impact of pupil mobility on assessment and its implications for program planning.* Brooklyn, NY: Community School District 17. ED 228 322.

Smith, J. M., Fien, H., & Paine, S. C. (2008). When mobility disrupts learning. *Educational Leadership.* Retrieved October 27, 2012, from ASCD: http://www.ascd.org/publications/educational-leadership/apr08/vol65/num07/When-Mobility-Disrupts-Learning.aspx

Smreker, C. E., & Owens, D. E. (2003). It's a way of life for us: high mobility and high achievement in department of defense schools. *Journal of Negro Education, 72*, 165-177.

Smrekar, C., Guthrie, J., Owens, D., & Sims, P., (2001). *March toward excellence: A report of the national education goals panel.* United States Department of Defense. Retrieved June 10, 2011, from: http://govinfo.library.unt.edu/negp/reports/DoDFinal921.pdf.

Sobe, N.W., & Fischer, M.G. (2009). *Mobility, migration, and minorities in education.* International handbook of comparative education. Springer Science + Business Media, BV. 359-371.

Stanley, J. (1993). *Children of the dust bowl: The true story of the school at weedpatch camp.* New York: Array.

Staresina, L. N. (2003). Student mobility. *Education Week.* Retrieved October 27, 2012, from http://www.edweek.com/context/topics/issuespage.cfm?id=82.

Taylor, R. (2010). World migration is growing and changing. Retrieved from http://suite101.com/article/world-migration-is-growing-and-changing-a317475

Tennessee Department of Education. (2010). *Guide to test report interpretation.* Office of Assessment, Evaluation, and Research. State of Tennessee Department of Education. Retrieved from http://www.tn.gov/education/assessment/doc/ACHEdu_Guide_test_interp.pdf.

Thompson, B. (2004). Equitable measurement of school effectiveness. *Urban Education, 39*, 200-229.

Thompson, S., Meyers, J., & Oshima, T. (2011). Student mobility and its implications for schools' adequate yearly progress. *The Journal of Negro Education, 80*, 12-21.

Titus, D. (2007). *Strategies and resources for enhancing the achievement of mobile students*. NASSP Bulletin, 91, 81-97.

Tkatchov, O., & Pollnow, S. (2012). *A practical guide to teaching and learning*. New York: Roman & Littlefield Education.

Tucker, C. J., Marx, J., & Long, L. (1998). Moving on: Residential mobility and children's school lives. *Sociology of Education, 71*, 111-129.

U.S. Census Bureau. (2004). *Geographical mobility: Population characteristics March 2002 to March 2003*. Retrieved June 10, 2011, from http://www.census.gov/hhes/www/poverty/publications/pubs-cps.html

U. S. Government Accounting Office. (1994). *Elementary school children: Many change schools frequently, harming their education*. (GAO/HEHS Publication No. 94-95). Washington, DC: U. S. Government Printing Office.

U. S. Government Accounting Office. (2007). *No child left behind Act: Education should clarify guidance and address potential compliance issues for schools in corrective action and restructuring status*. (GAO-07-1035). Washington, DC: U. S. Government Printing Office.

Wasserman, D. (2001). *Moving targets: Student mobility and school and student achievement.* Paper presented at the Annual Meeting of the American Educational Research Association, Seattle, WA.

Weckstein, P. (2003). Accountability and student mobility under title 1 of the no child left behind act. *Journal of Negro Education, 72*, 117-125.

Weingarten, R. (2008). *Stop scapegoating teachers.* Retrieved from USA Today: Retrieved October 27, 2012, from http://www.usatoday.com

White-Adams, G. E. (2008). *Barriers to educating homeless children and youth*. The University of Southern Mississippi. UMI: 3346518.

Wood, D., Halfon, N., Scarla, D., Newacheck, P., & Nessim, S. (1993). Impact of family relocation on children's growth, development, school function, and behavior. *Journal of the American Medical Association, 270*, 1334-1338.

Wright, D. (1999). Student mobility: A negligible and confounded influence on student achievement. *The Journal of Educational Research, 92*, 347-353.

Xu, Z., Hannaway, J., & D'Souza, S. (2009). *Student transience in North Carolina: The effect of school mobility on student outcomes using longitudinal data.* Washington, DC: National Center for Analysis of Longitudinal Data in Education Research.

APPENDIX: IRB LETTER

February 19, 2013

Janet Denise Dalton
2691 Holston Drive
Morristown, TN 37614

Dear Ms. Dalton,

Thank you for recently submitting information regarding your proposed project "The Effects of Mobility on Academic Achievement in High Poverty Schools."
I have reviewed the information that includes a completed Form 129.
The determination is that this proposed activity as described meets neither the FDA nor the DHHS definition of research involving human subjects. Therefore, it does not fall under the purview of the ETSU IRB.

IRB review and approval by East Tennessee State University is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these activities are human subject research in which the organization is engaged, please submit a new request to the IRB for a determination.

Thank you for your commitment to excellence.

Sincerely,
Chris Ayres
Chair, ETSU IRB

VITA

JANET DENISE DALTON

Personal Data: Date of Birth: October 11, 1960

Place of Birth: Morristown, Tennessee

Marital Status: Single

Education: Carson Newman College, Jefferson City, Tennessee, B. A.

Music Education, 1984

Lincoln Memorial University, Harrogate, Tennessee; M.Ed.

Administration and Supervision, 1996

Lincoln Memorial University, Harrogate, Tennessee; Ed.S.

Administration and Supervision, 1999

East Tennessee State University, Johnson City, Tennessee

Ed. D., Educational Leadership, 2013.

Professional Experience   Teacher, West Elementary School, Morristown, Tennessee,

1992-1999

Assistant Principal, Lincoln Heights Middle School,

Morristown, Tennessee, 1999-2002

Principal, Lincoln Heights Elementary School, Morristown,

Tennessee, 2002-Present.

Assistant Curator, Appalachian Bear Rescue, Townsend,

TN, 2013